

# REQUEST FOR CLIMATE CHANGE ENABLING ACTIVITY

PROPOSAL FOR FUNDING UNDER THE GEF Trust Fund

# **PART I: PROJECT IDENTIFIERS**

EA Title:	Enabling Republic of Moldova to Prepare its Fourth National Communication (4NC) and			
	Biennial Update Report (BUR) to	Biennial Update Report (BUR) to the UNFCCC		
Country:	Republic of Moldova	GEF Project ID: <sup>1</sup>		
GEF Agency:	UNEP	GEF Agency Project ID:	1232	
Other Executing Partner:	Climate Change Office	Submission Date:	17/12/2013	
GEF Focal Area:	Climate Change	Project Duration (Months)	36	
Check if applicable:	NCSA NAPA NAPA	Agency Fee (\$):	80,940	

### A. EA FRAMEWORK\*

EA Objective: To prepare and submit the Republic of Moldova's fourth national communication (4NC) and the first biennial update report (BUR) to UNFCCC and in doing so enhance the country's capacity to meet its reporting obligations under the UNFCCC on continous basis.

EA Component	Grant Type	Expected Outcomes	Expected Outputs	Grant Amount (\$)	Confirmed Co- financing (\$)
1. National circumstances, institutional arrangements for the preparation of national communications, national inventory reports and biennial update reports on a continuous basis.	TA	1.1 Information on national circumstances and institutional arrangements relevant to the preparation of the biennial update reports (BURs) on a continuous basis officially endorsed.	<ul> <li>1.1.1 Information on geography, climate, population, natural resources, and socio-economic profile of the country relevant to climate change updated for the period of 1990-2012 years.</li> <li>1.1.2 Overview of the institutional arrangements adopted for the preparation of the 1<sup>st</sup> Biennial Update Report (BUR) provided.</li> <li>1.1.3 Chapters 1: 'National Circumstances' of the 1<sup>st</sup> BUR compiled.</li> </ul>	10,000	2,500
Continuous vasis.		1.2 Information on national circumstances and institutional arrangements relevant to the preparation of the national communications (NCs) on a continuous basis officially endorsed.	<ul> <li>1.1.1 Information on geography, climate, population, natural resources, and socio-economic profile of the country relevant to climate change updated for the period of 1990-2014 years.</li> <li>1.1.2 Overview of the institutional arrangements adopted for the preparation of the 4<sup>th</sup> National Communications (4NC) provided.</li> <li>1.1.3 Chapters 1: 'National Circumstances' of the 4<sup>th</sup> NC compiled.</li> </ul>	10,000	2,500
2. The national inventory of anthropogenic emissions by sources and removal by sinks of all greenhouse gases (GHGs) not controlled by the Montreal Protocol, including a national inventory	TA	2.1 The national system for preparation of GHG emission inventories comprehensively strengthened and described in the 1 <sup>st</sup> BUR and 4 <sup>th</sup> NC and officially accepted.	2.1.1 Describe the roles of, and cooperation between government agencies and other entities involved in the preparation of the inventory, as well as institutional, legal and procedural arrangements to prepare the inventory.  2.1.2 Design surveys and forms to collect activity data, identify research needs for developing national emission factors and country specific methodologies.  2.1.3 Inventory data management system developed, activity data collected and inventory database updated and used in a coherent manner for BURs, NIRs and	50,000	2,500

Project ID number will be assigned by GEFSEC.

report		NCs.		
		2.1.4 Describe the process for official consideration and approval of the inventory, including any recalculations, prior to its submission to the UNFCCC.		
	2.2 The national capacities for inventory planning improved and officially accepted.	2.2.1 Update the 'Manual of Procedures', defining and allocating specific responsibilities in the inventory development process, including those relating to choice of methods, data collection, particularly activity data and emission factors from statistical services and other entities, processing and archiving, QC and QA.	20,000	2,500
		2.2.2 Update the QA/QC plan, describing specific QC procedures implemented during the inventory development process, facilitate the overall QA procedures conducted and establish quality objectives.		
	2.3 The national capacities for inventory preparation and management strengthened and	2.3.1 Assess the results of the most recent Key Source Analysis to prioritize activities on developing the GHG inventory which better reflect the national circumstances.	170,000	17,500
	officially accepted.	2.3.2 Identify areas where recalculations are necessary, plan strategy to ensure consistency and recalculate the GHG inventory for the time series covered by the TNC (1990-2010) in the 1 <sup>st</sup> BUR and for the time series covered by the BUR (1990-2012) in the 4 <sup>th</sup> NC.		
		2.3.3 Following the IPCC 1996 Revised Guidelines, IPCC Good Practice Guidance (2000), IPCC Good Practice Guidance on LULUCF (2003) and 2006 IPCC Guidelines, compile the national inventory of greenhouse gas sources and sinks for 2011-2012 time period in the frame of 1 <sup>st</sup> BUR and for 2013-2014 time period in the frame of 4 <sup>th</sup> NC.		
		2.3.4 Provide information on methodologies used in the estimation of GHG emissions by sources and removals by sinks, including a brief explanation of the sources of emission factors and activity data.		
		2.3.5 Undertake an uncertainty assessment of the National Inventory of Greenhouse Gas Sources and Sinks, provide information on the level of uncertainty with inventory data and their underlying assumptions, and describe the methodologies used for estimating these uncertainties		
		2.3.6 Elaborate the NIR: 1990-2012 in the frame of 1 <sup>st</sup> BUR and the NIR: 1990-2014 in the frame of 4 <sup>th</sup> NC, and circulate them for internal review.		
		2.3.7 Technical peer reviews of the NIR: 1990-2012 and NIR: 1990-2014 performed by independent experts and/or organizations who did not participate to the development of the national inventories.		
		2.3.8 Incorporate into NIRs the comments received from the peer review process and finalize the NIR: 1990-2012 in the frame of 1 <sup>st</sup> BUR and the NIR: 1990-2014 in the frame of 4 <sup>th</sup> NC; based on		

			developed NIRs, compile Chapters 2: 'National Greenhouse Gas Inventory' of 1 <sup>st</sup> BUR (for 1990-2012 time period) and of the 4 <sup>th</sup> NC (for the 1990-2014time period) of the Republic of Moldova under the UNFCCC.  2.3.9 Archive AD, EFs and conversion factors used in the inventory preparation process and describe in the NIRs the procedures and arrangement undertaken to archive data for the preparation of the national GHG inventories (for 1990-2012 time periods in the frame of 1 <sup>st</sup> BUR and for 1990-2014 time periods in the frame of 4 <sup>th</sup> NC), as well as the role of the institutions involved.  2.3.10 Translate the NIR: 1990-2012 and the NIR: 1990-2014 from national language (Romanian) to English and publish both documents.		
3. Information on mitigation actions and their effects	TA	3.1 Officially approved improvement of the national capacities for developing and considering mitigation scenarios within the context of the low emission development trajectory, separately in the 1st BUR and 4th NC of the Republic of Moldova under the UNFCCC.	3.1.1 Update the BAU scenarios for selected sectors (energy, transport, building, industry, agriculture, LULUCF and waste) by using available software (i.e., ENPEP, LEAP, IPCC software, etc.), in two round of assessments, separately for the 1st BUR and for the 4th NC of the Republic of Moldova under the UNFCCC.  3.1.2 Update for selected sectors the mitigation options leading to low emission development trajectory, separately for the 1st BUR and for the 4th NC of the Republic of Moldova under the UNFCCC.  3.1.3 Update mitigation scenarios (WM – with measures and WAM – with additional measures) by using available software, (i.e., ENPEP, LEAP, IPCC software, etc.), in two round of assessments, separately for the 1st BUR and for the 4th NC of the Republic of Moldova under the UNFCCC.  3.1.4 Update mitigation targets for selected sectors, separately in the 1st BUR and in the 4th NC of the Republic of Moldova under the UNFCCC.  3.1.5 Analyse quantitatively the development and climate impacts of considered mitigation scenarios, separately in the 1st BUR and in the 4th NC of the Republic of Moldova under the UNFCCC.	153,500	17,500
		3.2 Mitigation actions and their effects, including associated methodologies and assumptions and progress of implementation are described in accordance with reporting guidelines, in the 1 <sup>st</sup> BUR and 4 <sup>th</sup> NC of the Republic of Moldova under the UNFCCC and officially approved.	<ul> <li>3.2.1 Status report on national arrangements for the implementation of LEDS and NAMAs provided.</li> <li>3.2.2 Reporting template for mitigation actions and/or NAMAs developed and institutionalized.</li> <li>3.2.3 Status of implementation of mitigation actions and/or NAMAs and results obtained compiled in a tabular format and reported separately, for 1<sup>st</sup> BUR and 4<sup>th</sup> NC.</li> <li>3.2.4 Status report on participation in international carbon market mechanisms prepared and reported separately, for 1<sup>st</sup> BUR and 4<sup>th</sup> NC.</li> <li>3.2.5 Establish a database on all on-going mitigation actions and/or NAMAs, to contain: the name; a short</li> </ul>	80,000	5,000

4.1 Information on vulnerability to climate change and adaptation actions taken.  4.1 Officially endorsed improvement of the national capacities for developing climate change scenarios, inclusive through generating high resolution climate change scenarios, inclusive through generating high resolution climate change scenarios for the Republic of Moldova.  4.2 Officially approved socio-economic scenarios made available for use when conducting vulnerability and adaptation assessments  4.3 Officially approved vulnerability and adaptation assessments for key socio-economic sectors made available  5. Financial, technical and capacity needs including support needs and received.  TA (1.1 Officially endorsed detect changes and determine current trends.  4.1.1 The latest GCMs and RCMs (i.e., PRECIS) are tested and used for projecting climate change scenarios for three 30 year time slices in the future, centered on 2002, 2050s and 2080s, relative to the climatological baseline period, inclusive for: air temperature, precipitation, level of supply with heat and humidity, extreme events occuring, etc.  4.2.1 Socio-economic scenarios developed for use in the valuation of vulnerability and adaptation assessments  4.2.2 Risk assessments made and vulnerability indices developed for most probable climatic risks and extremes.  4.2.3 Spatial vulnerability profiles in GIS format produced at national and sub-national level based on vulnerability indices developed.  4.3.1 In depth impact assessments of climate change on the agriculture, livestock, water resources, terrestrial ecosystems, health sectors are completed.  4.3.2 Adaptation assessments of the 4th PC of the Republic of Moldova under the UNFCCC.  5.1 Financial, technical and capacity needs including support events and reporting of constraints, gaps and related financial, technical and capacity pneeds including support events.  5.1.2 Information on financial resources, technology and capacity building and technical assistance received from the GEF, Annex I Parties and other d				description, inclusive: the methodologies, assumptions and coverage (i.e., sectors and technologies); the scale; the estimated and achieved GHG emissions reductions; implementation period and information on the progress; responsible institutions for implementation; the type and level of support / funding obtained.  3.2.6 Compile Chapters 3: 'Information on mitigation actions and their effects' of 1 <sup>st</sup> BUR and 4 <sup>th</sup> NC of the Republic of Moldova under the UNFCCC.		
4.2 Officially approved socio-economic scenarios developed for use in the evaluation of vulnerability and adaptation assessments  4.2.1 Socio-economic scenarios developed for use in the evaluation of vulnerability and adaptation assessments  4.2.2 Risk assessments made and vulnerability indices developed for most probable climatic risks and extremes.  4.2.3 Spatial vulnerability profiles in GIS format produced at national and sub-national level based on vulnerability indices developed.  4.3 Officially approved vulnerability and adaptation assessments for key socio-economic seconomic assessments of climate change on the agriculture, livestock, water resources, terrestrial ecosystems, health sectors are completed.  4.3.1 In depth impact assessments of climate change on the agriculture, livestock, water resources, terrestrial ecosystems, health sectors are completed.  4.3.2 Adaptation assessments, including the socio-economic aspects, for the agriculture, livestock, water resources, terrestrial ecosystems, health sectors are completed.  4.3.3 Compile Chapters 4: 'Vulnerability and Adaptation assessment' of the 4th NC of the Republic of Moldova under the UNFCCC.  5. Financial, technical and capacity needs including support in eded and reporting of constraints, gaps and received.  5. Financial, technical and capacity needs and support institutions for mitigation actions implementation	vulnerability to climate change and adaptation	TA	endorsed improvement of the national capacities for developing climate change scenarios, inclusive through generating high resolution climate change scenarios for the Republic of	data to detect changes and determine current trends.  4.1.2 The latest GCMs and RCMs (i.e., PRECIS) are tested and used for projecting climate change scenarios for different time horizons, up to 2100.  4.1.3 Describe the possible climate change scenarios for three 30 year time slices in the future, centered on 2020s, 2050s and 2080s, relative to the climatological baseline period, inclusive for: air temperature, precipitaion, level of supply with heat and humidity,	40,000	5,000
4.3 Officially approved vulnerability and adaptation assessments for key socio-economic sectors made available  5. Financial, technical and capacity needed and received.  TA  5.1 Framework for the continuous assessment and reporting of received.  5.1 Framework for the continuous assessment and received.  4.3.1 In depth impact assessments of climate change on the agriculture, livestock, water resources, terrestrial ecosystems, health sectors are completed.  4.3.2 Adaptation assessments, including the socio-economic aspects, for the agriculture, livestock, water resources, terrestrial ecosystems, health sectors are completed.  4.3.2 Compile Chapters 4: 'Vulnerability and Adaptation Assessment' of the 4 <sup>th</sup> NC of the Republic of Moldova under the UNFCCC.  5.1.1 Financial, technology and capacity building needs for mitigation actions implementation assessed.  5.1.2 Information on financial resources, technology transfer, capacity building and technical assistance received from the GEF, Annex I Parties and other developed country Parties, the GCF and multilateral institutions for mitigation actions implementation			approved socio- economic scenarios made available for use when conducting vulnerability and adaptation	the evaluation of vulnerability and adaptation assessments.  4.2.2 Risk assessments made and vulnerability indices developed for most probable climatic risks and extremes.  4.2.3 Spatial vulnerability profiles in GIS format produced at national and sub-national level based on	25,000	5,000
of Moldova under the UNFCCC.  5. Financial, technical and capacity needs including support needed and received.  TA  5.1 Framework for the continuous needs for mitigation actions implementation assessed.  5.1.1 Financial, technology and capacity building needs for mitigation actions implementation assessed.  5.1.2 Information on financial resources, technology transfer, capacity building and technical assistance received from the GEF, Annex I Parties and other developed country Parties, the GCF and multilateral institutions for mitigation actions implementation			approved vulnerability and adaptation assessments for key socio-economic sectors made	<ul> <li>4.3.1 In depth impact assessments of climate change on the agriculture, livestock, water resources, terrestrial ecosystems, health sectors are completed.</li> <li>4.3.2 Adaptation assessments, including the socioeconomic aspects, for the agriculture, livestock, water resources, terrestrial ecosystems, health sectors are completed.</li> <li>4.3.3 Compile Chapters 4: 'Vulnerability and</li> </ul>	45,000	5,000
needed and received described in the BUR and officially approved.  collected, analysed and reported in Chapter 4: 'Constraints and gaps, and related financial, technical and capacity needs' of the 1st BUR of the Republic of Moldova under the UNFCCC.	technical and capacity needs including support needed and	TA	continuous assessment and reporting of constraints, gaps and related financial, technical and capacity needs and support needed and received described in the BUR and officially	Adaptation Assessment' of the 4 <sup>th</sup> NC of the Republic of Moldova under the UNFCCC.  5.1.1 Financial, technology and capacity building needs for mitigation actions implementation assessed.  5.1.2 Information on financial resources, technology transfer, capacity building and technical assistance received from the GEF, Annex I Parties and other developed country Parties, the GCF and multilateral institutions for mitigation actions implementation collected, analysed and reported in Chapter 4: 'Constraints and gaps, and related financial, technical and capacity needs' of the 1 <sup>st</sup> BUR of the Republic of	10,000	2,500

			<ul> <li>5.1.3 Describe the level of support received to enable the preparation and submission of the BUR.</li> <li>5.1.4 Compile Chapter 4: 'Constraints and gaps, and related financial, technical and capacity needs' of the 1<sup>st</sup> BUR of the Republic of Moldova under the</li> </ul>		
		5.2 Framework for the continuous assessment and reporting of constraints, gaps and related financial, technical and capacity needs and support needed and received described in the 4NC and officially approved.	UNFCCC.  5.2.1 Financial, technology and capacity building needs for mitigation and adaptation actions implementation assessed.  5.2.2 Information on financial resources, technology transfer, capacity building and technical assistance received from the GEF, Annex I Parties and other developed country Parties, the GCF and multilateral institutions for mitigation and adaptation actions implementation collected, analysed and reported in Chapter 7: 'Constraints and gaps, and related financial, technical and capacity needs' of the 4 <sup>th</sup> NC.	10,000	2,500
			5.2.3 Compile Chapter 7: 'Constraints and gaps, and related financial, technical and capacity needs' of the 4 <sup>th</sup> NC of the Republic of Moldova under the UNFCCC.		
6. Domestic measurement reporting and verification	TA	6.1 Officially approved domestic MRV arrangements for mitigation actions and its effects defined and established; a description provided in the 1 <sup>st</sup> BUR.	<ul> <li>6.1.1 Design and set up a domestic MRV system to support the implementation of the unilateral National Appropriate Mitigation Actions and of the Low Emission Development Strategy, to be approved by the Government in 2014 year.</li> <li>6.1.2 Select the appropriate methodologies and monitoring protocols.</li> <li>6.1.3 MRV conducted and documented, a reporting process established.</li> </ul>	45,000	2,500
			6.1.4 Compile the Chapter 5: 'Domestic measurement reporting and verification' of Biennial Update Report of the Republic of Moldova under the UNFCCC		
7. Other information	TA	7.1 Other information relevant to the achievement of the objective of the Convention reported in the 1 <sup>st</sup> BUR.	<ul> <li>7.1.1 Integration of climate change into relevant social, economic and environmental policies and actions;</li> <li>7.1.2 Compile the Chapter 6: 'Other information relevant to the achievement of the objective of the Convention' of Biennial Update Report of the Republic of Moldova under the UNFCCC.</li> </ul>	5,000	2,500
		7.2 Assessment of technology needs for implementing the Convention undertaken and reported in the 4 <sup>th</sup> NC.	7.2.1 Technology Needs Assessment consistent with national strategies and plans to implement the Convention undertaken for both mitigation and adaptation;  7.2.2 In-depth analysis and prioritization of technologies based on costs, adoption rates and other factors undertaken for both mitigation and adaptation;  7.2.3 Compile Chapter 6.1: 'Other information: Technology Transfer' of 4 <sup>th</sup> NC of the Republic of Moldova under the UNFCCC.	10,000	2,500
		7.3 Information on research and	7.3.1 Research and systematic observation needs identified and prioritized for implementation;	10,000	2,500

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		systematic observation systems reported in the 4 <sup>th</sup> NC.	7.3.2 Projects on climate research to improve assessment of impacts and adaptation described;		
			7.3.3 Research activities to develop country specific emission factors for improving quality of inventory reported;		
			7.3.4 Information on collaboration in regional and international research and systematic observation networks for combating climate change reported;		
			7.3.5 Compile Chapter 6.2: 'Other information: Research and systematic observation' of 4 <sup>th</sup> NC of the Republic of Moldova under the UNFCCC.		
		7.4 Information on Education, Training and Public Awareness	7.4.1 Information on inclusion climate change in formal educational curricula and vocational training reported;	41,045	2,500
		reported in the 4 <sup>th</sup> NC.	7.4.2 Level of awareness of different segments of the population evaluated through a sociological survey and remedial actions identified to inform and educate them and to influence their behavioural choices;		
			7.4.3 The 'ACT ON CO <sub>2</sub> 'awareness campaign (i.e., television, radio, web resources, street advertising (both stationary and on transport means), face-to-face events, partnerships and so on) launched and implemented with the purpose to engage citizens on climate change issues, address the confusion and powerlessness which can impede people taken action, and encourage genuine and sustained behaviour change to help reduce individual CO <sub>2</sub> emissions and meet the Republic of Moldova's targets under the UNFCCC;		
			7.4.4 Compile Chapter 6.3: 'Other information: Education, Training and Public Awareness' of 4 <sup>th</sup> NC of the Republic of Moldova under the UNFCCC.		
		7.5 Capacity Building needs for reporting to the UNFCCC and implement the Convention identified	<ul> <li>7.5.1 An exhaustive list of areas requiring prioritising capacity building is produced and reported in the 4<sup>th</sup> NC;</li> <li>7.5.2 Compile Chapter 6.4: 'Other information:</li> </ul>	10,000	2,500
		and reported in the 4 <sup>th</sup> NC.	Capacity Building' of 4 <sup>th</sup> NC of the Republic of Moldova under the UNFCCC.		
8. Publication and submission of BUR	TA	9.1 BUR and NIR submitted to UNFCCC	The Republic of Moldova's BUR and NIR prepared, published and submitted to UNFCCC.	15,000	2,500
		9.2 4 <sup>th</sup> NC submitted	The Republic of Moldova's 4 <sup>th</sup> NC prepared,	15,000	2,500
Subtotal		to UNFCCC	published and submitted to UNFCCC.	774,545	90,000
EA Management Co	ost <sup>2</sup>			77,455	10,000
Total EA Cost				852,000	100,000

<sup>&</sup>lt;sup>a</sup> List the \$ by EA components. Please attach a detailed project budget table that supports all the EA components in this table.

# B. CO-FINANCING FOR THE EA BY SOURCE AND BY NAME

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)

<sup>&</sup>lt;sup>2</sup> This is the cost associated with the unit executing the project on the ground and could be financed out of trust fund or co-financing sources.

Government of the Republic of Moldova	Ministry of Environment	In-kind	100,000
(select)		(select)	
Total Co-financing			100,000

#### C. GRANT RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY

GEF Agency	Type of Trust Fund	Focal Area	Country Name/Global	EA Amount (a)	Agency Fee (b) <sup>2</sup>	Total (c)=(a)+(b)
UNEP	GEFTF	Climate Change	Republic of Moldova	852,000	80,940	932,940
(select)	(select)	(select)				0
(select)	(select)	(select)				0
Total Grant Re	Total Grant Resources			852,000	80,940	932,940

#### D. EA MANAGEMENT COST

Cost Items	Total Estimated Person Months	Grant Amount (\$)	Co-financing (\$)	EA Total (\$)
Project Manager*	36	36,000	4,000	40,000
Administrative and Financial Assistant*	36	27,000	3,000	30,000
Office facilities; equipment, consumables; communications; hospitality costs; insurance of maintenance costs (electricity, heat, water)*		7,855	3,000	10,855
Travel*				
Others **	Bank Commission	3,600		3,600
	Annual Independent Audit	3,000		3,000
Total		77,455	10,000	87,455

<sup>\*</sup> Details to be provided in Annex A. \*\* For Others, to be clearly specified by overwriting fields (1)-(2)

#### ADDITIONAL INFORMATION FOR TABLE D, IF APPLICABLE:

If costs for office facilities, equipment, consumables, logistic expenses, communications, hospitality hosts are requesting for GEF financing, please provide justification here:

(i) As regards costs associated with "Office facilities, equipment, consumables, logistic expenses, communications and hospitality costs" an total amount of US\$ 7,855 has been earmarked, inclusive: US\$ 3,055 for equipment (one laptop) and consumables (printing paper and printer toners); US\$ 3,600 for communications costs (internet, telephone charges and currier services for sending regular reports to UNEP); and US\$ 1,200 to cover the hospitality costs (food and refreshment drinks during the meetings of the Project Advisory Committee and the Project Steering Committee and other related events organised by Project Management Unit);

(ii) On the issue of costs associated with "Others", an total amount of US\$ 7,200 has been earmarked, inclusive: US\$ 3,600 to cover the bank commission for all financial operations performed by Project Management Unit during the Project Implementation; as well as US\$ 3,000 to cover the cost of three annual independent financial audits of the project.

#### PART II: ENABLING ACTIVITY JUSTIFICATION

# A. ENABLING ACTIVITY BACKGROUND AND CONTEXT

(Provide brief information about projects implemented since a country became party to the convention and results achieved) The Republic of Moldova signed the UNFCCC on June 12, 1992 and it was ratified by the Parliament on March 16, 1995. On February 13, 2003, Republic of Moldova ratified the Kyoto Protocol (the official date of accession was April 22, 2003). Since UNFCCC establishment the Ministry of Environment (MoEN) of the Republic of Moldova (RM) is the state authority responsible for development and promotion of policies and strategies addressing environment protection, rational use of natural resources and biodiversity conservation.

On behalf of the Government of RM, MoEN is in charge also for implementation of international environment treaties to which RM is a Part (including UNFCCC). Representatives of MoEN also act as GEF and UNFCCC Focal Points. In view of implementing and accomplishing the UNFCCC provisions, as well as mechanisms and provisions of Kyoto Protocol based on Ministerial Resolution No. 21 as of February 11, 2004, the Climate Change Office (CCO) was established under the Ministry of Ecology, Constructions and Territory Development (reorganized into Ministry of Environment and Natural Resources in April 2005, respectively into the Ministry of Environment in September 2009). The CCO is totally responsible for the activities related to preparation of National Communications (NCs) and National Inventory Reports (NIRs).

As a Party to the UNFCCC, by this moment the RM has prepared two national communications, which included the GHG National Inventories. The first GHG Inventory of the Republic of Moldova for the period 1990-1998, was developed during the 1998-2000 in the frame of UNDP-GEF Project "Republic of Moldova: Enabling Activities for the Preparation of the FNC under the UNFCCC", reported as part of First National Communication of the Republic of Moldova to the UNFCCC and made available at the COP 6 (Hague, 2000).

After completion of FNC, the Republic of Moldova secured additional support from GEF within the frame of the UNDP-GEF Project "Climate Change: Enabling Activity (Phase II)". The overall aim of this project was to strengthen and maintain the in-country capacity for realization and transfer of the technologies required for abatement and adaptation to climate change; creating conditions for further studies and systematic observations addressed to climate change studies and its impact on different sectors of economy, health and environment; enhance public awareness and involve the stakeholders in climate change related issues. Through this project, the climate change team that prepared the FNC has prepared the "Technology Needs and Development Priorities Report" (it was submitted to the UNFCCC Secretariat and UNDP/GEF in 2002).

Within 2003-2006 periods, it was implemented the UNDP-GEF Regional Project "Capacity Building for Improving the Quality of Greenhouse Gas Inventories (Europe/CIS region)" covered 12 countries from Eastern Europe and CIS region, including the Republic of Moldova. The project was built on the expertise gained during the preparation of FNC. By strengthening institutional capacity to prepare inventories and establishing a trained, sustainable inventory team, the project helps countries to reduce uncertainties and improve the quality of inventories for the Second National Communications. This, in turn allows countries to improve national strategies for reducing greenhouse gas emissions.

Also, within 2003-2005 periods the UNDP-GEF Project "National Self-Assessment of Capacity Building Needs" has been implemented, aimed to improve coordination and integration actions undertaken under the three Rio Conventions – the United Nations Framework Convention on Climate Change (UNFCCC), the Convention on Biodiversity (CBD) and the Convention on Combating Desertification (CCD). In addition, the project was designed to reinforce the synergetic effect of these Conventions, thus contributing to a long-term sustainable development of the country. The project has identified priorities, needs and constraints for capacity building at national level in order to meet obligations under the Global Environmental Conventions, inclusive for the United Nations Framework Convention on Climate Change. Through UNDP-GEF Project "National Self-Assessment of Capacity Building Needs", the national team that prepared the 'Report on National Capacity Self-Assessment' and 'Action Plan for Capacity Building to Implement the Rio de Janeiro Conventions under the 2006-2010 period' (2005).

In 2004-2006, it was implemented the EU TACIS Regional Project "Technical Assistance to Armenia, Azerbaijan, Georgia and Moldova in the fulfillment of their global climate change engagements". The key objectives of the Project included: capacity building in the beneficiary countries for the implementation of CDM Projects under Kyoto Protocol, including assistance in building of the institutional infrastructure to support the CDM projects and development of the portfolio of possible CDM projects; raising awareness among key decision-makers, business community and broad public of the country's obligations under UNFCCC and Kyoto Protocol and of the development opportunities driven by the activities to reduce GHG emissions within the framework of the CDM projects under Kyoto Protocol; local capacity building for the development of scenarios to mitigate GHG emissions at the national level and identification of the existing potential and available options to mitigate GHG emissions; assistance to the beneficiary countries in the development of their national GHG emissions reduction strategies and adjustment to climate changes.

Within the period October 2005 - April 2009, the second GHG Inventory of the Republic of Moldova for the period 1990-2005 was developed in the frame of UNEP-GEF Project "Republic of Moldova: Enabling Activities for the Preparation of the SNC under the UNFCCC", reported as part of the "Second National Communication of the Republic of Moldova to the UNFCCC", as well as a separate publication entitled "National Inventory Report: 1990-2005, Greenhouse Gas Sources and Sinks in the Republic of Moldova", made available at SBI 30 (Bonn, 2009).

Also, within 2005-2009 periods, UNDP Moldova in partnership with the Ministry of Economy and Trade implemented the Project "National Human Development Reports" (National HDR's). Such reports are the tool used by the Government of the Republic of Moldova and UNDP Moldova to identify, to study and prioritize the nation's social-economic and human development needs. The NHDR's contribute to better definition of the key areas for the development policies and improvement of the liaison regarding the development priorities between the country and its donors, civil society and media. The subject of the National HDR for 2009 is "Socio-Economic Impact of Climate Change in the Republic of Moldova and Adaptation Policy Options". The respective Report focuses on the impact of climate change on Moldova's environment, society and economy. It discusses adaptation options and their potential synergies with the overarching development goals of the country. It aims to inspire decision-makers and the general public to act now for the sake of current and future generations. It provides an assessment of climate change impacts in the country, a comprehensive policy analysis, and recommendations on how to manage and minimize the

negative impacts, maximize beneficial opportunities and avert their implications for human development. The Report is considered to be instrumental in the policy debate on climate change in the Republic of Moldova. It highlights areas where action is needed in terms of adaptation to climate change, and explains the implications for sectoral and cross-sectoral development policies. It also convincingly demonstrates best practices and the experience of other countries in addressing some of the issues of concern presented in the Report.

In 2007-2009, in the frame of TACIS Regional Project "Sustainable Integrated Land Use of the Eurasian Steppe", implemented in the Republic of Moldova within the period, a case study was carried out on assessing the potential to reduce the greenhouse gas emissions from the agricultural soils in the steppe zone of the Republic of Moldova by promoting alternative agricultural technologies focused on enhancing the carbon accumulation and storing process in these types of soils. For this purpose, it was improved the greenhouse gas emissions evaluation methodology used while compiling the Republic of Moldova's First National Communication under the UNFCCC. A long term polygon was set up also, where research was initiated in 2008-2009 and will continue in the following 5 years. The range of above mentioned measures planned to be undertaken in conformity with two alternative scenarios, based on the assessments made in a farm situated in the southern part of the Republic of Moldova (Tartaul de Salcie village, Cahul district) reveal that these measures may ensure a reduction in humus losses from 1.48 t/ha (baseline scenario) to 0.29 t/ha (intermediary scenario) and 0.22 t/ha (optimal scenario). These measures may lead to an annual reduction of CO<sub>2</sub> emissions from agricultural soils by 2.54 t/ha under the intermediary scenario, and by 3.62 t CO<sub>2</sub>/ha under the optimal scenario. At the national level the application of the proposed agricultural technologies in the frame of two alternative scenarios may lead to an annual reduction of greenhouse gas emissions by circa 144.5 thousand tones CO<sub>2</sub> under the intermediary scenario, if these measures are implemented at least on 10% of arable lands located in the steppe zone (what makes circa 57 thousand hectare), and by circa 722.6 thousand tones CO2 under the optimal scenario, if these measures are implemented at least on 50% of arable lands located in the steppe zone (what makes circa 285 thousand hectare). Along the reduction of greenhouse gas emissions the alternative agricultural practices are supposed also have a beneficial impact on the process of agricultural sector adaptation to new climate conditions.

In 2008-2012, the EU TACIS Regional Project "Support for Kyoto Protocol Implementation" (Armenia, Azerbaijan, Belarus, Georgia, Moldova, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan, Uzbekistan, Ukraine) was implemented in the Republic of Moldova. The key objectives of the project were: promoting the energy efficiency activities and broader use of flexible Kyoto Protocol mechanisms; adoption of the climate change mitigation and adaptation strategies; local capacity strengthening and public awareness-raising. The project objectives were achieve through two main type of activities: review by key experts of certain specialized reports on the problems regarding the Convention and Kyoto Protocol in the participating countries; organization of seminars where the representatives of the countries involved in the Project implementation were acquainted with those Reports made available afterwards for dissemination at national level.

In 2008-2012, the UNECE Regional Project "Energy Efficiency Investment Project Development for Climate Change Mitigation" was started in twelve countries of the region (Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Kazakhstan, Moldova, Romania, Russia, Serbia, Macedonia and Ukraine). The project was focused on funding of the investments in energy efficiency activities to mitigate the climate change in twelve countries of South-Eastern and Eastern Europe and Central Asia. The Project promoted the emergence of a market to the extent in which it would be possible to identify, develop, fund and implement local sustainable projects with focus on energy efficiency and use of renewable energy sources.

The specific project objectives included: identification, development, funding and implementation of the energy efficiency investment projects at energy consumer or supplier level as well as projects focusing on the use of renewable energy sources to realize the environmental, human health and institutional priorities; strengthening of the energy efficiency and renewable energy policies in the participant countries, assistance to local and central public authorities in the promotion of economic, institutional and regulatory reforms necessary to attract the investments in the energy efficiency and renewable energy projects; promotion of the opportunities for commercial banks and private businesses to invest in the energy efficiency and renewable energy projects via establishment of new public or private investment funds or financial mechanisms.

In 2010-2013, the EU FP7 PROMITHEAS-4 Project "Knowledge transfer and research needs for preparing mitigation/adaptation policy portfolios" was implemented in the Republic of Moldova. The Project aims was the development of policy portfolios of mitigation/adaptation actions and the prioritization of research needs and gaps for twelve countries (Albania, Armenia, Azerbaijan, Bulgaria, Estonia, Kazakhstan, Moldova, Romania, Russian Federation, Turkey and Ukraine). The Project was focused on the following main working packages (WP):

• WP1. Evaluation of available data and information: (i) provide an overview of international procedures

and standards in collecting and reporting data and information; (ii) map national procedures, sources, available data and information and offer an understanding of the state-of-the-art for the existing data and information of the participating developing countries and/or emerging economies; (iii) contribute in the knowledge transfer procedures (training, implementation, dissemination); (iv) collect data and information and prepare a data base for each beneficiary (developing country or emerging economy participating in the project); (v) link research gaps and needs with EU and international funding programs.

- WP2. Choice and implementation of models: (i) to present the used models for developing adaptation/mitigation policy portfolios; (ii) to identify the most appropriate models for developing reliable scenarios in the participating developing countries; (iii) to train at least twenty four scientists from those countries in using models for developing policy portfolios with adaptation/mitigation actions; (iv) to identify research needs and gaps during the execution of this working package.
- WP4 Evaluation of policy portfolios: (i) to identify the most effective policy portfolios for adaptation/mitigation actions; (ii) to train young scientists in using evaluation methods for climate change policy issues; (iii) to identify the type of research support needed for the implementation of the policy portfolios.
- WP5. Prioritization of research gaps and needs: (i) to identify and record the research needs and gaps that prevent the exploration of climate change policy scenarios and link them with EU and international funding programs; (ii) to synthesize the outcomes of the respective tasks in the previous WPs.
- WP6. Dissemination—common activities: (i) to ensure the wide dissemination of the outcomes; (ii) to keep informed the governments of the twelve countries about the project's outcomes; (iii) to inform national and regional stakeholders on project's outcomes; (iv) to motivate, at least, the scientific communities of the countries of the participating institutes about the project's conclusions through the concluding conference; (v) to coordinate the parallel activities.

In 2012, the US Agency for International Development (USAID) invited the Republic of Moldova to join to the US Government's Regional Enhancing Capacity for Low Emissions Development Strategies (EC-LEDS) Programme (2012-2015). By this moment, the beneficiary central public authorities (Ministry of Economy and Ministry of Environment) have identified three areas for potential engagement with the Republic of Moldova on EC-LEDS: (i) Strategic Energy and Low Emissions Development Planning: collaboration will be focused on use of the energy models (e.g., MARKAL/TIMES) developed with USAID assistance to evaluate and improve the Republic of Moldova's strategies, programmes and action plans for energy sector; (ii) GHG Inventory and Data Collection: collaboration will be focused on strengthening the process of data collection for National GHG Inventory and Energy Balances; also, assistance will be made available to develop regulations necessary to improve the GHG inventory data collection process and to provide necessary training in data collection and measurements; and (iii) Local Low Emissions Development: collaboration will be focused on developing programs to address the enabling environment for low emissions planning and project implementation at the national and local levels, as well as on developing and implementing local energy efficiency plans and practices, and improve planning to attract capital investments. On the ground level the practical activities will be initiated in May 2013 are envisaged to be finished by June 2014.

Within the period May 2011 - March 2013, in the Republic of Moldova implemented the UNEP Risoe Centre (URC) Project "Technology Needs Assessments". The purpose of the project was to assist the Republic of Moldova to identify and analyse priority technology needs, which can form the basis for a portfolio of environmentally sound technology projects and programmes to facilitate the transfer of, and access to, the ESTs and know-how in the implementation of Article 4.5 of the UNFCCC Convention. The overall objective of the TNA Project comprises mitigation and adaptation technology needs assessment, activities associated with sector and technology prioritization, encouraging the creation of enabling environment for the transfer of environmentally sound technologies.

The Project also aimed to identify barriers hindering the acquisition, deployment, and diffusion of prioritized technologies and developing Technology Action Plans (TAP), specifying activities and enabling frameworks to overcome the barriers and facilitate the transfer, adoption, and diffusion of selected technologies. It is envisaged that the Multi-Criteria Decision Analysis (MCDA) methodological approach, used in the TNA Project for conducting the sectors and technologies evaluation, will be used further for NAMAs prioritisation process.

In January 2010, the Republic of Moldova associated itself with the Copenhagen Accord and submitted an emission reduction target to be specified in its Appendix II: "A reduction of no less than 25% of the base year (1990) level total national GHG emissions have to be achieved by 2020 through implementation of global economical mechanisms focused on the climate change mitigation, in accordance with the Convention's principles and provisions." The target of the Republic of Moldova is provided without specific NAMAs identified and quantified or further clarification on the support needed. However it is recognized that significant financial, technological and capacity building support will be needed to achieve this target.

In October 2010, Republic of Moldova has initiated the UNEP-GEF Project "Republic of Moldova:

Enabling Activities for the Preparation of the Third National Communication under the UNFCCC". In the frame of this project, there will be developed the "Third National Communication of the Republic of Moldova to the UNFCCC", followed by the "National Inventory Report: 1990-2010, Greenhouse Gas Sources and Sinks in the Republic of Moldova". The TNC of the Republic of Moldova is developed in accordance with the Guidelines on National Communications from non-Annex I Parties to the Convention (Decision 17/CP 8) adopted at COP 8 in New Delhi (2002). In conformity with the project document, the TNC and the NIR for 1990-2010 periods have to be submitted officially to UNFCCC by end of 2013 year.

The Republic of Moldova, supporting and contributing to the global imperative to stabilize the concentrations in line with 2 degree temperature increase scenario, decided to make a transition to low emission development path, and as a first step developing a Low-Emission Development Strategy (LEDS). Thus, in the framework of UNDP Moldova Project "Support to Environmental Protection and Sustainable Use of Natural Resources" and with support of UNDP Regional Bureau for Europe and the Commonwealth of Independent States (RBEC), within the period September 2010 - December 2012, there was developed the Low Emissions Development Strategy of the Republic of Moldova until 2020, complemented by a list of prioritized National Appropriate Mitigation Actions (NAMAs). The LEDS and NAMAs are built on National Development Strategy "Moldova 2020", Government Programme "European Integration: Liberty, Democracy, Welfare" for 2011-2014, and a range of sectoral policy documents, like Energy Strategy until 2030, Road Transport Infrastructure Strategy for 2008-2017, National Strategy for Sustainable Development of the Agricultural Complex of the Republic of Moldova for 2008-2015, and others. Mitigation priorities were identified for each major economic sector of the Republic of Moldova (i.e., energy, industry, transportation, buildings, agriculture, forestry, waste). The analytical basis for LEDS development was the GHG Inventory for 1990-2010 and emission projections broken down by sector, developed in the frame of Third National Communication (2013) for the period until 2020. The LEDS is currently under the consideration by the Government of the RM (it would be officially approved in the first quarter of 2014 year). The approval of LEDS will allow the RM the access to the "fast start" financing as well as long-term financing committed by developed countries in Copenhagen to support developing countries in implementing LEDSs and NAMAs.

The objective of this project is to prepare and submit to the COP the Republic of Moldova's Fourth National Communication (4NC) to fulfill its obligations under the UNFCCC (Article 12) by February 2017 as well as provide relevant information required to meet other obligations under the Convention, namely the first Biennial Update Report (BUR) by December 2014. The project proposal is prepared as per requirements of the UNFCCC for NCs based on Decision 17/CP.8 "Guidelines for the preparation of NCs from Parties not included in Annex I to the Convention", and as per requirements of the UNFCCC for BURs contained in the Annex III to Decision 2/CP.17. The project proposal is also in accordance with Objective 6 of GEF-5's Climate Change Focal Area Strategy and Strategic Programming, which provides support for enabling activities and capacity building of Non-Annex I Parties that is funding for the preparation of NCs in a timely manner at a full-agreed cost.

# The **goal** of this project is to assist the country in mainstreaming and integration of climate change consideration into national and sectorial development policies by giving continuity to the institutional and technical capacity strengthening process, partly initiated and sustained by the National Communications.

The **immediate objectives** of the project are (i) to assist the Republic of Moldova to prepare its first biennial update report consistent with the guidelines for the preparation of biennial annual report for Non-Annex 1 Parties, which contained in the Annex III to decision 2/COP.17 and submit it by December 2014, as well as (ii) to prepare its 4<sup>th</sup> national communication under the UNFCCC consistent with the guidelines for the preparation of NCs from Parties not included in Annex I to the Convention, contained in Decision 17/CP.8 and submit it by February 2017.

The **project objective** will be achieved with the fulfillment of the following outcomes, which are in line with the GEF's climate change mitigation strategic objective (SO-6) under GEF-5: Enabling Activities: Support enabling activities and capacity building under the Convention. The outcome is: Completed climate change enabling activities under the UNFCCC.

The **project outcomes 1-9** are as follows:

- 1. Information on national circumstances and institutional arrangements relevant to the preparation of the national communications, national inventory reports and biennial update reports analysed and updated;
- 2. The national system for preparation of GHG emission inventories comprehensively strengthened (the national inventory data for 1990-2010 under the TNC will be updated; also it will be developed the national inventory for 2011-2012 in the frame of BUR and for 2013-2014 in the frame of 4NC); the national capacities for inventory planning preparation and management improved;
- . The national capacities for developing and considering mitigation scenarios within the context of low emission development trajectory improved and mitigation actions and their effects, including associated methodologies and assumptions and progress of implementation described

# B. ENABLING ACTIVITY GOALS, OBJECTIVES, AND ACTIVITIES

(The proposal should briefly justify and describe the project framework. Identify also key stakeholders involved in the project including the private sector, civil society organizations, local communities, and their respective roles, as applicable. Describe also how the gender dimensions are considered in project design and implementation.)

- in accordance with reporting guidelines;
- 4. The national capacities for developing and considering climate change scenarios improved, inclusive through generating high resolution climate change scenarios for the Republic of Moldova; socio-economic scenarios made available for use while conducting vulnerability and adaptation assessments; and vulnerability and adaptation assessments for key socio-economic sectors described in accordance with reporting guidelines;
- 5. Framework for the continuous assessment and reporting of constraints, gaps and related financial, technical and capacity needs and support needed and received established and reported in accordance with reporting guidelines;
- 6. Domestic MRV arrangements for mitigation actions and its effects defined and established;
- 7. Other information relevant to the achievement of the objective of the Convention provided;
- 8. The publication and submission of the the First Biennial Update Report and Forth National Communication to the UNFCCC.

#### The **project outputs** based on the above-mentioned outcomes are:

### Outcome 1

- Update of information on geography, population, natural resources, economy and development policies relevant to climate change;
- Institutional arrangement for the preparation of national communications and biennial update reports described and properly documented with roles and flow of functions carefully assessed for effectiveness with recommendations for improvements;
- 3. Compile Chapters 1: 'National Circumstances' of 1<sup>st</sup> BUR and 4<sup>th</sup> NC of the Republic of Moldova under the UNFCCC.

#### Outcome 2

- 1. Describe the roles of, and cooperation between government agencies and other entities involved in the preparation of the inventory, as well as institutional, legal and procedural arrangements to prepare the inventory.
- 2. Design surveys and forms to collect activity data, identify research needs for developing national emission factors and country specific methodologies.
- 3. Inventory data management system developed, activity data collected and inventory database updated and used in a coherent manner for BURs, NIRs and NCs.
- 4. Describe the process for official consideration and approval of the inventory, including any recalculations, prior to its submission to the UNFCCC.
- 5. Update the 'Manual of Procedures', defining and allocating specific responsibilities in the inventory development process, including those relating to choice of methods, data collection, particularly activity data and emission factors from statistical services and other entities, processing and archiving, QC and QA.
- Update the QA/QC plan, describing specific QC procedures implemented during the inventory development process, facilitate the overall QA procedures conducted and establish quality objectives.
- Assess the results of Key Source Analysis for 2010 year to prioritize activities on developing the GHG inventory which better reflect the national circumstances.
- 8. Identify areas where recalculations are necessary, plan strategy to ensure consistency and recalculate the GHG inventory for the 1990-2010 time series in the frame of BUR and for the 1990-2012 time series in the frame of 4NC.
- Following the IPCC 1996 Revised Guidelines, IPCC good practice guidance (2000), IPCC good practice guidance on LULUCF (2003) and 2006 IPCC Guidelines, compile the national inventory of greenhouse gas sources and sinks for 2011-2012 time series in the frame of BUR and for 2013-2014 time series in the frame of 4NC.
- 10. Provide information on methodologies used in the estimation of GHG emissions by sources and removals by sinks, including a brief explanation of the sources of emission factors and activity data.
- 11. Undertake an uncertainty assessment of the National Inventory of Greenhouse Gas Sources and Sinks, provide information on the level of uncertainty with inventory data and their underlying assumptions, and describe the methodologies used for estimating these uncertainties;
- 12. Elaborate the NIR: 1990-2012 in the frame of BUR and the NIR: 1990-2014 in the frame of 4NC, and circulate them for internal review; technical peer review for the NIRs performed by independent experts and/or organizations who did not participate to the development of the national inventory.
- 13. Incorporate into NIRs the comments received from the peer review process and finalize the reports; based on NIRs, compile the Chapters 2: 'National Greenhouse Gas Inventory' of BUR and 4NC of the Republic of Moldova under the UNFCCC.
- 4. Archive AD, EFs and conversion factors used in the inventory preparation process and describe

- in the NIR the procedures and arrangement undertaken to archive data for the preparation of the national GHG inventory, as well as the role of the institutions involved.
- 15. Translate the NIRs from Romanian to English.

#### Outcome 3

- 1. Update the BAU scenarios for selected sectors (energy, transport, building, industry, agriculture, LULUCF and waste) by using available software (i.e., ENPEP, LEAP, IPCC software, etc.).
- 2. Update for selected sectors the mitigation options leading to low emission development trajectory.
- 3. Update mitigation scenarios (WM with measures and WAM with additional measures) by using available software.
- 4. Update mitigation targets for selected sectors.
- 5. Analyse quantitatively the development and climate impacts of considered mitigation scenarios.
- 6. Provide status report on national arrangements for the implementation of LEDS and NAMAs.
- 7. Reporting template for mitigation actions and/or NAMAs developed and institutionalized.
- 8. Status of implementation of mitigation actions and/or NAMAs and results obtained compiled in a tabular format reported.
- 9. Status report on participation in international carbon market mechanisms prepared.
- 10. Establish a database on all on-going mitigation actions and/or NAMAs, to contain: the name; a short description, inclusive: the methodologies, assumptions and coverage (i.e., sectors and technologies); the scale; the estimated and achieved GHG emissions reductions; implementation period and information on the progress; responsible institutions for implementation; the type and level of support / funding obtained.
- 11. Compile Chapters 3: 'Information on mitigation actions and their effects' of BUR and 4NC of the Republic of Moldova under the UNFCCC.

#### Outcome 4

- Undertake detailed analysis of historical climate data to detect changes and determine current trends.
- 2. The latest GCMs and RCMs (i.e., PRECIS) are tested and used for projecting climate change scenarios for different time horizons, up to 2100.
- 3. Describe the possible climate change scenarios for three 30 year time slices in the future, centered on 2020s, 2050s and 2080s, relative to the climatological baseline period, inclusive for: air temperature, precipitaion, level of supply with heat and humidity, extreme events occuring, etc.
- Socio-economic scenarios developed for use in the evaluation of vulnerability and adaptation assessments.
- Risk assessments made and vulnerability indices developed for most probable climatic risks and extremes.
- 6. Spatial vulnerability profiles in GIS format produced at national and sub-national level based on vulnerability indices developed.
- 7. In depth impact assessments of climate change on the agriculture, livestock, water resources, terrestrial ecosystems, health sectors are completed.
- 8. Adaptation assessments, including the socio-economic aspects, for the agriculture, livestock, water resources, terrestrial ecosystems, health sectors are completed.
- Compile Chapters 4: 'Vulnerability and Adaptation Assessment' of the 4<sup>th</sup> NC of the Republic of Moldova under the UNFCCC.

#### Outcome 5

- 1. Financial, technology and capacity building needs for mitigation & adaptation actions implementation assessed.
- Information on financial resources, technology transfer, capacity building and technical
  assistance received from the GEF, Annex I Parties and other developed country Parties, the GCF
  and multilateral institutions for mitigation & adaptation actions implementation collected,
  analysed and updated.
- Describe the level of support received to enable the preparation and submission of BUR and NCs.
- 4. Compile Chapter 4 of BUR and Chapter 7: 'Constraints and gaps, and related financial, technical and capacity needs' of 4NC of the Republic of Moldova under the UNFCCC.

#### Outcome 6

- 1. Design and set up a domestic MRV system to support the implementation of the unilateral National Appropriate Mitigation Actions and of the Low Emission Development Strategy.
- 2. Select the appropriate methodologies and monitoring protocols.
- 3. MRV conducted and documented, a reporting process established.
- 4. Compile Chapter 5: 'Domestic measurement reporting and verification' of Biennial Update Report of the Republic of Moldova under the UNFCCC

#### Outcome 7

- 1. Collect and present other information relevant to the achievement of the objective of the Convention (i.e., integration of climate change into relevant social, economic and environmental policies and actions, activities related to technology transfer, climate change researches and research programmes, information on education, training and public awareness, information on capacity building, on information and networking, etc.).
- 2. Compile Chapter 6: 'Other information relevant to the achievement of the objective of the Convention' of Biennial Update Report of the Republic of Moldova under the UNFCCC.
- 3. Technology Needs Assessment consistent with national strategies and plans to implement the Convention undertaken for both mitigation and adaptation;
- 4. In-depth analysis and prioritization of technologies based on costs, adoption rates and other factors undertaken for both mitigation and adaptation;
- Compile Chapter 6.1: 'Other information: Technology Transfer' of 4<sup>th</sup> NC of the Republic of Moldova under the UNFCCC.
- 6. Research and systematic observation needs identified and prioritized for implementation.
- 7. Projects on climate research to improve assessment of impacts and adaptation described.
- 8. Research activities to develop country specific emission factors for improving quality of inventory reported.
- 9. Information on collaboration in regional and international research and systematic observation networks for combating climate change reported.
- Compile Chapter 6.2: 'Other information: Research and systematic observation' of 4<sup>th</sup> NC of the Republic of Moldova under the UNFCCC.
- 11. Information on inclusion climate change in formal educational curricula and vocational training reported;
- 12. Level of awareness of different segments of the population evaluated through a sociological survey and remedial actions identified to inform and educate them and to influence their behavioural choices;
- 13. The 'ACT ON CO<sub>2</sub>'awareness campaign (i.e., television, radio, web resources, street advertising (both stationary and on transport means), face-to-face events, partnerships and so on) launched and implemented with the purpose to engage citizens on climate change issues, address the confusion and powerlessness which can impede people taken action, and encourage genuine and sustained behaviour change to help reduce individual CO<sub>2</sub> emissions and meet the Republic of Moldova's targets under the UNFCCC.
- 14. Compile Chapter 6.3: 'Other information: Education, Training and Public Awareness' of 4<sup>th</sup> NC of the Republic of Moldova under the UNFCCC.
- 15. An exhaustive list of areas requiring prioritising capacity building is produced and reported in the 4<sup>th</sup> NC;
- Compile Chapter 6.4: 'Other information: Capacity Building' of 4<sup>th</sup> NC of the Republic of Moldova under the UNFCCC.

#### Outcome 8

1. The Republic of Moldova's BUR, NIRs and 4NC prepared, published and submitted to UNFCCC.

Key stakeholders to be involved in project implementation will include Central Public Authorities (Government ministries), Central Public Administrations (agencies, services and bureaus), academia, research institutions, universities, private sector and civil society organizations:

- Central Public Authorities:
  - Ministry of Transport and Road Infrastructure,
  - o Ministry of Information Technology and Communication,
  - o Ministry of Regional Development and Constructions,
  - Ministry of Agriculture and Food Industry,
  - o Ministry of Internal Affairs,
  - o Ministry of Economy,
  - Ministry of Health,
  - Ministry of Defence
- Subordinated Institutions to the Central Public Authorities:
  - o Customs Service,
  - o Energy Efficiency Agency,
  - o Civil Aeronautical Authority,
  - National Agency for Energy Regulation,
  - o Agency for Geology and Mineral Resources,
  - State Hydrometeorological Service,
  - State Ecological Inspectorate,
  - Environmental Pollution Prevention Office,

- o Biodiversity Office,
- Ozone Office
- Central Administrative Authorities:
  - o Agency "Moldsilva",
  - National Bureau of Statistics,
  - o Land Relations and Cadastre Agency
- Academy of Sciences of Moldova with its institutional members:
  - o Institute of Zoology,
  - o Institute of Power Engineering,
  - o Botanical Garden (Institute),
  - o Institute of Ecology and Geography,
  - o Institute of Genetics and Plant Physiology,
  - o Institute of Plant Protection and Ecological Agriculture,
  - o Institute of Pedology, Agrochemistry and Soil Protection "Nicolae Dimo",
- Institute of Scientific and Practical Animal Husbandry and Veterinary Medicine in Biotechnology Universities:
  - State University of Moldova
  - State University of Tiraspol,
  - o Technical University of Moldova,
  - o State Agrarian University of Moldova,
  - o State University of Medicine and Pharmacy "Nicolae Testemiteanu"
  - o J.S.C. "Lafarge-Ciment",
- J.S.C. "Macon" Economic Agents:
  - o S.E. "Moldavian Railways",
  - o M.E. "Autosalubritate",
  - o J.S.C. "Moldova-Gaz",
  - o J.S.C. "Moldelectrica",
  - o J.S.C. Red Union Fenosa S.A. from Gas Natural Fenosa Group,
  - S.E. "Glass Factory in Chisinau",
  - o M.E. "Glass Container Company" J.S.C.,
  - o M.E. "Cristal-Flor" S.A.,
- Industry Associations:
  - o Public Association of Refrigerating Engineers in the Republic of Moldova,
  - O Union of Moldovan Sugar Producers
- Civil society organizations:
  - o NGO "Energie Plus"
  - NGO "Eco Terra"
    - NGO "Ecospectr"

The overall delivery responsibility lies on the Ministry of Environment of the Republic of Moldova and its Climate Change Office (CCO), which will act as the executing agency. To ensure effective and timely work delivery, strategies for implementation of the project would be grounded on the following key working principles: inclusiveness and wide participation; deployment of good science; optimal use of national expertise; use of appropriate tools and methodologies, as well as accurate and transparent data and information.

The CCO would act as the Project Management Unit (PMU) and be accountable to both the Project Advisory Committee (PAC) and the Project Steering Committee (PSC) and report regularly to UNEP and Ministry of Environment.

Within the CCO, five Working Groups (Teams) on: (i) National GHG Inventory; (ii) Climate Change Mitigation; (iii) Climate Modelling; (iv) Vulnerability and Adaptation Assessment; (v) Education and Public Awareness, would be basically responsible for implementing the main components of the project.

In the extent possible, the national consultants to be selected as members of the respective WGs must have relevant experience in the working area. Membership of the WGs will be reconstituted to ensure alignment with the chapters of the BUR and 4NC. The membership of the WGs will be based on competence, experience and relevance. The WGs will be led by team leaders with clear operation mandates, roles and reporting lines. It is at this level that activities will be planned in more details and implemented.

The PMU will handle the day-to-day activities of the project (technical and administrative) and act as the interface between PAC, PSC and technical working groups. The PAC would be the highest decision making body for the project and will provide overall direction and oversight to the project and will meet every six months to evaluate progress of work and where necessary make policy decisions for the project. Its membership would not be more than 10 and must be senior representative of central public authorities and subordinated institutions, central public administrations, research, academia and civil society.

The composition of the PAC will include representation from Ministry of Environment (MoEN), Ministry of Economy (MEC), Ministry of Agriculture and Food Industry (MAFI), Agency of Energy Efficiency (AEE), National Bureau of Statistics (NBS), Forest Research and Management Institute, Institute of Power Engineering of the Academy of Sciences of Moldova, Technical University of Moldova and NGO "Energie Plus".

The PSC will be constituted as the implementation clearinghouse for the project. Its desirable composition would be more focused on institutional representations rather than individuals. As much as possible, the work of the PSC will be limited to the implementation aspects of the project whereas the PAC will provide strategic directions. The PSC will meet regularly, particularly on the basis on its agreed work programme with membership from PMU and representatives of the key national stakeholders, as per list provided above.

Consistent with the policies of the Ministry of Labor, Family and Social Protection, relating to the promotion of women into decision-making processes, women should be actively involved in climate change related activities in the Republic of Moldova, not only as beneficiaries but also as indispensable partners in the climate change decision-making. Understanding how the unique social and economic roles played by women is crucial to the effective implementation of sectoral and national projects and programmes to adapt and to mitigate climate change in the Republic of Moldova.

Although the role of women in the climate change adaptation actions is better understood in the Republic of Moldova, the role of women in climate change mitigation strategies has received relatively little attention until this moment. This is because programs to address GHG mitigation issues have been perceived to be rather technical or scientific in nature. However, attempts would be made during the project inception work to clearly identify ways and means of engaging women in mitigation actions implementation in the Republic of Moldova.

#### C. DESCRIBE THE ENABLING ACTIVITY AND INSTITUTIONAL FRAMEWORK FOR PROJECT IMPLEMENTATION

(Discuss the work intended to be undertaken and the output expected from each activity as outlined in Table A).

The project will have seven main components. Each component will entail a combination of activities related to the following as outlined in the guidelines for the preparation of BUR and NCs by Non-Annex 1 Parties.

# Component 1 - Information on national circumstances and institutional arrangements relevant to the preparation of national communications and biennial annual report on continuous basis

NCs and BURs are two important reporting mechanisms that will help make climate change issues central to development processes. In addition to providing feedback on the impacts of economic development on environment to policy makers, the two reports are also critical for fashioning out strategies and measures for combating climate change and ensuring sustainable development of the Republic of Moldova's economy. Therefore, it is important that preparation of the NCs and BURs is designed in a way that it is sustainable, timely and backed by a strong national institutional arrangement. Every effort will be made within the framework of this project to ensure that the project outputs fit into the overarching climate change response strategy of the Republic of Moldova.

The Ministry of Environment through its Climate Change Office will serve as the executing entity. The project will be implemented in collaboration with a number of stakeholders. The institutional framework will be composed of a set of partner institutions and their roles, the cooperative mechanism amongst them and a dedicated team of support staff from the Climate Change Office (CCO) of the Ministry of Environment.

The CCO will host the Project Management Unit (PMU) and will be responsible for the implementation of the project. The PMU will also be a liaison between the Project Steering Committee (PSC) and the Project Advisory Committee (PAC).

The Ministry of Environment would ensure the integration of the project into the Republic of Moldova's United Nations Development Assistance Framework (UNDAF) Action Plan for 2013-2017 time periods, which is focused on strengthening the national policies and capacities to enable climate and disaster resilient, low emission economic development and sustainable consumption, accelerating thus the progress towards achieving the Millennium Development Goals, as per its output 3.2 which seeks to strengthen the national policies and capacities enabling climate and disaster resilient, low emission economic development and sustainable consumption.

The PAC will be the highest decision making entity within the project, and will have oversight and be responsible for offering strategic directions. The PSC will be the technical clearinghouse for all five working groups. In addition to using national consultants, the project will build upon existing institutional arrangements and working groups that supported the preparation of the second and third national communications. In the preparation of the BUR and 4NC, the work of the WGs during the third national communication would be relied upon.

Minister of Environment will act as National Project Coordinator (NPC) and chairs the Project Advisory Committee (PAC), ensuring country ownership and the effective and efficient steering of the project towards outcomes and outputs that are of relevance and interest to the Republic of Moldova.

The project relies on strong collaboration among the participating ministries and agencies and other stakeholders for which the Ministry of Environment is at the vantage point, as it is also the Focal Point for Global Environment Facilities (GEF), as well as for the United Nations Framework Convention on Climate Change (UNFCCC) and Chair of the "National Commission for the implementation and execution of UNFCCC and Kyoto Protocol mechanisms and provisions".

In the preparation of the BUR, the information on the state of the economic development and its future prospects will be updated in extent possible to the end of 2013 year, while in the preparation of the 4NC, the information on the state of the economic development and its future prospects will be updated in extent possible to the end of 2015 year. Relevant data on economic development indicators that have reported in previous reports will be revisited and updated.

In the preparation of the BUR and 4NC, emphasis will be placed on both on the economy-wide scale as well as critical GHG emissions/removals sectors. New datasets that have come about a result of emerging activities in the national economy will be collected. New data on population and its distribution in urban and rural areas will be assessed to provide indication of the implications of population dynamics of various climate change policy interventions. Efforts will be made to provide information on existing response strategies that are essential to facilitate actions that are targeted at mitigating climate change.

A project inception workshop will be held to launch the project.

# Component 2 – The national inventory of anthropogenic emissions by sources and removal by sinks of all greenhouse gases (GHGs) not controlled by the Montreal Protocol, including a national inventory report

2.1 The national system for preparation of GHG emission inventories comprehensively strengthened and described

Further enhance and strengthen the institutional arrangements to ensure a robust national inventory system that is effective and efficient and is able to deliver in accordance with the decision 1/CP.16 and 2/CP.17. It is envisaged that the enhanced institutional arrangement will be responsive to future GHG reporting requirement including reviews and verifications. The progressive improvements in the national system for GHG are critical for the continuous, effective and timely generation of GHG inventory estimates for both international and national decision-making. Therefore significant amounts of the BUR resources would be committed to improving the overall capability of the national system. Proper institutional coordination mechanism will be put in place and supported by continuous education and enhancing the expertise of the key staff that are involved in the inventory process.

- 1. Aside realignment of institutions involved in the GHG preparation, enough clarity will also be provided on the operational modalities and procedures needed to make the national system more efficient and permanent. Although the existing coordination mechanism is generally ad-hoc and yet to be fully mainstreamed into normal activities of sectors involved in the national GHGI, some resources of the Republic of Moldova's BUR will be used to further facilitate decentralization of the inventory tasks to make a fully functional national system. In this regard, various stakeholders and partner institutions will dedicate more time to the inventory process on sustainable basis as well as make efforts to maintain and retain capacities within the institutions. We will also invest in start-up data management infrastructure, software and operations, coupled with seamless access and upgrade capabilities.
- 2.2 The national capacities for inventory planning improved

The overall improvements in the GHG inventory are important to producing high quality estimates. The improvements are intended to come about as a result of updating the 'Manual of Procedures', to define and allocate specific responsibilities in the inventory development process, including those relating to choice of methods, data collection, particularly activity data and emission factors from statistical services and other entities, processing and archiving, quality control (QC) and quality assurance (QA); as well as through updating the QA/QC plan, to describe specific QC procedures implemented during the inventory development process, facilitate the overall QA procedures conducted and establish quality objectives. By implementing QA/QC, the minimum standards of the inventory process and estimates will be guaranteed.

2.3 The national capacities for inventory preparation and management strengthened, the NIRs and

Chapters 2 of the BUR and 4NC compiled

GHG inventory represent an important part of the climate mitigation planning. It is expected to provide accurate baselines for the development of emission reduction interventions, especially considering that the Republic of Moldova's emissions are anticipated to increase over time. Apart from providing the basis for designing mitigation interventions, GHG inventory would also be reliable monitoring indicators for assessing the effects of mitigation actions on emissions and other co-benefits.

The GHG inventory exercise will be conducted using the IPCC 1996 Revised Guidelines, IPCC good practice guidance (2000), IPCC good practice guidance on LULUCF (2003) and 2006 IPCC Guidelines. BUR will cover the 1990-2012 years, while 4NC the period of 1990-2014.

As much as possible, the existing GHG inventory database covering all the major sectors (energy, industrial processes, solvents and other product use, agriculture, land use, land use change and forestry, and waste) will be reviewed and updated with new data (activity data and emission factors). This is to ensure that estimates are produced using methodologies and datasets that are transparent, robust and consistent with IPCC guidelines. To make the emission relevant for climate mitigation action and planning, efforts would be made to produce the latest estimates within reasonable time series and to the extent practicable, project the emission scenarios within a specified time horizon.

The following specific activities will be undertaken:

- Assess the results of Key Source Analysis for 2010 year to prioritize activities on developing the GHG inventory which better reflect the national circumstances;
- Identify areas where recalculations are necessary, plan strategy to ensure consistency and recalculate
  the GHG inventory for the 1990-2010 time series in the BUR and for the 1990-2012 in the 4NC, if the
  case:
- Following the IPCC 1996 Revised Guidelines, IPCC good practice guidance (2000), IPCC good practice guidance on LULUCF (2003) and 2006 IPCC Guidelines, compile the national inventory of greenhouse gas sources and sinks for 2011-2012 in the BUR, and for 2013-2014 in the 4NC;
- Provide information on methodologies used in the estimation of GHG emissions by sources and removals by sinks, including a brief explanation of the sources of emission factors and activity data;
- Undertake an uncertainty assessment of the National Inventory of Greenhouse Gas Sources and Sinks, provide information on the level of uncertainty with inventory data and their underlying assumptions, and describe the methodologies used for estimating these uncertainties;
- Elaborate the NIR: 1990-2012 in the frame of BUR preparation process and the NIR: 1990-2014 in the frame of 4NC preparation process, and circulate the reports for internal review;
- Technical peer review for the NIRs performed by independent experts and/or organizations who did not participate to the development of the national inventory;
- Incorporate into NIR the comments received from the peer review process and finalize the NIRs;
   compile the Chapters 2: 'National Greenhouse Gas Inventory' of the BUR and 4NC of the Republic of Moldova under the UNFCCC;
- Archive AD, EFs and conversion factors used in the inventory preparation process and describe in the NIR the procedures and arrangement undertaken to archive data for the preparation of the national GHG inventory, as well as the role of the institutions involved;
- Translate the NIR: 1990-2012 and NIR: 1990-2014, respectively the Chapters 2: 'National Greenhouse Gas Inventory' of BUR and 4NC, from national language (Romanian) to English.

#### Component 3 - Information on mitigation actions and their effects

3.1 Improve the national capacities for developing and considering mitigation scenarios within the context of low emission development trajectory.

The purpose of this component is to support the Republic of Moldova to develop and consider mitigation scenarios within the context of low emission development trajectory.

The macroeconomic forecasts will be projected up to 2030 based on the projected demographic and socioeconomic data, and national development plans/strategies for the most relevant economic sectors, using appropriate statistical techniques and macroeconomic models.

The macroeconomic projections will be done on the basis of different ranges of scenarios, which depict three plausible macroeconomic development scenarios [Business-as-usual (BAU), Low-to-Medium Growth (LMG) and High Growth (HG)] developed by the Department of Macroeconomic Analysis and Forecast of the Ministry of Economy of Moldova. Detailed information on the description on approaches, methodologies and underlying assumptions used for conducting the macroeconomic forecast would be documented.

The future emission simulations would be projected for years 2015, 2020, 2025 and 2030 using medium to long range emission reduction objectives and measures relative to 2010 year. There will be generated three emission scenarios, the Business-as-Usual (BAU) scenario (through default, without mitigation measures);

With Measures (WM) and With Additional Measures (WAM).

Projections would be made at the economy-wide level, on sector-by-sector and gas-by-gas basis respectively, as well as with and without the contribution of LULUCF sector.

Two different approaches would be adopted for the analytical work for energy and non-energy sectors. Mitigation analyses will be carried out covering the entire economy. However, in-depth analyses in specific high GHG emitting sectors such as energy (including transport), agriculture, land use change and forestry and waste will be conducted as well.

Point source emissions estimates from specific industries will be assessed with the view of developing plant specific mitigation measures. To undertake the sectoral level assessments, Task Working Subgroups (TWSGs) will be composed for each sector (energy, transport, building, industry, agriculture, forestry and waste).

As stated above, the Republic of Moldova will use ENPEP and LEAP to study options that have specific sectoral and technological implications. These models will be applied mostly in the energy, transport, industry and building sectors. Non-energy sector (agriculture, LULUCF and waste) assessment will be conducted on the basis of the IPCC software, and sectoral planning and strategies for the future.

In the above mentioned context the following specific activities will be undertaken:

- Update the BAU scenarios for selected sectors (energy, transport, building, industry, agriculture, LULUCF and waste) by using available software (i.e., ENPEP, LEAP, IPCC software, etc.)
- Update for selected sectors the mitigation options leading to low emission development trajectory.
- Update mitigation scenarios (WM with measures and WAM with additional measures) by using available software.
- Update mitigation targets for selected sectors.
- Analyse quantitatively the development and climate impacts of considered mitigation scenarios.

3.2 Mitigation actions and their effects, including associated methodologies and assumptions and progress of implementation are described in accordance with reporting guidelines

The working group on climate change mitigation will develop and use a common reporting template for reporting mitigation actions for all sectors. The database on all on-going mitigation actions and/or NAMAs (unilateral, supported and credited) will contain: the name; a short description, inclusive: the methodologies, assumptions, objectives of actions and steps taken or envisaged to achieve that action and coverage (i.e., sectors and technologies); the scale; estimated outcomes, emission reduction potential and already achieved GHG emissions reductions; implementation period and information on the progress of implementation; responsible institutions for implementation; the needs, type and level of support required / funding obtained.

Strong linkages will be established between low carbon benefits that will be derived from the implementation of the national climate change policy as well as any development policies or measures which will have tangible co-benefits for mitigation of GHG and vice versa.

In the above mentioned context the following specific activities will be undertaken:

- Status report on national arrangements for the implementation of LEDS and NAMAs provided;
- Reporting template for mitigation actions and/or NAMAs developed and institutionalized;
- Status of implementation of mitigation actions and/or NAMAs and results obtained compiled in a tabular format reported;
- Status report on participation in international carbon market mechanisms prepared;
- Establish a database on all on-going mitigation actions and/or NAMAs, to contain: the name; a short
  description, inclusive: the methodologies, assumptions and coverage (i.e., sectors and technologies);
  the scale; the estimated and achieved GHG emissions reductions; implementation period and
  information on the progress; responsible institutions for implementation; the type and level of support
  / funding obtained;
- Compile Chapter 3: 'Information on mitigation actions and their effects' of the Biennial Update Report of the Republic of Moldova under the UNFCCC.

#### Component 4 - Measures to adapt to climate change

This component in the TNC addressed the climate and its impacts on the Agriculture, Livestock, Water Resources, Forestry Ecosystems, Land Resources and Human Health, including aspects of Human Livelihoods and Social Aspects. The sectoral coverage in the TNC still may be extended, results of modelled climate change projections may further refinement in terms of covering also the extreme events, and the climate change impacts were not assessed on all relevant socio-economic sectors. In some cases the assessment studies lack the holistic approach that is essential to integrate all factors affecting the system,

including cross-cutting issues and higher order effects. Economic assessments were also not covered in most of these studies. This thematic area will be fully revisited and updated during the preparation of the 4NC.

Within the framework of preparing the 4NC, this component will aim at undertaken improved assessment of climate change impacts on, and vulnerability of different socio-economic sectors, natural resources and ecosystems to climate change, specifically in the context of Climate Change Adaptation Strategy of the Republic of Moldova to be approved by the Government earlier in 2014 year. Multi-Model Ensemble of GCMs, as well as RGMs projections and multiple impact assessment models will be assessed for being adopted for realistic assessment of climate change impacts based on availability of capacity and resources. Risk and vulnerability profiles will be developed at the appropriate geographic scale to facilitate mainstreaming of adaptation into national, regional or district level programs, action plans and projects.

The focus will be on the short term (2020s), medium term (2050s) and long term (2080s) analysis. The impact assessments would cover all the sectors wherever possible using the most appropriate approaches, methodologies and tools, including multiple models for the following sectors: Agriculture; Livestock; Water Resources; Soil Resources; Ecosystems; Infrastructure and Settlements; Transport; Energy; and Public Health.

Climate impacts would be assessed at the finest possible scale to facilitate national and local adaptation action plans formulation. The scale to be adopted will be primarily determined by the GCM and the downscaled RCM results. To enable development and implementation of urgent adaptation projects, the focus of impact assessment will be for the short term period, along with impact assessments for medium and long term for better policy formulation. Provided the capacity, resources and timeframe allow for it, the most advanced models available will be adopted for impact assessment and wherever possible multi-models will be used for better decision-making. Vulnerability profiles will be developed based on vulnerability indices for different sectors, ecosystems, and activity areas at disaggregated levels and then combined to reflect the country's vulnerability. Spatial vulnerability profiles on a GIS format could be developed at the appropriate scale with ranking of the most vulnerable areas well delineated for factors such as sensitive ecosystems, biodiversity protection, economy and prevent loss of lives. A good indication of spatial impacts can be very useful for planning development. Vulnerability indices could be developed for a set of indicators identified for each sector. These indicators could be quantified, normalized and aggregated to obtain composite vulnerability indices. This method will integrate the combination of more than a single impact factor as well as indirect ones, thus enabling more informed decision.

Based on the impacts and vulnerability assessments, adaptation measures will be identified and assessed. These will then be further analysed for their potential for adoption according to the country or community circumstances. The adaptive capacity of the natural and socioeconomic systems, the institutions and local communities will also be assessed. Priority adaptation measures and sectoral action plans will be prioritized on a range of socio-economic parameters in line with the sustainable development agenda of the country.

In the above mentioned context the following specific activities will be undertaken:

- Undertake detailed analysis of historical climate data to detect changes and determine current trends.
- The latest GCMs and RCMs (i.e., PRECIS) are tested and used for projecting climate change scenarios for different time horizons, up to 2100.
- Describe the possible climate change scenarios for three 30 year time slices in the future, centered on 2020s, 2050s and 2080s, relative to the climatological baseline period, inclusive for: air temperature, precipitaion, level of supply with heat and humidity, extreme events occuring, etc.
- Socio-economic scenarios developed for use in the evaluation of vulnerability and adaptation assessments.
- Risk assessments made and vulnerability indices developed for most probable climatic risks and extremes.
- Spatial vulnerability profiles in GIS format produced at national and sub-national level based on vulnerability indices developed.
- In depth impact assessments of climate change on the agriculture, livestock, water resources, terrestrial ecosystems, health sectors are completed.
- Adaptation assessments, including the socio-economic aspects, for the agriculture, livestock, water resources, terrestrial ecosystems, health sectors are completed.
- Compile Chapters 4: 'Vulnerability and Adaptation Assessment' of the 4<sup>th</sup> NC of the Republic of Moldova under the UNFCCC.

# Component 5 - Constraints and gaps, and related financial, technical and capacity needs including support needed and received.

Under this component, a framework would be established to facilitate a continuous assessment of constraints and gaps especially on financial, technical and capacity for mitigation and adaptation actions implementation. Information on financial resources, technology transfer, capacity building and technical

assistance received from the GEF, Annex I Parties and other developed country Parties, the GCF and multilateral institutions for mitigation and adaptation actions implementation will be collected, analysed and updated. The assessment will help to understand and prioritise national strategies and target support to where it is needed most. In this regard, data on constraints, gaps, barriers and capacity, financial and technical needs would be collected from all climate-related initiatives and synthesized into Chapter 4: 'Constraints and gaps, and related financial, technical and capacity needs' of Biennial Update Report and Chapter 7: 'Constraints and gaps, and related financial, technical and capacity needs' of the 4NC of the Republic of Moldova under the UNFCCC.

The respective chapters would among others describe the level of support received to enable the preparation and submission of biennial update report and national communications. Because the BURs and NCs would be generated on regular basis, it is important to create a sustainable basis for that at the national level. Though its preparation, the Republic of Moldova's BUR and NC would be country driven, both technical and financial assistance would be required to facilitate its effective and timely delivery. Therefore this component will be dedicated to providing information on the levels and kinds of supports the Republic of Moldova received to enable complete preparation and submission of its BUR and 4NC.

In the above mentioned context the following specific activities will be undertaken:

- Financial, technology and capacity building needs for mitigation and adaptation actions implementation assessed;
- Information on financial resources, technology transfer, capacity building and technical assistance received from the GEF, Annex I Parties and other developed country Parties, the GCF and multilateral institutions for mitigation and adaptation actions implementation collected, analysed and updated;
- Describe the level of support received to enable the preparation and submission of biennial update report and 4<sup>th</sup> National Communication;
- Compile the Chapter 4: 'Constraints and gaps, and related financial, technical and capacity needs' of
  Biennial Update Report and Chapter 7: 'Constraints and gaps, and related financial, technical and
  capacity needs' of the 4NC of the Republic of Moldova under the UNFCCC of the Republic of
  Moldova under the UNFCCC.

#### Component 6 - Information on domestic measurement reporting and verification

Information will be provided on the setting up and operationalizing domestic MRV system to track and verify, "support" and "mitigation actions" and "effects" on emission reduction and sustainable development. The information on the domestic MRV system will include a description of the MRV processes, its architecture, operational procedures and steps and indicators used to continuously monitor emissions, mitigation actions and its effects and mechanism for review and verification.

The final output of this component will be the establishment of a domestic MRV system as well as information on the protocols and operational procedures of the domestic MRV system. These will be prepared and all incorporated in Chapter 5: 'Domestic measurement reporting and verification' of Biennial Update Report of the Republic of Moldova under the UNFCCC.

In the above mentioned context the following specific activities will be undertaken:

- Design and set up a domestic MRV system to support the implementation of the unilateral National Appropriate Mitigation Actions and of the Low Emission Development Strategy.
- Select the appropriate methodologies and monitoring protocols.
- MRV conducted and documented, a reporting process established.
- Compile the Chapter 5: 'Domestic measurement reporting and verification' of Biennial Update Report
  of the Republic of Moldova under the UNFCCC.

#### Component 7 - Other information

This component will contain other information relevant to the achievement of the objective of the Convention (i.e., integration of climate change into relevant social, economic and environmental policies and actions, activities related to technology transfer, climate change researches and research programmes, information on education, training and public awareness, information on capacity building, on information and networking, etc.).

Among those mentioned above, the component will provide information on how "support" received is helping to unlock sustainable development opportunities especially in sectors where it is national priority to reduce emission. For instance, how "supported actions" are facilitating and/or stimulating technology transfer, local innovations and research, education training and public awareness, market improvement and barriers are being addressed.

The summary of the impact of implementation of response measures will be incorporated in Chapters 6: 'Other information relevant to the achievement of the objective of the Convention' of BUR and 4NC of the Republic of Moldova under the UNFCCC.

In the above mentioned context the following specific activities will be undertaken:

- Collect and present any other information relevant to the achievement of the objective of the Convention (i.e., integration of climate change into relevant social, economic and environmental policies and actions, activities related to technology transfer, climate change researches and research programmes, information on education, training and public awareness, information on capacity building, on information and networking, etc.).
- Compile the Chapter 6: 'Other information relevant to the achievement of the objective of the Convention' of Biennial Update Report of the Republic of Moldova under the UNFCCC.
- Technology Needs Assessment consistent with national strategies and plans to implement the Convention undertaken for both mitigation and adaptation;
- In-depth analysis and prioritization of technologies based on costs, adoption rates and other factors undertaken for both mitigation and adaptation;
- Compile Chapter 6.1: 'Other information: Technology Transfer' of 4<sup>th</sup> NC of the Republic of Moldova under the UNFCCC.
- Research and systematic observation needs identified and prioritized for implementation.
- Projects on climate research to improve assessment of impacts and adaptation described.
- Research activities to develop country specific emission factors for improving quality of inventory reported.
- Information on collaboration in regional and international research and systematic observation networks for combating climate change reported.
- Compile Chapter 6.2: 'Other information: Research and systematic observation' of 4<sup>th</sup> NC of the Republic of Moldova under the UNFCCC.
- Information on inclusion climate change in formal educational curricula and vocational training reported;
- Level of awareness of different segments of the population evaluated through a sociological survey and remedial actions identified to inform and educate them and to influence their behavioural choices;
- The 'ACT ON CO2' awareness campaign (i.e., television, radio, web resources, street advertising (both stationary and on transport means), face-to-face events, partnerships and so on) launched and implemented with the purpose to engage citizens on climate change issues, address the confusion and powerlessness which can impede people taken action, and encourage genuine and sustained behaviour change to help reduce individual CO2 emissions and meet the Republic of Moldova's targets under the UNFCCC.
- Compile Chapter 6.3: 'Other information: Education, Training and Public Awareness' of 4<sup>th</sup> NC of the Republic of Moldova under the UNFCCC.
- An exhaustive list of areas requiring prioritising capacity building is produced and reported in the 4<sup>th</sup> NC:
- Compile Chapter 6.4: 'Other information: Capacity Building' of 4<sup>th</sup> NC of the Republic of Moldova under the UNFCCC.

D. DESCRIBE, IF POSSIBLE, THE EXPECTED COST-EFFECTIVENESS OF THE PROJECT The project is cost-effective as it targets to strengthen existing human and institutional capacities to be used for current and future reporting. Information/data from previous national communications is used as reference material for subsequent national communications reporting, avoiding duplication of effort and promoting efficient use of financial and human resources. The technical backstopping that UNEP has provided to countries over the years will serve as a basis to improve the quality of the national reporting, which will result in more comprehensive national reports to guide countries in developing their sectoral strategies.

Since the support for preparation of BUR (352,000 USD) and 4NC (500,000 USD) is to be met at agreed full cost (852,000 USD) basis, the Republic of Moldova will assess and provide the actual cost of preparing the BUR and 4NC to ensure that the GEF is provided with feedback in terms of sufficiency of funds provided for the BUR and 4NC preparation.

UNEP will support the development of the Republic of Moldova's 4NC and BUR. As an implementing agency of the GEF, UNEP can ensure a very streamlined approval and fund disbursement process and with multiple benefits compared to the single-country application approach, to support Moldova in the preparation of its Fourth National Communication (4NC) and BUR. Thus, the project approval process and start-up of activities will be accelerated, and as a result, the project cycle is expedited, saving significant time to countries and minimizing the gaps between national communication projects.

The project is consistent with the 2014-2017 Medium Term Strategy (MTS) of the United Nations Environment Programme (UNEP) and is linked to Expected Accomplishment 2 "Low emission growth -

Energy efficiency is improved and the use of renewable energy is increased" in partner countries to help reduce greenhouse gas emissions and other pollutants as part of their low emission development pathways. It is supported within the framework of the following Programme of Work (PoW) 2014-2015, Subprogramme 1 on Climate Change: Expected Accomplishment, Outputs: (3) Tools and approaches designed and piloted in countries to develop mitigation plans, policies, measures, and low emission development strategies, and spur investment and innovation within selected sectors in a manner that can be monitored, reported and verified; (4) Technical support provided to countries and partners to plan and implement sectoral initiatives and to make renewable energy and energy efficiency projects affordable and replicable; (5) Technical support provided to countries to address UNFCCC monitoring and reporting requirements and to mainstream their results into national development planning processes in collaboration with United Nations Country Teams (UNCTs) and partners. E. DESCRIBE THE **Project start:** BUDGETED M&E PLAN A Project Inception Workshop (PIW) will be held within the first 2 months of the start of the project. The PIW will be attended by all relevant stakeholders including those with assigned roles in the project organization structure. The Inception Workshop is crucial to building ownership for the project results and to review and agree on the first year annual work plan. The Inception Workshop report is a key reference document and must be prepared and shared with participants to formalize various agreements and plans decided during the meeting. Quarterly: Technical Progress Reports and Financial Reports shall be reviewed by UNEP Task Manager and Fund Management Officer. Periodic Monitoring through discussions with key partners: UNEP Task Manager will conduct periodic monitoring activities based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess status of implementation of project. The monitoring of project activities will identify areas of improvements and will make recommendations on how to address gaps in project implementation. End of Project and auditing: During the last three months, the project team will prepare the Project Terminal Reports in respect of both the NC4 and BUR1. These comprehensive reports will summarize the results achieved (objectives, outcomes, outputs), lessons learned, problems met and areas where results may not have been achieved. They will also set out some recommendations necessary to ensure sustainability and replicability of the project's results. Audit on project will follow UNEP Financial Regulations and Rules and applicable Audit policies. Learning and knowledge sharing: Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and forums F. EXPLAIN THE N/A DEVIATIONS FROM TYPICAL COST RANGES (WHERE APPLICABLE)

# PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

# A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT(S) ON BEHALF OF THE GOVERNMENT(S):

Name	Position	MINISTRY	DATE
H.E. Minister Gheorghe	GEF Operational Focal Point –	MINISTRY OF ENVIRONMENT OF	NOVEMBER, 18 <sup>TH</sup> , 2013

SALARU	Republic of Moldova	THE REPUBLIC OF MOLDOVA	

## **B.** CONVENTION PARTICIPATION

CONVENTION	DATE OF RATIFICATION/	NATIONAL FOCAL POINT
	ACCESSION (mm/dd/yy)	
UNFCCC	16 March 1995	H.E. Minister Gheorghe ŞALARU
		MINISTRY OF ENVIRONMENT
		STR. COSMONAUTILOR, 9
		MD 2005, Chisinau, Republic of Moldova
		TEL: +(373) 22 204 507
		EMAIL: GH.SALARU@MEDIU.GOV.MD
		GHSALARU@GMAIL.COM

## **B. GEF AGENCY CERTIFICATION**

This request has been prepared in accordance with GEF policies and procedures and meets the standards of the GEF Project Review Criteria for Climate Change Enabling Activity approval.

Agency Coordinator, Agency name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	E-mail Address
Maryam Niamir- Fuller, Director, GEF Coordination Office, UNEP	W. Wien Fuller	12/17/2013	George Manful Task Manager	+254 207625085	george.manful@unep.org

### LIST OF ANNEXES

- Annex A: Consultants to be hired for the Enabling Activity
- Annex B: Response to GEF Review (GEF STAP Council)
- Annex C: OFP Endorsement Letter
- Annex D: Environmental and Social Safeguards Checklist
- Annex E: Acronyms and Abbreviations
- Annex F: Supervision Plan
- Annex G: Operational Guidance to Focal Area Enabling Activities
- Annex H: Initial BUR Tracking Tool

# **Annex A: Consultants to be hired for the Enabling Activity** (See attached)

# ANNEX B: RESPONSE TO GEF REVIEW (GEF STAP COUNCIL) $\ensuremath{\mathrm{N/A}}$

### ANNEX E: ACRONYMS AND ABBREVIATIONS

- AD Activity Data
- AEE Agency of Energy Efficiency
- AFOLU Agriculture, Forestry and Other Land Use
- BUR Biennial Update Report
- CCO -Climate Change Office
- CDM Clean Development Mechanism
- COP Conference of Parties
- CTCN Climate Technology Center and Network
- EFs Emission Factors
- ENPEP Energy and Power Evaluation Programme
- 4NC Fourth National Communication
- GCMs Global Climate Models
- GEF Global Environment Facility
- GHG Greenhouse Gas

GIS – Geographic Information System

INC - Initial National Communication

IPCC – Intergovernmental Panel on Climate Change

LEAP -Long-range Energy Alternatives Planning system

LEDS - Low Emission Development Strategies

LUCF – Land Use Change and Forestry

LULUCF – Land Use Land Use Change and Forestry

MAFI – Ministry of Agriculture and Food Industry

MEC – Ministry of Economy

MoEN - Ministry of Environment

MRV - Measurement, Reporting and Verification

MTS – Medium Term Strategy

NAMA – Nationally Appropriate Mitigation Actions

NAP - National Adaptation Plan

NBS - National Bureau of Statistics

NCs – National Communications

NHDR - National Human Development Report

NIR -National Inventory Report

NPC - National Project Coordinator

NPM – National Project Manager

PAC – Project Advisory Committee

PIW - Project Inception Workshop

PM – Project Manager

PMU – Project Management Unit

PoW – Programme of Work

PRECIS - Providing REgional Climates for Impacts Studies modeling software

PSC – Project Steering Committee

PTC - Project Technical Coordinator

QA – Quality Assurance

QA/QC - Quality Assurance/ Quality Control

QC - Quality Control

RCMs – Regional Climate Models

RM - Republic of Moldova

SNC – Second National Communication

TACIS - Technical Aid to the Commonwealth of Independent States

TNA - Technology Needs Assessment

TORs - Terms of Reference

UNCTs – United Nations Country Teams

UNDAF - United Nations Development Assistance Framework

UNECE - United Nations Economic Commission for Europe

UNEP – United Nations Environment Programme

UNFCCC - United Nations Framework Convention on Climate Change

URC - UNEP Risoe Center

USAID - United States Agency for International Development

V & A – Vulnerability and Adaptation

WGs – Working Groups

### ANNEX G - OPERATIONAL GUIDANCE TO FOCAL AREA ENABLING ACTIVITIES

### **Biodiversity**

- GEF/C.7/Inf.11, June 30, 1997, Revised Operational Criteria for Enabling Activities
- GEF/C.14/11, December 1999, An Interim Assessment of Biodiversity Enabling Activities
- October 2000, Revised Guidelines for Additional Funding of Biodiversity Enabling Activities (Expedited Procedures)

# **Climate Change**

- GEF/C.9/Inf.5, February 1997, Operational Guidelines for Expedited Financing of Initial Communications from Non-Annex 1 Parties
- October 1999, Guidelines for Expedited Financing of Climate Change Enabling Activities Part II, Expedited Financing for (Interim) Measures for Capacity Building in Priority Areas
- GEF/C.15/Inf.12, April 7, 2000, Information Note on the Financing of Second National Communications to the UN Framework Convention on Climate Change
- GEF/C.22/Inf.15/Rev.1, November 30, 2007, Updated Operational Procedures for the Expedited Financing of National Communications from Non-Annex 1 Parties

## **Persistent Organic Pollutants**

- GEF/C.17/4, April 6, 2001, Initial Guidelines for Enabling Activities for the Stockholm Convention on Persistent Organic Pollutants
- GEF/C.39/Inf.5, October 19, 2010, Guidelines for Reviewing and Updating the NIP under the Stockholm Convention on POPs

# **Land Degradation**

• (ICCD/CRIC(5)/Inf.3, December 23, 2005, National Reporting Process of Affected Country Parties: Explanatory Note and Help Guide

### **National Capacity Self-Assessment (NCSA)**

- Operational Guidelines for Expedited Funding of National Self Assessments of Capacity Building Needs, September 2001
- A Guide for Self-Assessment of Country Capacity Needs for Global Environmental Management, September 2001

#### **National Adaptation Plan of Action (NAPA)**

• GEF/C.19/Inf.7, May 8, 2002, Notes on GEF Support for National Adaptation Plan of Action,