



UNITED NATIONS DEVELOPMENT PROGRAM

Country: Government of Armenia

PROJECT DOCUMENT

- PROJECT TITLE:** **ENABLING ACTIVITIES FOR THE PREPARATION OF ARMENIA'S THIRD NATIONAL COMMUNICATION TO THE UNFCCC**
- UNDAF Outcome 4:** Environment and disaster risk management is integrated into national and local development frameworks
- Expected CP Outcome(s) 4.1:** Armenia is better able to address key environmental challenges including climate change
- Expected Output 4.1.1:** National policies and tools for implementation of and compliance with international environmental agreements are developed and adopted
- Expected Output 4.1.4:** National and local capacities to develop innovative policies and practices to address climate change mitigation and adaptation strengthened

Brief Description

This nationally executed project aims to respond to the objectives of the UN Framework Convention on Climate Change (UNFCCC) in accordance with its commitments as a Party to the Convention mandated by Articles 4 and 12 of the UNFCCC and subsequent COP decisions. The project is a follow up of previous climate change enabling activities undertaken in the country. It will enable Armenia to present the updated information on Convention implementation in a consistent, transparent and comparable manner.

The main components of the project are:

- 1) Preparation of the Third National Communication of Armenia and its submission to the Conference of Parties. It will consist of updated information on: i) national circumstances; ii) national greenhouse gas inventory; iii) assessment of vulnerability to climate change and steps taken to adapt to climate change; iv) policies and measures undertaken to mitigate climate change; v) capacity building to develop, transfer, assess environmentally sound technologies and know-how, modalities to absorb them and host projects; vi) public awareness, education, training, research and systematic observation;
- 2) Facilitation to mainstreaming of climate change issues into national development policies and strategies;
- 3) Identification and formulation of project proposals related to adaptation to the impacts of climate change and abatement of greenhouse gases emissions;
- 4) Strengthening national capacities to participate in different mechanisms aimed at fulfillment of commitments under the UNFCCC;
- 5) Enhancing general awareness and knowledge on climate change related issues in Armenia.

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ABBREVIATIONS

AFOLU	Agriculture, Forestry and Other Land Use
APR	Annual Progress Report
AWP	Annual Work Plan
BAU	Business-as-usual
CACAM	Central Asia, Caucasus, Albania and Moldova
CC	Climate Change
CCPC	Climate Change Program Coordinator
CCU	Climate Change Unit
CDM	Clean Development Mechanism
CGE	Consultative Group of Experts
CJSC	Closed Joint Stock Company
CO	Country Office
COP	Conference of Parties
EBRD	European Bank for Reconstruction and Development
EC	European Commission
ESCCC	Educational and Scientific Center for Climate Change
FAO	Food and Agriculture Organization
FNC	First National Communication
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Greenhouse Gas
GoA	Government of Armenia
GPG	Good Practice Guidance
IFAD	International Fund for Agricultural Development
IPAA	Information and Public Awareness Assistant
IPCC	Intergovernmental Panel on Climate Change
IR	Inception Report
KP	Kyoto Protocol
LEAP Ltd	Long-range Energy Alternatives Planning (software) Limited
LULUCF	Land Use, Land-use Change and Forestry
MARKAL	Energy Technology Systems Analysis Program
MCA	Millennium Challenge Account
MDGs	Millennium Development Goals
MNP	Ministry of Nature Protection
M&E	Monitoring and Evaluation
NAMA	Nationally Appropriate Mitigation Actions
NAP	National Adaptation Program
NC	National Communication
NCSP	National Communications Support Program
NGO	Non-governmental Organization
NIM	National Implementing Modality
NPC	National Project Coordinator
NPD	National Project Director
NSS	National Statistical Service
OSCE	Organization for Security and Cooperation of Europe
PIR	Project Implementation Report
POB	Project Outcome Board

PSC	Project Steering Committee
PTL	Project Task Leader
QA	Quality Assurance
QC	Quality Control
QPR	Quarterly Progress Report
RA	Republic of Armenia
SBAA	Standard Basic Assistance Agreement
SDP	Sustainable Development Program
SNC	Second National Communication
SNCO	State Non-commercial Organization
SPAN	Specially Protected Area of Nature
TL	Team Leader
TNC	Third National Communication
TOR	Terms of Reference
TR	Technical Report
TT	Technology Transfer
UN	United Nations
UNCBD	United Nations Convention on Biological Diversity
UNCCD	United Nations Convention to Combat Desertification
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
USD	United States Dollar
V&A	Vulnerability and Adaptation
WB	World Bank
WMO	World Meteorological Organization

Chemical Combinations

CO ₂ eq.	carbon dioxide equivalent
CH ₄	methane
SO ₂	sulfur dioxide

Measurement Units

Gg	gigagram
m	meter
km ²	square kilometer
°C	degree Celsius

I. SITUATION ANALYSIS

1. The Republic of Armenia (Armenia) is a landlocked mountainous country with a total area of 29.74 km² and population approx. 3.2 mln. 75.6% of Armenia's territory is 1000-2500 m above the sea level, with the lowest point being at 375m above sea level and the highest point - at 4095m. Due to the high vertical alternation, 10 landscape zones (from semi-desert to snowy highlands) and 6 climatic patterns (from dry sub-tropical to frosty highlands) are available in the country. The location and relief of Armenia has contributed to the formation of rich biodiversity and various types of natural ecosystems. The temperature ranges from -41⁰C to +42⁰C, and precipitation from 200 to 1000mm.

2. Due to the mountainous nature of the country the **water resources** are distributed unevenly in terms of spatial and seasonal distribution. Climate change (CC) renders considerable changes in the river flow regimes. Changes in water quality, quantity and flow regimes inevitably impact water ecosystems, irrigated agriculture, communal water use, infrastructures (combined with activation of landslides and mudflows) and hydropower production (the only local source of energy). One of the largest alpine and freshwater lakes of the world, Lake Sevan, which is located at 1916m above sea level and occupies one-sixth of the country's territory and is strategically important for the socio-economic development of Armenia – is at high risk to climate change.

3. As the climate in the country is formed through vertical zoning, even minor climate variation causes substantial alterations in flora and fauna, the representatives of which are compelled to change their habitats - often with no place for retreat. Armenia has small **forest covered area** (10.4%) situated on 550-2500m altitude. Armenia's forests are categorized with their protective, special and production significance. Forest ecosystems in Armenia have been identified as a global conservation priority as they fall under the Caucasus-Anatolian-Hyrcanian Temperate Forests Eco-region. However, deforestation and illegal logging persist owing to poor law enforcement and poverty. **Desertification** and **land** degradation are also key challenges under climate change impacts. Armenia's **agriculture**, which provides 43% of the total labor force in Armenia, with a share of about 18% in the gross domestic product (GDP), is under high risk by climate variability and climate change with severe socio-economic implications.

4. As a post-Soviet Republic, Armenia's **economic policy** was shaped in mid 1990s. During 1995-2000 economic stability and growth was recorded in Armenia after the period of recession. Remarkable development was achieved over the last decade, in 2007 the GDP per capita reached USD 3,000, due to which Armenia's status was elevated from a low to middle-income country. Structural changes of the economy resulted in changes to the composition of GDP - with a decrease in the share of industrial production and an increase in the share of construction and services. Armenia's **greenhouse gas emissions** (GHG) have decreased sharply since the collapse of the Post Soviet Country- from 24,218 Gg CO₂ eq. in 1990 to 6,635 Gg CO₂ eq. in 2000, accounting for approx. 0.02% of global emissions. The main source of emissions is the energy sector accounting for 69% of total emissions in 2006. Based on the projections for future emissions under "business-as-usual"

(BAU) scenario, it is expected that total GHG emissions in the country will grow 3.5 times by 2020.

5. Regarding its **commitments** under the UNFCCC as a non-Annex I Party to the Convention (Armenia ratified the Convention in 1993 and the Kyoto Protocol in 2002), Armenia has prepared and submitted to the Conference of Parties two National Communications (NCs): First National Communication (FNC) in 1998 and the Second National Communication (SNC) in 2010. In January 2010, the Government of Armenia (GoA) associated itself to the Copenhagen Accords and submitted on the voluntary basis the framework of nationally appropriate mitigation actions to the UNFCCC Secretariat.

6. The **Government** considers the environment to be an integral component for sustainable development and will work to achieve the protection and improvement of the use of natural resources. In August 2009 the Government established the National Council for Sustainable Development headed by the Prime Minister with responsibility for coordination, monitoring and evaluation of sustainable development activities in the country. Priority issues for economic development of the country are addressed in the frames of the 2008-2012 Socio-Economic Development Program of the RA Government, the Sustainable Development Program (SDP, 2008) and the Millennium Development Goals (MDGs). The Government has been very active in climate change negotiations. Armenia is a member to the UNFCCC informal negotiation group CACAM (Central Asia, Caucasus, Albania and Moldova) established during COP 6 in 1999 and together with Tajikistan and Kyrgyzstan is in the group of “Landlocked Mountainous Developing Countries” established in 2010.

7. The **United Nations** (UN) system in Armenia has developed the second *UN Development Assistance Framework (UNDAF)* for 2010-2015 in line with the main national development priorities. According to the latter, the UN system in Armenia will support the country in its development efforts, will ensure national ownership of UN programmes and projects, and further develop Armenia’s individual and institutional national capacities. It will also ensure that “by 2015 national authorities implement environment and disaster risk reduction in the framework of national and local development programmes”. In 2009 the UNDP’s *Country Program Document* was approved for 2010-2015, according to which UNDP will contribute to the achievement of two outcomes under Environmental Governance: “*Development and introduction of policy frameworks to ensure conservation and sustainable use of national resources at national and local levels, including climate change adaptation and mitigation*”. Since 1996 UNDP has supported Armenia in focusing assistance towards compliance with international conventions, aiming at capacity development to implement global environmental conventions primarily through UNDP/GEF portfolio for climate change - over a dozen projects have been implemented/completed since then and 4 are currently ongoing.

II. PROJECT’S DEVELOPMENT AND MAIN OBJECTIVES

8. **Project Development Objective.** The project will strengthen **technical and institutional capacity** to facilitate the process of feeding climate change issues into national development policies and strategies. Thus, it will enable the country to

climate proof planning process, acknowledging that climate change is rather a sustainable development than an environmental issue.

9. The project will contribute to the global efforts of mitigating climate change and will guide the development of nationally appropriate mitigation actions (**NAMA**) framework to support achievement of the ultimate objective of the UNFCCC - "to stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system". The Project will also guide the development of the adaptation strategy and National Adaptation Programme (**NAP**).

10. The project will help to identify and, to the extent feasible, develop **projects** related to adaptation to climate change and abatement of greenhouse gas emissions; projects which may be eligible for funding or co-funding by GEF, other multilateral or bilateral organizations, as well as under KP's CDM. Moreover, the project will strengthen the national capacity of Armenia to participate in different mechanisms of the UNFCCC.

11. The project will continue to enhance general **awareness** and **knowledge** on climate change related issues in Armenia, and strengthen the dialogue, information exchange, awareness and cooperation among all relevant stakeholders, including governmental, non-governmental, academic and private sector in accordance to Article 6 of the UNFCCC and Buenos Aires Plan of Action.

12. **Project immediate objective.** The project will enable Armenia to prepare and submit its Third National Communication (**TNC**) to the UNFCCC in accordance with its commitments under Articles 4 and 12 of the Convention.

III. STRATEGY

13. This project will support addressing one of the **UNDAF** (2010-2015) and **Country Program Document** (2010-2015) priorities: further enhancement of the national capacities for environmental governance, including effective management of natural resources, support to introduction and transfer of cleaner technologies, energy efficiency/renewable energy and environmental education in accordance with the MDGs and SDP.

14. The UNDP has a strong comparative advantage in supporting preparation of the TNC, because of managing the **National Communications Support Programme** (NCSP) with the funding of the GEF. The NCSP has been working with more than 130 developing countries, providing technical and policy support for over a decade. The international knowledge network provided by the NCSP will be fundamental in ensuring quality results for the Project.

15. The project will build on the **previous work** done under Armenia's First and Second National Communications and will involve the key experts and institutions involved in compilation of the most recent NC in order to maintain continuity in the NC preparation process. Additional experts and institutions will be identified and

consulted as needed, including a short term international consultant to provide advice on specific aspects of adaptation strategy for Armenia. In the frames of the TNC it is envisaged to strengthen participation of national professionals in the trainings and workshops organized by the UNFCCC Secretariat, UNDP/GEF NCSP and other agencies to foster internal networking and exchange of experience among national and international experts. The role of the Project Steering Committee will be critical for the success of this strategy. The strategy of partnership with governmental institutions, academia, NGOs and international organizations, found successful from the experience in Armenia's FNC, SNC and other projects, will be utilized. Cooperation with the private sector will be strengthened to promote investments in introduction and transfer of climate technologies.

16. Working on priority areas/issues identified under the **stocktaking exercises** will be the key approach of the Project. The key emphasis of the Project will be on GHG inventory and assessment of vulnerability. Building on the results of these studies, the options to mitigate climate change by addressing GHG emissions and facilitating adaptation to climate change in priority sectors and selected area will be analyzed and reviewed in the light of country development context. Gaps, uncertainties and constraints along with other information related to the UNFCCC implementation will be addressed as indicated by 17/CP.8. Finally, the information compiled and analyzed during the project will be communicated to the COP in the form of the Third National Communication of Armenia.

17. **Synergies** with other climate change ongoing activities/projects will be utilized. Strengthening the coordination process with relevant conventions (UNCBD, UNCCD, Montreal Protocol, etc.) and sustainable development programmes (SDP, MDGs, etc) will be the most important strategic step of the project for successfully **mainstreaming** climate change issues into Action Plans of these Conventions and country's sectoral plans. The project will respond to these issues by developing analytical reports, facilitating and promoting public participation and awareness raising through workshops, seminars, electronic networks, and by other initiatives.

18. The crucial element determining the success of the project will be the close **collaboration** of all relevant national stakeholders, including ministries, agencies, NGOs and programmes at the institutional level, as well as close collaboration of the project personnel at the individual level. A key focus of the project will also be promoting **regional cooperation** in assessing climate change impact and scenarios on the regional level, as relevant.

IV. PROJECT ACTIVITIES

Project Outcomes, Outputs and Activities

Outcome 1: National Circumstances

Output 1.1: National circumstances reviewed, updated and described

Activities

- 1.1.1 *In cooperation with the National Statistical Service (NSS) of the Republic of Armenia, analyze the data and information provided in the SNC within the light of new developments in the country. Responsible Parties: Team leaders (TLs), national experts, Information and Public Awareness Assistant (IPAA).*
- 1.1.2 *Identify the respective sources of information and compile relevant data and information from different sources, fill the gaps, update and add new information according to the guidelines for the National Circumstances section. Responsible Parties: TLs, national expert, IPAA.*
- 1.1.3 *Draft, discuss, agree and revise the National Circumstances section under the TNC according to the guidelines set by 17/CP8. Responsible Parties: national expert, IPAA.*
- 1.1.4 *Finalize the National Circumstances section of the TNC. Responsible Parties: national expert.*

Outcome 2: GHG Inventory

Output 2.1: GHG inventory team maintained and strengthened

Activities

- 2.1.1 *Identify and mobilize national experts in targeted sectors and corresponding areas. Agree on institutions' involvement in the GHG inventory preparation process and establish a working group. Responsible Parties: National Project Coordinator (NPC), Project Task Leader (PTL), TL.*
- 2.1.2 *Train national partners and experts on IPCC new requirements and methodologies for GHG inventory. Responsible Parties: TL, national consultants.*
- 2.1.3 *Agree with the NSS of the Republic of Armenia on the arrangements and coordination of the inventory work. Responsible Parties: NPC, PTL, TL, national experts/consultants.*

Output 2.2: Methodologies for conducting GHG inventory analyzed, selected and validated

Activities

- 2.2.1 *Review the existing information on the Second GHG Inventory archived and documented in the Manual of Procedures for GHG national inventory. Responsible Parties: TL, national experts.*
- 2.2.2 *Revise the GHG inventory software based on the changes and format suggested by IPCC 2006 guidelines. Responsible Parties: TL, experts.*
- 2.2.3 *Identify all new sources of information for filling data gaps. Responsible Parties: TL, national experts.*
- 2.2.4 *Decide on the methodology for GHG emissions estimation relying on the IPCC GPG package of methodologies. Responsible Parties: TL, national consultants, national experts.*

- 2.2.5 *Decide the source categories, on which data collection for filling the gaps will be carried out.* Responsible Parties: NPC, TL, national consultants, national experts.
- 2.2.6 *Develop a methodology for assessing emissions of SO₂ from copper and molybdenum production and other GHG precursor emissions.* Responsible Parties: TL, national consultants.
- 2.2.7 *Review and update the quality assurance and quality control (QA/QC) plan.* Responsible Parties: TL, QA/QC expert.

Output 2.3: GHG inventory data collected

Activities

- 2.3.1 *Identify all possible sources of data and new data for estimation of 2006 and 2010 GHG emissions, set up the process of required data collection in cooperation with the NSS of the Republic of Armenia.* Responsible Parties: NPC, TL, national experts/consultants.
- 2.3.2 *Collect all required data for base year GHG inventory of 2010, time series of 2006-2010. Complete the missing data of 2006 for all categories of sources, according to their priority - natural gas combustion, enteric fermentation, motor vehicle engine emissions, fugitive emissions from fuels and gas supply, emissions from the solid waste treatment/disposal etc.* Responsible Parties: TL, national experts/consultants.
- 2.3.3 *Enter the collected data into the software.* Responsible Parties: TL, national expert.
- 2.3.4 *Analyze the collected data and identify the errors, inaccuracies and uncertainties.* Responsible Parties: TL, national experts.
- 2.3.5 *Define emission factors for the purpose of their application in the Inventory. Identify the research needs for development of national emission factors.* Responsible Parties: TL, national experts.
- 2.3.6 *Identify, assess and minimize uncertainties associated with the GHG emissions (removals), including through field research, in the sectors: Agriculture, Forestry and Other Land Use (AFOLU); methane fugitive emission in gas transmission and distribution systems.* Responsible Parties: TL, national experts/consultants.

Output 2.4: 2010 National inventory of GHG emissions by sources and removals by sinks according to the IPCC guidelines completed. Time series of GHG emissions of 2006-2010 by sectors and categories developed.

Activities

- 2.4.1. *Re-calculate GHG emissions Inventory for 2000.* Responsible Parties: TL, national experts.
- 2.4.2. *Prepare draft inventory of sources and sinks for 2010 and time series for 2006-2010.* Responsible Parties: TL, national experts/consultants.

- 2.4.3. *Develop the key source analysis for 2006 and 2010, and conduct a sensitivity analysis (2000-2010), as specified in the IPCC GPG Guidelines.* Responsible Parties: TL, national experts/consultants.
- 2.4.4. *Carry out an uncertainty analysis, in particular, as specified in the IPCC GPG Guidelines.* Responsible Parties: TL, national experts/consultants.
- 2.4.5. *Compile the national GHG inventory of anthropogenic emissions for 2010 by sources and removals by sinks, according to the IPCC Guidelines.* Responsible Parties: TL, national experts/consultants.
- 2.4.6. *Circulate the draft inventory for internal/external review as part of QA/QC plan and based on the results make necessary revisions.* Responsible Parties: NPC, PTL, TL, international consultant.
- 2.4.7. *Organize a national workshop to present the findings of the GHG Inventory and get additional comments.* Responsible Parties: NPC, PTL, TL, IPAA.
- 2.4.8. *Incorporate the comments received from the review process, prepare National GHG Inventory report for publication and place on the website of the Climate Change Information Centre.* Responsible Parties: TL, national experts, IPAA.
- 2.4.9. *Finalize the Inventory Report as part of the TNC of the Republic of Armenia.* Responsible Parties: NPC, PTL, TL.

Output 2.5: GHG inventory data and estimates documented and archived

Activities

- 2.5.1. *Document and archive activity data, emission factors, references and estimates.* Responsible Parties: TL, national experts, IPAA.
- 2.5.2. *Update the Manual of Procedures and National Inventory Report with new GHG inventory data and estimates.* Responsible Parties: TL, national experts.

Outcome 3: Programmes containing measures to mitigate climate change

Output 3.1: Necessary data and relevant information collected and analyzed

Activities

- 3.1.1 *Assess to what extent climate change mitigation measures reported in the SNC have been realized, and develop corresponding comments and recommendations on BAU and “with measures” scenarios.* Responsible Parties: NPC, TL, national experts/consultants.
- 3.1.2 *Consider the estimates of the GHG inventory of 2006 and the base year 2010 as starting point for the analysis of emissions towards 2030.* Responsible parties: TL, national experts/consultants.
- 3.1.3 *Collect all relevant macroeconomic data and set assumptions for emission scenario development. This should include data from the new energy balance*

and from all sectoral economic plans. Responsible parties: TL, national experts/consultants, IPAA.

- 3.1.4 *Process the compiled data in the required format for entering in the GHG emissions scenarios generation software.* Responsible Parties: TL specialized institution.
- 3.1.5 *Update the developments in the relevant policy and legal framework for mitigation scenario development.* Responsible Parties: NPC, TL, IPAA, national experts/consultants.

Output 3.2: Revised GHG Baseline Scenario developed

Activities

- 3.2.1 *Re-visit the measures carried out during 2005-2010, which were not envisaged in the “with measures” scenario under the SNC, and include them in the revised baseline scenario.* Responsible parties: TL, national experts.
- 3.2.2 *Develop a revised 2005-2010-2030 GHG emissions BAU scenario for the energy sector using the LEAP or MARKAL software.* Responsible Parties: TL, specialized institution.
- 3.2.3 *Develop a revised 2005-2010-2030 GHG emissions BAU scenario for non-energy sectors using the corresponding software.* Responsible Parties: TL national experts.
- 3.2.4 *Develop a final revised 2005-2010-2030 BAU scenario that will cover the BAU scenarios of all sectors.* Responsible Parties: TL, national experts.
- 3.2.5 *Identify any deviations from the GHG BAU scenario developed under the SNC and, if any, provide comments on the reasons for such deviations.* Responsible Parties: TL, national experts.

Output 3.3: CC mitigation scenario developed/updated

Activities

- 3.3.1 *Develop/update the CC mitigation scenario for the energy sector for the period of 2005-2010-2030, by using the selected software.* Responsible Parties: TL, specialized institution.
- 3.3.2 *Estimate the GHG reduction against the BAU scenario for the energy sector, cost of reduction and effectiveness of each measure.* Responsible Parties: TL, specialized institution.
- 3.3.3 *Develop/update the CC mitigation scenarios for non-energy sectors by using the corresponding software.* Responsible Parties: TL, national experts.
- 3.3.4 *Develop/update the final CC mitigation scenario, which will include the mitigation scenarios of all sectors.* Responsible Parties: TL, national experts.
- 3.3.5 *Identify any deviations from the mitigation scenario developed under the SNC and, if any, provide comments on the reasons for deviations.* Responsible Parties: NPC, TL, national experts.

Output 3.4: CC Mitigation Analysis for 2005-2010-2030 completed

Activities

- 3.4.1. *Develop, discuss, agree and revise the draft chapter of the CC mitigation analysis.* Responsible Party: TL, PTL.
- 3.4.2. *Finalize the CC mitigation analysis chapter to be submitted as a part of the TNC.* Responsible Parties: NPC, TL, national experts.
- 3.4.3. *Archive and document all the CC mitigation analysis related studies and assessments.* Responsible Parties: NPC, TL, IPAA.

Outcome 4: Programs containing measures to facilitate adequate adaptation to climate change

Output 4.1: Organizational issues for development of the Vulnerability and Adaptation (V&A) Chapter arranged

Activities

- 4.1.1 *Organize a workshop on vulnerability and adaptation issues to present the related activities undertaken to date, the strategically important developments in various sectors, needs and opportunities, including in the areas of scientific research, technologies, finance and organizational issues.* Responsible Parties: NPC, PTL, IPAA.
- 4.1.2 *Revise/prepare the list of vulnerable sectors and the specific sub-sectors and decide on the range of the assessment: qualitative versus quantitative. Decide on the approaches, tools and methods to be used for the assessment.* Responsible Parties: NPC, TL, IPAA.
- 4.1.3 *Develop terms of references, select and bring on board national experts and specialized institutions.* Responsible Parties: PTL, TL, IPAA.
- 4.1.4 *Develop the detailed work plan of each expert and institution (including for research, modeling, technological applications, and coordination with stakeholders).* Responsible Parties: PTL, TL.
- 4.1.5 *Organize and conduct training for national experts on new methods of climate change impact assessment and adaptation approaches.* Responsible Parties: PTL, TL, IPAA.
- 4.1.6 *Validate, select or adapt best methodologies for vulnerability assessment.* Responsible Parties: NPC, TL, national experts/consultants.

Output 4.2: Data collected, including an electronic database established, data archived, vulnerability assessed, including for a pilot area

Activities

- 4.2.1 *Identify the type and scope of data and information needed for using the CC impact forecasting models and tools.* Responsible Parties: TL, national experts/consultants.

- 4.2.2 *Establish a data collection system for vulnerability assessment (in cooperation with scientific institutions and the NSS). Responsible Parties: NPC, TL, national experts/consultants.*
- 4.2.3 *Collect and synthesize the necessary data/information and maintain continuous consultations with stakeholders. Responsible Parties: TL, national experts/consultants.*
- 4.2.4 *Review the policy process and development context for the selected sectors in order to explore how vulnerability issues are addressed and adaptation measures integrated into the sectoral policies and decision-making agenda. Responsible Parties: TL, national experts/consultants.*

Output 4.3: Current vulnerability and adaptation of the selected priority sectors/areas assessed

Activities

- 4.3.1. *Develop respective indicators for baseline development. Responsible Parties: NPC, TL, national consultants.*
- 4.3.2. *Develop a climate baseline for priority sectors considering the baseline identification methodology according to technical papers suggested by NCSP, CGE and IPCC. Responsible Parties: TL, national experts/consultants.*
- 4.3.3. *Develop a socio-economic baseline. Responsible Parties: TL, national experts/consultants.*
- 4.3.4. *Assess current vulnerability of sectors to the climate change. Responsible Parties: TL, national experts/consultants, specialized institution.*
- 4.3.5. *Assess any previous adaptation experience in priority sectors, if available, with consideration of “ecosystem approach”. Responsible Parties: TL, national experts/consultants.*
- 4.3.6. *Conduct vulnerability assessment of the selected pilot area/community in Vayots Dzor marz. Responsible Parties: TL, national experts/consultants, specialized institution.*

Output 4.4: Future climate risk and adaptation measures for priority sectors assessed

Activities

- 4.4.1 *Study extreme climatic risks; recommend implementation of Climate Watch system. Adapt long-term climate prediction methodologies for national circumstances. Responsible parties: national expert/consultants, specialized institution.*
- 4.4.2 *Explore the possibility of using non-meteorological (alternative) data sets, develop improved decadal as well as centennial climate change scenarios for Armenia using new data sets (CMIP5, CORDEX). Responsible parties: national consultants, specialized institution.*
- 4.4.3 *Apply statistical and/or dynamical downscaling technique for development of fine resolution scenarios; assess change of hydro meteorological vulnerability*

of the territory of Armenia due to climate change. Responsible parties: national consultants, specialized institution.

- 4.4.4 *Select a climate change scenario (scenarios) and conduct vulnerability assessment for all priority sectors and specific sub-sectors by utilizing the recommended and selected models. Develop corresponding maps.* Responsible Parties: TL, national experts/consultants, specialized institution.
- 4.4.5 *Develop environmental-socio-economic trends and risks.* Responsible Parties: NPC, TL, national experts/consultants.
- 4.4.6 *Develop adaptation response measures, select appropriate measures for all sectors and sub-sectors, prioritize them, and identify barriers and opportunities.* Responsible Parties: NPC, PTL, TL, national experts/consultants, international consultant.
- 4.4.7 *Compile an integrated long-term national adaptation policy framework paper and measures.* Responsible Parties: TL, international consultant, national experts/consultants.
- 4.4.8 *Develop recommendations for adaptation of the selected pilot area/community in Vayots Dzor marz and elaborate pilot project proposals.* Responsible Parties: TL, national experts/consultants, international consultant.
- 4.4.9 *Organize a national workshop to highlight findings from the V&A study and get more comments.* Responsible Parties: NPC, PTL, TL, national experts/consultants, IPAA.

Output 4.5: Vulnerability and Adaptation Chapter completed

Activities

- 4.5.1 *Develop, discuss, agree and revise the draft V&A Chapter.* Responsible Parties: NPC, PTL, TL, national experts/consultants, IPAA.
- 4.5.2 *Finalize the V&A chapter as part of Armenia's TNC.* Responsible Parties: TL.
- 4.5.3 *Archive and document all the V&A related studies, assessments and conclusions.* Responsible Parties: TL, IPAA.

Outcome 5: Other information considered relevant to the achievement of the objective of the Convention

Output 5.1: Information on research and systematic observations compiled and synthesized

Activities

- 5.1.1. *Evaluate the technical capacity of national observation network and develop an action plan on strengthening and improving observation network, which will lead to reduction of climate change assessment uncertainties and improvement of the quality of climate products, services.* Responsible parties: NPC, national expert/consultants.

- 5.1.2. *In cooperation with stakeholder scientific institutions, develop long- and short-term scientific-research projects/action plan based on current issues and needs.* Responsible parties: NPC, national consultants.
- 5.1.3. *Develop long-term plan for improvement of climatic monitoring system for the period of 2012-2020, including the use of satellite derived products. Develop recommendations for improvement of the early warning system.* Responsible parties: NPC, TL, experts/national consultants.
- 5.1.4. *Develop the section on Research and Systematic Observations, as part of "Other information considered relevant to the achievement of the objective of the Convention" Chapter.* Responsible parties: NPC, PTL, national consultant.

Output 5.2: Information on technology development, introduction and transfer compiled and synthesized

Activities

- 5.2.1 *Assess the institutional structures dealing with transfer, development and deployment of innovative technologies under the Climate Change Convention and other international processes for selecting and adapting the best practices.* Responsible parties: NPC, national experts/consultants.
- 5.2.2 *Increase awareness in the country on the COP16 (Cancun) decisions, develop recommendations on establishment of the "National Centre/network for Climate Change Technologies".* Responsible parties: NPC, UNDP Climate Change Program Coordinator (UNDP CCPC).
- 5.2.3 *Assist in establishment of a clearing house for the best available technologies, based on the COP decisions, IPCC Guidelines, as well as using the TT: Clear web site.* Responsible parties: NPC, national experts/consultants.
- 5.2.4 *Develop, discuss, agree and amend the "Transfer, development and deployment of best available innovative technologies" section.* Responsible parties: NPC, PTL, IPAA, national consultant.
- 5.2.5 *Finalize the section for incorporated into the TNC.* Responsible parties: national consultant.

Output 5.3: Information on education, training and public awareness compiled and synthesized

Activities

- 5.3.1 *Identify the new developments in the areas of education, training and awareness, under climate change postdating the SNC.* Responsible parties: TL, national experts/consultants.
- 5.3.2 *Identify institutions/organizations active in training and awareness raising on climate change issues, support to capacity development.* Responsible parties: national experts/consultants.
- 5.3.3 *Support development, publication and dissemination of climate change curriculum and methodological materials for all educational levels, as well as outreach materials on climate change issues, including Climate Change e-*

Newsletters. Update the Project website. Responsible parties: NPC, PTL, TL, national experts/consultants, IPAA.

- 5.3.4 *Support drafting the status and scope of work of the Educational and Scientific Centre for Climate Change (ESCCC), discuss and agree with stakeholders (Ministry of Education and Science, higher educational establishments).* Responsible parties: NPC, PTL, TL, national experts/consultants.
- 5.3.5 *Organize outreach events to raise the awareness of population on climate change risks and possible adaptation measures.* Responsible parties: NPC, PTL TL, IPAA.
- 5.3.6 *Develop, discuss, agree and revise the “Education, training and public awareness” Section.* Responsible parties: TL, national consultants, IPAA.
- 5.3.7 *Finalize the above section for incorporation into the TNC.* Responsible parties: national consultant.

Output 5.4: Chapter on other information completed

Activities

- 5.4.1 *Develop corresponding draft chapter of the TNC with its components.* Responsible parties: NPC, PTL, national consultant.

Outcome 6: Constraints, gaps and related financial, technical and capacity needs

Output 6.1: Constraint, gaps and related needs (financial, technical and capacity) identified and reported

Activities

- 6.1.1 *Review the status of the constraints and gaps from the previous NC.* Responsible parties: NPC, TLs, national experts/consultants.
- 6.1.2 *Identify new constraints and gaps for each thematic area.* Responsible parties: NPC, TLs, national experts/consultants.
- 6.1.3 *Summarize constraints, gaps and needs identified; discuss, agree and revise the synthesis report.* Responsible parties: NPC, TLs, national experts/consultants, IPAA.
- 6.1.4 *Finalize the above chapter as part of Armenia’s TNC.* Responsible parties: TLs.

Outcome 7: SNC Submission

Output 7.1: TNC produced/published, translated, submitted and disseminated

Activities

- 7.1.1 *Compile the draft version of Armenia's TNC.* Responsible parties: expert on TNC compilation.
- 7.1.2 *Circulate the draft for comments, receive, review and incorporate the comments into the final document.* Responsible parties: NPC, UNDP CCPC, PTL, expert on TNC compilation, IPAA.
- 7.1.3 *Organize a national workshop to present the findings of Armenia's TNC.* Responsible parties: NPC, PTL, IPAA.
- 7.1.4 *Finalize the TNC of Armenia.* Responsible parties: PTL, expert on TNC compilation, proofreader, translator, IPAA.
- 7.1.5 *Publish Armenia's TNC on hard and electronic copies.* Responsible parties: PTL, designer, publishing house, IPAA.
- 7.1.6 *Submit officially Armenia's TNC to the UNFCCC Secretariat.* Responsible parties: NPC.
- 7.1.7 *Disseminate TNC.* Responsible parties: NPC, UNDP CCPC, PTL, IPAA.
- 7.1.8 *Present the TNC in a side event during the COP/Subsidiary Body sessions.* Responsible parties: NPC, UNDP CCPC.

V. INSTITUTIONAL FRAMEWORK AND PROJECT MANAGEMENT ARRANGEMENTS

19. The **National Executing Agency** of the project will be the **Ministry of Nature Protection of RA (MNP)**, serving as Government counterpart, and will be responsible for the overall management and supervision of the project, following the UNDP National Implementation Modality (NIM). Being the national authorized body for the UNFCCC implementation in Armenia, MNP has coordinated the climate change program of UNDP-GEF since 1997. The MNP will ensure harmony between the project, its outcomes and general country environmental policy and priorities.

20. **The UNDP Country Office** in Armenia will act as an **Implementing Agency** for the project, will play a key role in interaction with the participants from the state, private and civil sector and will render the following services to support the project in accordance with the established policies and procedures:

- (i) Identification and recruitment of the project personnel;
- (ii) Procurement of equipment, labor and services;
- (iii) Identification and facilitation of training activities, seminars and workshops;
- (iv) Financial monitoring, reporting and audit;
- (v) Processing of direct payments;
- (vi) Supervision of project implementation, monitoring and assistance in project assessment.

The overall back-up of the project will be ensured by the UNDP HQ in NY.

21. The **UNFCCC Focal Point**, acting as **Project National Coordinator**, will provide strategic guidance and support on behalf of the Ministry of Nature Protection/ Government, as well as represent the interests of the project within the Ministry and the Government and ensure relevance and contribution of the project to the national capacity building work and implementation of national commitments under UNFCCC.

The NPC will coordinate the overall project execution activities and will be responsible for meeting the objectives of the project.

22. In order to ensure sustainability and linkages with climate change enabling activities already implemented in the country, the UNDP **Climate Change Program Unit** established in the frames of Armenia's FNC and strengthened in the course of various climate change projects under coordination of the MNP will carry out the day-to-day implementation of the project (see Fig. 1. *Climate Change Program Unit Structure*). The Unit will serve as a support unit to the National Focal Point for the UNFCCC and Kyoto Protocol.

23. As part of the project management arrangements, the **Project Steering Committee (PSC)**¹, established and operating in the frames of previous enabling activities, will continue to act as an advisory body to the project providing high-level guidance, policy input and support, facilitating communication, cooperation and coordination among stakeholders and other project partners. The PSC will be charged to monitor implementation of the project activities according to the approved AWP and approve any essential deviations from it if necessary. The PSC will be composed of representatives from the Ministry of Nature Protection, as the project executing agency, the UNDP, as the implementing agency, as well as the Ministry of Energy and Natural Resources, Ministry of Urban Development, Ministry of Economy, Ministry of Territorial Administration, Ministry of Agriculture, Ministry of Health, Ministry of Emergency Situations, Ministry of Education and Science, National Statistical Service, representatives of international donor agencies, academia, private sector and NGOs.

24. A full time **Project Task Leader (PTL)/Expert** will be brought in to provide necessary management and technical backstopping to the **Climate Change Program Coordinator**. The recruitment of PTL will be carried out according to the UNDP procedures. The PTL will be fully responsible for direct execution of the project and coordination of project activities. He/she will have the right to implement the planned activities in accordance with the AWP approved by the UNDP and the Ministry of Nature Protection. The PTL will be accountable to the Climate Change Programme Coordinator and UNDP for planning, implementation quality, timeliness and effectiveness of the activities and proper use of funds. The PTL will be responsible for consultants' timely deliverables and their contributions to the overall project outputs.

25. To achieve the project outputs, a **project team** will be established and recruited on a competitive basis according to the UNDP rules and regulations. In order to successfully implement the project activities, it is preferable and advantageous to use the accumulated capacities, including personnel, experience and information, established, trained and strengthened during the previous enabling activities. Such approach will ensure smooth start up and implementation of the project. The project team will consist of Team Leaders (for GHG inventory, CC mitigation, V&A, and Other Information relevant to the UNFCCC objectives), National Experts and Consultants (from research institutes, relevant ministries, NGOs, etc.), Information and Public Awareness Assistant, who will be coordinated by the PTL

¹ PSC is an informal Committee.

and will be accountable to the UNDP Climate Change Programme Coordinator. Besides, the PTL will be supported by the Climate Change Program Unit Associate in administrative and financial issues, as well as by the IT specialist and volunteers. The Terms of Reference for the project key staff are provided in Annex F.

26. The **Project Management Team** will be responsible inter alia for: recruitment of international and national consultants, including candidate search/selection; preparation of TORs; supervision; project coordination, including organization of regular meetings with project implementing agency; financial management and accountability; issuance of payments; training staff on reporting; ensuring completeness and timeliness of reporting; technical reporting including preparation of progress reports; monitoring and evaluation; organization of training/workshop activities.

27. The institutional framework and management arrangements, according to the positive practice of SNC, will be maintained. The chart of institutional arrangements for project implementation is provided in Fig. 2.

28. Once the project implementation mechanisms have been established and in place, a project Inception workshop will be organized aimed at presenting objectives and activities of the project to stakeholders; clarifying the links between previous, ongoing and future climate change activities; identifying possible synergies with other activities; finalizing the project work plan and TORs. This workshop will also serve at raising awareness among the invited stakeholders about climate change issues.

Fig. 1. Climate Change Program Unit Structure (2011)

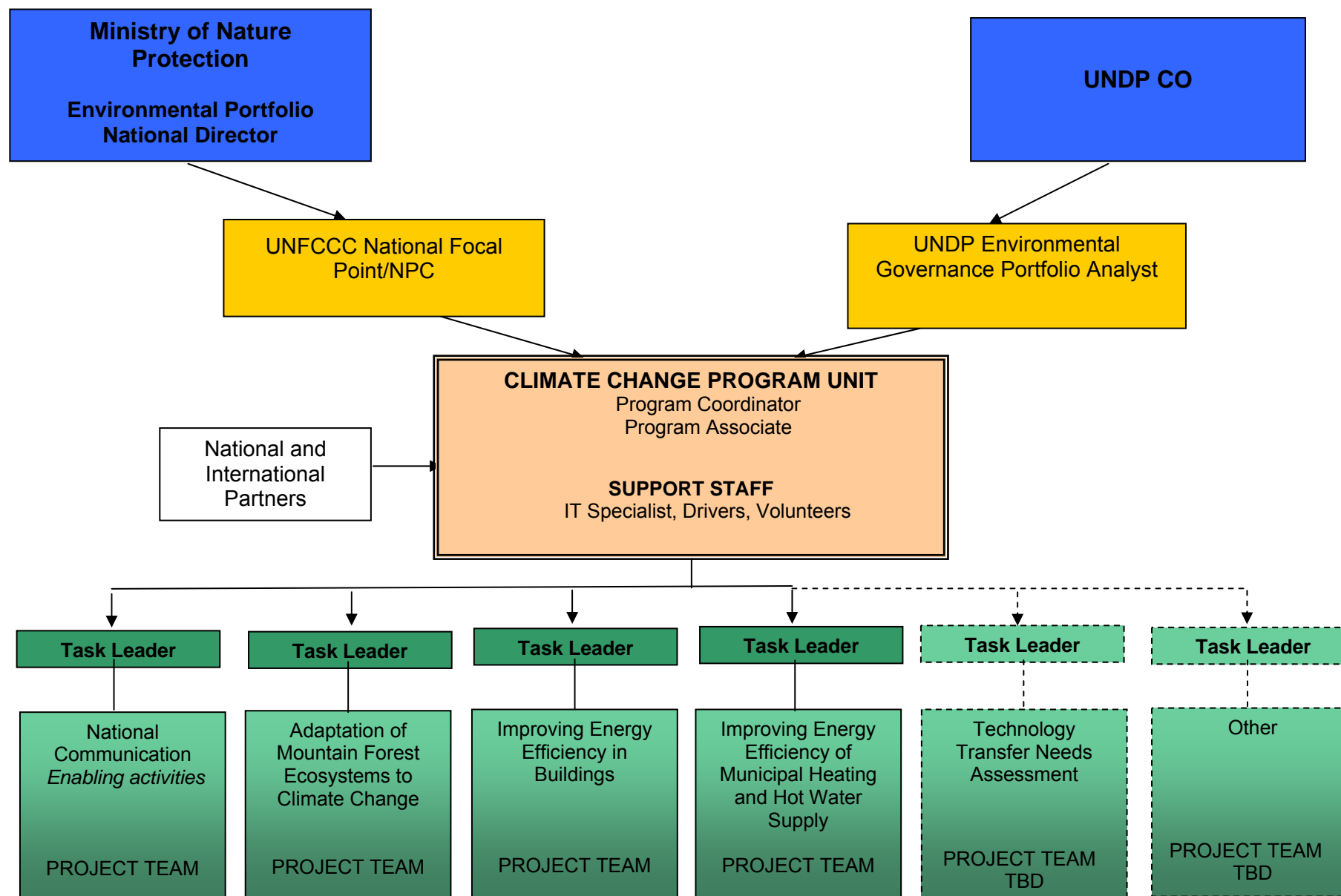
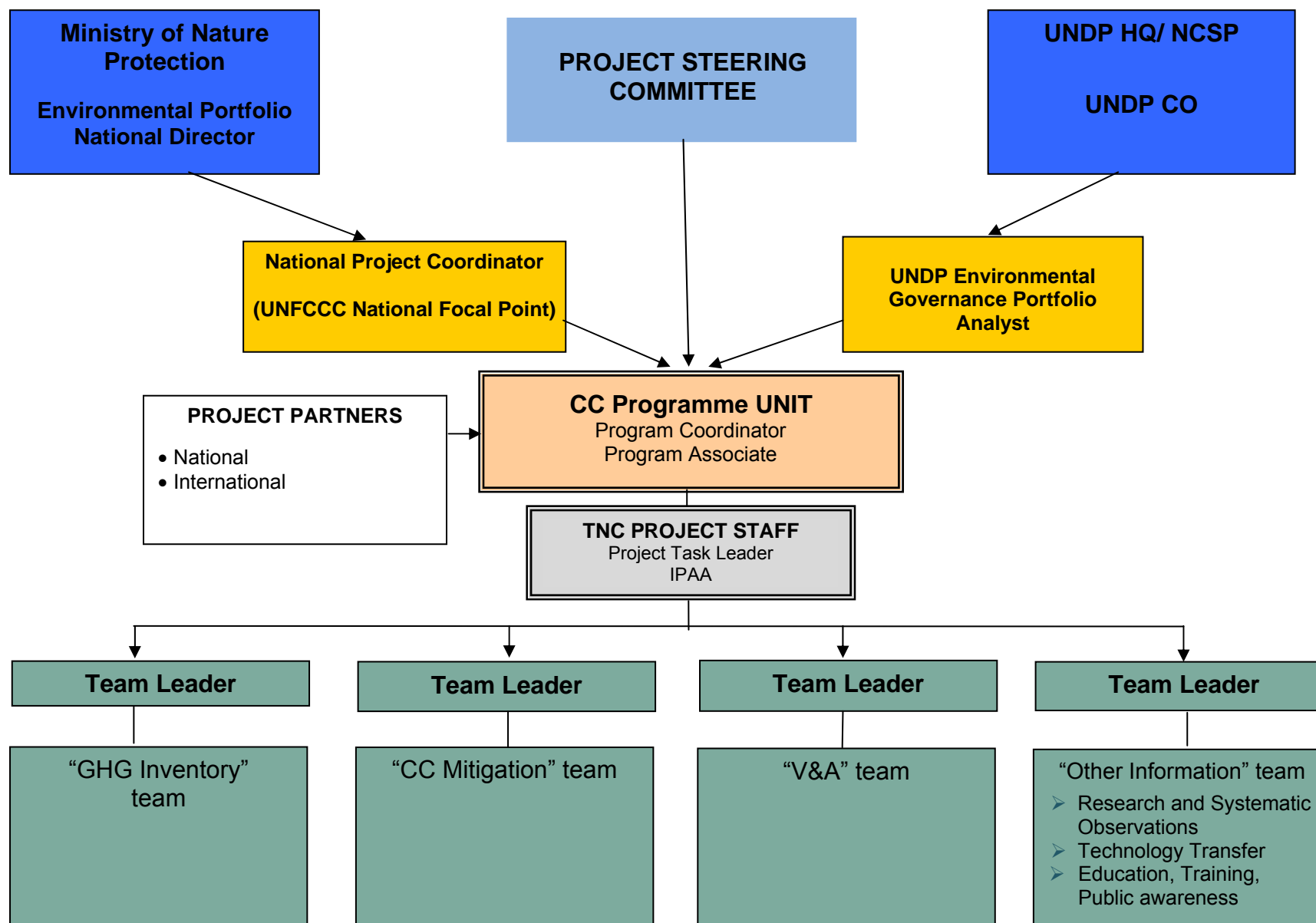


Fig. 2. Institutional Framework for Project Implementation



VI. MONITORING AND EVALUATION PLAN

29. In accordance with the programming policies and procedures outlined in the UNDP User Guide, the project will be monitored through the following:

Within the annual cycle

- (i) On a quarterly basis, a quality assessment shall record progress towards the completion of key results.
- (ii) An Issue Log shall be activated in Atlas, which will be updated by the PTL to facilitate tracking and resolution of potential problems or requests for change.
- (iii) Based on the initial risk analysis submitted (See Annex E), a risk log shall be activated in Atlas and regularly updated by reviewing the external environment that may affect the project implementation.
- (iv) Based on the above information recorded in Atlas, Quarterly Progress Reports (QPR) shall be submitted by the PTL to the PSC through Project Assurance, using the standard report format available in the Executive Snapshot.
- (v) A 'Lesson-learned' log shall be activated and regularly updated to ensure on-going learning and adaptation within the organization, and to facilitate the preparation of the Lessons-learned Report at the end of the project.
- (vi) A Monitoring Schedule Plan shall be activated in Atlas and updated to track key management actions/events.

Annually

- (i) **Annual Review Report.** An Annual Review Report shall be prepared by the PTL and shared with the PSC and the Outcome Board. As minimum requirement, the Annual Review Report shall consist of the Atlas standard format for the QPR covering the whole year with updated information for each above element of the QPR as well as a summary of results achieved against pre-defined annual targets at the output level.
- (ii) **Annual Project Review.** Based on the above report, an annual project review shall be conducted during the fourth quarter of the year or soon after, to assess the performance of the project and appraise the Annual Work Plan (AWP) for the following year. In the last year, this review will be a final assessment. This review is driven by the PSC and may involve other stakeholders as required. It shall focus on the extent to which progress is being made towards outputs, and that these remain aligned to appropriate outcomes.

Project Inception Phase

30. Monitoring and Evaluation (M&E) of the project will follow the UNDP Program Manual and GEF M&E procedures and will be conducted by the project team and the UNDP Country Office (UNDP-CO).

31. The M&E plan includes the following documents and activities: inception report, project implementation reviews, quarterly operational report. An M&E plan will be finalized at the

Project Inception Meeting following a collective fine-tuning of indicators, means of verification, and the full definition of project staff M&E responsibilities.

32. A Project Inception Workshop will be conducted with the project team, relevant government counterparts, the UNDP-CO, PSC and representation from relevant stakeholder agencies. A fundamental objective of this Inception workshop will be to assist the project team in understanding and taking ownership of the project's goal, objective and outcomes. It will also help to finalize preparation of the project's first annual work plan on the basis of the project's log frame matrix

Monitoring responsibilities and events

33. The day-to-day monitoring of implementation progress will be the responsibility of the PTL, whose work will be based on the project's annual work plan and its indicators. Annual monitoring will be carried out by the PSC, Ministry of Nature Protection and UNDP, which is the highest policy-level meeting of the parties directly involved in the implementation of a project. The first meeting will be held within the first twelve months following the inception workshop. A detailed schedule of PSC meetings to review project progress will be developed by the project management, in consultation with the project National Executing Agency - Ministry of Nature Protection, and stakeholder representatives and incorporated into the Project Inception Report. The Project Team will inform the UNDP-CO of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely and remedial fashion. Periodic monitoring of implementation progress will be undertaken by the UNDP-CO through semi-annual meetings with the National Executing Agency, 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 Reporting

34. The PTL, 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)

35. A Project Inception Report will be prepared immediately following the Inception Workshop. It will include a detailed First Year/Annual Work Plan divided in quarterly time-frames detailing the activities and progress indicators that will guide implementation during the first year of the project. The Inception Report will include a more detailed narrative on the institutional roles, responsibilities, coordinating actions and feedback mechanisms of project related partners.

B. Progress Reports

36. Progress reports outlining main updates in project progress will be provided on quarterly and annual basis to the UNDP Country Office and the Ministry of Nature Protection. The UNDP-GEF PIR/APR will be prepared on an annual basis prior to the Project Outcome Board (POB) meeting to reflect progress achieved in meeting the project's Annual Work Plan and assess performance of the project in contributing to intended outcomes through outputs and partnership work. The PIR/APR will follow the templates and recommendations provided by UNDP-GEF.

C. Technical Report (TR)

37. Technical Reports are detailed documents covering specific areas of analysis or scientific specializations within the overall project. TRs 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 TRs 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

38. The GoA will provide the Resident Representative of UNDP Armenia 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.

Learning and knowledge sharing

39. Results from the project will be disseminated through existing information sharing networks and the Climate Change Information Center website of the Ministry of Nature Protection – www.nature-ic.am.

40. In addition, the project will cooperate closely with the UNDP Programmatic activities, as relevant and appropriate. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to the project implementation through lessons learned. The project will identify, analyze, and share lessons learned that might be beneficial for the project implementation. Identifying and analyzing lessons learned is an ongoing process, and the need to communicate such lessons as one of the project's central contributions is a requirement to be delivered at least once every 12 months. UNDP-GEF shall provide a format and assist the project team in categorizing, documenting and reporting on lessons learned.

VII. LEGAL CONTEXT

41. This Project Document shall be the instrument referred to as such in Article I of the Standard Basic Assistance Agreement (SBAA) between the GoA and the United Nations Development Programme (UNDP), signed by the parties on 8 March, 1995. 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.

42. Consistent with the Article III of the Standard Basic Assistance Agreement, the responsibility for the safety and security of the executing agency and its personnel and property, and of UNDP's property in the executing agency's custody, rests with the executing agency.

43. The Executing Agency shall:

- (i) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;

(ii) assume all risks and liabilities related to the executing agency's security, and the full implementation of the security plan.

44. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this agreement.

45. UNDP acts in this project as Implementing Agency for the GEF, and all rights and privileges pertaining to UNDP as per the terms of the SBAA shall be extended mutatis mutandis to GEF.

46. 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.

47. In order to accord proper acknowledgement of GEF funding, a GEF logo should appear on all relevant GEF project publications, including among others, project hardware and vehicles purchased with GEF funds. Any citation on publications regarding projects funded by GEF should also accord proper acknowledgment to GEF. The logos of the UNDP, GEF and Government should be equal and appear on all communication and other public materials.

VIII. ASSESSING PROJECT IMPACT

48. According to the CGE report (2011), based on the survey conducted with non-Annex I parties, it is recommended to maintain a consistent national team for preparation of national communications. The project team will apply the same strategy and approach that has already been used under the previous enabling activities. The project will utilize the capacities developed under the UNDP-GEF climate change enabling activities not only for preparing National Communications but also for developing programs for climate change mitigation and its mainstreaming into national development plans and policies. Incorporation of climate change issues into national policy documents and national strategies will be an indicator for such impact, which in addition will indicate the awareness level on climate change issues in Armenia. The mainstreaming of the climate change into the key policy frameworks and agendas will be a continuous effort during the TNC.

49. During the project implementation, specific emphasis will be put on strengthening the dialogue, information exchange and cooperation among all relevant stakeholders including governmental, non-governmental, academic and private sectors. This will facilitate the integration of climate change related issues into the general planning and strategy

formulation, which can be considered not only as an obligation but also as an opportunity to introduce new strategies and technologies on a “win-win” basis.

50. The entire process of implementation of the UNFCCC and the Kyoto Protocol principles will be maintained. The new developments under the UNFCCC will be considered and aligned with the recommendations of the NC. In this context the following indicators will be taken into account for the assessment of the project impact: sustainability and continuity of national GHG inventory; monitoring of climate change and its impact; consistency of adaptation and mitigation measures with the national and regional priorities and programmes; inclusion of climate change issues into educational curricula; responding to the country’s needs in technology transfer including strengthening countries capacity to participate in the cooperation opportunities under the Convention and the Kyoto Protocol; awareness raising among decision makers; regularly updating the Climate Change bilingual website; keeping and updating the roster of national experts and partner organizations including those in the regions, establishing and implementing training programmes.

IX. BUDGET

Award ID:	00060737	Project ID(s):	00076620
Award Title:	Enabling activities for the Preparation of Armenia's Third National Communication to the UNFCCC		
Business Unit:	ARM10		
Project Title:	Enabling activities for the Preparation of Armenia's Third National Communication to the UNFCCC		
PIMS no.:	4547		
Implementing Partner (Executing Agency):	Ministry of Nature Protection (MNP)		

GEF Outcome/Atlas Activity	Responsible Party/Implementing Agent	Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Total (USD)
OUTCOME 1: GHG Inventory	MNP	62000	GEF	71200	International Consultants	0	7,000	0	7,000
				71300	Local Consultants	8,000	25,000	11,000	44,000
				71400	Contractual services-Individuals	8,500	8,500	8,000	25,000
				71600	Travel	3,000	4,000	1,000	8,000
				72100	Contractual Services - Companies	10,000	15,000	0	25,000
				72800	Information Technology Equipment	2,500	500	500	3,500
				74500	Miscellaneous Expenses	2,000	1,500	2,000	5,500
					Total Outcome 1	34,000	61,500	22,500	118,000
OUTCOME 2: Mitigation Analysis	MNP	62000	GEF	71300	Local Consultants	0	10,000	4,500	14,500
				71400	Contractual services-Individuals	5,000	12,000	13,000	30,000
				71600	Travel	0	4,000	4,000	8,000
				72100	Contractual Services - Companies	0	15,000	0	15,000
				72500	Supplies	1,000	1,000	1,000	3,000
				72800	Information Technology	4,000	1,000	1,000	6,000

					Equipment				
				74500	Miscellaneous Expenses	1,000	500	1,000	2,500
					Total Outcome 2	11,000	43,500	24,500	79,000
OUTCOME 3: Vulnerability and Adaptation Assessment	MNP	62000	GEF	71200	International Consultants	0	10,500	0	10,500
				71300	Local Consultants	13,000	27,500	10,000	50,500
				71400	Contractual services- Individuals	9,000	8,500	8,500	26,000
				71600	Travel	3,000	4,000	6,000	13,000
				72100	Contractual Services - Companies	0	18,000	15,000	33,000
				72800	Information Technology Equipment	2,500	1,000	500	4,000
				74500	Miscellaneous Expenses	1,000	1,000	1,000	3,000
					Total Outcome 3	28,500	70,500	41,000	140,000
OUTCOME 4: National circ; Const. & gaps, financial, tech, & capacity needs; Other relevant info	MNP	62000	GEF	71300	Local Consultants	3,000	13,000	6,000	22,000
				71400	Contractual services- Individuals	8,000	8,000	8,000	24,000
				71600	Travel	0	2,000	1,000	3,000
				72100	Contractual Services - Companies	0	5,000	5,000	10,000
				72400	Communic.& Audio Visual Equipment	5,000	5,000	5,000	15,000
				73100	Rental & Maintenance - Premises	1,000	1,000	1,000	3,000
				73400	Rental & Maintenance of Other Equipm.	1,000	1,000	1,000	3,000
				74200	Audio Visual&Printing Production Costs	3,000	3,000	5,000	11,000
				74500	Miscellaneous Expenses	2,000	1,000	1,000	4,000
					Total Outcome 4	23,000	39,000	33,000	95,000
	MNP	62000	GEF	71405	Contractual Services -	13,000	13,000	13,000	39,000

Project Management, including Monitoring and Evaluation			Individual				
		71600	Travel	500	500	1,000	2,000
		74100	Professional Services	0	2,000	2,000	4,000
		74500	Miscellaneous Expenses	1,000	1,000	1,000	3,000
			Total Management	14,500	16,500	17,000	48,000
PROJECT TOTAL				111,000	231,000	138,000	480,000

Summary of Funds:

	Amount Year 1	Amount Year 2	Amount Year 3	Total
GEF	113,400	225,800	140,800	480,000
UNDP	10,000	5,000	5,000	20,000
Government in-kind	25,000	20,000	25,000	70,000
TOTAL	148,400	250,800	170,800	570,000

X. DETAILED WORKPLAN

Outcome/Outputs/Activities	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
IMPLEMENTATION ARRANGEMENTS AND PROJECT INCEPTION												
<u>Activities</u>												
1. Contract the project office staff	X											
2. Establish technical teams	X	X										
3. Update the composition of the PSC, if needed	X											
4. Organize a project initiation workshop	X											
5. Organize a scoping meeting	X											
6. Maintain and upgrade the electronic network among experts/institutions	X	X	X	X	X	X	X	X	X	X	X	X
OUTCOME1: NATIONAL CIRCUMSTANCES												
Output 1.1: National circumstances reviewed, updated and described												
<u>Activities</u>												
1.1.1. In cooperation with the NSS of the Republic of Armenia, analyze data and information provided in the SNC within the light of new developments in the country.							X	X				
1.1.2. Identify the respective sources of information, compile relevant data and information from different sources, fill the gaps, update and add the new information according to guidelines for the National Circumstances section.							X	X				
1.1.3. Draft, discuss, agree and revise the National Circumstances section under the TNC, according to the guidelines set by 17/CP8.									X			
1.1.4. Finalize the National Circumstances section under the TNC.									X			
OUTCOME 2: GHG INVENTORY												
Output 2.1: GHG inventory team maintained and strengthened												
<u>Activities</u>												
2.1.1. Identify and mobilize national experts in targeted sectors and corresponding areas. Agree on institutions' involvement in the GHG inventory preparation process and establish a working group.		X	X									
2.1.2. Train national partners and experts on IPCC new requirements and methodologies for GHG inventory.			X									
2.1.3. Agree with the NSS of the Republic of Armenia on the arrangements and coordination of the inventory work.		X										
Output 2.2: Methodologies for conducting GHG inventory analysed, selected and validated												
<u>Activities</u>												
2.2.1. Review the existing information on the 2 nd GHG inventory archived or documented in the Manual of Procedures for GHG national inventory.		X	X									
2.2.2. Revise the GHG inventory software based on the changes and format suggested by IPCC 2006 guidelines.			X	X								
2.2.3. Identify all new sources of information for filling data gaps.			X									
2.2.4. Decide on the methodology for GHG emissions estimation relying on the IPCC GPG		X	X									

Outcome/Outputs/Activities	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
package of methodologies.												
2.2.5. Decide the source categories, on which data collection for filling the gaps will be carried out.			X	X								
2.2.6. Develop a methodology for assessing emissions of SO ₂ from copper and molybdenum production and other GHG precursor emissions.			X	X								
2.2.7. Review and update the QA/QC plan.			X	X								
Output 2.3: GHG inventory data collected												
<u>Activities</u>												
2.3.1. Identify all possible sources of data and new data for estimation of 2006 and 2010 GHG emissions, set up the process of required data collection in cooperation with the NSS of the Republic of Armenia.		X	X									
2.3.2. Collect all required data for base year GHG inventory of 2010 and time series of 2006-2010. Complete the missing data of 2006 for all categories of sources, according to their priority.			X	X								
2.3.3. Enter the collected data into the software.			X	X	X							
2.3.4. Analyse the collected data and identify the errors, inaccuracies and uncertainties.					X	X						
2.3.5. Define emission factors for the purpose of their application in the Inventory. Identify the research need for development of national emission factors.				X	X							
2.3.6. Identify, assess and minimize uncertainties associated with the GHG emissions (removals), including through field research, in the sectors: Agriculture, Forestry and Other Land Use (AFOLU); methane fugitive emission in gas transmission and distribution systems.				X	X	X						
Output 2.4: National inventory for 2010 by sources and removals by sinks according to the IPCC guidelines completed. Time series for GHG emissions of 2006-2010 by sectors and categories developed												
<u>Activities</u>												
2.4.1. Re-calculate GHG emissions inventory for 2000.				X	X							
2.4.2. Prepare draft inventory of sources and sinks for 2010 and time series for 2006-2010.				X	X	X						
2.4.3. Develop the key source analysis for 2006 and 2010, and conduct a sensitivity analysis (2000-2010), as specified in the IPCC GPG Guidelines.						X						
2.4.4. Carry out an uncertainty analysis, in particular, as specified in the IPCC GPG Guidelines.					X	X						
2.4.5. Compile the national GHG inventory of anthropogenic emissions for 2010 by sources and removals by sinks, according to the IPCC Guidelines						X						
2.4.6. Circulate the draft inventory for internal/external review as part of QA/QC plan and based on the results, make necessary revisions.						X						
2.4.7. Organize a national workshop to present findings of the GHG inventory and get additional comments.							X					
2.4.8. Incorporate the comments received from the review process, prepare National GHG Inventory report for publication and place on the website of the Climate Change Information Centre.							X					
2.4.9. Finalize the Inventory Report as a part of the TNC of Armenia.							X					

Outcome/Outputs/Activities	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
Output 2.5: GHG inventory data and estimates documented and archived												
<u>Activities</u>												
2.5.1. Document and archive activity data, emission factors, references and estimates								X				
2.5.2. Update the Manual of Procedures and National Inventory Report with new GHG inventory data and estimates.								X	X			
OUTCOME 3: PROGRAMMES CONTAINING MEASURES TO MITIGATE CLIMATE CHANGE												
Output 3.1: Necessary data and relevant information collected and analyzed												
<u>Activities</u>												
3.1.1. Assess to what extent climate change mitigation measures reported in the SNC have been realized, and develop corresponding comments and recommendations on “business-as-usual” (BAU) and “with measures” scenarios.			X									
3.1.2. Consider the estimates of the GHG inventory of 2006 and the base year 2010 as starting point for the analysis of emissions towards 2030.					X							
3.1.3. Collect macroeconomic data and set assumptions.				X	X							
3.1.4. Process the compiled data in the required format for entering in the GHG emissions scenarios generation software.						X						
3.1.5. Update the developments in the relevant policy and legal framework for mitigation scenario development.				X								
Output 3.2: Revised GHG baseline scenario developed												
<u>Activities</u>												
3.2.1. Re-visit the measures carried out during 2005-2010, which were not envisaged in the “with measures” scenario under the SNC, and include them in the revised baseline scenario.			X	X								
3.2.2. Develop a revised 2005-2010-2030 GHG emissions BAU scenario for the energy sector using the LEAP or MARKAL software.						X	X					
3.2.3. Develop a revised 2005-2010-2030 GHG emissions BAU scenario for non-energy sectors using the corresponding software.						X	X					
3.2.4. Develop a final revised 2005-2010-2030 BAU scenario that will cover the “business-as-usual” scenarios of all sectors.							X	X				
3.2.5. Identify any deviations from the GHG BAU scenario developed under the SNC and, if any, provide comments on the reasons for such deviations.								X				
Output 3.3: CC mitigation scenario developed/updated												
<u>Activities</u>												
3.3.1. Develop/update the CC mitigation scenario for the energy sector for the period of 2005-2010-2030, by using the selected software.								X	X			
3.3.2. Estimate the GHG reduction against the BAU scenario for the energy sector, cost of reduction and effectiveness of each measure.									X			
3.3.3. Develop/update the CC mitigation scenarios for non-energy sectors by using the corresponding software.								X	X			
3.3.4. Develop/update the final CC mitigation scenario, which will include the mitigation									X			

Outcome/Outputs/Activities	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
scenarios of all sectors.												
3.3.5. Identify any deviations from the mitigation scenario developed under the SNC and, if any, provide comments on the reasons for deviations.									X			
Output 3.4: CC mitigation analysis for 2005-2010-2030 completed												
<u>Activities</u>												
3.4.1. Develop, discuss, agree and revise the draft chapter of the CC mitigation analysis.								X	X			
3.4.2. Finalize the CC mitigation analysis chapter to be submitted as a part of the TNC.									X	X		
3.4.3. Archive and document all the CC mitigation analysis related studies and assessments.										X		
OUTCOME 4: PROGRAMMES CONTAINING MEASURES TO FACILITATE ADEQUATE ADAPTATION TO CLIMATE CHANGE												
Output 4.1: Organizational issues for development of the Vulnerability and Adaptation (V&A) Chapter arranged												
<u>Activities</u>												
4.1.1. Organize a workshop on vulnerability and adaptation issues to present the related activities undertaken to date, the strategically important developments in various sectors, needs and opportunities, including in the areas of scientific research, technologies, finance and organizational issues.	X											
4.1.2. Revise/prepare the list of vulnerable sectors and the specific sub-sectors and decide on the range of the assessment: qualitative versus quantitative. Decide on the approaches, tools and methods to be used for the assessment.		X										
4.1.3. Develop terms of references, select and bring on board national experts and specialized institutions.	X	X										
4.1.4. Develop the detailed work plan of each expert and institution (including for research, modelling, technological applications, and coordination with stakeholders).		X										
4.1.5. Organize and conduct training for national experts on new methods of climate change impact assessment and adaptation approaches.		X	X									
4.1.6. Validate, select or adapt best methodologies for vulnerability assessment.		X	X									
Output 4.2: Data collected, including an electronic database established, data archived, vulnerability assessed, including for a pilot area												
<u>Activities</u>												
4.2.1. Identify the type and scope of data and information needed for using the CC impact forecasting models and tools.		X										
4.2.2. Establish a data collection system for vulnerability assessment (in cooperation with scientific institutions and the NSS)		X	X									
4.2.3. Collect and synthesize the necessary data/information and maintain continuous consultations with stakeholders.		X	X	X								
4.2.4. Review the policy process and development context for the selected sectors in order to explore how vulnerability issues are addressed and adaptation measures integrated into the sectoral policies and decision-making agenda.			X	X								
Output 4.3: Current vulnerability and adaptation of the selected priority sectors/areas assessed												
<u>Activities</u>												
4.3.1. Develop respective indicators for baseline development.			X									
4.3.2. Develop a climate baseline for priority sectors considering the baseline identification		X	X									

Outcome/Outputs/Activities	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
methodology according to technical papers suggested by NCSP, CGE and IPCC.												
4.3.3. Develop a socio-economic baseline.		X	X	X								
4.3.4. Assess current vulnerability of sectors to the climate change.				X	X							
4.3.5. Assess any previous adaptation experience in priority sectors, if available, with consideration of “ecosystem approach”.				X	X							
4.3.6. Conduct vulnerability assessment of the selected pilot area/community in Vayots Dzor marz.					X	X						
Output 4.4: Future climate risk and adaptation measures for priority sectors assessed												
4.4.1. Study extreme climatic risks; recommend implementation of Climate Watch system. Adapt long-term climate prediction methodologies for national circumstances.			X	X								
4.4.2. Explore the possibility of using non-meteorological (alternative) data sets, develop improved decadal as well as centennial climate changes scenarios for Armenia using new data sets (CMIP5, CORDEX).			X	X	X							
4.4.3. Apply statistical and/or dynamical downscaling technique for development of fine resolution scenarios; assess change of hydro meteorological vulnerability of the territory of Armenia due to climate change.			X	X	X							
4.4.4. Select a climate change scenario (scenarios) and conduct vulnerability assessment for all priority sectors and specific sub-sectors by utilizing the recommended and selected models. Develop corresponding maps.				X	X	X	X					
4.4.5. Develop environmental-socio-economic trends and risks.					X	X						
4.4.6. Develop adaptation response measures, select appropriate measures for all sectors and sub-sectors, prioritize them, and identify barriers and opportunities.						X	X					
4.4.7. Compile an integrated long-term national adaptation policy framework paper and measures.					X	X	X					
4.4.8. Develop recommendations for adaptation of the selected pilot area/community in Vayots Dzor marz and elaborate pilot project proposals.							X	X				
4.4.9. Organize a national workshop to highlight findings from the V&A study and get more comments.								X				
Output 4.5: Vulnerability and Adaptation Chapter completed												
<u>Activities</u>												
4.5.1. Develop, discuss, agree and revise the draft V&A Chapter.							X	X				
4.5.2. Finalize the V&A chapter as part of Armenia’s TNC.								X	X			
4.5.3. Archive and document all the V&A related studies, assessments and conclusions.									X	X		
OUTCOME 5: OTHER INFORMATION CONSIDERED RELEVANT TO THE ACHIEVEMENT OF THE OBJECTIVE OF THE CONVENTION												
Output 5.1: Information on research and systematic observations compiled and synthesized												
<u>Activities</u>												
5.1.1. Evaluate the technical capacity of national observation network and develop an action plan on strengthening and improving observation network, which will lead to reduction of climate change assessment uncertainties and improvement of the quality of climate products, services.		X	X			X						

Outcome/Outputs/Activities	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
5.1.2. In cooperation with stakeholder scientific institutions, develop long- and short-term scientific-research projects/action plan based on current issues and needs.					X	X		X				
5.1.3. Develop long-term plan for improvement of climatic monitoring system for the period of 2012-2020, including the use of satellite derived products. Develop recommendations for improvement of the early warning system.							X	X				
5.1.4. Develop the section on Research and Systematic Observations, as part of "Other information considered relevant to the achievement of the objective of the Convention" Chapter.								X				
Output 5.2: Information on technology development, introduction and transfer compiled and synthesized												
5.2.1. Assess the institutional structures dealing with transfer, development and deployment of innovative technologies under the Climate Change Convention and other international processes for selecting and adapting the best practices.				X	X							
5.2.2. Increase awareness in the country on the COP16 (Cancun) decisions, develop recommendations on establishment of the "National Centre/network for Climate Change Technologies".				X	X	X	X					
5.2.3. Assist in establishment of a clearing house for the best available technologies, based on the COP decisions, IPCC Guidelines, as well as using the TT: Clear web site.						X	X	X				
5.2.4. Develop, discuss, agree and amend the "Transfer, development and deployment of best available innovative technologies" section.								X	X			
5.2.5. Finalize the section for incorporated into the TNC.									X			
Output 5.3: Information on education, training and public awareness compiled and synthesized												
5.3.1. Identify the new developments in the areas of education, training and awareness, under climate change postdating the SNC.						X	X					
5.3.2. Identify institutions/ organizations active in training and awareness raising on climate change issues, support to capacity development.			X	X	X	X	X	X	X			
5.3.3. Support development, publication and dissemination of climate change curriculum and methodological materials for all educational levels, as well as outreach materials on climate change issues, including Climate Change e-Newsletters. Update the Project website.		X	X	X	X	X	X	X	X	X	X	X
5.3.4. Support drafting the status and scope of work of the Educational and Scientific Centre for Climate Change, discuss and agree with stakeholders (Ministry of Education and Science, higher educational establishments).			X			X	X					
5.3.5. Organize outreach events to raise the awareness of population on climate change risks and possible adaptation measures.			X	X	X	X	X	X	X	X	X	X
5.3.6. Develop, discuss, agree and revise the "Education, training and public awareness" Section.									X			
5.3.7. Finalize the above section for incorporation into the TNC.									X			
Output 5.4: Chapter on other information completed												
5.4.1. Develop corresponding chapter of the SNC.									X	X		
OUTCOME 6: CONSTRAINTS, GAPS AND RELATED FINANCIAL, TECHNICAL AND CAPACITY NEEDS												
Output 6.1: Constraint, gaps and related needs (financial, technical and capacity) identified and reported												

Outcome/Outputs/Activities	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
<u>Activities</u>												
6.1.1. Review the status of the constraints and gaps from the previous NC.						X	X					
6.1.2. Identify new constraints and gaps for each thematic area.							X	X				
6.1.3. Summarize constraints, gaps and needs identified, discuss, agree and revise the synthesis report.								X				
6.1.4. Finalize the above chapter as part of Armenia's TNC.								X				
OUTCOME 7: SUBMISSION												
Output 7.1: TNC produced/published, translated, submitted and disseminated												
<u>Activities</u>												
7.1.1. Compile the draft version of Armenia's TNC.								X	X			
7.1.2. Circulate the draft for comments, receive, review and incorporate the comments into the final document.									X			
7.1.3. Organize a national workshop to present the findings of Armenia's TNC.									X			
7.1.4. Finalize and translate the TNC of Armenia.									X	X		
7.1.5 Design and publish Armenia's TNC in hard and electronic copies (on CDs)									X	X		
7.1.6. Submit officially Armenia's TNC to the UNFCCC Secretariat.										X		
7.1.7. Distribute TNC to national/international partner and stakeholders, as well as through regular mail and emails										X		
7.1.8. Present the finding of Armenia's TNC to the wide public through different awareness raising/outreach events and mass media											X	X
7.1.9. Present the TNC in a side event during the COP/Subsidiary Body sessions.												X

Annex A. Report on Stocktaking Analysis

A.1 Methodology

51. This exercise is considered as a key step for preparation of the proposal for Armenia's TNC to the UNFCCC. The stocktaking exercise aimed at undertaking a highly consultative and participatory process of needs assessment to identify gaps, barriers, uncertainties, lessons learnt and validate the priorities for the TNC. Based on the stocktaking exercise a synthesis report was produced, which focuses on all thematic areas related to the National Communications for non-Annex I countries as indicated in Decision 17/CP.8.

52. The following main tools have been used during the stocktaking process: (i) *desk review* of relevant documents; (ii) *interviews* with stakeholders; (iii) *questionnaires*, which was circulated among participants, (iv) *face-to-face consultative meetings*; (v) *workshops/seminars* (including four seminars in the regions of Armenia). The seminars held in the regions of Armenia aimed at identification of community stakeholders, their roles and responsibilities to be utilized in the course of preparation of the TNC. The stocktaking exercise involved a variety of stakeholders from different ministries/ state agencies, public institutions, NGOs, academia, national experts, international organizations active in Armenia, and communities – over 110 people. A stakeholder involvement matrix is provided in Annex D.

53. To facilitate the stocktaking exercise a stocktaking team was established. The Project Task Leader, in close consultation with the National Project Coordinator and the UNDP Climate Change Program Coordinator (CCPC), has directly led the stocktaking exercise. The stocktaking team was composed of the key thematic experts: *GHG inventory, CC mitigation, Vulnerability and Adaptation, Research and Systematic Observations, TT and Education, Training and Public Awareness*. The national experts, having been involved in the FNC and SNC, were considered as *primary stakeholders*. A *secondary group of stakeholders* consisted of Project Steering Committee members, representatives of different ministries, research institutions, international organizations, NGOs, etc., which have been consulted and participated in the seminars as well. Each expert was responsible for producing a *separate report* on the respective thematic area. The thematic reports were submitted to NPC, acting as Compilation Expert, who was responsible for final editing and compilation of a stocktaking synthesis report. Elaboration of the TNC project proposal document was further carried out by the PTL in consultation with the UNDP CCPC, NPC and the UNDP Climate Change Program Associate.

54. For setting up priorities for V&A thematic area, a *prioritization* matrix was used. The *criteria* were selected based on the consultations with experts and stakeholder. *Weight* of each criterion is considered equal. Each expert has independently allocated *scores* for criteria and afterwards points have been totaled and issues with highest points are considered as priorities. For more information see Matrix on Vulnerability and adaptation priority areas in Annex C.

A. 2 General findings and lessons learnt

General findings

55. Sustainable data collection mechanisms should be established to facilitate assessments in various sectors;

56. It is important to ensure continuity and coherence across different sections of the NC, both in terms of consistent data, timeframes, and as a holistic document that sends out clear and unified messages.

57. It is important to ensure that the NC findings are channeled back to relevant agencies in a relevant format for high-level policy- /decision-makers of key sectors;

58. Engagement of NGOs and civil society in climate change processes should be enhanced and opportunities should be provided to them for review and commenting on the TNC draft.

Lessons learned

59. The engagement of the *human capacity* involved in preparation of the previous NC was highly important for the success of the process. The approach of *training-of-trainers* for extension of the expert group has been a key step towards ensuring sustainability of the process.

60. The inventory and CC mitigation analysis teams have been a core capacity in preparation of a number of important documents for the policy makers in the scopes of the SNC. Some of these documents include: “Calculation of Grid Emission Factor for the Electricity System of RA for the year 2009”, “Assessment of the GHG Emissions Mitigation Potential in Animal Farming Sector of the Republic of Armenia (2010)” among others.

61. *Technical support* provided by the NCSP through review of Armenia’s 2nd GHG Inventory by an international consultant was vital in identification of gaps and mistakes and consideration of recommendations by national experts for future inventories.

62. *Partnership* with other UNDP projects and programs, as well as with other donors and national institutions in advocacy of incorporation of climate change issues into development agendas has been a good practice already in use. Working in *synergy* with other GEF climate change or non-climate change projects has been an efficient way of getting efficient results.

63. The NC exercise has been seen not only as a tool to meet Armenia’s commitments to the UNFCCC but also as a mechanism for *mobilizing co-funding for implementation of the in-depth studies* in the scope of the SNC objectives: this included mobilization of the co-funding for the regional climate change scenarios development and risk assessment by OSCE, and GHG emissions assessment from animal farming in Armenia - by Norwegian Vekst Foundation.

64. *Climate proofing* of country development documents has been made possible through incorporation of SNC recommendations into a number of documents, including the Agricultural Development Strategy of Armenia, Food Security Concept Paper among others. Such efforts should be continued under the TNC.

65. *The Climate Change e-Newsletters*, developed and published on quarterly basis under Armenia's SNC, have been a successful tool for awareness raising among the wide public. It is important to continue this good practice under the TNC.

A. 3 Findings in Thematic Areas

I. NATIONAL CIRCUMSTANCES

Baseline analysis and issues identified

66. The National Circumstances section of the Second National Communication, which contains information about the Government structure of the Republic of Armenia, its geographic position, natural resources, climate, population, economy, energy sector, industry, transport, agriculture, forestry, waste and legal and institutional bases for the implementation of the UNFCCC, has been developed in accordance with the information published by the National Statistics Service of Armenia for 2006.

67. In terms of a number of data, particularly those on the country's geographic position and natural resources, the information provided in the SNC will still be relevant for the TNC. The information pertaining to other sectors, however, needs to be revised and updated with consideration of the developments in the country since 2006.

Priorities and new areas of work under the TNC

68. Taking into account the developments taken place in the economy of the country, this section needs to be revised. Meanwhile, certain comments on the aforementioned developments, in particular, by conducting statistical analysis and assessment of various tendencies, need to be provided.

69. Apart from updating the information included in the National Circumstances section of the SNC, it is necessary to add the sub-sections of Environmental Protection Activities, Civil Society Involvement, Tourism and Financial Mechanisms, the absence of which in the SNC should be considered as a gap. The material to be presented in the TNC will correspond to the guidelines set by 17/CP.8.

70. The preparation of the National Circumstances section of the TNC will be carried out in cooperation with the NSS of the Republic of Armenia, accompanied with analysis of strategic documents.

71. In addition, it would be necessary to ensure that the socio-economic data and information provided in the National Circumstances section correspond to the data used in other sections and assessment models.

II. GREENHOUSE GAS INVENTORY

Baseline analysis and issues identified

72. The 2nd GHG Inventory of the Republic of Armenia contains information on all sources and sinks, as well as all gases considered by the IPCC Guidelines for National Greenhouse Gas Inventories (1996 revised version); Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories (2000); Good Practice Guidance for Land Use, Land-Use Change and Forestry (2003) and the “Co-operative Program for Monitoring and Evaluation of the Long Range Transmission of Air Pollutants in Europe” (EMEP) CORINAIR-99 atmospheric emissions inventory guidebook.

73. The estimation of GHG emissions has primarily been carried out for the baseline year of 2000. In order to evaluate the trends, data series of compatible emissions have been recalculated for 1990, 1994-2006. Due to the lack of data, GHG emissions from the LULUCF (Land Use, Land Use Change and Forestry) sector have been calculated only for the year 2000 and recalculated for 1990. For the Energy sector only the reference method has been used for 1994-1996. The national activity data and emission factors were used for each sector; however, in a number of cases the, IPCC 1996 Guidelines emission factors have been used. The insufficiency of relevant data has been the main technical obstacle in preparation of the Inventory, along with the inconsistency of available data with the format recommended by the IPCC.

74. Within the framework of preparation of the 2nd GHG Inventory, 13 key emission sources were identified and a level assessment for those sources was carried out for the years 1990 and 1997-2006, along with an assessment of uncertainties on the bases of the IPCC GPG 2000 and the IPCC GPG for LULUCF 2003.

75. For the purpose of improving the quality of the national inventory, quality assurance and quality control (QA/QC) has been carried out. The QA/QC has been conducted in accordance with the GPG Tier 1 methodology.

76. An English-Armenian Glossary of GHG Inventory terms has been developed to be used during the preparation of the Armenian and English versions of the Inventory.

77. In accordance with the 2010-2013 National Energy Efficiency Action Plan approved by the Protocol Resolution of the GoA on November 4, 2010, development of an energy balance is envisaged for the baseline year of 2010. It would be necessary to ensure cooperation between the teams involved in National energy balance development and GHG inventory under TNC for considering common approaches to the requirements for the data needed and emission factors.

78. The lack of data collection system for the LULUCF sector has been considered the main obstacle during the preparation of the 2nd GHG Inventory, along with the inconsistency of the official data/information on fugitive emissions within the gas distribution system with the standardized factors.

79. Some of the key deficiencies of the 2nd GHG Inventory include the following: i) lack of the IPCC reference factors for the assessment of SO₂ emissions from copper and molybdenum production, due to which it has not been possible to include those emissions' estimates in the 2nd GHG Inventory. It would be necessary to develop national emission factors for the SO₂ emissions assessment during preparation of the 3rd GHG Inventory; ii) lack of data on emissions from production and use of asphalt in the Industrial Processes sector.

Priorities and new areas of work under the TNC

80. Quality improvement works for the 3rd GHG Inventory will focus on the methods and approaches for data collection process, filling data gaps and establishment of a sustainable system for conducting GHG Inventory. These are signified by the fact that during the recent negotiations on further implementation of the UNFCCC, Parties reached an agreement on developing and submitting a GHG Inventory on a regular basis - every two or four years.

81. The 3rd GHG Inventory of the Republic of Armenia will be developed for the baseline year of 2010, and 2007-2010 time series. Apart from that, re-calculation and completion of the 2000 and 2006 data will be carried out.

82. The efforts for improvement of the GHG Inventory will also be directed at employment of higher tier methodologies for GHG emissions estimation from key sources, adjustment of emission factors, assessment and reduction of emission uncertainties. According to the preliminary assumption, higher tier methodologies will be used for the following sources: "1.A.1.CO₂ emissions from stationary sources" in the sector of Energy and "4.A. CH₄ emissions from livestock enteric fermentation" in the sector of Agriculture. For the other sources, the possibility of conducting higher tier calculations will be decided in the process of the work. Special attention will be paid to the sectors of "Forestry" and "Land Use". Under a separate task: i) methane fugitive emissions in the gas distribution system will be studied; and ii) national emission factors for estimation of SO₂ from copper and molybdenum production will be elaborated. During the preparation of the 3rd GHG Inventory, it will be necessary to take into account, to the extent possible, the new requirements by the IPCC GPG 2006.

83. The 3rd National GHG Inventory of the Republic of Armenia will contain information about all sources and sinks, as well as gases considered in the IPCC Guidelines for 1996 and 2006. More focus will be given to the precursors of GHGs. For that purpose, among other methods, the one of "Co-operative Program for Monitoring and Evaluation of the Long-Range Transmission of Air Pollutants in Europe" EMEP/CORINAIR atmospheric emission inventory guidebook will be utilized. It will be necessary to make amendments in the inventory software taking into consideration the new format developed for the IPCC 2006 guidelines.

84. It will be necessary to develop a system of approaches and activities that target the enhancement of data reliability and validation. This refers to the quantitative assessment of uncertainties, in the first place. The national capacity on GHG inventory preparation can be enhanced through establishment of a working group from the representatives of key ministries/agencies, including the NSS.

III. PROGRAMS CONTAINING MEASURES TO MITIGATE CLIMATE CHANGE

Base analysis and issues identified

85. Within the scope of the SNC of the Republic of Armenia, GHG emissions trends for the period of 1990-2005 have been assessed, and the policies and measures for reduction of GHG emissions by 2020 have been analyzed. The analysis included the following sectors: Energy, Industrial Processes, Agriculture, Land Use Change and Forestry, and Waste. For assessment of the potential for reduction of GHG emissions, the following two development scenarios have been applied: “business-as-usual” (BAU) scenario (without measures), which suggests maintenance of existing practices in the future, and “with measures” scenario. Both scenarios are based on the official program documents of the Republic of Armenia: the long-term macroeconomic development program of Armenia, and sectoral programs and development plans that include the aforementioned categories of GHG emissions.

86. The “with measures” scenario for the period until 2020 for the Energy sector is based on the following official program documents: (i) Energy Sector Development Strategy within the Context of Economic Development of the Republic of Armenia (2005); (ii) the Action Plan of the Ministry of Energy envisaged by the National Security Strategy of the Republic of Armenia (2007); (iii) National Program of the Republic of Armenia for Energy Saving and Renewable Energy (2007).

87. For non-energy sectors, development of GHG emissions scenarios is based on the following official program documents: (i) Sustainable Agricultural Development Strategy of the Republic of Armenia; (ii) National Forest Policy and Strategy of the Republic of Armenia; (iii) National Forest Program of the Republic of Armenia.

88. The GHG emissions reduction scenarios are conditioned with data gaps, realistic vision and uncertainties in the aforementioned strategic programs. In this regard, the TNC will address the accuracy of GHG emissions scenarios, as well as provide comments, based on the assessment of those uncertainties, for new strategic documents to be considered in the course of TNC preparation.

Priorities and new areas of work under the TNC

89. The climate change mitigation analysis under the TNC will consider all categories of GHG emission sources relevant to the Republic of Armenia: Energy, Industrial Processes, Agriculture, Land Use Change and Forestry, as well as Waste.

90. The BAU scenario developed under the SNC, along with the “with measures” scenario will be revised/updated with comprehensive approach, taking into account the new developments in the economy of the Republic of Armenia.

91. During the preparation of the TNC new program documents and projects will be considered, in particular: (i) the updated Sustainable Development Program of the Republic of Armenia; (ii) the annual action plans of the GoA on Implementation of

the Energy Saving and Renewable Energy Program; (iii) the Gas Supply System Modernization and Expansion Project of the Republic of Armenia (2009); (iv) the Transport Sector Development Strategy of the Republic of Armenia (2011); (v) key directions of climate change mitigation, declared by the Republic of Armenia in the document for association to the Copenhagen Accords (2010), (vi) the donor assisted projects currently implemented by the Scientific-Research Institute of Energy, including the energy consumption management project; the development of roadmap for renewable energy development; regional integration and energy safety and power market development projects (2011), (vii) energy efficiency and renewable energy projects currently implemented in the frames of ArmSEFF program (2010) and projects funded by WB, EBRD, UNDP, GEF, EC, USAID, (viii) the Republic of Armenia Strategy for Rural and Agricultural Development for the period of 2010-2020 (2011), (ix) the waste management projects in the regions (marzes) of Armenia (2010) etc.

92. In the mitigation analysis (projections for the period until 2030), the year 2010 will be adopted as the baseline year. Taking into consideration the critical importance of the baseline indicators of GHG emissions in the reduction of uncertainties in the scenarios and enhancement of their reliability, special attention will be paid to the gaps, completeness and compatibility and coordination of GHG inventory assessments.

93. In order to ensure accurate assessment of the fugitive emissions from the natural gas transportation systems, the TNC will include special studies aimed at verification of the quantitative indicators of such emissions.

94. For developing GHG emissions scenarios for the Energy sector, the LEAP or MARKAL software will be used depending on the completeness of input data, and for assessment of carbon flows in forest ecosystems, the COMAP or COPATH software will be utilized. Excel spreadsheets will be used, in the IPCC recommended formats, for development of GHG emissions scenarios for other sectors, since there is lack of other special software.

95. During the preparation of the TNC, it would be necessary to ensure two-way flow of communication, with feedback from the interested ministries and ministerial departments, so that the policies and measures for climate change mitigation are considered in the corresponding sectoral policies. The Climate Change Information Center under the Ministry of Nature Protection of the Republic of Armenia will play a key role in the processes of coordination, exchange and dissemination of information.

IV. PROGRAMS CONTAINING MEASURES TO FACILITATE ADEQUATE ADAPTATION TO CLIMATE CHANGE

Base analysis and issues identified

96. During the preparation of the V&A chapter of the SNC, special attention has been paid to the following sectors: water resources, agriculture, natural ecosystems (including forestry), human health and infrastructures. Vulnerability assessment has been based on the forecast of changes in air temperature and precipitation

conducted by the MAGICC/SCHENGEN and HadRM3 models for three time periods: 2030, 2070 and 2100 within the context of the IPCC A2 and B2 development scenarios. In order to have breakdown of climate change forecast according to the regions of Armenia, the HadRM3P model was applied and the forecasts for 9 regions of Armenia were made. The assessments done through empirical statistical method, using the actual data till 2006, have revealed uncertainties of around 15-20% for temperature forecast and up to 50% - for precipitations. According to the applied models, the average annual temperature is expected to increase: by 1⁰C by 2030, 2⁰C by 2070 and 4⁰C by 2100, and precipitations are projected to decrease by 3%, 6% and 9% accordingly.

97. The vulnerability of various sectors of economy and ecosystems under climate change has been assessed and corresponding adaptation measures have been proposed.

98. **Water resources:** Since 2007 several significant developments have occurred in the institutional and legal framework of the water sector management in Armenia in line with European Water Framework Directive. Six water basin management areas have been established: Sevan, Hrazdan, Araratian, Southern, Northern and Akhuryan.

99. The vulnerability of water resources in Armenia was assessed using statistical/regression models and one created with application of the ArcGIS software, which enables conducting spatial analysis and assessments. The main criteria for the analysis were the annual average and extreme (maximum and winter minimum) river flow, as well as snow cover. While assessing the vulnerability of water resources, trends of river flow and data on precipitations in the form of snow were analyzed for 1991-2006 compared to 1961-1990 baseline period using the PRECIS model under IPCC A2 scenario. The data on main river basins and Lake Sevan were analyzed for the periods 2030, 2070 and 2100.

100. In the frames of the SNC in-depth study of climate change impacts on the selected pilot river basin (Marmarik) has been conducted and adaptation measures have been proposed. The study served as a basis for consideration of the climate change impact on water resources as a key component of the Governmental Resolution "On Approval of the Model Plan for Water Basin Management" (February 3, 2011).

101. Within the SNC the following gaps have been identified in the water sector management: incomplete database of water resources and water sector in the State Water Cadastre; lack of data on separate elements of the surface water regime, water and water system balance, as well as methods for calculating flood flows and inundations are based on outdated data; absence of reliable models for assessing water resources vulnerability; absence of modern methods for transforming actual flows to natural flows; absence of monitoring data on groundwater resources; the deficiency in the system of water use regulation - the principle and rule for "ecological flow limitations" are not adequate for protection of water ecosystems; climate change impacts on water objects are practically not studied; and climate change component is not considered in Lake Sevan Ecosystems Restoration Program.

102. Cooperation among riparian countries plays an essential role in the success of climate change impact assessment in transboundary river basins. In this context, initial cooperation has been established in the framework of the “Regional Climate Change Impacts Study for the South Caucasus Region” UNDP/OSCE project. The vulnerability of Aghstev and Debed transboundary river basins has been assessed through close cooperation of Armenian, Azerbaijani and Georgian experts. The initial attempt to study the CC impact on water quality was conducted; however, under the TNC, it would be desirable to expand the studies in this area.

103. The UNDP is currently implementing a project on strengthening national capacities for disaster risk reduction and climate risk management in 4 pilot marzes of Armenia (Lori, Shirak, Tavush and Syunik), and it is desirable to support dissemination of the project outputs to the rest of the Marzes in Armenia under the TNC. The themes for disaster risk reduction and adaptation to climate change are also included in the Adelphi/GIZ project implemented in cooperation with the Ministry of Nature Protection of RA. In this framework, in 2011 training-of-trainers for both community people and policy makers to enhance their capacity in the above-mentioned issues with bottom-up and top-down approaches has been planned.

104. **Agriculture:** The development trends in this sector have been analyzed, and vulnerability of *plant-growing* and *cattle-breeding* sub-sectors has been assessed. Vulnerability of the main cultivation plants under CC scenarios has been assessed, and agricultural losses from recent years’ extreme weather events have been analyzed. In particular, the impacts of droughts, hot dry winds, hail and early frost have been assessed. However, the effects of increase of water resources’ demand and enhanced seasonal fluctuations of river flows on agriculture have not been studied. This can be considered as a gap and new area of work to be considered under the TNC. Computer modeling methods have been applied for assessment of vulnerability of plant-growing activities in Armenia; however due to lack of disaggregate data (e.g. on soil characteristics, yields, agro-technical, etc.) the results were not complete and accurate.

105. In the *Cattle Breeding* sub-sector, vulnerability of pastures and meadows has been examined and an attempt has been made to associate incidences of animal diseases with climate variability. However, a more detailed analysis aimed at identification of such association is needed to be carried out under the TNC.

106. Following the completion of the SNC, a number of changes have taken place in the legislative framework of the country, along with start-up of a number of donor supported projects related with climate risks and food security, expansion of the irrigation system and revision of the irrigation standards; therefore it is recommended that those updates and project outputs be considered during the TNC preparation.

107. In particular, in 2009-2010 the Food and Agriculture Organization (FAO) initiated a regional project for a number of Eastern European countries aimed at development and introduction of adaptation measures to reduce agriculture sector vulnerability to CC. Under the funding by the World Bank/International Fund for Agricultural Development (IFAD) and the GoA, the “Management and Competitiveness of Community Agricultural Resources” Project (2011-2015) has

launched. The project aims to improve agricultural management systems with consideration of climate change impacts as well. The Project intends to enhance effectiveness and sustainable use of pastures in 55 communities of the Republic. Under the funding of the German KfW Bank, another project will start in 2011 aimed at encouragement of entrepreneurship in the sector of agriculture.

108. The Ministry of Agriculture of the RA with the Armenian State Hydro-meteorological Service (“Armstatehydromet”) is developing programs and methods for crop monitoring and yield forecast in Armenia under different climate change scenarios.

109. The Millennium Challenge Account Armenia Program has been implementing a large-scale “Irrigated Agriculture” project in Armenia since 2008 with two major components: “Irrigation infrastructure” and “Water to market” activity. Within the project, 40 km of canals and 250 hydro-technical structures are rehabilitated, 5 gravity systems are constructed, 17 pumping stations and tertiary canals, and the drainage system in Ararat and Armavir valleys are currently under rehabilitation. Water to Market Activity has been providing on-farm water management training to improve farmers' skills in irrigation and make available new irrigation technologies and techniques that enhance irrigation efficiency.

110. **Natural ecosystems:** In this sector, vulnerability of all major ecosystems on the territory of the Republic of Armenia has been assessed. Along with that, vulnerability analysis for a number of individual plant species has been carried out. With the help of “BIOCLIM for DIVA-GIS” computer model, research has started on assessment of the spread of invasive plant species under climate change. In 2011 studies will be launched on climate change impact assessment for rare and endangered plant and animal species. Over the last years, vulnerability of forest ecosystems has been extensively studied both under direct impact of CC, as well as indirect impacts associated with spread of diseases, pest outbreaks, increased incidence of forest fires etc. Currently, the “Adaptation to Climate Change Impacts in Mountain Forest Ecosystems of Armenia” UNDP/GEF project is under implementation, the objectives of which include development and introduction of adaptation measures that could be successfully implemented in forest management practices of other regions of Armenia.

111. During the recent years, the total territory of the “Specially Protected Areas of Nature” (SPAN) of Armenia has increased by 76.100 hectares, covering approx. 374 thousand hectares (as of 2011), which accounts for approx. 12% of the country’s territory. In 2009, the GoA approved the Project “Capacity Building for SPANs Management System”.

112. During the period of 2007-2010 the analysis of the flora and fauna of Armenia has been carried out, along with assessment of the status of certain species in accordance with international standards, publication of the Red Book of the Republic of Armenia and its approval by the GoA (which ensures a legal status to the publication). However, the absence of regular monitoring system of biological resources and lack of systematically archived data does not contribute to sustainable management of the biodiversity resources and assessment of climate change impacts in longer time horizon.

113. Vulnerability of wetlands and water ecosystems has been assessed by expert judgment due to lack of data on systematic observations and studies. Within the scope of the TNC, it would be necessary to carry out a qualitative assessment of changes in water reservoirs. The State Monitoring Project of Lake Sevan, which will commence in 2011, will enable collection of data on ecosystem changes at the Lake and realization of vulnerability assessment of water ecosystems under CC.

114. **Infrastructure and settlements:** One of the key gaps of this sector covered in the SNC, is that it only provides a brief assessment of floods and mudflows in Armenia occurred during the recent years, and does not include any projections on forecasted changes in the occurrence of floods and mudflows under CC. Secondly, the existing data and studies in the country do not provide evidence for establishing a link between landslides, mudflows, rock falls and CC.

115. This chapter of the SNC has not taken into consideration the impacts of such hazardous hydro-meteorological phenomena as strong winds, heavy precipitations, snowstorms, which every year cause significant damage to infrastructure and settlements in the country. Vulnerability of Armenia's regions to hydro-meteorological hazards with significant adverse impacts on infrastructure and settlements was conducted not in required details. During the preparation of the TNC it is necessary to pay special attention to the issues of spatial planning in the country and support incorporation of climate change concerns into relevant design documents.

116. **Human health:** This section of the SNC has primarily focused on dangerous infections (intestinal, vector born, viral and parasitic) and the status of their carriers and transmitters (rodents, lice, fleas, mosquitoes, bugs). Regression analysis method has been used for statistical data on some nozologies; however no successful results have been achieved due to insufficiency of disaggregated data. No vulnerability assessment model has been used in this sector, thus it would be recommended to identify and apply relevant models under the TNC. In addition, it would be reasonable to study the impact of heat waves on people with cardiovascular diseases and central nervous system disorders.

117. The analysis of all sectors has revealed the underestimation of the importance of climate change impacts in the national policies, which highlights the importance of scientifically justified forecasts of losses, development of analytical papers and practical recommendations to be used for advocating the adaptation policies and measures. Particular emphasis must be given to the involvement of the civil society in lobbying process.

Priorities and new areas of work under the TNC

118. Acknowledging the importance of food security and considering it as an essential part of Agriculture sector, it would be reasonable to consider this issue in the relevant section of the TNC. For conducting vulnerability assessment and development of adaptation measures in this sub-sector, it is necessary to rely on the "ecosystem approach" giving a complete significance to the balanced and sustainable use of pastures, meadows and arable lands, as well as conservation of wild nature genetic resources of food significance and restoration of industrial fish resources both in Lake Sevan and other lakes and rivers of Armenia. The country

history suggests the importance of fish stock as important source for ensuring food security of the nation. It would be necessary to advocate for incorporation of the ecosystem services conservation component into water use regulation policies considering the current trends of climate aridization and water demand increase.

119. In addition to the above-mentioned sectors, it is recommended to assess the Tourism sector vulnerability in TNC. Taking into account the fact that “ecosystem approach” has been included and prioritized in the draft concept paper of the Environmental Protection Code of the RA (is in the process of adoption), vulnerability assessment and adaptation measures’ selection under this new sector should be carried out within that context.

120. Availability of reliable models for vulnerability assessment is crucial for validation of adaptation projects; therefore within the vulnerability assessment in the frames of the TNC, special attention should be paid modeling activities. It is necessary to study not only the existing models that are applied in various countries, but also, to the extent possible, adapt them to the local conditions. An important prerequisite for that will be community participation and civil society involvement in adaptation projects and activities.

121. It will be necessary to conduct assessment of vulnerability of the selected pilot area/community in Vayots Dzor region to the existing and projected climate change and variability, and design respective adaptation measures.

122. In regard to the vulnerability assessment of transboundary areas and systems, it will be necessary to support regional cooperation in order to develop more accurate climate change scenarios and adaptation measures.

123. In addition, assessment of socio-economic impacts of CC needs be carried out through the application of respective models.

V. OTHER INFORMATION CONSIDERED RELEVANT TO THE ACHIEVEMENT OF THE OBJECTIVE OF THE CONVENTION

Base analysis and issues identified

124. **Research and Systematic Observations.** The Armenian State Hydro-meteorological Service (Armstatehydromet) has functions and roles which correspond to those of the World Meteorological Organization (WMO): observations, provision of information, including prognosis/forecasts, data collection, storage, processing and international cooperation. Armstatehydromet shares data both at international and national levels. Research activities are conducted in Armstatehydromet by the Climate Study Center, which includes divisions for climatology, digital modeling of hydro-meteorological processes, global and regional climate change studies, applied climatology and atmosphere pollution studies. Armstatehydromet cooperates with a number of agencies and institutions in Armenia, including Ministry of Nature Protection, Ministry of Agriculture, Ministry of Energy and Natural Resources, and the National Statistical Service. Within FAO food security project Armstatehydromet works with the NSS and Ministry of Agriculture. Armstatehydromet is considered as the center of climate monitoring in Eastern

Europe (RA 6 region). Since 2003, Yerevan aerological station of Armstatehydromet is included in the Global Upper Air Network of the Global Climate Observation System.

125. Within the SNC, the Armstatehydromet has produced a report on "Model Simulations of Climate Change over Armenia Region". This report was used in development of the corresponding chapter of the SNC on Climate Change Impacts, Vulnerability Assessment and Adaptation.

126. During the preparation of the "Research" section of the SNC, a small number of research projects, funded by the state budget and implemented in the framework of international projects, have been assessed. It has been revealed that the state financing for the science sector is not sufficient to support addressing the issues and challenges of various sectors of economy, and the private sector has not yet dedicated due focus to funding scientific research projects. Research efforts directly or indirectly associated with the problems of climate change have not been sufficiently assessed.

127. **Technology transfer:** In 2003 Armenia carried out an assessment of technological needs and the potential for technology transfer. The report was submitted to the Secretariat of the Convention. Technological needs for both mitigation and adaptation were duly assessed.

128. Nearly all organizations engaged in the field of technologies in the Republic of Armenia are focused on commercialization of innovative technologies. In the meantime, there are neither sufficient organizations, processes, nor a corresponding legal framework and incentive mechanisms in place to support and encourage the deployment of the "best available" environmentally sound technologies in the country. It would be desirable to pay a special attention to these issues under the TNC.

129. **Education, training and public awareness:** Following the development and submission of the SNC, the GoA adopted the Resolution No. 1551-N "On Approval of the 2011-2015 Action Plan arising from the Concept Paper for Establishment of a Comprehensive Unified National Environmental Education System" (November 25, 2010). Despite the fact that environmental education is ensured at pre-school, secondary, vocational and higher education levels, and even at post-graduate studies, nevertheless, CC the issues are not appropriately included in the academic curricula. Within the system of higher education, which is basically the primary level for personnel training, the subject on Climate Change is lectured only at two Faculties of the Yerevan State University, namely Geographical-Geological and Chemical Faculties. The Departments of Physical Geography and Hydrometeorology train 5-7 specialists on the annual basis in the specialty of "Hydrometeorology" for Armstatehydromet. The Department of Energy of the State Engineering University of Armenia delivers lectures for the course "Employment of Clean Development Mechanism in Energy Projects". In general, professors and teachers delivering those subjects are not fully and adequately aware about the processes and developments in the climate change area and need qualification enhancement and training on continuous basis; therefore it is reasonable to consider capacity building activities for the above-mentioned issues under the TNC.

130. The stocktaking consultations on the above-mentioned gaps with a number of higher educational establishments revealed the need for establishment of an Inter-Institutional Educational and Scientific Center for Climate Change. A preliminary agreement has been reached that the Yerevan State University will host the Center. Among other things, it is desirable to support the establishment of the Center in the scopes of the TNC.

131. Public Awareness activities are mainly carried out by means of seminars, mass media broadcasts and transmissions, dissemination of information bulletins and through the efforts of NGOs. An important means of public awareness is the bilingual website of the Climate Change Information Center, which is being updated on a regular basis. The electronic version of Climate Change Newsletters are regularly placed on the website along with other materials and publications.

132. The workshops organized in the regions (marzes) of Armenia revealed that the marz administration and community level awareness on climate change processes is still weak, however people are well informed of climate change risks. The afore-mentioned gap needs to be addressed within the framework of the TNC.

133. The three-day seminar on Adaptation to Climate Change organized by Adelphi/GIZ for the employees of the MNP and the managers of Aarhus Centers in Armenia was qualified as highly important by the participants. This expertise needs to be supported and continued through strengthening of the Aarhus Centers - as a convenient platform for organization of discussions and forums, as well as for dissemination of publically relevant information. This process is in line with the UNDP climate strategy "regional approach" and can get supplemental support from the UNDP. This kind of approach to public awareness will also produce good practical results in the form of a "complex CC adaptation planning document" for a given area (community, region/marz).

134. In the framework of the cooperation established between the "Khazer" Ecological NGO and the Cornell University of the USA, "Climate Change Mitigation and Adaptation Curriculum" and "Extension Outreach Curriculum" for Armenian higher education institutions are envisaged to develop in 2011.

Priorities and new areas of work under the TNC

135. **Research and Systematic Observations:** It is desirable to consider data from other meteorological and agro-meteorological stations ("Zvartnots" aviation meteorological station and the meteorological complex of the RoA Ministry of Nature Protection for monitoring and evaluation of long-range air pollutant transmission (EMEP) located on the territory of "Amberd" meteorological station) besides those of Armstatehydromet. The full refurbishment of "Zvartnots" aviation meteorological station with radio location equipment and devices, allows creating a system for short-term (operative) forecast and early warning on hazardous meteorological phenomena (hail, storm).

136. Within the scope of the TNC it will be necessary to encourage research efforts in a variety of areas. It will be important to establish close collaboration with the State Committee of Science, the Ministry of Science and Education and the National Academy of Sciences.

137. Regarding the projections (selection of models), it is desirable to cooperate with the countries of the eco-region and jointly select a coordinated regional scenario. The selection of models should be followed by assessment of uncertainty and errors.

138. **Technology transfer:** It is desirable to assist establishment of a clearing house for Technology Transfer (CHTT), which would be responsible for collection and dissemination of information on best available technologies through its network. The CHTT would be guided by the decisions adopted at the 16th Conference of Parties of the UNFCCC, held in Cancun, as well as by other documents. The coordination of the above-mentioned initiative should be realized in cooperation with the State Committee of Science and respective international organizations and funding institutions should be encouraged to be involved in the process.

139. **Education, training and public awareness:** In the framework of the TNC it is desirable to support establishment of an Educational and Scientific Center for Climate Change, which will coordinate and assist educational establishments in updating their climate change educational curricula. Public awareness efforts need to be enhanced to inform population, particularly those in the regions (marzes) of Armenia. Aarhus Centers and Agricultural Support Marz Centers can act as key partners for organization of discussions and different events.

VI. CONSTRAINTS AND GAPS, AND RELATED FINANCIAL, TECHNICAL AND CAPACITY NEEDS

Base analysis and issues identified

140. The development process of the SNC revealed a large number of constraints and needs for proper implementation of the Convention in the country. Those constraints led to certain reporting gaps in almost all key chapters of the SNC, which have been discussed separately in the sections above. Those common gaps include the following:

- Relevantly low level of professional capacity (human resource).
- Lack of data and low level of reliability of data. The data compiled for the SNC in terms of their quantity and quality were poorer compared to those of the FNC. It was conditioned by the collapse of the centralized institutional system of data collection existing in the former Soviet period. The formation of an equivalent or a more efficient system was delayed due to insufficient level of research in various areas and critical shortage of data. Those gaps were conditioned by certain organizational and economic (financial) constraints. The organizational constraints were reflected by the lack of cooperation between different levels of management, as well as by insufficient financing.

Priorities and new areas of work under the TNC

141. Data collection (management) will be effective and promising if implemented in an institutionally centralized and coordinated manner, where a key role will be reserved to the NSS.

142. In the scopes of the TNC, it is desirable to provide support to the establishment of the CHTT and development, deployment and transfer of technologies, as well as establishment of financial mechanisms to insure financial flows for implementation of respective projects.

143. In order to build the professional capacity, support will be rendered within the scope of the project for establishment of an inter-institutional Educational and Scientific Center for Climate Change and the formation of a collaboration network between various higher educational institutions. Teaching and training of human resources will be reasonable to accomplish in accordance with the principle of “on job training”.

Annex B. Stakeholder Survey

Stakeholder survey for the Stocktaking Exercise

Last Name: _____ First Name:

Place of Work:

Title:

Address:

Tel:/Fax:

E-mail:

I. Please, mention your area of work according to the components of the National Communication:

1. National Inventory of GHG emissions
2. Measures to facilitate adequate adaptation to climate change
• <i>Climate extreme events</i>
• <i>Agriculture</i>
• <i>Water resources</i>
• <i>Health</i>
• <i>Forest</i>
• <i>Ecosystems</i>
• <i>Other</i>
3. Measures to mitigate climate change
4. Measures to mitigate climate change emissions by sources and removals by sinks of all GHGs
5. Technology transfer
6. Research and systematic observation
7. Education, training and public awareness
8. Capacity building
9. Information and networking

II. Please, provide your opinion on the SNC, with particular emphasis on the particular sector relevant to your area of work (completeness, data availability, applicability, application of modern assessment methodologies).

III. Please, provide a brief update of the changes, new developments, changes in social and economic circumstances (including planned changes) in your area of work after 2006.

IV. Please, identify information/data gaps, constraints, uncertainties and needs, as well as what could have been done additionally in the frames of the TNC to improve the quality of the assessment and reporting regarding your specific area.

V. Please, assess the adaptation measures recommended (completeness, priorities (sectors/measures), whether there is there need to revise/amend those priorities)

VI. Please, identify new stakeholders, potential co-partners, which can be involved in the course of preparation of the TNC.

VI. Please, assess the synergy between the NC and ongoing/planned activities both at the local, regional and international levels.

Annex C. Matrix on Vulnerability and Adaptation Priority Areas

Sub area Administrative Unit	Sector (sub- sector)	Scale of Vulnerability	Relevance to National Develop- ment Priorities	Develop- ment Benefits	Data availability	Sub Area Total
Tavush Marz	<i>climate</i>	+++	+++	++	++	10
	<i>water</i>	+++	+++	+++	+++	12
	<i>agriculture</i>	+++	+++	+++	+++	12
	<i>energy</i>	+	+	+	+++	6
	<i>forest</i>	+	+	+	+	4
	<i>land</i>	+++	+++	+++	+++	12
	<i>biodiversity</i>	++	++	++	++	8
	<i>fish</i>	+	+	+	+	4
	<i>natural ecosystems</i>	+++	+++	+++	++	11
	<i>health</i>	+++	+++	+++	+++	12
Gegharkunik Marz	<i>climate</i>	++	+++	+++	++	10
	<i>water</i>	+++	+++	+++	+++	12
	<i>agriculture</i>	++	+++	+++	++	10
	<i>energy</i>	+	+	++	+++	7
	<i>forest</i>	+	++	++	++	7
	<i>land</i>	++	++	++	++	8
	<i>biodiversity</i>	++	+++	+++	+++	11
	<i>fish</i>	+++	+++	+++	+++	12
	<i>natural ecosystems</i>	++	++	+++	++	10
	<i>health</i>	++	+++	++	++	9
Vayots Dzor Marz	<i>climate</i>	+++	+++	+++	+++	12
	<i>water</i>	+++	+++	+++	+++	12
	<i>agriculture</i>	+++	+++	++	++	10
	<i>energy</i>	++	++	+	+++	8
	<i>forest</i>	+++	+++	+++	++	11
	<i>land</i>	+++	+++	+++	+++	12
	<i>biodiversity</i>	+++	+++	+++	++	11
	<i>fish</i>	+	+	+	+	4
	<i>natural ecosystems</i>	+++	+++	+++	++	11
	<i>health</i>	++	++	++	++	8

Annex D. Stakeholder Involvement Matrix

Name of Institutions/stakeholders consulted	Stakeholder interests, official position or mandate	Reasons for inclusion	Role in the self-assessment process
State management structures			
Ministry of Nature Protection <i>(including agencies and relevant institutions that are under its coordination)</i>	<ul style="list-style-type: none"> • Elaborates and implements the GoA policies in the areas of environmental protection and sustainable use of natural resources. • Conducts national policy on natural resources. • Conducts administrative statistical reporting, relevant registries and inventory of natural resources and their approved reserves. Conducts Red Books of Armenia on flora and fauna. • Develops normative legal and technical acts. • Sets up state norms of adverse environmental impact and use of natural resources. • Conducts state environmental impact assessment and monitoring of environmental situation. • Sets up norms of harmful emissions into the atmosphere and discharges to the water objects and conducts their state registry. • Develops strategy directions of ecological education and science. • Implements international commitments of Armenia in the field of environment. 	<ul style="list-style-type: none"> • Responsible for project implementation. • UNFCCC Focal Point. • GEF Operational Focal Point. • Leads the Project Steering committee. • Focal Point for other environmental conventions. • Through its Climate Change Unit (CCU) is responsible for preparation, approval and presentation of the TNC to the COP and supports to the overall implementation process of the UNFCCC. 	<ul style="list-style-type: none"> • Implemented and coordinated self-assessment exercise. • Hold consultations with relevant stakeholders. • Provided policy advice. • Through CCU synthesized thematic areas specific reports into the stocktaking report. • Through CCU prepared the stocktaking report and project proposal for the TNC.
Ministry of Emergency Situations <i>(including agencies and relevant institutions that are under its coordination)</i>	<ul style="list-style-type: none"> • Elaborates and implements the policies in the area of population protection and civil defense in emergency situations, • Coordinates state projects on preventing emergency situations, developed by the administrative bodies and organizations, • Organizes awareness activities on the issues of civil protection in case of emergency situations, • Organizes and coordinates state consolidated accounting of fires, • Performs stock-taking of fire prevention and anti-fire machinery and facilities of state and regional authorities and participates in fire extinguishing and rescue as well as recovery activities, establishes anti-fire units in organizations by their request, • Coordinates rescue forces' and anti-fire units' activities, • Qualification certification of relevant units, including anti-fires ones, as well as relevant specialists, • Implements regular and special studies, observations and projections of hydro-meteorological phenomena. Draws up warning system for dangerous weather phenomena. <p><u>"Armenian State Hydro-meteorological Service" SNCO</u></p> <ul style="list-style-type: none"> • Performs hydro-meteorological observations and elaborates relevant predictions to ensure functioning and sustainable development of the economy's sectors that depend critically on hydro-meteorological conditions 	<ul style="list-style-type: none"> • PSC member. • Provider of information on hydro meteorological phenomena 	<ul style="list-style-type: none"> • Consulted by CCU. • Involved in stocktaking survey • Corresponding chapters of the proposal were consulted with specialists from Armstatehydromet

Name of Institutions/stakeholders consulted	Stakeholder interests, official position or mandate	Reasons for inclusion	Role in the self-assessment process
	<p>(agriculture, energy, aviation, construction, transport and the likes),</p> <ul style="list-style-type: none"> • Implements hydro-meteorological and environmental monitoring programs of state importance within the RA territory, • Compiles database of state informational resources, collects and maintains a consolidated fund of hydro-meteorological events and environment monitoring data, • Performs applied scientific studies in the field of hydro-meteorological and environmental monitoring; elaborates and improves observation and prediction methodology. 		
<p>Ministry of Agriculture <i>(including agencies and relevant institutions that are under its coordination)</i></p>	<ul style="list-style-type: none"> • Develops and implements GoA policies in the field of agriculture, forestry and food provision management. • Conducts administrative statistical registry and inventory of agricultural land reclamation conditions. • Conducts state management of forests, pastures, and meadows, including protection, monitoring, conservation and use. Implements forestation activities, conducts state forest inventory and monitoring, takes stock of the state forest fund. • Develops methods and technologies for land protection, efficient use of agricultural land, reclamation, increase of fertility and rehabilitation. • Develops agrarian fundamental and applied sciences. 	<ul style="list-style-type: none"> • PSC member. • Potential policy adviser and data provider. • Potential provider of technical expertise. • Promotes adaptation policy development and its incorporation in the agricultural development plans. 	<ul style="list-style-type: none"> • Consulted by CCU. • Involved in the adaptation and vulnerability stocktaking survey. • Participated in prioritization exercise. • Provided input and feedback to the process.
<p>Ministry of Energy and Natural Resources <i>(including agencies and relevant institutions that are under its coordination)</i></p>	<ul style="list-style-type: none"> • Elaborates and implements the GoA policies in the energy sector. • Ensures development and application of economic and legal mechanisms for efficient use of local energy sources and alternative resources. • Ensures implementation of the energy conservation and renewable energy development policy according to the relevant legislation. 	<ul style="list-style-type: none"> • PSC member. • Potential policy adviser and data provider. • Potential provider of technical expertise. • Promotes GHG abatement policy. • Facilitates mainstreaming of climate change issues into national development plans. 	<ul style="list-style-type: none"> • Consulted by CCU. • Involved in the mitigation stocktaking survey. • Provided input and feedback to the process.
<p>Ministry of Urban Development</p>	<ul style="list-style-type: none"> • Elaborates and implements the GoA in the urban development sector, including residential and communal sector, development of general plans of territorial administration. • Develops and based on established procedures approves urban planning, architectural and construction normative and technical documents. 	<ul style="list-style-type: none"> • PSC member. • Potential policy adviser and data provider. • Potential provider of technical expertise. • Facilitates mainstreaming of climate change issues into urban development planning. 	<ul style="list-style-type: none"> • Consulted by CCU. • Provided input and feedback to the process.
<p>Ministry of Finance</p>	<ul style="list-style-type: none"> • Elaborates and implements the GoA in the areas of fiscal revenue collection, public finance administration, and coordination of social-economic development programs. 	<ul style="list-style-type: none"> • PSC member. • Potential policy adviser and data provider. 	<ul style="list-style-type: none"> • Consulted by CCU. • Provided input and feedback to the

Name of Institutions/stakeholders consulted	Stakeholder interests, official position or mandate	Reasons for inclusion	Role in the self-assessment process
	<ul style="list-style-type: none"> Coordinates development of poverty reduction strategy, clarification of annual action plans and their revisions, implements monitoring and analysis of poverty reduction process and annual reports. Assists in implementation of approved commitments of the Government adhered with respect to the Republic of Armenia. Coordinates loan and grant resources provided to the RA by international financing organizations and foreign countries, implements financial monitoring of the projects. 	<ul style="list-style-type: none"> Potential provider of technical expertise. 	<ul style="list-style-type: none"> process.
Ministry of Economy	<ul style="list-style-type: none"> Elaborates the national economic, trade and industrial development policies, participates in developing short, medium and long-term social and economic development projections and plans as well as in developing the strategy of economic security and sustainable development. Promotes studies directed to scientific and innovative policy development, international cooperation in technology transfer and introduction of new technologies, intellectual property rights 	<ul style="list-style-type: none"> PSC member. Potential policy adviser and data provider. Potential provider of technical expertise for technology transfer. Facilitates technology transfer and application of international standards. 	<ul style="list-style-type: none"> Consulted by CCU. Provided input and feedback to the process.
Ministry of Territorial Administration	<ul style="list-style-type: none"> Coordinates implementation of government's regional policy. Ensures implementation of social and economic development plans by territorial administration bodies. 	<ul style="list-style-type: none"> Potential PSC member. Potential policy adviser and data provider. Potential provider of technical expertise. Facilitates mainstreaming of climate change issues in regional development plans. 	<ul style="list-style-type: none"> Consulted by CCU. Provided input and feedback to the process.
Ministry of Transport and Communication	<ul style="list-style-type: none"> Elaborates and implements the government's policies in the transport, communication, and information technologies sectors. Develops normative and technical by-laws on adjustment of all types of transport and communication. 	<ul style="list-style-type: none"> Potential policy adviser and data provider. Potential provider of technical expertise. Facilitates mitigation objectives in the transport sector development plans. 	<ul style="list-style-type: none"> Consulted by CCU. Provided input and feedback to the process.
Ministry of Foreign Affairs	<ul style="list-style-type: none"> Elaborates and implements the government's foreign affairs policies and organizes and manages the diplomatic services within the scope of the authority vested in it. 	<ul style="list-style-type: none"> Potential policy adviser. 	<ul style="list-style-type: none"> Consulted by CCU. Provided input and feedback to the process.
Ministry of Justice	<ul style="list-style-type: none"> Elaborates and implements government's policy in sectors which belong to the authority of the Ministry in accordance with laws, other legal acts, and its by-laws. Coordinates state legal expertise of normative legal acts, by-laws and their state registry. 	<ul style="list-style-type: none"> Potential policy adviser. 	<ul style="list-style-type: none"> Consulted by CCU. Provided input and feedback to the process.
Ministry of Education and	<ul style="list-style-type: none"> Elaborates and implements the government's policy in the education and 	<ul style="list-style-type: none"> Potential PSC member. 	<ul style="list-style-type: none"> Consulted by CCU.

Name of Institutions/stakeholders consulted	Stakeholder interests, official position or mandate	Reasons for inclusion	Role in the self-assessment process
Science <i>(including agencies and relevant institutions that are under its coordination)</i>	science sectors. <ul style="list-style-type: none"> • Develops state and targeted action plans. • Ensures development educational plans, curricula, books and handbooks for secondary education. • Facilitates scientific and technical studies for improvement of environmental situation in the country. • Approves educational and subject curricula developed by educational institutions. 	<ul style="list-style-type: none"> • Potential policy adviser and data provider. • Potential provider of technical expertise. • Facilitates mainstreaming of climate change issues into development plans. 	<ul style="list-style-type: none"> • Participated in the stocktaking survey. • Provided input and feedback to the process.
Ministry of Health <i>(including agencies and relevant institutions that are under its coordination)</i>	<ul style="list-style-type: none"> • Elaborates and implements the government's policy in the healthcare sector. • Develops hygienic and anti epidemic measures and supervises their implementation. • Assesses environmental impact on population health. • Organizes measures on population early medical assistance in case of epidemic situations. • Organizes anti epidemic measures in the infectious and parasitological sites. 	<ul style="list-style-type: none"> • PSC member. • Potential policy adviser and data provider. • Potential provider of technical expertise. • Facilitates mainstreaming of climate change V&A issues into national plans. 	<ul style="list-style-type: none"> • Consulted by CCU. • Participated in the V&A stocktaking survey. • Provided input and feedback to the process.
Government Adjunct Bodies			
State Committee of Water Resources	<ul style="list-style-type: none"> • Elaborates and implements government's policies in the areas of management and utilization of state-owned water systems. • Participates in drafting of national water plan. • Participates in evaluation of annual and long-term consumable water resources. • Ensures implementation activities directed to redistribution of consumables water resources. • Conducts administrative statistical registry of water consumption. 	<ul style="list-style-type: none"> • Potential PSC member. • Potential policy adviser and data provider. • Potential provider of technical expertise. • Facilitates mainstreaming of climate change issues into national water sector plans. 	<ul style="list-style-type: none"> • Consulted by CCU. • Provided input and feedback to the process.
State Committee of the Real Estate Cadastre	<ul style="list-style-type: none"> • Elaborates and implements the policies of the unified national cadastre of real estate property. • Draws up land balance of the land fund. • Develops management principles on regulation of land relations, land policy and land resources with regard to rights and land market formation. • Develops and implements geodesic and mapping targeted projects of state importance. • Develops and manages state fund of map-making. 	<ul style="list-style-type: none"> • Potential policy adviser and data provider. • Potential provider of technical expertise. • Facilitates mainstreaming of climate change issues into national development plans. 	<ul style="list-style-type: none"> • Consulted by CCU. • Provided input and feedback to the process.
National Statistical Service	<ul style="list-style-type: none"> • Collects, processes, summarizes, analyzes and publishes statistical data. • Develops methodologies of statistical work. • Co-ordinates the information and data collection according to the unified classification and coding system based on international standards. • Organizes statistical surveys. • Carries out Population census every 10 years. • Establishes, maintains and updates the Business Register. • Jointly with other agencies develops and introduces national accounting 	<ul style="list-style-type: none"> • Potential PSC member. • Potential policy adviser and data provider. • Potential provider of technical expertise. 	<ul style="list-style-type: none"> • Consulted by CCU. • Participated in the stocktaking survey. • Provided input and feedback to the process.

Name of Institutions/stakeholders consulted	Stakeholder interests, official position or mandate	Reasons for inclusion	Role in the self-assessment process
	system indices in accordance to international standards.		
Academic and Research Institutions			
National Academy of Sciences <i>(Institute of Botany, Institute of Zoology, Institute of Geological Science, Institute of Hydrology and Ichthyology, Byurakan Observatory, Center for Ecological Noosphere Studies, Institute of Hydroponics)</i>	<ul style="list-style-type: none"> • Elaborates and implements scientific policy. • Promotes and carries out fundamental and applied research in different scientific fields and coordinates research carried out throughout Armenia. • Promotes introduction of innovative technologies and their improvement. • Implements expertise according to established procedures. • Develops and presents targeted programmes for educational and research institutions. • Formulates investment projects based on outputs achieved by research institutions. 	<ul style="list-style-type: none"> • PSC member. • Potential data provider. • Potential provider of technical expertise. • Facilitates climate change related studies. 	<ul style="list-style-type: none"> • Consulted by CCU. • Participated in the stocktaking survey. • Provided input and feedback to the process.
Yerevan State University, State Engineering University of Armenia, Armenian Agricultural Academy	<ul style="list-style-type: none"> • Educates at all levels on chemistry, biology, geology, geography, physics, computer sciences, economics, humanitarian sciences and mathematics. • Prepares high qualification specialists and organizes specialist retraining. • Conducts scientific research activities and implements projects. • Conducts educational and information activities. 	<ul style="list-style-type: none"> • Potential data provider. • Potential provider of technical expertise. • Facilitates climate change related studies and education. 	<ul style="list-style-type: none"> • Consulted by CCU. • Participated in the stocktaking survey. • Provided input and feedback to the process.
International Organizations			
UNDP Armenia	<p>In accordance with the national priorities and reflecting extensive consultations with civil society, the UNDP has signed with the GoA Country Programme Action Plan setting following priority environmental outputs:</p> <ul style="list-style-type: none"> • Promote environmentally sound technologies and effective management of natural resources in accordance with the MDGs and SDP. • Promote sustainable development by helping duty-bearers to integrate the principles of sound resource management and environmental protection into national development policies and programmes. • Strengthen the protection of natural resources by helping to create an enabling environment that promotes sound resource management. • Strengthen the capacity of civil society to contribute to sustainable development by raising awareness, enhancing skills and increasing public participation in the development and implementation of policies and programmes on natural resource management. 	<ul style="list-style-type: none"> • Implementing Agency of the GEF funded Climate Change enabling activities. • PSC member. • Provides technical assistance to the project implementation. • Coordinates Project cooperation with other donors and UNDP other programme activities. 	<ul style="list-style-type: none"> • Assisted and monitored stocktaking exercise. • Consulted by CCU. • Provided input and feedback to the validation process.
World Bank Armenia	<ul style="list-style-type: none"> • Helps accelerate economic growth, create employment and improve social services through analysis, advice and financial assistance. • Supports the country's growth through the provision of technical assistance, as well as analytical and policy advice. <p>In Frames of Country Assistance Strategy for Armenia the focus of World Bank lending has shifted to poverty alleviation through improvements in education, health, social infrastructure and private sector development as well as to agriculture and food security.</p>	<ul style="list-style-type: none"> • Potential PSC member. • Potential provider of technical expertise. • Potential innovative financing mechanism for renewable energy, energy efficiency, carbon sequestration and other 	<ul style="list-style-type: none"> • Consulted by CCU.

Name of Institutions/stakeholders consulted	Stakeholder interests, official position or mandate	Reasons for inclusion	Role in the self-assessment process
		similar funds.	
Regional Environmental Center (REC) Armenia	<ul style="list-style-type: none"> Assists in solving South Caucasian regional environmental problems and supports in building the civil society through promotion of public participation in the decision-making process, development of free exchange of information and encouragement of cooperation at national and regional level among NGOs, governments, businesses, local communities and all other stakeholders. Provides free access to environmental information. Assists in increasing the environmental awareness. Supports public participation in environmental decision-making. 	<ul style="list-style-type: none"> Potential partner for awareness raising activities. 	<ul style="list-style-type: none"> Consulted by CCU.
USAID Armenia	<p>In consultation with Armenian public, private and non-governmental organizations, as well as with other donors the USAID supports the efforts of the Government of Armenia in:</p> <ul style="list-style-type: none"> Capacity building for the GHG inventory development Promotion of energy efficiency, renewable energy and diversification of energy sources. 	<ul style="list-style-type: none"> Potential information provider. Potential provider of technical expertise. 	<ul style="list-style-type: none"> Consulted by CCU.
Non-Governmental Organizations			
“BYURAKN”	<ul style="list-style-type: none"> Promotes environmental education. Carries out advocacy campaign in the field of environmental protection. Promotes sustainable management of resources as a way of thinking and behavior. 	<ul style="list-style-type: none"> Potential partner for environmental education and awareness raising activities. 	<ul style="list-style-type: none"> Consulted by CCU.
Association for Sustainable Human Development	<ul style="list-style-type: none"> Advocates and disseminates the ideology and concepts of sustainable human development. Facilitates the elaboration and operation of the national strategy on sustainable development. 	<ul style="list-style-type: none"> PSC member. Potential partner for advocacy and awareness raising activities. 	<ul style="list-style-type: none"> Consulted by CCU.
Green’s Union of Armenia	<ul style="list-style-type: none"> Advocates for environmental protection and rational use of natural resources. Facilitates improvement of environmental legislation. Promotes use of alternative and renewable sources of energy. 	<ul style="list-style-type: none"> PSC member. Potential provider of technical expertise. Potential partner for awareness raising and advocacy activities. 	<ul style="list-style-type: none"> Consulted by CCU.
International Center for Human Development	<ul style="list-style-type: none"> Advocates for environmental protection and rational use of natural resources. Facilitates the regional cooperation 	<ul style="list-style-type: none"> 	
Environmental Public Advocacy Centre	<ul style="list-style-type: none"> Provides consultations to individuals, citizen groups, public and other organizations on a wide variety of environmental topics. Presents environmental claims of individuals, groups and organizations before governmental bodies, as well as in courts of law. Drafts and analyses environmental legislation. Conducts education of new generation of environmental lawyers through training and legal education programs. 	<ul style="list-style-type: none"> Potential partner for advocacy and awareness raising activities. 	<ul style="list-style-type: none"> Consulted by CCU.

Name of Institutions/stakeholders consulted	Stakeholder interests, official position or mandate	Reasons for inclusion	Role in the self-assessment process
“Khazer” Ecological and Cultural Organization	<ul style="list-style-type: none"> Promotes enhancement of general awareness, knowledge and education among the students, schoolchildren and public on global environmental concerns. Implements projects on climate change advocacy and education, participates in environmental monitoring. 	<ul style="list-style-type: none"> Potential partner for awareness raising activities. 	<ul style="list-style-type: none"> Consulted by CCU.
ECO-TEAM	<ul style="list-style-type: none"> Promotes awareness on energy efficiency, renewable energy Provides free consultancy and humanitarian assistance to needy low-income people, large families, and orphans. 	<ul style="list-style-type: none"> Potential partner for awareness raising activities. 	<ul style="list-style-type: none"> Consulted by CCU.
Professional and Entrepreneurial Orientation Union	<ul style="list-style-type: none"> Promotes different groups of the citizens, particularly intellectuals, youth, students, pupil, beginner businessmen, refugees, migrants, etc., to make correct professional and entrepreneurial orientation on the basis of own knowledge, ability and preference, so as to use their potential with the greatest effect in the field of socio-economic reforms, development of scientific, educational, cultural and environmental policy, with special reference to nature conservation and sustainable use of natural resources. 	<ul style="list-style-type: none"> Potential partner for training and awareness raising activities. 	<ul style="list-style-type: none"> Consulted by CCU.
Green Land, Tree Project, Armenian Forests <i>(The NGOs has similar mandates)</i>	<ul style="list-style-type: none"> Promotes rehabilitation of the forests, protective green belts and the expansion of green areas in Armenia with the assistance of all Armenians. Facilitates advocacy for protection of the green areas. 	<ul style="list-style-type: none"> Potential partner for development of reforestation, afforestation projects and awareness rising. 	<ul style="list-style-type: none"> Consulted by CCU.
Women for Green Way for Generations (WGWG)	<ul style="list-style-type: none"> Contributes to: <ul style="list-style-type: none"> Improvement of women's and children's health; improvement of public policy on reproductive health, particularly on consequences of negative environmental factors. Prevention and prophylaxis of environmental pollutants related diseases. Formation of ecological culture and self-consciousness among the population. Awareness raising and environmental education. 	<ul style="list-style-type: none"> Potential partner for producing CC Newsletters and outreach materials. 	<ul style="list-style-type: none"> Consulted by CCU.
Armenian Women for Health and Healthy Environment for Generations	<ul style="list-style-type: none"> Participates in environmental risk assessment, environmental security issues, fieldwork, and monitoring, Assists in establishing environment related data base 	<ul style="list-style-type: none"> Potential partner for monitoring, data collection and awareness raising activities. 	<ul style="list-style-type: none"> Consulted by CCU.
Geophone	<ul style="list-style-type: none"> Conducts environmental impact assessment/ environmental expertise, fieldwork, and monitoring, public involvement in decision-making process, information dissemination, and cooperation with other NGOs. 	<ul style="list-style-type: none"> Potential partner for awareness raising activities. 	<ul style="list-style-type: none"> Consulted by CCU.
Bio and Landscape Diversity	<ul style="list-style-type: none"> Promotes protection of biodiversity and landscapes, assessment and sustainable use of bio-resources, as well as legislation improvement in the sphere for human sustainable development. 	<ul style="list-style-type: none"> Potential provider of technical expertise. 	<ul style="list-style-type: none"> Consulted by CCU.

Name of Institutions/stakeholders consulted	Stakeholder interests, official position or mandate	Reasons for inclusion	Role in the self-assessment process
Armenian Geographical Society	<ul style="list-style-type: none"> Mobilizes geographers and representatives of related sciences to promote science development, sharing geographical and geo-ecological knowledge, increases public awareness on geographical issues. Organizes scientific conferences on geography and rational use of natural resources and environmental issues in the regions. 	<ul style="list-style-type: none"> Potential data provider. Potential partner for awareness raising activities. 	<ul style="list-style-type: none"> Consulted by CCU.
Private Companies			
GEORISK Scientific Research CJSC	<p>Provides scientific and technical advice and implements research in the field of:</p> <ul style="list-style-type: none"> Geology Studies. Geotechnical Engineering. Hazard and Risk Assessment related to earthquakes, volcanoes, landslides, and mudflows. Interpretation of remote sensing materials (air photos/satellite imagery). Ecology. Creation of GIS-based data banks and databases. Applications of GPS technology. Research in biotechnology and bioenergetics. 	<ul style="list-style-type: none"> Conducts studies related to monitoring and assessment of desertification, deforestation, hazardous slope phenomena (landslides, mudflows), greenhouse gases emission, etc. Provides analytic services, research, and expert estimations. Potential provider of thematic data, technical expertise related to application of GIS and other advanced tools in the climate change study, monitoring, forecasting and management. 	<ul style="list-style-type: none"> Consulted by CCU regarding natural hazard/risk assessment, monitoring, and management. Participated in the stocktaking survey.
Energy Strategy Center	<ul style="list-style-type: none"> Issues of policy and strategy planning in the energy sector Energy demand and generation forecast studies Business planning and project implementation in the energy sector Renewable energy development projects implementation Environmental issues in energy sector 	<ul style="list-style-type: none"> Partner in mitigation studies. Energy demand forecast Potential provider of technical expertise. 	<ul style="list-style-type: none"> Consulted by CCU. Participated in the stocktaking survey.
Library of Foreign Assistance of the CJSC "Scientific Research Institute of Energy"	<p>Provides scientific and technical information which includes:</p> <ul style="list-style-type: none"> Reports of foreign assistance projects in energy, ecology, economy, other fields. Books, magazines, newspapers, other periodicals. Conference, seminar, training, presentation materials, transactions. Newsletters, magazines, bulletins, digest in electronic format. 	<ul style="list-style-type: none"> Provides analytical services, research, and expert estimations. Potential provider of thematic data, and other advanced tools in the climate change study, monitoring, forecasting and management 	<ul style="list-style-type: none"> Consulted by CCU regarding information collection and dissemination matters.
Technokom Ltd	<p>Focuses its activities in solar, heating, refrigeration technologies development in Armenia.</p> <ul style="list-style-type: none"> Design, manufacturing and installation of custom-sized solar water heating 	<ul style="list-style-type: none"> Potential partner for technology transfer. Potential provider of 	<ul style="list-style-type: none"> Consulted by CCU.

Name of Institutions/stakeholders consulted	Stakeholder interests, official position or mandate	Reasons for inclusion	Role in the self-assessment process
	systems. <ul style="list-style-type: none"> • Installation of photovoltaic and autonomous power supply systems. • Consultancy in heating and refrigeration equipment design and installment. 	technical expertise.	
AREV Scientific-Industrial Company	<ul style="list-style-type: none"> • Develops advanced industrial technologies which have unique environmentally safe applications in renewable energy sources, which can be applied in efficient production, processing of nuclear and recycling of industrial wastes, in hydrometallurgy based on electro dialysis and electrolysis with especially selected components. Company is also experienced in developing important theoretical and modeling tools. • Develops solar heater. 	<ul style="list-style-type: none"> • Potential partner for technology transfer. • Potential provider of technical expertise. 	<ul style="list-style-type: none"> • Consulted by CCU. • Participated in the stocktaking survey.
“Gazoterm” CJSC	<ul style="list-style-type: none"> • Heat supply and ventilation. • Development of ventilation and hydro technical projects. • Expertise in the field of energy and hydrotechnics. • Development of normative documents. 	<ul style="list-style-type: none"> • Gas sector mitigation technology expertise provider. 	<ul style="list-style-type: none"> • Consulted by CCU.
“JINJ” CJSC	<ul style="list-style-type: none"> • Provides engineering consultations in the area of water supply, water disposal and water resources management. • Design of engineering networks and evaluation of water supply projects. 	<ul style="list-style-type: none"> • Potential provider of technical expertise in water and wastewater treatment areas. 	<ul style="list-style-type: none"> • Consulted by CCU. • Participated in the stocktaking survey.
“ArmRusGazArd” CJSC	<ul style="list-style-type: none"> • ArmRusGazArd is a gas supply construction and repair organization specialized in: • Construction, design of gas pipelines, consulting in operation of gas pipeline systems. 	<ul style="list-style-type: none"> • Potential data provider. • Potential provider of technical expertise. 	<ul style="list-style-type: none"> • Consulted by CCU.
Institute of Water Problems and Hydraulic Engineering	<ul style="list-style-type: none"> • Studies water resources, water balance, water distribution issues in Armenia. 	<ul style="list-style-type: none"> • Potential data provider. • Potential provider of technical expertise on V&A of water sector. 	<ul style="list-style-type: none"> • Consulted by CCU.

Annex E. Risk Analysis

Risk Type	Risk Rating ²	Risk Mitigation Measures
<p>1. Political risk - Changes in the Government structure and its representatives may entail delays in project implementation and reduction of efficiency in mainstreaming CC issues into national development policies.</p>	L/M	<p>Since the Ministry administrations are less affected by the changes in the Government, the Project will work closely with specialized departments/agencies and will consider capacity building of policy makers as an element to be carried out continuously through the TNC project. The project will work with Government structures to demonstrate the benefits of measures, and involve them in project activities through the Steering Committee. This way the awareness and will of policy makers will be enhanced to support the implementation of Convention commitments, and implementation of CC mitigation and adaptation measures on the ground.</p>
<p>2. Institutional and coordination risks with stakeholders – Coordination with stakeholders may cause delay since a large number of actors from different sectors are involved and streamlining of outputs will multi-step approvals.</p>	L/M	<p>This risk will be minimized by building on the institutional collaboration established during the implementation of the SNC. Commitments from all stakeholders will be maintained through effective coordination and communication between project team and stakeholders, as well as through scheduled meetings of the working groups.</p>
<p>3. Difficulty with hiring qualified experts in several sub-sectors</p>	L	<p>The project will draw on the pool of national experts for most of the project activities. However, opportunities will be created within the project for national experts and young professionals in specific issues to be trained at respective national/ regional/ international trainings in order to minimize related delays of project implementation due to this risk.</p>
<p>4. Foreign currency exchange rate risk</p>	M	<p>The exchange rate between the USD and the Armenian Dram may decrease and/or fluctuate, potentially leading to a reduced value of GEF resources. Careful financial planning should help anticipate such situation.</p>

² L- Low, M-Middle, H-High

Annex F. Terms of Reference of Project's Key Personnel

1. PROJECT TASK LEADER (PTL)

In consultation with the PSC, National Project Coordinator and the UNDP CC Programme Coordinator, the PTL is responsible for day-to-day management and implementation of the project, including administrative matters. The work of the Task Leader will be carried out in line with the UNDP and GEF requirements and according to countries commitments under the Convention.

Job content

- (i) Ensure that the TNC process is in the line with the guidance provided by the COP of the UNFCCC and contributes to the improvement of the UNFCCC reporting process;
- (ii) Lead, supervise, and monitor project implementation in accordance with the Project's approved Work Plan;
- (iii) Establish relationships with national and international financial organizations for identification of cooperation perspectives to mobilize additional financial resources in order to achieve project outputs;
- (iv) Provide substantive support in identification and recruitment of the project team, consisted of national experts/consultants and subcontractors, formulate their Terms of Reference, and evaluate their performance.
- (v) Monitor and analyze the adequacy and content of the technical reports and project deliverables to achieve the project outcomes/outputs.
- (vi) Provide technical backstopping and guidance to the national team of experts and subcontractors.
- (vii) Liaise with Governmental agencies, regional and local authorities, private sector, civil society organizations, and international partners to ensure participatory approach for achievement of project objectives.
- (viii) Support development of procurement documentation required to facilitate procurement process of project goods and services.
- (ix) Analyze the outputs, organize surveys and awareness rising campaign;
- (x) Ensure organization of workshops, trainings and seminars for information dissemination on project's outcomes and activities, as well as other meetings, prepare briefing notes, background papers and make presentations.
- (xi) Ensure access to the project outcomes for stakeholder agencies and organizations and other partners to ensure their involvement in the TNC;
- (xii) Identify and ensure synergy of the TNC with other relevant ongoing/new projects to ensure continuity of the process;
- (xiii) Ensure preparation of periodic progress reports as per UNDP, GEF and Ministry of Nature Protection requirements.
- (xiv) Ensure regular updating of Project information on www.nature-ic.am web-site.

Outputs

- Successful and timely Project implementation in accordance with objectives, schedule and planned budget.
- The quality of work of the Project Task Leader will be assessed by successful achievement of general objectives of the Project, in particular:
 - Preparation of annual Project reports, working plans and other relevant Project documents;
 - Documents on informative campaigns.

Schedule

The PTL is expected to adhere to the timetable of the project, delivering the progress according to the project work plan and expected outputs. The key output of the project is expected to be delivered by the 34th month of the project.

Remuneration

Remuneration is to be made on monthly basis according to the Contract.

Required qualifications

Education: Advanced University Degree in environmental management or other related field.

Experience: Minimum 6 years of related working experience relevant to the environment/energy projects. Good understanding of country's environmental and development issues and thematic areas under investigations. Experience in international project management and involvement in previous enabling activities are an advantage. Substantial knowledge of IPPC methodologies and UNFCCC/ GEF guidelines, international negotiation processes. Demonstrated ability of cooperation with stakeholders: government officials, scientific institutions, NGOs, private sector and international financing institutions. Experience with UNDP-GEF project implementation procedures is highly desirable.

Languages: Excellent knowledge of Armenian and English, with exceptional writing skills. Ability to review, prepare and present training material and make oral presentations, both in Armenian and English.

Other skills: Strong interpersonal and communication skills, ability to take decisions. Good knowledge of computer software (MS Office, and task relevant specific software).

2. INFORMATION AND PUBLIC AWARENESS ASSISTANT (IPAA)

The IPAA will work under overall guidance of the NPC and the UNDP CCPC and direct supervision of the PTL to provide assistance to TLs in different thematic areas in carrying out day-to-day tasks. He/She will be responsible also for secretarial and project management support functions.

Job content

- (i) Assist the UNDP CCPC in drafting the detailed thematic workplans according to the Project annual work plan.
- (ii) Support the UNDP CCPC, PTL and TLs/Experts in planning, implementation and monitoring of the project related activities included in the AWP.
- (iii) Collect and systemize the existing national and international documents in relevant areas.
- (iv) Provide background material for use in discussions and briefing sessions. Assist in arrangement of meetings, organization of workshops, round tables, draft agendas and prepare briefing kits.
- (v) Take notes and draft minutes of workshops and working group meetings, draft reports, and relevant correspondence as needed. Keep appropriate filing system.
- (vi) Maintain records, documents and other information on the project and expert team activities.
- (vii) Assist the PTL/Experts in preparation of periodic progress reports on the thematic groups, as per UNDP, GEF and Executing agency requirements and documents to be submitted to the Project Board approval and report regularly on the progress of work.
- (viii) Routine translation/interpretation during project's meetings and drafting of correspondence as required
- (ix) Assist in provision of follow-up, clarification and respond to requests for information.
- (x) Provide translation from English into Armenian and vice versa of all necessary documents and technical reports.
- (xi) Keep, regularly update and disseminate among project partners and stakeholders newsletter on climate change related issues.
- (xii) Assist in making logistical arrangements for missions and experts.
- (xiii) Assist in drafting relevant information for project website: (www.nature-ic.am).
- (xiv) Ensure communication within project team and maintain external correspondence.
- (xv) Perform other duties as required.

Qualifications

Education: University Degree in social sciences or other related field.

Experience: Minimum five years of experience, preferably in environmental projects with international organizations, basic knowledge of CC and UNFCCC/IPCC process will be an advantage.

Skills: Strong interpersonal and communication skill, good organizational skills, good team player, computer skills, including Microsoft office package and internet applications

Languages: Fluent in Armenian and English

3. GHG INVENTORY TEAM LEADER

The task objective is to prepare the GHG inventory of Armenia for 2010 and GHG Inventory chapter of Armenia's TNC to the UNFCCC according to Articles 4 and 12 and guidelines for NC of non-Annex I countries, with the overall goal to maintain and strengthen the national capacities for the continuous preparation of GHG inventory according to the countries commitments under convention.

Job Content

Under the overall guidance of the NPC and the UNDP CCPC and direct supervision of the PTL, the team leader is responsible for co-ordination and execution of the corresponding technical component to ensure overall quality of the Project. He/she will provide technical guidance and supervise the work of experts and national institutions involved in GHG inventory development team. His/her responsibilities will include but not be limited to the following:

- Assist the NPC in establishing the team of experts for performing the GHG inventory on the basis of the roster of experts and tender, as needed;
- Identify training needs, prepare training materials and organize training programmes, consultation and workshops, and develop publications if needed; Organize a "training-of-trainers" sessions on GHG inventory, as needed,
- Provide assistance to the national team in the use of IPCC guidelines and methodologies, including new requirements, to improve emission factors and overall quality of GHG inventory. In consultation with NPC select and implement methodologies for conducting GHG inventory;
- Develop detailed work plan for GHG inventory on the basis of the overall project work plan;
- Develop the scopes of work and respective Terms of References for the team members;
- Prepare a monitoring and evaluation plan to ensure adequate, timely and effective management and assessment of team activities;
- Lead and oversee the team conducting the national GHG inventory;
- Lead the data collection process, including surveys;
- Identify gaps and key sectors for GHG inventory;
- Ensure that approaches used by team for compiling, archiving, updating and managing greenhouse gas inventory are consistent with the project document and with the IPCC guidance;
- Foster and establish links with related national and regional projects and other international programmes;
- Provide periodic progress report to the NPC on the GHG inventory thematic area;
- Draft the National GHG Inventory, and respective chapter of Armenia's TNC along with the respective part of the executive summary;
- Lead and coordinate the updating of the Manual of Procedures in light of the new findings under the TNC exercise.
- Incorporate comments received from the review process in final products.
- Oversee the archiving of the data and estimates of the Inventory.

Terms and conditions for provision of services

The GHG Inventory Team Leader works under direct overseeing and supervision of NPC. The Team leader is hired for the period of 8 months in the first year with possible extension.

The NPC may contact the Team Leader during working hours for expert support, inputs and participation in the meetings in relation to the project objectives.

Schedule

The Team Leader is expected to adhere to the timetable of the project, delivering the progress of technical component (thematic reports) according to the project work plan and expected output. The key output of the TNC component is expected to be delivered by the 32nd month of the project.

Qualifications and Experience

The candidate should be highly motivated, enthusiastic and capable of working independently. He/she should have a strong scientific/technical and policy background, preferably in all sectors of national greenhouse gas inventories. The ability to work with a wide variety of people from government, agencies, non-governmental organizations and research institutions is essential. He/she should particularly have:

- An advanced degree (at least MSc. or equivalent) in energy, environmental management or other relevant disciplines;
- A minimum of 7 years of work experience in the area relevant to climate change;
- Demonstrated ability of analytical and drafting work;
- Substantial involvement in preparation of Armenia's SNC (in national GHG inventory);
- Good understanding of GHG inventory process and substantial knowledge on IPCC manuals and guidelines, GPG and Uncertainty Management in National GHG Inventories;
- Good understanding of the institutional framework in the country is highly desirable;
- Ability in negotiation and conflict resolution;
- Familiarity with computers and word/excel processing;
- Good knowledge of English.

4. CC MITIGATION TEAM LEADER

The task objective is to prepare the climate change mitigation analysis and the corresponding chapter of Armenia's TNC to the UNFCCC according to Articles 4 and 12 and guidelines for NC of non-Annex I countries, with an overall goal to maintain and strengthen the national capacities for updating CC mitigation policy and measures according to the country's commitments under the Convention and development priorities.

Job Content

Under the overall guidance of the NPC and the UNDP CCPC and direct supervision of the PTL, the Team Leader is responsible for co-ordination and execution of the corresponding technical component to ensure overall quality of the Project. He/she will provide technical guidance and supervise the work of the experts and the national institutions involved in the CC mitigation analysis. His/her responsibilities will include but not be limited to the following:

- Assist the NPC in establishing the team of experts for performing the CC mitigation analysis on the basis of the roster of experts and tender, if necessary;
- Develop a detailed work plan for the CC mitigation analysis on the basis of the overall project work plan;
- Develop the scope of work and respective Terms of References for the team members;
- Lead the data and information collection process;
- In consultation with NPC decide on methodologies for elaboration of scenarios for both energy and non-energy sectors;
- Lead and oversee the scenario development and update;
- Organize relevant consultations/workshop, as needed;
- Prepare a monitoring and evaluation plans to ensure adequate, timely and effective management and assessment of team activities;
- Ensure synergy with other relevant projects: foster and establish links with related national and regional projects, and other international programmes;

- In consultation with NPC select and implement corresponding methodologies and models for the CC mitigations analysis;
- Identify gaps and key barriers for CC mitigation technology transfer;
- Identify training needs, prepare training materials, organize training programmes, consultation and workshops and develop publications, if needed;
- Provide periodic progress report to the NPC on the thematic area;
- Draft the respective chapter of Armenia's TNC along with the respective part of the executive summary. Incorporate comments received from the review process in final products;
- Oversee the archiving and documentation of the studies conducted.

Terms and conditions for provision of services

The Team Leader works under direct overseeing and supervision of NPC. The Team leader is hired for the period of 8 months in the first year with the possible extension. The NPC Armenia may contact team leader during working hours for expert support, inputs and participation in the meetings in relation to the project objectives.

Schedule

The team leader is expected to adhere to the timetable of the project, delivering the progress of technical component (thematic reports) according to the project work plan and expected output. The key output of the SNC component is expected to be delivered by the 32th month of the project

Qualifications and Experience

The candidate should be highly motivated, enthusiastic, and capable of working independently. He/she should have a strong scientific/technical and policy background, preferably in energy or economics. The ability to work with a wide variety of people from government, agencies, non-governmental organizations, and research institutions is essential. He/she should particularly have:

- An advanced degree (MSc. or equivalent) in energy, economics or other relevant disciplines;
- A minimum of 7 years of work experience relevant to the energy/environment projects;
- Demonstrated ability of analytical and drafting work;
- Substantial involvement in preparation of Armenia's SNC and familiarity with processes under the UNFCCC;
- Substantial knowledge of IPCC manuals and guidelines, software, National GHG Inventory processes and GHG emission projections;
- A good understanding of the macro economical developments, legislation and institutional framework in the country;
- Ability in negotiation and conflict resolution;
- Familiarity with computers and word processing;
- Good knowledge of English is asset.

5. VULNERABILITY AND ADAPTATION TEAM LEADER

The task objective is to prepare the adaptation policy framework for Armenia, based on comprehensive vulnerability assessment of different sectors, and the corresponding chapter of Armenia's TNC to the UNFCCC according to Articles 4 and 12 and guidelines for NC of non-Annex I countries. The overall goal of the task is to maintain and strengthen the national capacities for ensuring effective response to climate change adverse impacts according to the country development priorities.

Job content

Under the overall guidance of the NPC and the UNDP CCPC and direct supervision of the PTL, the Team Leader is responsible for co-ordination and execution of the corresponding technical component to ensure overall quality of the Project. He/she will provide technical

guidance and supervise the work of the experts and the national institutions involved in the V&A analysis. His/her responsibilities will include but not be limited to the following:

- Assist the NPC in establishing the team of experts for performing the V&A analysis on the basis of the roster of experts and tender, if necessary;
- Develop a detailed work plan for the V&A component on the basis of the overall project work plan;
- Develop scope of work and respective Terms of References for the team members;
- Lead the data and information collection process and identification of gaps and priority areas for adaptation;
- In consultation with NPC decide on approaches to be applied for V&A analysis;
- Lead and oversee the scenario development and update;
- Prepare a monitoring and evaluation plan to ensure adequate, timely and effective management and assessment of team activities;
- Lead and oversee the development baseline climate and socio-economic scenario and impact of climate change;
- Organize relevant consultations/workshops, as needed;
- Ensure synergy with other relevant projects: foster and establish links with related national and regional projects, and other international programmes;
- In consultation with NPC select and implement corresponding methodologies and models for V&A analysis;
- Identify gaps and key barriers for CC adaptation technology transfer;
- Identify training needs prepare training materials, organize training programmes, consultation and workshops and develop publications if needed;
- Provide periodic progress report to the NPC on the thematic area.
- Draft the adaptation policy framework and respective chapter of Armenia's TNC along with the respective part of the executive summary;
- Incorporate comments received from the review process in final products.
- Oversee the archiving and documentation of the studies conducted.

Terms and conditions for provision of services

The Team Leader works under direct overseeing and supervision of the NPC. The Team Leader is hired for the period of 8 months in the first year with the possible extension. The NPC Armenia may contact the Team Leader during working hours for expert support, inputs and participation in the meetings in relation to the project objectives.

Schedule

The team leader is expected to adhere to the timetable of the project, delivering the progress of technical component (thematic reports) according to the project work plan and expected output. The key output of the TNC component is expected to be delivered by the 32th month of the project

Qualifications and Experience

The candidate should be highly motivated, enthusiastic, and capable of working independently. He/she should have a strong scientific/technical and policy background. The ability to work with a wide variety of people from government, agencies, non-governmental organizations, and research institutions is essential. He/she should particularly have:

- An advanced degree (MSc. or equivalent) in environmental management or other relevant disciplines;
- A minimum of 7 years of work years experience relevant to the CC/environment projects;
- Substantial involvement in the preparation of Armenia's SNC and familiarity with processes under the UNFCCC;
- Demonstrated ability of analytical and drafting work;
- Substantial knowledge of IPCC manuals, Guidelines on CC adaptation policy framework and specific models/software for CC scenario development and vulnerability assessment;
- Good understanding of the legislation and institutional framework in the country;
- Ability in negotiation and conflict resolution;
- Familiarity with computers and word processing;
- Good knowledge of English is asset.

6. PROJECT STEERING COMMITTEE

The Project Steering Committee will be charged with inter-institutional coordination, overseeing and advising Project on the execution of Project activities and will have decision-making power.

Job content

The PSC together with the Implementing Agency (UNDP) is responsible for the project progress and continuous monitoring to achieve the goals under the UN Framework Convention on Climate Change. The PSC will:

- Provide assistance and political support to the NPT, NPC, PTL and national experts and counterparts during the implementation process of all project activities;
- Oversee project progress and provide general consultation for project implementation policy ensuring the project's consistency with the other ongoing processes in the country;
- Promote the collection of relevant data and information, ensure constant information exchange between stakeholders;
- Facilitate the communication between the project and respective sectors and promote the decision-making effectiveness;
- Receive information from the NPC on the status of implementation of project activities, technical constraints, which may hinder project timely implementation and make recommendations;
- Review and make necessary comments/advise to the draft documents prepared by the project.

Rules under which PSC operates

- The NPD serves as Moderator of PSC meetings. The NPD 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 NPD.
- When the PSC does not meet, the NPD and NPC may request inputs and support from individual members of the PSC.

Annex G. Endorsement Letters



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MINISTRY OF NATURE PROTECTION OF THE REPUBLIC OF ARMENIA
MINISTER
МИНИСТЕРСТВО ОХРАНЫ ПРИРОДЫ РЕСПУБЛИКИ АРМЕНИЯ
МИНИСТР

0010, ք. Երևան, Հանրապետության հր. Կառավարական 3-րդ տուն
3 Government Bldg, Republic Sq, Yerevan, 0010, Armenia
0010, Армения, г.Ереван, Дом правительства, здание N3
Էլ. փոստ /E-mail/ չի. փոստ: min_ecology@mnp.am
Web page: www.mnp.am
☎ (374 10) 52 10 99
☎ (374 10) 54 08 57

№ 1/04/21524-10 1/04/11049-10
«28» 04 2010 թ.

To: Dafina Gercheva
Resident Representative
UNDP Armenia
Petros Adamyan 14 Str.,
Yerevan, Armenia

Re: *Self-assessment exercise for the preparation of the Third National Communications to the UNFCCC*

Dear Ms. Gercheva,

On behalf of the Government of Armenia and, in my capacity as GEF Operational Focal Point, I hereby endorse the request of funding for US \$20,000 for the above-mentioned activity, to be presented through the United Nations Development Programme (UNDP) to the Global Environment Facility.

By requesting this assistance, the Government of Armenia expresses its interest in receiving UNDP support for the preparation of its Third National Communication to the United Nations Convention on Climate Change.

We look forward to our on-going cooperation.

Accept, please, the assurance of my highest consideration.

Enclosed: 10 pages.

Sincerely,

Aram Harutyunyan
GEF Operational Focal Point





29 November 2010

Dear Ms. Gercheva,

Subject: Armenia Self-assessment to prepare a project proposal for its Third National Communication to the UNFCCC – Armenia: Third National Communication, PIMS No: 4547, ATLAS BU: ARM10, Proposal ID: 00060737; Project ID: 00076620

I am pleased to delegate to you the authority to sign the above-mentioned project document on behalf of UNDP and to commence implementation of the preparation of the project. As per Rule 116.05 of the UNDP Financial Regulations and Rules (Executive Board Decision 2005/1), this document becomes effective when signed by the Resident Representative. The Self-assessment exercise, which amounts to a total of US\$ 20,000.00 in approved funding, has received its final approval in accordance with the established GEF procedures

Please note that the objective of this self-assessment is to assist Armenia to prepare and submit a project proposal for the preparation of its Third National Communication. The main outcome of the self-assessment is the corresponding project document for UNDP review and approval. The UNDP-GEF Regional Coordination Unit will assist the Government and the Country Office during the preparation of the project document, which is expected to be completed within 3 months. At this time, a separate delegation of authority will be issued upon approval of the Third National Communication project document.

Once the project document is signed, you may request issuance of an *Authorized Spending Limit (ASL)* by submitting an Atlas-generated *Annual Work Plan (AWP)* based on the *Total Budget and Annual Work Plan* in the attached project document, along with a copy of the signed cover page, to Ms. Keti Chachibaia, Regional Technical Advisor in Bratislava. Please note that this project has already been assigned an Atlas ID: BU: ARM10, Proposal ID: 00060737 and Project ID: 00076620. Comments on the AWP will be provided within 5 working days by the UNDP-EEG Regional Technical Advisor as relevant.

Budget revisions should be forwarded to the UNDP-EEG Regional Service Center (RSC)/Regional Coordination Unit (RCU) with an explanation of the changes proposed. In this connection, please note that UNDP-EEG is not in a position to increase the budget above the amount already approved by the GEF CEO. Therefore, any over-expenditure during this initiation phase will have to be absorbed by other Country Office resources.

Ms. Dafina Gercheva
Resident Representative
UNDP
Yerevan
Armenia

We take the opportunity to draw your attention to the following mandatory requirement for all GEF-funded projects:

- ❖ Any changes contemplated with respect to the project objectives and outcomes will have to be discussed with and approved by the UNDP-EEG RSC/RCU, as they will have to be reported to GEF.

In conclusion, I would like to assure you of the UNDP-EEG Team's and my personal commitment to successful implementation of the project. The EEG Regional Service Center/Regional Coordination Unit in Bratislava is available to you for advice and technical support. Should you have any concerns or questions, please do not hesitate to contact me with your feedback on the quality of our services and suggestions for improvements.

Yours sincerely,



Yannick Gilemarec
Executive Coordinator

cc: Ms. Kori Udovickā, Regional Director, RBEC
Ms. Keti Chachibaia, GEF Regional Technical Advisor, Bratislava, Slovak Republic

Annexes

Annex 1 Project Support Services (management oversight)

Annex 1: UNDP Environment and Energy Group - Project Support Services

Stage	Country Office	EEG
Identification, Sourcing and Screening of Ideas	Identify project ideas as part of country programming	Provide information on substantive issues and specialized funding opportunities (SOFs)
		Verify soundness and potential eligibility of identified idea
Feasibility Assessment / Due Diligence Review	Assist proponent to formulate project idea / prepare project idea paper	Technical support: provide up-front guidance; sourcing of technical expertise; verification of technical reports and project conceptualization; guidance on SOF expectations and requirements
	Review and appraise project idea	Provide detailed screening against technical, financial, social and risk criteria and provide statement of likely eligibility against identified SOF
	Assist proponent to identify and negotiate with relevant partners, co-financ ers, etc	Assist in identifying technical partners; Validate partner technical abilities.
	Obtain clearances – Government, UNDP, Executing Agency, LPAC, co-financ ers, etc.; monitor project milestones	Obtain clearances – SOF
Development & Preparation	Management and financial oversight of Initiation Plan	Technical support, backing and troubleshooting
	Support project development, assist proponent to identify and negotiate with relevant partners, co-financiers, etc	Technical support: sourcing of technical expertise; verification of technical reports and project conceptualization; guidance on SOF expectations and requirements
	Review, appraise, finalize Project Document	Verify technical soundness, quality of preparation, and match with SOF expectations
	Negotiate and obtain clearances – Government, UNDP, Executing Agency, LPAC, co-financiers, etc	Negotiate and obtain clearances by SOF
	Respond to information requests, arrange revisions etc.	Respond to information requests, arrange revisions etc.
	Prepare operational and financial reports on development stage as needed	Verify technical soundness, quality of preparation, and match with SOF expectations

COUNTRY: REPUBLIC OF ARMENIA

UNDAF Outcome 4: Environment and disaster risk management is integrated into national and local development frameworks

Expected CP Outcome(s) 4.1: Armenia is better able to address key environmental challenges including climate change

Expected Output 4.1.1: National policies and tools for implementation of and compliance with international environmental agreements are developed and adopted


Expected Output 4.1.4: National and local capacities to develop innovative policies and practices to address climate change mitigation and adaptation strengthened

Executing Entity: Ministry of Nature Protection

Implementing Agency: United Nations Development Program

Programme Period:	CPD 2010-2015
Programme Component:	Promoting energy efficiency and environmental sustainability
Project Title:	Enabling activities for the preparation of Armenia's Third National Communication to the UNFCCC
Award ID:	00060737
Project ID:	00076620
PIMS ID:	4547
Project Duration:	3 years
Management Arrangement:	NIM

Total resources required:	USD 570,000
Total resources allocated:	USD 570,000
o GEF Allocation:	USD 480,000
o Government (in-kind):	USD 70,000
o UNDP (in-kind):	USD 20,000



AGREED BY (GOVERNMENT AND UNDP):

Aram Harutyunyan
Minister of Nature Protection
Republic of Armenia
/Executing Entity/

Date: 03.11.11

Dafina Gercheva
UNDP Resident Representative
UNDP Armenia
/Implementing Agency/



Date: 03.11.11