



Project Document

“Moldova Disaster and Climate Risk Reduction Project”

Summary

Moldova’s economy, population, and environment are highly exposed and vulnerable to natural hazards. Climate change is expected to amplify exposure to meteorological hazards. The objective of this project (2010-2012) is to reduce disaster and climate risks in Moldova and thus contribute to the attainment of country development strategies and the Millennium Development Goals.

The project seeks to strengthen disaster and climate risk assessment capacities and identify priorities at the national level to inform country disaster risk and climate risk management strategies and program development. This will be done through the creation of a National Disaster Observatory and accompanying capacity development actions in risk analysis. In parallel, actions will be taken at the local level to reduce vulnerabilities and strengthen capacities to manage climate risks at local levels. Local level risk management will be mainstreamed into and delivered through the Integrated Local Development Programme, which presently covers 30% of the country’s territory. Finally, the project will enhance the capacity of UN Country Team to manage disaster and climate risks. This will be done through the mobilization of a national Disaster Risk Reduction Advisor.

The project will be implemented over a period of 24 months. The main implementing partners are the Civil Protection and Emergency Situations Service of the Ministry of Interior, Ministry of Environment, and local public administrations.

COVER PAGE

UNDAF Outcome/Indicator: UNDAF Outcome 1: By 2011, public institutions with the support of Civil Society Organizations (CSOs) are better able to ensure good governance, rule of law and equal access to justice and promotion of human rights

Expected Outcome/Indicator: There is improved readiness to prevent and mitigate natural and manmade disasters and crises

CPAP Expected Output: Capacities of targeted LPAs are improved to plan,

Annual Targets: see attached Results and Resources Framework

Implementing Partner: Civil Protection and Emergency Situations Service (Ministry of Interior)

Responsible parties: *UNDP Moldova*

Project Outputs:

1. Disaster and climate risk assessment capacities strengthened and priorities identified at the national level to inform country disaster risk and climate risk management strategies and program development
2. Vulnerabilities reduced and capacities strengthened to manage climate risks at local levels
3. Strengthened capacity of UN Country Team to manage disaster and climate risks

Programme period:	<u>2007-2012</u>
CPAP Programme Component:	_____
Project Title:	<u>Moldova Climate Risk Management</u> <u>Technical Assistance</u> <u>Support Project</u>
Atlas Award ID:	_____
Start date:	<u>September 2010</u>
End Date	<u>December 2012</u>
PAC Meeting Date	3 September 2010

Total required resources,	<u>\$1,843,600</u>
Total allocated resources:	_____
• Regular (UNDP CO)	<u>\$ 100,000</u>
• Other:	
o TRAC 3	<u>\$ 500,00</u>
o Government	<u>in-kind</u>
Unfunded budget:	<u>\$1,243,600</u>
In-kind Contributions	_____

Agreed by (Implementing Partner): _____

Agreed by (UNDP Moldova): _____

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1 SITUATION ANALYSIS

1.1 Introduction

Over the 20th century, disasters involving climatic hazards were seven times as frequent as those involving geo-physical hazards, such as earthquakes and volcanic eruptions, globally and accounted for nine times as many deaths. The economic losses from climatically-triggered disasters were three times higher than those from disasters triggered by geo-physical hazards and the number of people affected 55 times greater.

Across large swaths of the developing world, losses associated with these disasters are on a sufficient scale to undermine development. Disasters are evidence of societal vulnerability to hazards. In hazard-prone, inhabited areas, disasters and losses are inevitable unless societal exposure and/or vulnerability are reduced. Managing climate-related risks, therefore, is a key enabler of development. Identifying and reducing risks associated with climate-related hazards – including drought, floods, cyclones, sea-level rise and extreme temperatures – can help to protect people, livelihoods and assets, thereby promoting the achievement of development goals.

The Republic of Moldova is prone to different kinds of natural hazards, including drought, floods, severe weather, earthquakes, and landslides. The exposure and losses resulting from these are summarized below:

- On average, northern Moldova experiences a drought once every 10 years, central Moldova once every five to six years, and southern Moldova once every three to four years.¹ Average annual losses between 1996 and 2004 were around \$19 million per year.² Abnormally high temperatures and low rainfall over a three-year period resulted in a severe drought in 2007, which crippled Moldova's agricultural sector, resulting in \$1.2 billion in losses.³ The effects of poor nutrition were exacerbated by reduced access to potable water, particularly in rural areas where 45% of the population relies on wells as their main source of drinking water.
- Heavy rains result in frequent floods (an average of 1.2 per year, 1992-2005), to which 40% of the settled areas in the country are exposed. Floods result in average annual damages of around five million dollars.⁴ In 2008 the country experienced severe torrential rains, which together with releases from upstream in Ukraine, led to flooding in both the northern and southern areas of the country. Moldova incurred \$120 million in losses from this event.⁵ Flooding occurs relatively frequently in the smaller internal rivers, especially in the region of the Carpathian Mountains, and affects approximately 168 settlements (160 000 people). In 1994, severe floods in Cimișlia killed 29 people, destroyed 802 homes and left over 2000 houses badly damaged.

¹ Drought has become more frequent and intense during the last two decades, appearing nine times (1990, 1992, 1994, 1996, 2000, 2001, 2003, 2007), leading to significant crop losses. In 1990, 1992, 2003, and 2007 drought was observed during the entire vegetative season. In the remaining years drought struck during summertime.

² Societatea de Cruce Rosie a Moldovei and Departamentul Situatii Exceptionale al Republicii Moldova, 2005, *Opredelenie uviazimosti rayonsov i naseleennykh punktov Respublki Moldova k chrezvychainym situatsiiam prirodnoogo i tekhnogennogo kharaktera*.

³ National Hydrometeorological Service and Ministry of Agriculture and Food Industry.

⁴ World Bank, 2007, *Rural Productivity in Moldova – Managing Natural Vulnerability*.

⁵ Official estimates.

- Severe weather events, such as torrential rains, hail, wind, and frost occurs annually in the country within localized areas. Average annual damages accruing from these have been estimated at over \$7.5 million.⁶
- Situated in the Vrancea seismic zone (also encompassing Romania), Moldova regularly experiences earthquakes. Over the past 200 years, Moldova has suffered sixteen major earthquakes of force 7–8 on the Richter Scale. The 1986 earthquake struck the capital city of Chisinau, injuring 261 people and leaving 1,200 homeless. Direct and indirect losses reached \$1.2 billion.⁷ Mortality to date has been low but there are concerns that a major earthquake will occur sometime in the future and that it will seriously affect the capital city of Chisinau.
- In Moldova, 43.7% of settlements are threatened by landslides, and they are increasing every year. Landslides are mainly linked to subsidence from large construction works and widespread deforestation, rather than heavy rainfall events. They are relatively slow-moving and not a major contributor to morbidity or mortality. Most damages are related to local displacement, which may result from damage to buildings and other assets, and loss of cropland. Average annual losses from them amount to \$1.3 million.⁸

Average annual losses from hydrometeorological hazards comprise around three percent of GDP (if the 2007 drought is factored into the annual average⁹). They have a severe impact upon the rural population of Moldova, which makes up around 60% of the total and depends largely upon agriculture for their livelihood.¹⁰ Overall annual losses from geophysical hazards account for 0.9% of GDP. These primarily threaten infrastructure, homes, and public buildings, especially in Chisinau. It should be emphasized that these figures are likely underestimated, owing to the fact that post-disaster needs assessments do not at present capture all direct damages and few of the indirect damages.

Climate variability has accelerated in the last few decades. Since the 1980s annual air temperature has increased dramatically (about 0.58 °C per decade). Spring precipitation has risen since the 1980s (by around 6 mm per decade), summer precipitation has declined (by over 13 mm per decade), and variability has been amplified in spring and autumn. Meteorological hazards, particularly drought and floods, have become more frequent and intense.

During 2010-39 precipitation is expected rise in winter (10-20%) and spring (3-4%) and decrease in summer (4-6%) and fall (5%). Precipitation events are expected to become more sporadic and intense, leading to more severe and frequent droughts and floods (even on major river systems). Potential evaporation is projected to rise by 15-20%, thereby reducing soil moisture. Aridity will increase significantly, transforming much of the country into dry sub-humid, semi-arid, and (in the south) arid zones. Reduced soil moisture in turn may lead to more destructive landslides and amplify the secondary impacts of earthquakes.¹¹

⁶ World Bank, 2007, *Rural Productivity in Moldova – Managing Natural Vulnerability*.

⁷ Institute of Geology and Seismology, Moldova Academy of Sciences.

⁸ V.A. Osinok, A.P. Sudarev, and E.N. Sheremet (Gosudarstvennoe Agentsvo po Geologii Respubliki Moldova “AGeoM”), 2006, *Monitoring opasnykh geologicheskikh protsessov na territorii Moldovy*.

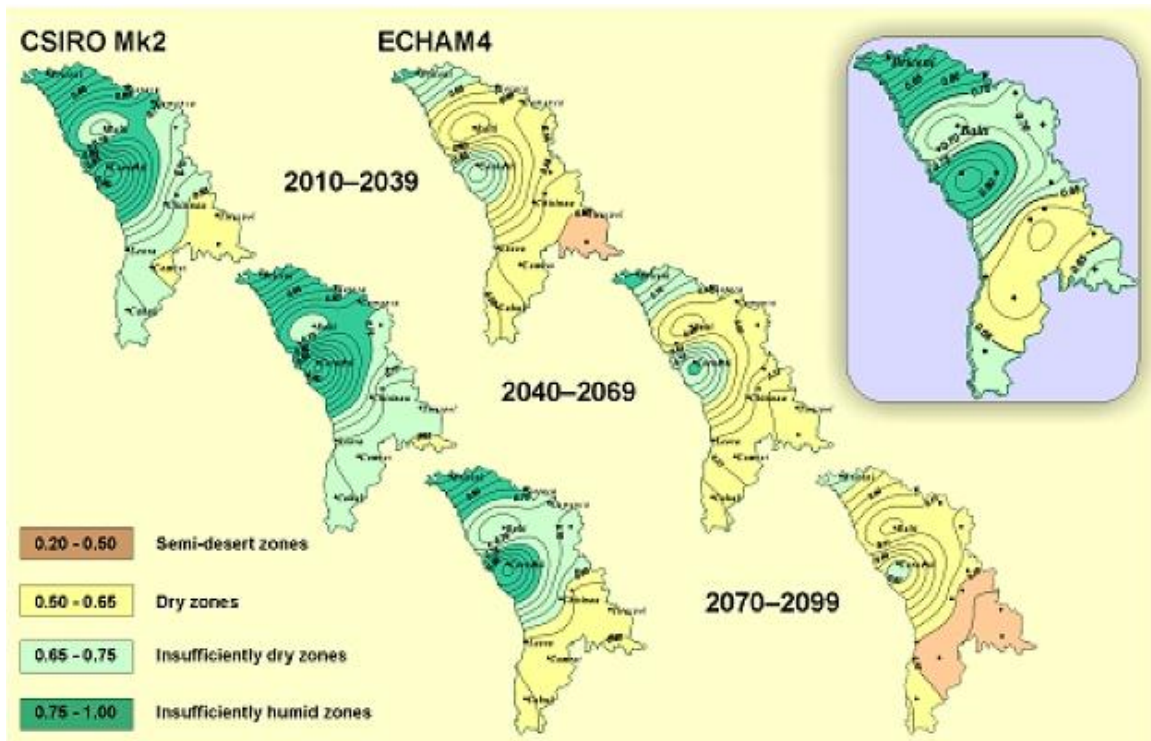
⁹ Otherwise, they account for 0.3% of GDP. Figures are based upon a GDP in 2007 of \$4.4 billion.

¹⁰ The rural population increased in the 1990s as people lost urban jobs and moved away from large towns and cities.

¹¹ Republic of Moldova, Ministry of Environment and Territorial Development, 2000, *First National Communication of the Republic of Moldova under the United Nations Framework Convention on Climate Change*, pp. 42-46; UNDP, 2009, *Climate Change in Moldova: Socio-Economic Impact and Policy Options for Adaptation. National Human Development Report 2009/2010*.

In addition to more severe exposure to meteorological hazards, climate variability is expected to have dramatic impacts upon Moldova's economy and environment. According to the available models, surface water resources will diminish by 16-20% in the 2020s. Taking into account groundwater supplies, severe water stress will set in after 2030, particularly in the south of the country. Wheat and corn yields may diminish significantly (wheat by 25% of the 1960-1990 baseline in 2010-2039), which will reduce food security. Aridization and lower water availability will shift spatial distribution of flora and fauna species and have a negative impact upon aquatic ecosystems such as wetlands. Desertification and accompanying land degradation will become more widespread.

Figure 1: Predicted Aridity in Moldova, according to Climate Change Scenarios



Source: Republic of Moldova, Ministry of Environment and Territorial Development, 2000, *First National Communication of the Republic of Moldova under the United Nations Framework Convention on Climate Change*, p. 42

Moldova's economy, population, and environment are highly vulnerable to natural hazards. While at independence the Republic of Moldova was classified as a middle-income country, it is now the poorest nation in Europe. The UNDP Human Development Report 2006 ranks Moldova 114 out of 177 countries with a human development index (HDI) score of 0.694, lower than the regional average for CIS and Eastern Europe. The most vulnerable economic sector is agriculture. The agricultural and agro-processing sectors account for about 34% of the country's GDP. These sectors generate about 60% of export earnings, and provide employment for roughly 43% of the labour force. Although 80% of Moldova's surface land is under agriculture, production is currently less than half of the level prior to the dissolution of the former Soviet Union. This is in part due to a high share of subsistence farming (almost 50% of agricultural land is covered by small holder farms), as highly fragmented land impedes enforcement of policies and measures for land conservation, efficient irrigation, etc, needed to improve agricultural productivity. Given the changes in land use and cropping patterns, the migration from villages of the more able workers, the break-up of the intensive livestock production units and a shift to

rain fed crops, labour productivity has been halved. This has further eroded the profitability of agriculture and the welfare of rural communities.

A significant component of vulnerability is the high incidence of poverty, particularly in rural areas. Despite economic growth observed in recent years, poverty is geographically widespread and persistent in the country. Although the overall poverty rate fell dramatically between 1999 and 2005 (from around three-quarters to one-third of the population), the percentage of rural Moldovans living below the poverty line remains high, and actually rose between 2003 and 2005 (from 31% to 36% of the population). This is particularly the case in rural areas, where 66% of the country's poor reside. The severe drought in 2007, combined with underdeveloped market infrastructure, inefficient supply chains, and market distortions has reduced farm-gate prices and, hence, the incomes of rural households. Additional factors contributing to vulnerability are as follows:

- The location of many settlements and concentration of population in hazard-prone areas;
- Unsustainable land and water management and agronomic practices;
- The deterioration of infrastructure, in particular the near-collapse of many irrigation systems, and poor drinking water supply;
- Poor access to agricultural credit, inputs, and markets; and
- Environmental factors such as deforestation and erosion.

Capacity needs to be developed to address the risks posed by natural hazards and climate change. Despite the existence of a generally sound legal and regulatory framework for disaster risk reduction (DRR) and climate change adaptation, the enabling environment is incomplete, as there is no overall climate risk management or disaster risk reduction strategy in place. Moreover, there is a need for strategies that will shift the focus from the present disaster response and preparedness orientation toward prevention and mitigation, integrated with climate risk management. A National Strategy for Natural Hazard Mitigation, 2008-2015, which has an implicit climate risk management focus, was developed under World Bank auspices, but was not supported further, owing to lack of funding to support its final development and implementation. Coordination bodies (such as the National Commission of Emergency Situations) are *ad hoc* in nature, and, although there is a coherent institutional architecture for preparedness and response, linkages among the relevant institutions for risk assessment are not cohesive, and processes are not systematized and institutionalized for integrating prevention and mitigation actions into development planning and subsequent implementation. (See Annex 1 for a chart of the institutional structure in risk assessment, early warning, and response). Moreover, there is a lack of capacity at the local level among district emergency commissions, local public administrations, civil society organizations, and communities for preparedness and response, as well as planning for and undertaking prevention and mitigation actions. An integrated approach to climate risk management is lacking at all levels.¹²

1.2 Baselines for UNDP Intervention

Disaster risk reduction and climate change adaptation have been assigned a high priority in joint UN-government programmatic strategies for Moldova. The UN Development Assistance Framework agreed with the government for 2007-11 notes that there is to be “improved readiness to prevent and mitigate natural and manmade disasters and crises” (Outcome 1.5). Capacities of government, civil society organizations, local public administrations, and communities in planning, implementation, and monitoring are to be developed under Outcome 3. These outcomes are reflected in the Country Programme Action Plan, 2007-11. As a UN member, the Government of Moldova is signatory to and has

¹² Bureau of Crisis Prevention and Recovery, 2009, *Moldova Disaster Risk Reduction Programme: General Concept*.

been active in supporting several relevant international agreements and conventions, including the Hyogo Framework for Action and the United Nations Framework Convention on Climate Change. On the basis of this framework, the UNDP Country Office in Moldova, in close coordination with the UNCT, will strive to build upon the existing experience in disaster risk management and climate change adaptation to improve the management of disaster and climate risks.

The project is also in alignment with other government priorities. The Government of Moldova has fully embraced the need to promote an agenda that would enable the country to become more resilient in the face of future disaster-related shocks. Key strategies and concepts are listed below:

- At the end of 2007, the Government approved a strategy for the development of the agricultural sector, which recognizes the vulnerability of agriculture in Moldova to drought and other climate related hazards, particularly its technical ability to cope with weather related shocks, farmer awareness about various adaptation technologies, varieties and cultivation methods, and the availability of financial and insurance mechanisms that can reduce losses to the sector.
- The SWOT analysis for the National Development Strategy (NDS) for 2008-2011 emphasizes the negative role in development played by natural disasters. The actions specified in the NDS include improvement of hydrometeorological observation, forecasting, and early warning, as well as regional development, with an emphasis upon rural development and agriculture productivity growth.
- In 2003 the Government of Moldova adopted the National Plan for Promoting Gender Equality in Society, which supports the development of capacities in women's empowerment, raising awareness concerning and promoting the concept of gender equality, preventing violence towards women and children, and ensuring gender equality in decision-making bodies, the labor market, social services, and healthcare.
- In November of 2009 the UNDP presented the DRR concept that underlies this project document to a roundtable of key government stakeholders. Consensus was reached and support expressed for the concept and proposed follow-up actions.

During the present UNDAF/CPAP period the UN has been instrumental in supporting both humanitarian and development responses to natural disasters. Interventions have included the following:

- The Moldova UN Country Team (UNCT) led a major intervention in 2007 to deliver humanitarian aid to the population most affected by a severe drought that encompassed 80% of the territory of the country. To sustain the livelihood of the most affected, emergency support reached 530,000 people (including in Transnistria). During that process, the UN role in coordinating the donors' assistance in the case of disasters proved to be critical as the UNCT Moldova played key role in mobilizing and delivering the emergency assistance. It included important elements of longer term adaptation of the rural development systems to long term climate change.
- In order to target assistance for mitigating drought impacts in the future, an Inter-Agency Feasibility Study concerning rural livelihoods produced recommendations for climate risk management (including drought mitigation).
- In 2008 UNCT led a response to flooding that damaged 500 homes and impacted 20 settlements near the rivers, displacing as many as 10,000 people. UNICEF provided cash for education for children to families affected by floods in 2008, and assisted the Government in the renovation of the school buildings affected, while UNDP implemented a number of labour intensive civil works projects, rehabilitating infrastructure and socially important facilities in the communities most affected by the floods.
- In 2008 a study was launched to elaborate the elements of a DRR programme for Moldova, with the objective of strengthening the institutional framework.

- In 2009 WHO assessed health system disaster preparedness and analyzed hospital safety. These have been accompanied by training and support to contingency planning. These studies can be utilized in future risk assessment and DRR-related programming. A regional study on climate change effects is in the process of preparation, which will include Moldova.
- In 2009 UNICEF, in close collaboration with the Department of Civil Protection, developed an assessment of the existing emergency system (focusing on multi-sector response towards children, families and communities and coping mechanisms in the wake of emergencies), which provided UNICEF and the Moldovan Government with a framework to start building a psychosocial component to the existing Emergency Response System and strategic recommendations to implement this component. This assessment was followed by a training workshop with the basic components of an emergency response system for children, families and communities.
- In 2009 UNICEF supported the Ministry of Health, with funds from the World Bank, to develop its capacity in communication during emergencies. While the project refers to Avian Flu, it has been an excellent entry point to strengthen the capacity of the health authorities to communicate, whatever the emergency is (this project was very recently used to disseminate information on the H1N1 flu that has reached Moldova). UNICEF is implementing a World Bank project on the avian influenza control and human pandemic preparedness and response (communication component).
- In November of 2009 the Bureau of Crisis Prevention and Recovery's Regional Disaster Risk Reduction Advisor for Europe and the Commonwealth of Independent States (ECIS) conducted a joint mission with a consultant of UNICEF to assess disaster risk reduction capacities of relevant entities. Subsequently a general concept for a disaster risk reduction programme was developed in support of this project document (the concept note is attached).

UNDP has provided significant support to climate change adaptation in Moldova. Key actions include the following:

- Provision of support to the development of the *Second National Communication of the Republic of Moldova under the United Nations Framework Convention on Climate Change*.
- Under UNDP auspices, the National Human Development for 2009-10 was created on *Climate Change in Moldova: Socio-Economic Impact and Policy Options for Adaptation*. The report suggests that Moldova develop a comprehensive National Climate Change Adaptation Programme to oversee overall and sector adaptation strategies. The Ministry of Environment has requested UNDP engagement to elaborate a national strategy towards this end.
- In January of 2010 the Practice Leader of the Energy and Environment Group for ECIS conducted a mission to Moldova (among other objectives) to provide advice concerning the Copenhagen Accord and positioning of UNDP's Energy and Environment programme in Moldova. The mission recommended coordination and cooperation with the proposed disaster risk reduction programme in climate risk management. The mission also elaborated concepts concerning introducing legal and financial incentives in support of climate resilient rural development, as well as integrated and sustainable land management through a community-based approach.

The Integrated Local Development Programme (ILDLP) aims to improve capacities for policy-making, planning and implementation in area-based development at the local level. The programme presently covers around 30% of the territory of Moldova. There is considerable potential for integrating climate risk management into the Community Empowerment component of the ILDP, as the Country Office has developed significant capacity in implementing area-based development projects, and the participatory

methods already utilized in them are similar to those employed in local level disaster and climate risk management.¹³

Outside of the UN system, significant actions have been taken and/or are being pursued by other donors, as well as civil society organizations. The most pertinent to these to the proposed project are by the World Bank and Moldova Red Cross.

The World Bank in 2006 undertook a comprehensive analysis of rural disaster risks, which has been widely quoted in subsequent studies.¹⁴ Since then World Bank has sought to mainstream drought mitigation into its Rural Investment and Services Project through providing additional funding for irrigation and advisory services concerning drought adaptation. More recently, World Bank has designed a project to support the government's disaster preparedness and response capacities through improving early warning and strengthening hydro-meteorological monitoring and forecasting, as well as increase resilience in the agricultural sector through climate change adaptation actions. The actions proposed below will be closely coordinated with and achieve synergies with these interventions.

The Moldova Red Cross Society (MRCS) has mounted multiple humanitarian responses, including the 2007 drought and 2008 floods. MRCS possesses a nationwide network of 2,600 volunteers, who are trained in first aid, early warning, and humanitarian response. The Society has well established coordination and cooperation with the government and has jointly undertaken vulnerability and capacity assessment, contingency planning, and disaster responses. At the national level, it is underrepresented in decision-making bodies such as NES. The highest priority of the MRC at present is to improve its contingency planning, train new volunteers (as many have emigrated to European Union countries for work), and establish appropriate teams. The actions proposed below are designed to strengthen MRCS through collaboration in climate risk assessment and training at the local level, as well as inclusion into coordination bodies and mechanisms.

The DRR concept was further developed following consultations involving the Country Office and the Crisis Prevention and Recovery (CPR) and Energy and Environment (EEG) teams for ECIS. On this basis, an approach was developed for a disaster risk reduction programme for Moldova that includes collaboration between the CPR and EEG teams in the area of climate risk management. It benefits from the capacity strengths of the Country Office, particularly in area-based development, as well as ongoing collaboration between the two practices in the area of climate risk management.

2 STRATEGY

The DRR concept for Moldova developed in 2009 and subsequently refined in 2010 identified the following immediate priority actions for UNDP:

1. Reducing disaster risks at the local level, by applying the approach developed within the Integrated Local Development Programme, beginning with integrated climate risk management.

¹³ The Country Office proposed in 2008 a follow-up to the 2007 drought response, utilizing the ILDP as a vehicle for delivery for local level prevention and mitigation actions. However, this initiative did not receive funding.

¹⁴ World Bank, 23 May 2007, *Rural Productivity in Moldova – Managing Natural Vulnerability*.

2. Improvement of risk assessment through strengthening coordination among the relevant institutions, the upgrade of databases, creation of a central disaster and climate risk database (a National Disaster Observatory), and building capacity in the application of tools and methodologies, particularly related to assessing vulnerability and capacity. Immediate outputs of establishing a National Disaster Observatory include 1) more precise analysis of disaster and climate risks, 2) the development of a National Disaster Risk Reduction Strategy and National Climate Risk Management Strategy, which would specify processes and actions to address these risks, and 3) strengthened institutional linkages and analytical capabilities that will help to bolster an Emergency Command Center envisaged under a pipeline World Bank project.
3. Strengthening the disaster risk management capacities of the UN Country Team through the mobilization of a National Disaster Risk Reduction Advisor.
4. Creation of a UN Disaster Management Team to provide a much-needed coordination mechanism, followed by the development of a concept, advocacy, and an agreed charter for the creation of a National Platform for DRR.
5. Advocacy for and advancement of the integration of DRR into development planning at the national level, beginning with the most obvious sectors and geographical and thematic areas.

The project will develop capacity in disaster and climate risk assessment in order to identify and prioritize actions to be included into DRR and climate risk management strategies and policies, target mainstreaming actions, and inform contingency planning. Additional benefits will be derived in strengthening linkages in early warning (as the risk assessment and hazard monitoring agencies are the same) and development of scenarios for contingency planning and strengthening of preparedness and response. Capacities in disaster and climate risk assessment will be developed through the creation of a National Disaster Observatory (NDO), for which the Global Risk Identification Programme will be engaged. The NDO will be located within the Civil Protection and Emergency Situations Service (CPESS), which is mandated by law with coordinating and executing risk assessments. During the creation of the NDO capacity development activities will be undertaken to strengthen the relevant institutions' capabilities in vulnerability and capacity assessment, as well as to improve their ability to conduct cost-benefit analysis of risk management actions.

A prospective, rather than corrective approach to risk assessment will be promoted, i.e. capacity will be developed so that future assessments will seek to anticipate risks and take a proactive approach to addressing them, rather than deal with existing risks and take corrective actions. Within the framework of the project, analysis of risks will seek to incorporate climate change scenarios when assessing risks posed by meteorological hazards and integrate the analysis into DRR and climate risk management strategies and plans.

The NDO will also be coordinated with and enhance the creation of an Emergency Command Center within CPESS, which will be executed under a parallel World Bank project. As risk assessment entities are also those that monitor and provide early warning, strengthened institutional linkages resulting from the proposed project will also serve to bolster those needed for the Emergency Command center. Improved day-to-day data collection, data management, and analysis capacities resulting from the NDO will also have the additional benefit of supporting the Emergency Command Center's decision support system.

The creation of the NDO and accompanying capacity development actions in the first year of the project will be followed by a disaster and climate risk analysis. The risk analysis will fill gaps in existing studies on disaster risk and climate change adaptation. In particular, the climate risk analysis will build upon the National Human Development Report for 2009-10, as well as the Second National Communication

under the UN Framework Convention on Climate Change, which examine likely climate change scenarios and recommend mitigation and adaptation measures for various economic and social sectors and the environmental and natural resource management.¹⁵ Thus, in addition to assessing geophysical risks, the analysis will seek to more precisely identify potential changes in patterns of natural hazard exposure, vulnerabilities and impacts due to climate change. Risk analysis will be followed by evidence-based advocacy for and input into draft DRR and climate risk management strategies and programmes, as well as the UN Country Team contingency plan.

In parallel with the risk assessment component, the project will execute a local level climate risk management component. The actions seek to reduce the vulnerabilities and strengthen capacities of communities and public administrations (at the village and district/*rayon* level), which are most directly affected by disaster and climate risks. The component will benefit from advanced decentralization processes in Moldova, which is supported by a well developed and longstanding area-based developed programme (the Integrated Local Development Programme). The ILDP's Community Empowerment component will provide the vehicle for delivery of this component (See Annex 2 concerning ILDP project management and a sample of community development planning). Approaches and tools will be developed during the project for integrating disaster and climate risk management into the ILDP. This will permit subsequent interventions of the ILDP to address disaster and climate risks and vulnerabilities at the local level as one of several components and dimensions of poverty, which will permit a more holistic risk assessment and provide a wider range of benefits from DRR and climate risk management interventions than if they were undertaken as standalone actions.

Climate risk management seeks to promote the achievement of sustainable development goals by helping to manage societal vulnerability associated with both short-term climate variability and long-term climate change. Its focus upon climatic variability in both the present and the future provides immediate benefits in protecting Millennium Development Goals and strengthens the capacity of governments and societies to manage long term risks. The methodology to be applied is as follows:

1. Consult with national and local level stakeholders and conduct analysis to identify high-risk areas, focusing upon those repeatedly affected by drought and flood risks in the last three decades and likely to incur the most profound impacts of climate change. Produce a preliminary analysis of risk patterns posed by present-day variability and climate change.
2. Develop a local level climate risk assessment toolkit, to be tested, refined, and integrated into the existing methodology of the community development projects.
3. Train field staff and trainers, as well as national actors, in local level climate risk assessment and management.
4. Within the area identified in the preliminary scoping exercise, conduct rapid community risk assessments for screening and analysis, followed by in-depth risk assessment in target communities.
5. On the basis of analysis of the risk assessment, as well as further consultation with target communities, determine and execute specific climate risk management interventions through the development of community development plans or integration of climate risk management into existing plans. Interventions will encompass prevention/adaptation, early warning (focusing upon multiple benefits), and preparedness and response. Where appropriate, support the development community-based organizations such as local search and rescue teams, farmer's associations, etc.

¹⁵ Ministry of Environment and Natural Resources, 2009, *Second National Communication of the Republic of Moldova under the United Nations Framework Convention on Climate Change*; UNDP, 2009, *Climate Change in Moldova: Socio-Economic Impact and Policy Options for Adaptation. National Human Development Report 2009/2010.*

6. Disseminate lessons learned and successful approaches to national and local level stakeholders and provide a platform for the government to adopt and scale up the approaches piloted

The local level risk management component will achieve important synergies with the risk assessment component. The more qualitative data generated by local level risk screening and in-depth assessments will serve to generate data from the perspective of the at-risk population and verify quantitative assessments made for the risk analysis. Prevention/adaptation approaches developed and refined under the local level risk management component will be available to the DRR and climate risk management strategies and programmes developed. These approaches will also be advocated to the government for up-scaling and mainstreamed into and available for further application and replication under the area based development projects, which will thus be strengthened as a vehicle for further endeavors in local level management of disaster and climate risks. Finally, capacity developed under the risk assessment component will enable a more precise initial targeting of areas for future local level risk management interventions.

Climate variability and change are cross-cutting issues with considerable overlap among agencies and departments. Therefore, all activities related to climate risk management have been developed in collaboration with the ECIS Energy and Environment (EEG) and Poverty Reduction (PR) Practices. In executing the project, a National Disaster Risk reduction Advisor (see below) and Project Manager will facilitate coordination and collaboration with EEG and PR counterparts at the Country Office level, with support from the ECIS regional teams for the CPR, EEG, and PR practices. The project will be coordinated closely and collaborate, where appropriate, with EEG pipeline projects for improved land management and introducing legal and financial incentives for climate resilient rural development, as well as potential activities for sustainable livelihoods and improved natural resource management under the Poverty and Environment Initiative.

The project seeks to develop the capacity of the UN Country Team (UNCT) in addressing climate- and disaster-related risks. The UNCT in Moldova successfully led donor responses to drought in 2007 and floods in 2008. During these efforts UNCT strengthened its capacity for coordination, communications, targeting and delivery of assistance, logistics, and project monitoring. It remains to build upon these achievements and introduce a more systematic approach to disaster risk reduction. This can be done through the following activities (most of which were recommended in the aftermath of the 2007 drought¹⁶):

- Elaboration of an overall strategy to outline programmatic focus in DRR, which define agency responsibilities and allow partners to better understand the respective strategies of UN agencies in disaster risk reduction;
- Intensification of UN coordination processes and establishment of a formal multi-stakeholder coordination structure;
- Further clarification of agency responsibilities;
- Development and testing of a UNCT contingency plan; and
- Internal training in DRR and climate risk management involving national, civil society (especially Red Cross), and donor partners¹⁷.

¹⁶ UNDP, May/June 2008, *Relief and Technical Assistance Response to the Drought in Moldova, Project Review Mission Report*.

¹⁷ A National Platform is a coordination mechanism advocated within the framework of the Hyogo Framework for Action that includes all relevant stakeholders from among the government, NGOs, and donors/IFIs into an institutional structure that is appropriate to the national context. The National Platform envisioned in the DRR concept that underlies this project would have the following functions: supporting risk assessments and applying their the results in programming; providing input into and/or formulation of strategies, policies, and legislative acts pertaining to DRR; specifying and further developing processes

To accomplish these objectives, the project will mobilize a National Disaster Risk Reduction Advisor (NDRA) within the Moldova Country Office. In addition to the responsibilities, the NDRA will provide overall technical guidance for UNDP DRR and climate risk management activities in Moldova, as well as to provide technical support to the project and further develop UNDP's disaster and climate risk management portfolio in the country, develop and advocate a concept for a National Platform, advocate and provide support to the government in integrating prevention/adaptation into overarching and sector development strategies and plans.

The components of the project will support the development of capacity in civil society organizations involved in disaster risk management. The development of tools, execution of local risk assessment, participatory planning, and implementation of risk management interventions at the local level (Output 2) will be done with the participation of the Moldova Red Cross Society (MRCS) and other civil society organizations, when feasible.¹⁸ MRCS will also participate in coordination mechanisms, development of strategies, and contingency planning and training exercises envisioned in Outputs 1 and 3. This will enhance the role of the most significant civil society organization in disaster and climate risk management in Moldova, provide existing expertise of MRCS to the project, as well as help to support a three-year capacity development plan of the MRCS, which was elaborated in 2009.¹⁹

Women, due to their social roles, discrimination and poverty, are affected differently and often disproportionately by the effects of natural disasters and climate change. For example, drought poses particular hardships for women and girls who work harder to obtain water. As women typically have fewer employment opportunities than men, their livelihood options are typically more curtailed by losses associated with these types of hazard events. Mortality owing to natural disaster is significantly higher for women and children than men. Risk assessments undertaken under the project at national and local levels will be sufficiently disaggregated to account for particular socially conditioned vulnerabilities and capacities of all social groups, including women, men, children, the elderly, etc. Interventions identified and executed will benefit from the different perspectives and experiences that various social groups contribute and empower women and other social groups to ensure sufficient representation in all risk management decision-making processes and actions. The percentage of women beneficiaries of the local level climate risk management component will reflect their share of the population of the individual target communities.

and capacities for integrating prevention and mitigation actions into development planning and subsequent implementation; introducing an integrated approach to climate risk management; setting priorities, planning, and allocating resources; monitoring and evaluating the implementation of strategies and plans to derive lessons learned; building consensus among stakeholders; coordinating interventions to avoid duplication and achieve synergies; and fostering regional cooperation with other national platforms and agencies, as well as regional entities. The strategy for developing the National Platform elaborated in the concept note is to work towards establishing coordination mechanisms such as the UN Disaster Management Team (see below), building capacity of disaster management entities, while developing the concept and advocating the establishment of a National Platform.

¹⁸ Specific partnering opportunities will be considering on a case by case, depending on the communities selected for the pilot interventions and presence of Red Cross or other key civil society representative on the ground. Grants to facilitate the process could be provided to various NGO actors.

¹⁹ The MRSC applied to the International Federation of Red Cross Societies for funding to support the plan, but did not receive it. The proposed project is designed to help to fill the gap in support for the capacity development plan.

3 PROJECT OBJECTIVE, INTENDED OUTPUTS, AND ACTIVITIES

The objective of this project (2010-2012) is to reduce disaster and climate risks in Moldova and thus contribute to the attainment of country development strategies and the Millennium Development Goals. Project outputs include the following:

1. Disaster risk assessment capacities strengthened and priorities identified at the national level to inform country disaster risk and climate risk management strategies and program development
2. Vulnerabilities reduced and capacities strengthened to manage climate risks at local levels
3. Strengthened capacity of UN Country Team to manage disaster and climate risks

These activities are in support of these outputs described in detail below.

3.1 Disaster risk assessment capacities strengthened and priorities identified at the national level to inform country disaster and climate risk management strategies and program development

Activities for this output will begin with a 5-day multi-stakeholder training workshop. The workshop will engage stakeholders and provide participants with the required concepts and knowledge to perform disaster and climate data collection, operate the software tools, understand the methodologies, and use the data for analysis as part of DRR and climate risk management, particularly in support of risk assessments. It also will facilitate consultation to refine the design of the activities involved.

An additional goal of the inception workshop will be to establish and develop terms of reference for a National Risk Assessment Steering Committee (NRASC), comprised of Technical Advisory Group and National Advisory Group.²⁰ The Committee will be comprised of representatives of organizations involved in risk assessment (see Annex 1) and chaired by CPESS. These groups will meet on a quarterly basis to consult, reach decisions, and specify support actions concerning key issues related to risk assessment and its outputs in Moldova. It is envisioned that the NRASC will provide one of the components for a National Platform for DRR.

The project will carry out a Capacity and Needs Assessment of agencies involved in disaster and climate risk assessment, which will further engage stakeholders, identify specific areas where capacity development is needed, and raise awareness concerning them. The Assessment will cover the following:

- Enabling environment for disaster and climate risk assessment
- Existing databases and their management
- Institutional capacity and governance in disaster and climate risk assessment
- Technical capacity with regard to application of risk assessment tools and methodologies

The Capacity and Needs Assessment will include a detailed concept identifying the following:

- Governance framework and activities for institutionalization of the NDO;
- The location of the centralized database and structure of the NDO;
- Required equipment and technical infrastructure (server configuration and hosting agreement)
- Data sources, data collection, and the classification and validation/verification process;
- Resolution of the data to be entered;
- Cataloguing, archiving, and access standards;

²⁰ The NRASC is not the Project Board, but rather a national body to be created under the project. It is envisioned that some of members will also be in the Project Board.

- Digitization and data entry requirements, procedures, and standards;
- Mapping and geographical referencing requirements, procedures, and standards;
- Desired capacities in analysis tools and methods and actions required to develop them; and
- Desired analytical outputs and dissemination of risk assessment products.

The concept and a work plan will be disseminated to government and other stakeholders. The work plan will be discussed in detail in the NRASC and, after consensus is reached, ratified by it.

Throughout the course of establishing the National Disaster Observatory, the project will seek to make it an integral and sustainable part of CPESS and the risk assessment system in Moldova. This will encompass strengthening the enabling environment, when necessary, advocating the importance of disaster and climate risk management and the role of the NDO in it to key stakeholders, and creating facilitating regular communication, formal agreements (when necessary), periodic workshops, and other capacity development activities among risk assessment entities and other DRR stakeholders.

The project will undertake an extended process of historical research and collection and digitization of data related to disaster and climate risks over a 30-year time horizon. As much as possible, data will be disaggregated to the resolution specified by vulnerable social groups, including women, children, and the elderly. A team of consultants will be engaged to conduct historical research, as well as collect, digitize (if necessary), classify, and verify/validate data in accordance with the agreed process.

The database will be designed on the basis of the work plan, deliberations and decisions of the NRASC, and available data. Technical infrastructure will be set up, including acquisition of server, hosting agreement, and server configuration (database, software, domain name, etc.). Based upon the agreed architecture of the NDO, databases will be integrated. Staff of the host agency will be trained in and commence data entry. Initially, the project will provide a dedicated ICT specialist, who will in turn train and work with IT staff of the risk assessment agencies and advocate for the provision of any additional support needed to ensure sustainable ICT support beyond the life of the project.

Following the initial establishment of the database, the project will systematize day-to-day data collection and registration. Every time a disaster occurs (even small or medium scale disasters) an observer will register the hazard and impact information (damages and losses such as mortality, number of houses or agricultural crops destroyed and damaged, etc) in the disaster database. The National Disaster Observatory will collect information generated at local level and will provide stakeholders with reports, analysis and other products derived from the data collected. The tasks to be accomplish are listed below:

- Working with Host Institution in the final definition of forms for Disaster/Emergency reporting, which will provide the basis for day-to-day collection;
- Definition by the host institution of the level of involvement of disaster risk management agencies, district governments, and other entities for data collection and reporting, which may involve formal agreements;
- Development of a procedural guide to collect data and fill up the forms, which will specify how, when and who is responsible for entering the disaster data into the observatory, and how to get it from the emergency forms;
- Establishment of full institutional support for these forms and procedure, i.e. making them mandatory for emergency/incident reporting;
- Identification and designation of the staff actually responsible for a) the collection of data and b) for the data entry, and c) ICT support;

- Internal institutional training for the staff that will gather data from the field, including all relevant entities (monitoring agencies, disaster risk management entities, local governments, relevant line ministries, etc.), as well as those who will directly enter the data; and
- Any further refinements in configuration of the server and other parts of the database system to accept this form.

Analysis tools and methodologies will be initially selected during the Capacity and Needs Assessment and a common approach to risk assessment further discussed and ratified by the National Risk Assessment Steering Committee. The project subsequently will provide training to develop capacities in their application. It will be important to build upon and/or complement the present capacities of the various agencies. Areas identified during initial consultations with stakeholders in 2009 include impact, vulnerability, and capacity assessment, as well as cost-benefit analysis. Training will be delivered by the Global Risk Identification Programme, as well as international experts recruited for specific inputs.

The NDO will provide the basis for analysis of disaster and climate change risks and impacts to help identify problem areas and discover trends and patterns of realized risk. The analysis will also seek to assess the potential impacts of climate variability over the coming ten years. It will permit a better understanding of impacts upon and vulnerabilities of women, the elderly, children, and other ethnic, social, and economical groups. A preliminary analysis of disaster and climate change risks and impacts will be produced, reviewed, and then finalized by national risk assessment entities, with support from national consultants.

Analysis outputs will generate evidence to advocate to the government the development of a National Disaster Risk Reduction Strategy and a National Climate Risk Management Strategy, and mainstreaming disaster risk reduction into development planning. Provided that the government is receptive to these actions, the project will then work with relevant stakeholders to produce draft documents for discussion, further refinement, and ratification. A National Climate Risk Management Strategy would be drafted in collaboration with the Energy and Environment practice teams of Moldova and ECIS. On the basis of the analysis and during the process of terminal evaluation, follow-up programming in DRR and climate risk management will also be identified and developed. Stakeholders for review will include those dealing specifically with vulnerable social groups, to ensure that provision is made for their interests and empowerment.

3.2 Vulnerabilities reduced and capacities strengthened to manage climate risks at local levels

The local level climate risk management component of the project will commence activities with consultation for and initial development of a local level risk management toolkit. The toolkit will be utilized for implementation of the project and integration into the existing ILDP methodology. Integration is expected to proceed smoothly as both the local level risk management and ILDP methodologies are based upon Participatory Rural Appraisal methods. The toolkit will consist of:

- Manuals and modules for the training of trainers, as well as local governments and communities in disaster and climate risk management;
- Risk assessment manual and forms, including initial risk screening methodology and materials, criteria and analysis for the selection of target communities, and in-depth risk assessment methodology and materials; and
- Pilot community planning methodology and manual; and
- Awareness raising materials.

The toolkit will incorporate and build upon a wide variety of methodologies in local level risk management.²¹ Existing tools already utilized by the Moldova Red Cross Society (such as those applied in past vulnerability and capacity assessments) will be adapted (if necessary) for inclusion into the toolkit. Methodologies and tools will be designed to ensure participation and empowerment of especially vulnerable social groups, including women, children, and the elderly.

During the course of its application, the project will conduct consultations with target communities in order to evaluate and refine the local level risk management toolkit. The toolkit will be developed jointly by an international consultant and project trainers.

In parallel with the development of the toolkit, the international consultant will conduct training of trainers in disaster and climate risk management, who will support capacity development activities within communities. Training of trainers will utilize materials already made available by BCPR for this purpose, as well as others as deemed necessary. If feasible, trainers will be selected from Moldova Red Cross staff and volunteers, in order to ensure that they will remain available to communities beyond the life of the project.

Selection of areas for initial risk screening will be conducted through a review of existing assessments (for example, by Moldova Red Cross Society) and consultation with national risk assessment agencies, in particular the State Administration for Hydrometeorology. The project will select areas 1) repeatedly exposed, most profoundly affected by, and in the process of recovery from droughts and floods in the last two decades, 2) in which climate change in the coming two decades is expected to amplify exposure to droughts and floods, and 3) which are most vulnerable in terms of poverty. Initial risk screening will be conducted in 20 communities utilizing rapid appraisal techniques developed for the toolkit. A clear set of criteria and methodology for analysis will then be applied to select seven communities for in-depth risk assessment and planning. Staff and volunteers of the Moldova Red Cross Society will participate in the assessments and analysis. The number of participants from women and other vulnerable social groups in this process will reflect their proportion of the population.

In-depth risk assessment of target communities will be combined with a strong element of awareness-raising concerning risks and challenges that disaster pose for the most vulnerable social groups. The subsequent planning process will be holistic, with climate risk management integrated into the existing community development process for elaborating Community Development Plans, in which communities and local public administration actively participate to identify problems and constraints and rank of priority actions (see sample Community Agricultural Development Strategy Plan in Annex 2). Interventions in climate risk management will be selected according criteria of 1) priority assigned by the beneficiaries, 2) ability to provide multiple benefits (e.g. DRR, poverty reduction, improved natural resource management, climate proofing), and 3) ability to empower highly vulnerable social groups (women, children, elderly, etc.).

Interventions will consist of training in preparedness and response, the creation or strengthening of networks (and when necessary community-based organizations) in local level risk management, and support to local communities in prevention/adaptation interventions. The volunteer network of Moldova Red Cross Society will benefit from capacity building activities undertaken at the local level. If Transnistrian areas are included in to the areas covered by climate risk management interventions, the project will seek to utilize training and workshops to establish a dialogue between communities in

²¹ For examples, see the Community Risk Assessment Toolkit, available at <http://www.proventionconsortium.org/?pageid=43>.

Transnistria region and neighboring areas of Moldova, thereby contributing to mutual understanding and social cohesion.

The project will encourage non-structural prevention/adaptation and mitigation measures (e.g. improved agronomic and water management practices, as well structural measures (see Annex 3 for a list potential local level disaster prevention and mitigation measures). These will be supported by a small grants programme. Communities will be expected to make contributions on the order of 15-20% to investments. Where activities involving civil works are proposed, rigorous technical appraisal and design will be required, as well as demonstration of adequate capacity to operated and maintain infrastructure beyond the life of the project.

The execution of investment activities specified Community Development Plans will follow the standard community development process, the implementation phase of which consists of the following:

1. Specify technical specification; socio-economic impact; business and marketing plan
2. Prepare financing proposals including local contribution
3. Develop monitoring and evaluation procedure at local and regional level
4. Prepare and submit investment proposal
5. Undertake project field evaluations
6. Project review and approvals
7. Set up Project Implementing Authority
8. Project Implementation Committee, chaired by the Mayor
9. Finalize recommended investment proposals
10. Implementation and disbursement mechanism
11. Monitoring and Evaluation

Prevention/adaptation interventions will benefit from guidance and collaboration from the regional Crisis Prevention and Recovery, Energy and Environment Group, and Poverty Reduction Practices. It may be possible to combine some of them with activities presently being proposed by Energy and Environment Group under GEF grants (particularly improvement of land management and land use). Coordination will also be maintained with a proposed World Bank project, which will aim at climate change adaptation in agriculture.

The project will conduct special studies. The studies will cover areas such as linkages between climate risks and poverty, recommended mainstreaming climate and disaster risk management into community development related assessment, planning, and implementation activities, identification of effective investments into climate risk management, and other issues to be identified during the course of the project. They will be published via the UNDP Moldova website and the ECIS CPR workspace, and featured in community of practice events at the regional level. Special studies will also support monitoring and evaluation in deriving lessons learned. Both of these efforts will support evidence-based advocacy for replication and upscaling, as well as the inclusion of successful approaches into country DRR and climate risk strategies and programmes (see above under Output 1).

3.3 Strengthened capacity of UN Country Team to manage disaster and climate risks

As noted above, there is a need to strengthen the capacity of UN Country Team, building upon the achievements of successful responses to the drought of 2007 and floods of 2008. Particular areas of focus are coordination mechanisms, contingency planning, training, integration of prevention and mitigation actions into development frameworks, and programme development.

In preparation for the project, UNCT will undergo a DRR overview training to be delivered by BCPR's Disaster Reduction Team. Activities to be undertaken during the course of the project include the following:

- Elaboration of an overall strategy to outline programmatic focus in DRR, which will allow partners to better understand the respective strategies of UN agencies in terms of risk reduction.
- Establishment of a UN Disaster Management Team (UNDMT), which will provide a multi-stakeholder mechanism for coordinating and providing a common platform for DRR interventions among UN, government, and other entities. Aside from coordination functions, UNDMT can facilitate capacity-building support to the government and other relevant stakeholders, enhance understanding of the UN capacities and resources available for DRR, and strengthen knowledge/familiarity with international systems in DRR.
- Conducting an annual workshop for UNDMT membership to conduct capacity development and review agency/sector responsibilities for specific disaster risk reduction activities.
- Clarification and, when necessary, development of the mandate, objectives and roles/responsibilities for members of the UNDMT in accordance to the guidelines developed for sector responsibilities using the cluster approach.²²
- Development of a concept and advocacy for National Platform for DRR, incorporating existing structures (National Commission on Emergency Situations and other stakeholders, UN Disaster Management Team, National Risk Assessment Steering Committee, etc.). The National Platform would provide a mechanism for 1) providing input into and/or formulation of strategies, policies, and legislative acts pertaining to DRR, 2) specifying and further developing processes and capacities for integrating prevention and mitigation actions into development planning and subsequent implementation, 3) introducing an integrated approach to climate risk management, setting priorities, planning, and allocating resources, 4) building consensus among stakeholders, 5) coordinating interventions to avoid duplication and achieve synergies, and 6) fostering regional cooperation, where appropriate.
- Creation of a Contingency Planning Focal Points Group, followed by development of a UNCT contingency plan (including an early recovery strategy) that analyzes potential scenarios and for each risk identifies the affected areas, the magnitude of various impacts, and the anticipated responses, procedures, and required coordination by UN agencies, government, civil society, and other partners (who, what, where, how). Planning should be followed by dissemination to and consultation with relevant stakeholders in government and civil society, as well as testing and refinement.
- Review of national and sector contingency plans, as well as those for high risk districts
- Putting procurement systems in place that can be activated quickly as well as pre-arranged contracts with local suppliers. If needed items are not available nationally suppliers will be identified outside of the country.
- Integration of prevention/adaptation and mitigation actions into the upcoming UN Development Assistance Framework, as well as advocacy for and guidance concerning mainstreaming DRR into national, regional, and sector development strategies and plans.

²² *Cluster Approach*: The Cluster Approach aims to strengthen humanitarian response capacity and effectiveness in five key ways: i) ensuring sufficient global capacity is built up and maintained in key gap sectors/areas of response; ii) identifying predictable leadership in the gap sectors/areas of response; iii) facilitating partnerships and improved inter-agency complementarity by maximizing resources; iv) strengthening accountability; and 5) improving strategic field-level coordination and prioritization in specific sectors/areas of response by placing responsibility for leadership and coordination of these issues with the competent operational agency. (*IASC Guidance Note on Using the Cluster Approach Nov 2006*)

- Establishment of mandates, competencies, standards, and procedures for Post Disaster Needs Assessment and Early Recovery, as well as dissemination and advocacy to responsible entities, ensuring close coordination among clusters.
- Provision of regular training in disaster risk reduction and climate risk management for the UN Country Team and government and other partners.

All coordination mechanisms, plans and trainings will account for the special needs of vulnerable groups (women, children, the elderly, etc.) and ensure adequate representation of them in decision-making processes.

A National Disaster Risk Reduction Advisor (NDRA) will be recruited under the project to provide technical support to the project and take the lead in these activities listed above. In addition, the NDRA will lead in the identification and assessment of disaster risks, design and formulate of programme and project documents to strengthen management of risks associated with both climate and geophysical hazards, and engage and negotiate with donor and international financial institution partners (see TOR for the NDRA in Annex 4).

If possible, UNDP will collaborate with OCHA in UNCT capacity development activities for disaster preparedness and response. However, OCHA has no regional representation covering Moldova and Ukraine.²³ It therefore may be necessary to utilize OCHA contributions to CADRI.

Responsible parties for the activities listed above include the following: UN agencies and technical partners, National Commission on Emergency Situations, Civil Protection and Emergency Situations Service, Ministry of Environment, relevant line ministries, risk assessment entities, local governments and municipalities, civil society organizations, research institutions, national/international consultants, and project staff. Technical support and contributions to the project will be provided by the Disaster Reduction Team of BCPR as well as the Crisis Prevention and Recovery, Energy and Environment, and Poverty Reduction practice teams of the Bratislava Regional Center.

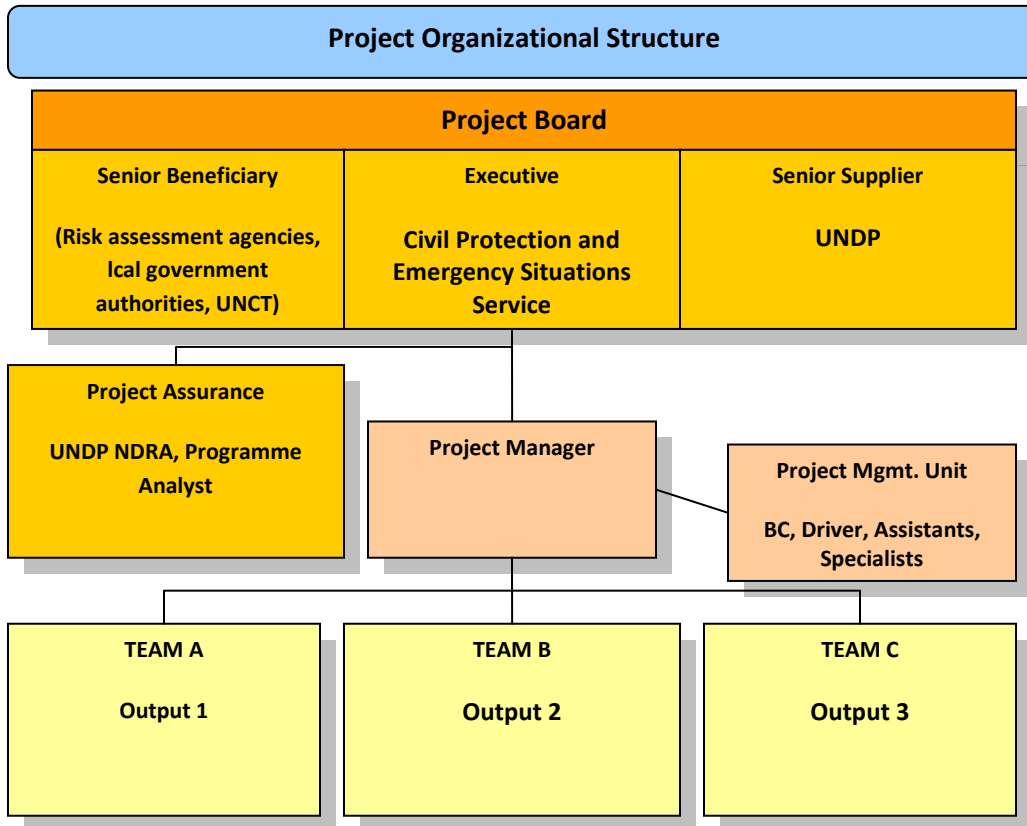
4 MANAGEMENT ARRANGEMENTS

Project Organizational Structure

The project will establish a Project Board, which will be comprised of representatives of the relevant government institutions, local authorities (in which Output 2 is to be implemented), representatives of the UNDP Country Office, and the Project Manager. The Project Board will be responsible for providing general oversight to ensure achievement of results on the primary project outcomes, and making consensus strategic management decisions when guidance is required by the Project Manager, including approval of project plans and revisions, as well as meeting the requirements of the Country Programme Action Plan and Annual Work Plan. The Director of CPESS will be the Chairman of the Project Board. Project Board meetings will be organized by the Project Board as needed, but not less than once every six months.

UNDP will be the Senior Supplier, operating according to the terms specified below. The Senior Beneficiary will be risk assessment agencies (Output 1) the local authorities in areas covered by local level climate risk management interventions (Output 2), and UNCT (Output 3).

²³ OCHA has been consulted in this matter, and a decision concerning the provision of inputs into these activities pending.



Project Assurance will be provided by the UNDP NDRA, a Programme Associate, the Country Office staff of the Energy and Environment Group and the ILDP (for Output 2), and evaluators. They will ensure that objective and independent project oversight is carried out for the purpose of meeting project management targets.

The Project Manager will be responsible for managing day-to-day project operations and decision-making. These will be executed on behalf of and according to the decisions of the Project Board. The Project Manager will supervise the staff of the project. He/she will also closely coordinate project activities with relevant government and other stakeholders.

The Project Management Unit will provide adequate administrative, financial, and organizational support to the Project Manager and staff of the project Teams.

Technical support of other United Nations agencies, such as the UNDP (specifically Bureau for Crisis Prevention and Recovery, Bratislava Regional Center), the UN Office for the Coordination of Humanitarian Affairs and the UN International Strategy for Disaster Reduction, shall be sought as part of their commitment to reducing disaster risk to natural hazards in high-risk nations. UNDP Moldova shall offer expertise in capacity development and gender equality at the onset of the project by reviewing the implementation plan and offering recommendations that shall strengthen the outcomes on the project participants.

Direct UNDP Country Office Support Services to the Programme Implementation

The UNDP and the Civil Protection and Emergency Situations Service have agreed that the UNDP Country Office will provide the following support services for the project activities at the request of CPSS:

- (a) Identification and/or recruitment and solution of administrative issues related to the project personnel;
- (b) Procurement of commodities, labor and services;
- (c) Identification and facilitation of training activities, seminars and workshops;
- (d) Financial monitoring and reporting;
- (e) Processing of direct payments;
- (f) Supervision of project implementation, monitoring and assistance in project assessment.

The UNDP country office may provide support services for assistance with reporting requirements and direct payment. In providing such support services, the UNDP country office shall ensure that the capacity of CPESS is strengthened to enable it to carry out such activities directly.

When providing the above support services, the UNDP Country Office will recover the costs for providing Implementation Support Services on the basis of actual costs and transaction fee based on the Universal Price List. According to the corporate guidelines, these costs are an integral part of project delivery and, hence, will be charged to the same budget line (account in AWP) as the project input itself.

The procurement of goods and services and the recruitment of project personnel by the UNDP country office shall be in accordance with the UNDP regulations, rules, policies and procedures. If the requirements for support services by the country office change during the life of a project, the list of UNDP country office support services is revised with the mutual agreement of the UNDP resident representative and CPESS.

The relevant provisions of the Standard Basic Assistance Agreement (SBAA) between the Government of Moldova and the UNDP, signed by Parties on October 2, 1992, including the provisions on liability and privileges and immunities, shall apply to the provision of such support services.

CPSS shall retain overall responsibility for this nationally managed project and will consult closely with UNDP in the appointment of the Project Manager.

Any claim or dispute arising under or in connection with the provision of support services by the UNDP country office in accordance with this document shall be handled pursuant to the relevant provisions of the SBAA.

5 MONITORING FRAMEWORK AND EVALUATION

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

Within the annual cycle

- On a quarterly basis, a quality assessment shall record progress towards the completion of key results, based on quality criteria and methods captured in the Quality Management table below.

- An Issue Log shall be activated in Atlas and updated by the Project Manager to facilitate tracking and resolution of potential problems or requests for change.
- Based on the initial risk analysis submitted (provided in Annex 5), a risk log shall be activated in Atlas and regularly updated by reviewing the external environment that may affect the project implementation.
- Based on the above information recorded in Atlas, a Quarterly Progress Reports (QPR) shall be submitted by the Project Manager to the Project Board through Project Assurance, using the standard report format available in the Executive Snapshot.
- A project Lesson-learned log shall be activated and regularly updated to ensure on-going learning and adaptation within the organization, and to facilitate the preparation of the Lessons-learned Report at the end of the project
- A Monitoring Schedule Plan shall be activated in Atlas and updated to track key management actions/events

Annually

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

Terminal Evaluation

The project will also conduct an independent Terminal Evaluation, for which an international DRR consultant and national DRR consultant will be employed for the final three months of the project. The capacity and Needs Assessment for Output 1, the local level risk assessment (including a vulnerability and capacity assessment) in Output 2, evaluations of UNCT activities in 2009, and the concept note developed in 2010 will furnish baseline data for the terminal evaluation. Evaluation will be carried out in collaboration with international and national DRR staff in the project office, the National Disaster Risk reduction Advisor, and the Regional Disaster Risk Reduction Advisor of the ECIS Regional CPR Team. The evaluation will consider achievement of development goals according to parameters of the relevance and responsiveness of the actions, their effectiveness and efficiency, and the impact and sustainability of results, focusing especially upon their contribution to capacity development. The evaluation will also provide recommendations for follow-up activities and (with input from the NDRA) develop a draft programme.

6 LEGAL CONTEXT

This project document shall be the instrument referred to as such in Article 1 of the SBAA between the Government of Moldova and UNDP, signed on October 2, 1992.

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

The executing agency shall:

- a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
- b) assume all risks and liabilities related to the executing agency's security, and the full implementation of the security plan.

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

The executing agency agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via <http://www.un.org/Docs/sc/committees/1267/1267ListEng.htm>. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

7 RESULTS AND RESOURCES FRAMEWORK

Expected Outcome as stated in the Country Programme Results and Resource Framework: “There is improved readiness to prevent and mitigate natural and man-made disasters and crisis”				
Outcome indicators as stated in the Country Programme Results and Resources Framework, including baseline and targets: Indicators: Baseline: Targets: To reduce climate and disaster risks in Moldova and thus contribute to the attainment of the Country Development Strategy and Millennium Development Goals				
Partnership Strategy: Multi-level involvement of key actors including the main partner: State Hydrometeorological Service (Ministry of Environment), as well as participating local governments and municipalities, National Commission of Emergency Situations, Civil Protection and Emergency Situations Service (Ministry of Interior), line ministries of affected sectors, civil society organizations, research institutions, and donors and international financial institutions				
Project title and ID (ATLAS Award ID): Moldova Disaster and Climate Risk Management Project				
EXPECTED OUTPUTS	OUTPUT TARGETS FOR (YEARS)	INDICATIVE ACTIVITIES	RESPONSIBLE PARTIES	INPUTS (USD)
Output 1: Disaster risk and climate risk assessment capacities strengthened and priorities identified at the national level to inform country disaster and climate risk management strategies and programme development Baseline: 1. <i>Linkages among risk</i>	Targets (Year 1) 1. Capacity and Needs Assessment conducted 2. Risk assessment capacity development actions agreed among stakeholders and initiated	1. Multi-stakeholder inception workshop for National Disaster Observatory 2. Establishment of National Risk Assessment Steering Committee (NRASC), comprised of Technical Advisory Group and National Advisory Group, with adequate representation by women 3. Evaluation of capacity and needs for risk assessment and National Disaster Observatory	UNDP (NDRA), CPSS, State Administration for Hydrometeorology, State Geological Agency, Institute of Earthquake Engineering and Seismology, NCES line ministries, civil society organizations, scientific research	301,900

<p><i>assessment institutions are not cohesive.</i></p> <p><i>2. Data sources and management and methodologies are not standardized</i></p> <p><i>3. Risk assessment is not adequately integrated into strategies and policies.</i></p> <p>Indicators (Year 1):</p> <p><i>1. Workshop implemented (report and evaluation)</i></p> <p><i>2. TOR of NRASC approved; gender composition of NRASC</i></p> <p><i>3. Data collected and report completed, including concept note and work plan;</i></p> <p><i>4. # meetings convened (minutes and protocols by NRASC)</i></p> <p><i>5. Research reports completed; # data units digitized (reports and forms, digitized data, disaggregated by gender)</i></p> <p><i>6. Design report completed and database created</i></p> <p><i>7. # training events and participants, disaggregated</i></p>		<p>4. Meetings and consultations of NRASC and WGs on a) structure, cataloguing, archiving, and access standards for centralized database, b) analysis tools, c) governance framework for risk assessment</p> <p>5. Historical research and collection and digitization of disaster and climate risk data (30 year time horizon, with disaggregation of data by gender</p> <p>6. Database design and integration of existing databases</p> <p>7. Training on data entry</p> <p>8. Systematic data registration initiated</p> <p>9. Provision of and training in analysis tools, PDNA, analysis of disaster loss data, and cost-benefit analysis, with due consideration for capturing gender differences in risk assessment</p>	<p>institutes, experts</p>	
	<p>Targets (Year 2)</p> <p>1. Risk assessment capacities improved</p> <p>2. Climate and disaster risks analyzed.</p>	<p>1. Systematic data registration</p> <p>2. Provision of and training in analysis tools, PDNA, analysis of disaster loss data, and cost-benefit analysis, with due consideration for capturing gender differences in risk assessment</p>	<p>UNDP (NDRA), CPSS, State Administration for Hydrometeorology, State Geological Agency, Institute of Earthquake Engineering and</p>	<p>116,900</p>

<p><i>by gender (training materials, training reports and evaluations)</i></p> <p><i>8.Guidelines on collection and entry completed; # data units entered and registered (guidelines and database)</i></p> <p><i>9. # training events and participants (training materials, training reports and evaluations)</i></p> <p>Indicators (Year 2):</p> <p><i>1. # data units entered and registered (database)</i></p> <p><i>2. # training events and participants, disaggregated by gender (training materials, training reports and evaluations)Draft report</i></p> <p><i>3. Analysis completed, with due attention to gender issues</i></p> <p><i>4. Disaster and climate risk strategies, plans, and programme and/or concepts and proposals completed</i></p> <p><i>5. Monitoring and evaluation reports</i></p>		<p>3. Preliminary analysis of disaster and climate risks and impacts, including gender</p> <p>4. Analysis of disaster and climate risks and impacts, including gender</p> <p>5. Dissemination and evidence-based advocacy and development of disaster and climate risk management strategies, plans, and programme</p> <p>6. Evaluation of results and outcomes, with impacts upon gender roils considered</p>	<p>Seismology, NCES line ministries, civil society organizations, scientific research institutes, experts</p>	
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Total for Output 1				418,800
<p>Output 2: Vulnerabilities reduced and capacities strengthened to manage climate risks at local levels</p> <p>Baseline:</p> <p>1. <i>Local governments and municipalities have inadequate capacity to assess and manage climate risks.</i></p> <p>2. <i>Communities are highly vulnerable to climate variability and have a low level of resilience.</i></p> <p>Indicators (Year 1):</p> <p>1. <i>Local level risk management toolkit (draft)</i></p> <p>2. <i># training events and participants; gender composition (training materials, training reports and evaluations)</i></p> <p>3. <i># communities in which rapid community risk assessment completed (transcripts, reports, PRA</i></p>	<p>Targets (Year 1)</p> <p>1. Tools for local level risk management developed</p> <p>2. Local level climate and disaster risks assessed and actions identified</p> <p>3. Local level risk management actions initiated</p>	<p>1. Consultation for and development of local level risk management toolkit</p> <p>2. Training of trainers/social mobilizers</p> <p>3. Consultation concerning high-risk areas and initial rapid community risk assessment for screening and targeting (20 communities), including gender</p> <p>4. Selection of target communities (7 communities)</p> <p>5. In-depth risk assessment of target communities, including gender</p> <p>6. Elaboration of/ mainstreaming into Community and District Development Plans initiated, with special attention to empowering highly vulnerable social groups (women, children, elderly, etc.)</p> <p>7. Elaboration of outputs and implementation modalities for interventions</p> <p>8. Creation of networks (and when necessary community-based organizations) in local level risk management</p> <p>9. Training in preparedness and</p>	<p>UNDP (NDRA, ILDP, and EEG focal point), State Administration for Hydrometeorology, district governments and municipalities, communities, civil society organizations, scientific research institutes, experts, line ministries</p>	<p>496,860</p>

<p><i>charts and maps, etc.); disaggregation of data by gender</i></p> <p><i>4. Selection criteria and analysis of rapid community risk assessment</i></p> <p><i>5. # of communities in which in-depth risk assessment conducted (transcripts, reports, PRA charts and maps, etc.) and synthesis report; disaggregation of data by gender</i></p>		<p>response, with consideration of special needs and contributions of women</p> <p>10. Support to local communities in prevention/ adaptation interventions, with due attention to women's empowerment and participation</p>		
<p><i>6. # Community Development Plans with disaster and climate risk management actions integrated</i></p> <p><i>7. Feasibility studies and work plans</i></p> <p><i>8. # workshops and meetings conducted (reports and protocols); (if needed) # CBOs created (by-laws and formation agreements)</i></p> <p><i>9. # training events and participants; % women in community/%women participants (training materials, training reports</i></p>	<p>Targets (Year 2)</p> <p>1. Actions to address climate risks at local level implemented</p> <p>2. Tools for local level risk management refined</p> <p>3. Approaches for potential replication analyzed and incorporated into relevant strategies and programmes</p>	<p>1. Creation of networks (and when necessary community-based organizations) in local level risk management</p> <p>2. Training in preparedness and response, with consideration of special needs and contributions of women</p> <p>3. Support to local communities in prevention/ adaptation interventions, with due attention to women's empowerment and participation</p> <p>4. Special studies concerning mainstreaming climate and disaster risk management into ILDP assessment, planning, and implementation activities, with due consideration of gender roles</p> <p>5. Refinement and finalization of local level risk management toolkit (for integration into ILDP), with due consideration for impacts upon and needs and</p>	<p>UNDP (NDRA, ILDP, and EEG focal point), State Administration for Hydrometeorology, district governments and municipalities, communities, civil society organizations, scientific research institutes, experts, line ministries</p>	<p>300,140</p>

<p><i>and evaluations)</i> 10. # applications and approvals; # projects implemented; % women in community/%women participants (feasibility studies; proposals and reviews, disbursement agreements; tender and implementation documentation)</p> <p>Indicators (Year2):</p> <p>1. # workshops and meetings conducted (reports and protocols); (if needed) # CBOs created (by-laws and formation agreements)</p> <p>2. # training events and participants; % women in community/%women participants (training materials, training reports and evaluations)</p> <p>3. # applications and approvals; # projects implemented; % women in community/%women participants (feasibility studies; proposals and</p>		<p>contributions of women</p> <p>6. Evaluation to derive lessons learned and identify approaches for potential replication and inclusion into Country CRM Programme</p>		
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<p>reviews, disbursement agreements; tender and implementation documentation)</p> <p>4. Study reports</p> <p>5. Consultation reports and analyses completed; Local level risk management toolkit and Integrated ILDP methodology approved</p> <p>6. Terminal evaluation report and national DRR and CRM strategies and programmes</p>				
Total for Output 2				797,000
<p>Output 3: Strengthened capacity of UN Country Team to manage disaster and climate risks</p> <p>Baseline:</p> <p>1. UN Country Team has been effective, but lacks formal mechanism for coordination.</p> <p>2. Contingency planning</p>	<p>Targets (year 1)</p> <p>1. UN Disaster Management Team established</p> <p>2. Elaboration of UN DRR Strategy initiated</p> <p>3. UNCT contingency planning initiated</p>	<p>1. Establishment of a UN Disaster Management Team</p> <p>2. Annual workshop for UNDMT membership</p> <p>3. Consultation and creation of UN DRR Strategy for Moldova</p> <p>4. Creation of Contingency Planning Focal Points Group</p> <p>5. Development of all-hazard, multi-phase contingency plan (draft), with consideration of gender</p>	<p>UNDP (NDRA), NCES, CPSS, risk assessment and early warning entities, line ministries, district governments and municipalities, civil society organizations, scientific research institutes, experts</p>	180,600

<p><i>and agency roles and responsibilities require clarification.</i></p> <p>Indicators (Year 1):</p> <ol style="list-style-type: none"> 1. <i>TOR for UN DMT approved</i> 2. <i>Workshop conducted (materials, report, and evaluation)</i> 3. <i>UN DRR Strategy for Moldova completed</i> 4. <i>TOR for Contingency Planning Focal Points Group approved</i> 5. <i>Draft UNCT Contingency Plan completed</i> <p>Indicators (Year 2)</p> <ol style="list-style-type: none"> 1. <i>Final UN CT Contingency Plan completed</i> 2. <i>Review completed and recommendations made</i> 3. <i>PDNA analysis and Early Recovery concept note completed</i> 4. <i>PDNA and Early Recovery training materials</i> 	<p>Targets (Year 2)</p> <ol style="list-style-type: none"> 1. UNCT contingency plan is in place 2. Contingency planning of UN partners strengthened 3. Post Disaster Needs Assessment and Early Recovery capacities enhanced 4. National Platform concept and TOR is elaborated and advocated 	<ol style="list-style-type: none"> 1. Contingency plan review, testing, and refinement, with consideration of gender 2. Review of national, sector, and high-risk district contingency plans, with consideration of gender 3. Analysis of Post Disaster Needs Assessment and development of concept for Early Recovery, with consideration of gender roles 4. Training in Post Disaster Needs Assessment, beneficiary targeting, and Early Recovery 5. Development of concept and advocacy for National Platform 6. Annual workshop for UNDMT membership 7. Evaluation of results and outcomes, with consideration of impacts upon gender roles 	<p>UNDP (NDRA), NCES, CPSS, risk assessment and early warning entities, line ministries, district governments and municipalities, civil society organizations, scientific research institutes, experts</p>	<p>149,400</p>
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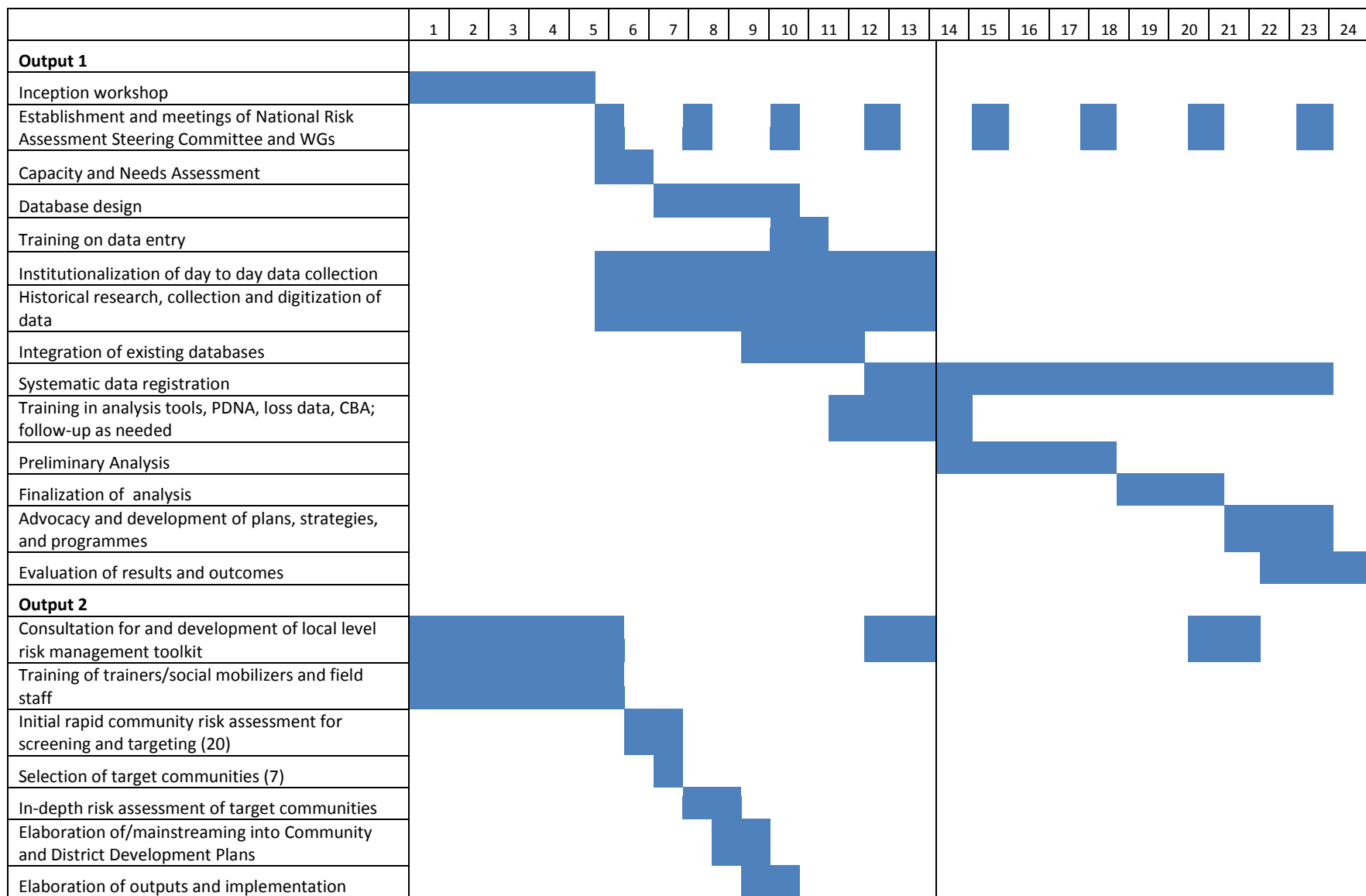
<p>completed; # training events and participants (training materials, training reports and evaluations)</p> <p>5. National Platform Concept Note and TOR agreed among stakeholders</p> <p>6. Workshop conducted (materials, report, and evaluation)</p> <p>7. Terminal evaluation report</p>				
Total for Output 3				330,000
<i>Project Management Unit</i>	Manager, administrative assistant, financial assistant, driver, interpreter/translators, office equipment, and operating costs			239,800
<i>Terminal Evaluation</i>	Consultants, travel costs, etc.			46,000
Total for Output 3				1,843,600

8 INDICATIVE BUDGET

#	Activity	w/m	Unit Cost (USD)	Total (USD)
	Output 1			
1	GRIP - Workshop and Capacity and Needs Assessment missions	1	10,000	10,000
2	National consultant - Capacity and Needs Assessments	3	1,700	5,100
3	GRIP - National Disaster Observatory Missions	6	10,000	60,000
4	International consultant(s) - training (analysis tools, PDNA, loss data, CBA)	3	20,000	60,000
5	National consultants - disaster and climate risk analysis, strategies, and programmes (3)	21	1,700	35,700
6	National consultants - historical research, digitization, database, and ICT (8)	80	1,700	136,000
7	Workshops and meetings (lump sum)			8,000
8	Training costs (lump sum)			15,000
9	Printing, communication, dissemination, and advocacy (lump sum)			10,000
10	Equipment (software, server, computers)			35,000
11	HQ's staff technical support and M&E / missions	4	5,000	20,000
12	Component coordination			24,000
13	Subtotal (Output 1)			418,800
	Output 2			
14	International consultant(s) - toolkit/climate and disaster risk management training	4	20,000	80,000
15	International consultant(s) - prevention/adaptation interventions	6	20,000	120,000
16	National consultants - field staff (2)	44	1,700	74,800
17	National consultant(s) - prevention/adaptation interventions	48	1,700	81,600
18	National consultants - climate and disaster risk management training (2)	28	1,700	47,600
19	Rapid risk assessment (lump sum)			20,000
20	In-depth risk assessment (lump sum)			20,000
21	Community development planning (lump sum)			20,000
22	Sub-contract - special studies			10,000
23	Workshops and training and simulation exercises and equipment (lump sum)			30,000
24	Printing, communication, dissemination, and advocacy (lump sum)			25,000
25	Small grants programme for prevention/adaptation investments (lump sum)			210,000
26	HQ's staff technical support and M&E / missions	4	5,000	20,000
27	Component coordination			38,000
	Subtotal (Output 2)			797,000
	Output 3			
28	National Disaster Risk Reduction Advisor	24	13,000	312,000
29	Meetings, workshops, trainings (lump sum)			5,000
30	Printing, communication, dissemination, and advocacy (lump sum)			3,000
	Subtotal (Output 3)			330,000

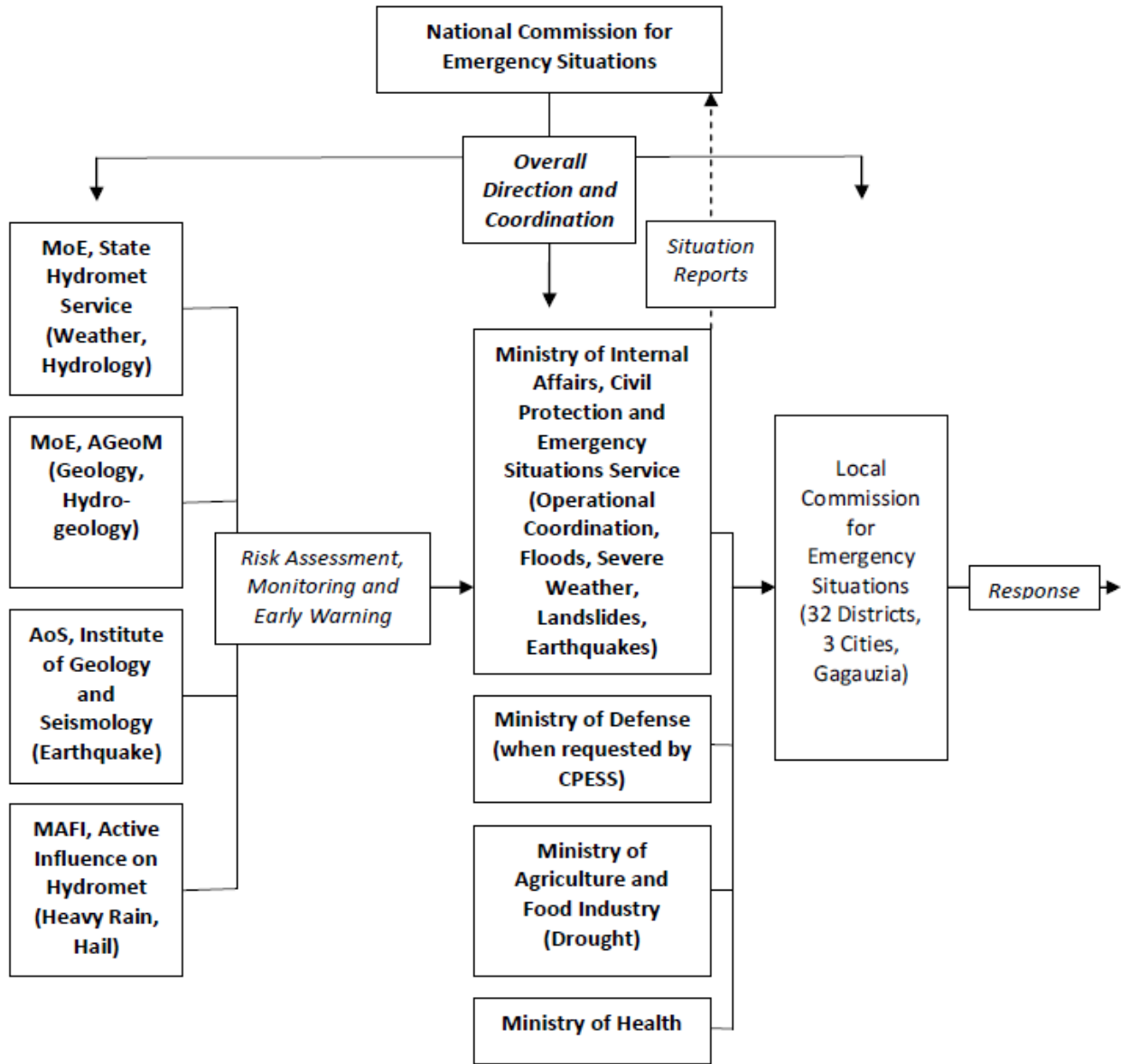
	Project Management Unit			
31	National project manager	26	1,700	44,200
32	Administrative assistant	26	700	18,200
33	Finance assistant	26	700	18,200
34	Driver	26	400	10,400
35	Interpreters/translators	48	600	28,800
36	Operating costs (lump sum)			30,000
37	Office equipment and supplies, project vehicle, and maintenance			90,000
	Subtotal (PMU)			239,800
	Terminal Evaluation			
38	International consultant	2	20,000	40,000
39	National consultant	2	2,000	4,000
40	Printing, workshops, local travel costs (lump sum)			2,000
	Subtotal (Terminal Evaluation)			46,000
	TOTAL			1,831,600
<p>Notes:</p> <p>4 and 14-15: International consultant line items include travel and DSAs</p> <p>7-18, 19-22, 23, and 29: Lump sums include local travel and DSAs, site expenses, and equipment</p> <p>25: Cost is calculated at \$40,000 per community</p> <p>28 (Year 1) includes relocation and assignment grants</p>				

9 PROJECT GANTT CHART



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
modalities for interventions																								
Training in preparedness and response																								
Implementation of prevention/adaptation interventions																								
Special studies on integration of local level risk management into ILDP																								
Evaluation of results and outcomes																								
Output 3																								
Establishment of a UN Disaster Management Team and initial meeting																								
UNDMT meetings																								
Annual workshop for UNDMT membership																								
Development of concept and advocacy for National Platform																								
Consultation and creation of UN DRR Strategy for Moldova																								
Creation of Contingency Planning Focal Points Group																								
Contingency plan development																								
Contingency plan review, testing, and refinement																								
Review of national, sector, and high-risk district contingency plans																								
Analysis of Post Disaster Needs Assessment																								
Training in Post Disaster Needs Assessment and beneficiary targeting																								
Evaluation of results and outcomes																								

ANNEX 1: STATE INSTITUTIONAL STRUCTURE



ANNEX 2: PREVENTION AND MITIGATION MEASURES AT LOCAL LEVEL

Hazard	Prevention and Mitigation Measures
Earthquake	<ul style="list-style-type: none"> • Apply the results of the seismic risk assessment in the drafting of the municipal development plans. • Retrofitting for seismic hazard of schools, hospitals, and houses, using awareness-raising to develop support for seismic resistant construction (urban and rural) • Improving anchorage and stability for critical utility installations • Non-engineered seismic resistant construction methods, e.g. rural homes and buildings • Promoting non-structural measures within homes (anchoring top-heavy items, such as bookshelves, cabinets, etc.) through information and awareness campaigns.
Drought	<ul style="list-style-type: none"> • Diversification of production and livelihoods to “spread the risk” • Selection of drought-resistant plant varieties and optimization of planting times • Minimum tillage • Increase soil organic matter to improve water retention and enhance fertility • Increased vegetative cover and/or vegetative barriers between parcels with trees and bushes to limit soil erosion from wind and water, as well as increase water retention • Water retention structures (ridges-and-furrows, basins, and water spreading) and landscape contouring to direct runoff into areas planted with trees, shrubs, and turf • Simple brushwood or grass hedges across gullies to prevent erosion, prevent water loss, and enhance percolation to promote aquifer recharge • Improved operation and maintenance of irrigation and drainage systems • Water harvesting and storage • Land leveling of fields to reduce on-farm water use • Reuse of drainage water within salinity limits • Improved pasture and rangeland management • Improved animal selection and herd management • Improved household water supply and sanitation
Landslide and mudslide	<ul style="list-style-type: none"> • Afforestation and agroforestry in zones of formation • Land use planning • Coverage of slopes with wire netting • Improved rangeland management • Buffer zones between grazing areas, paths, and roads and zones of formation
Flood	<ul style="list-style-type: none"> • Afforestation and agroforestry in zones of formation • Land use planning • Creation of floodplains and wetlands (where feasible) • Diversion of a portion of water to small reservoirs or irrigation systems • Management of channels to reduce speed of flow (winding channels) • Spillways • Small check dams and brushwood or grass hedges across gullies • Embankments • Improvement of drainage and reduction of water applications (where water tables are high) • Protection of springs, wells, and aquifers from flood contamination

Energy shortage	<ul style="list-style-type: none"> • Development of alternative energy sources, such as hydropower or biomass/agricultural wastes • Sustainably managed forestry or agro-forestry for fuel generation
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ANNEX 3: RISKS AND MITIGATION MEASURES

The main risks of the project are the following:

- Impediments to some of the project activities implementation due to location in Transnistria Region given the difficult dialogue between the Government of Moldova and the so-called administration of the Transnistria Region;
- The need to reconcile interests at national, regional and local levels may delay finalizing the target regions and beneficiary selection;
- Lack of effective co-ordination between institutions, organizations and authorities may put obstacles to project implementation, in particular delivery on the Outputs 1 and 3; and
- Lack of Government buy-in of disaster risk reduction and climate risk management strategies, as well as lack of support to upscaling of local level climate risk management approaches may hamper achievement of some of the activities under Output 2 .

The PMU will ensure that the risks noted above will not hinder the effective implementation of the project by ensuring the involvement of all relevant stakeholders in all stages/activities of the project, including decision-making, monitoring and evaluation, as well as engaging in sound, evidence-based advocacy efforts.
