

PROJECT DOCUMENT
The Republic of Moldova



Empowered lives.
Resilient nations

Project Title: The Dniester Hydro Power Complex Social and Environmental Impact Study

Project Number: 00109119

Implementing Partner: Ministry of Agriculture, Regional Development and Environment

Start Date: 1 September 2018 **End Date:** 31 August 2019 **PAC Meeting date:** 3 August 2018

Brief Description

The Dniester Hydro Power Complex (Dniester HPC) is functioning for many years and various negative environmental impacts and other consequences of its operation were registered on the Dniester River downstream. Generally, the critical pressures generated by HPC are well known. These are hydropeaking, altering water flow and spatial pattern of temperature, fluctuating water level, drastic slowing up of the gravel and sand sediments movement, etc.

Currently, the Agreement on functioning of the Dniester HPC is being developed and negotiated between the Governments of Moldova and Ukraine. It aims to provide the legal background for functioning of HPC and its further extension, as well as to establish responsibilities of both contracting parties in terms of ensuring safety of the HPC functioning, parties' rights, use of properties, leasing of land, etc. Yet, some articles of the Agreement, including art. 6 addressing environmental issues, is an obstacle for its signing, as there is no consensus on the requirements made by the Moldovan party which are considered as crucial for ensuring environmental security. Moldova argues that Ukrainian plans related to further development of the hydropower sector may negatively affect downstream ecosystems, and in general, undermine the socio-economic security of Moldova in terms of water quality and availability. To fully consider in the Agreement all the Moldova's concerns regarding protection of the Dniester River against hydro-power generation impacts, it is essential to carry out comprehensive study and assessments covering a wide range of issues linked to the hydropower generated impacts on the Moldovan part of the Dniester River, and to provide essential legal and negotiation support to Moldova in the course of the Agreement elaboration and negotiation.

The expected outputs of the project are: i) detailed Study on current and potential environmental and socio-economic impacts on the territory of Moldova resulting from operation of the hydro power generation facilities on the Dniester River elaborated, and the findings widely distributed; ii) capacities of the Moldovan negotiation team enhanced, and iii) public awareness raised, and transparency of the transboundary management of the Dniester River increased.

Contributing Outcome:
UNDAF/CPD Outcome 3. The people of Moldova, especially most vulnerable, benefit from enhanced environmental governance, energy security, sustainable management of natural resources, and climate and disaster resilient development.

Total resources required:	553,154 USD	
Total resources allocated:	UNDP TRAC:	-
	Donor:	553,154 USD
	Government:	-

UNDP CPD Output 3.2 Improved national capacities for environmentally sound management practices in ecosystems, waste and chemicals.

	In-Kind:	-
Unfunded:		-

Agreed by (signatures):

UNDP	Implementing Partner
Name: <i>Valeria Jeseanes Jeseanes</i>	Name: <i>Sapiá Valentina Sapiá</i>
Date: <i>23.08.18</i>	Date: <i>23.08.2018</i>

Acronyms and Abbreviations

AAM	Agency "Apele Moldovei"
AGRM	Agency for Geology and Mineral Resources
CP	Country Programme
CSO	Civil Society Organization
EI	Environmental Inspectorate
EIA	Environmental Impact assessment
EU	European Union
FI	Fish Inspection
GEF	Global Environmental Facility
GoM	Government of Moldova
HAPS	Hydro-Accumulating Power Stations
HPC	Hydropower Complex
HPS	Hydropower Stations
LPA	Local Public Authorities
MARDE	Ministry of Agriculture, Regional Development and Environment
MECS	Ministry of Education, Culture and Science
MEI	Ministry of Economy and Infrastructure
MHLSP	Ministry of Health, Labor and Social Protection
MTRI	Ministry of Transport and Road Infrastructure
MWt	Megawatt
NGO	Non-governmental organization
OAI	Office of Audit and Investigations
PB	Project Board
PO	Program Officer
RDA	Regional Development Agency
RF	Results Framework
SBBA	Standard Basis Assistance Agreement
SEA	Strategic Environmental Assessment
SHS	State Hydrometeorological Service
SIDA	Swedish International Development Cooperation Agency
SSC/TrC	South-South and Triangular Cooperation
TV	Television
UN	United Nations
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Program
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environmental Program

Table of Content

- I. Development Challenge 5
- II. Strategy 8
- III. Results and Partnerships 10
 - Outline of the Project Activities:** 10
 - Activities to implement Output 1* 10
 - Activities to implement Output 2* 15
 - Activities to implement Output 3* 16
 - Partnerships and Stakeholder Engagement** 19
 - Other considerations** 27
- IV. Project Management 27
- V. Results Framework 29
- VI. Monitoring and Evaluation 32
- VII. Work Plan 33
- VIII. Governance and Management Arrangements 40
- IX. Legal Context 42
- X. Risk Management 42
- XI. References 45

I. DEVELOPMENT CHALLENGE

Availability of water resources of appropriate quality is one of the major development challenges of the Republic of Moldova to overcome and avoid poverty, stagnation, deteriorating environment and other pressures, and to ensure water security.

Within last 25 years of its independence, Moldova undertakes the continuous policy, legislative, institutional and structural measures addressing environmental protection and improvement of the socio-economic conditions of the population.

In relation to policy and legislation, Moldova has extensive framework in the field of environmental and water protection, and regional development. Particularly, in 1992 Moldova signed the UN Rio Declaration on Environment and Development, followed by the commitments assumed under the 2002 Johannesburg World Summit on Sustainable Development and the 2012 United Nations Conference on Sustainable Development. Moldova was also actively involved in implementation of the 2015 Sustainable Development Goals, and is engaged now in operationalization of the 2030 Agenda for Sustainable Development. Moldova has ratified 18 multilateral environmental and energy Agreements, including the UNECE Aarhus Convention, Espoo Convention on Environmental Impact Assessment in a Transboundary Context, Energy Community Treaty (2010), etc. In addition, Moldova has signed a Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters was adopted in 2003 in Kiev. It gives individual actors subject to the transboundary impact of industrial accidents on international watercourses (e.g., fishermen or downstream hydro-technical facilities) the right to demand adequate and prompt compensation.

Development of policy and legal framework on Moldova is determined by the need to achieve the objectives set out in the Outcome Document adopted at the Conference on Sustainable Development in Rio de Janeiro „The future we want”, the Astana Ministerial Declaration on the environment; 26 principles of the Stockholm Declaration on the Human Environment; the Millennium Development Goals (particularly, Goal 7 „Ensure environmental sustainability”); the UN Partnership Framework for Moldova for the years 2018-2022, which includes the priority №3 „Environment Sustainability and Resilience”, aimed at enhancing environmental governance, energy security, sustainable management of natural resources, and climate and disaster resilient development. Currently, whole chapters that comprise environmental protection measures are included into the national documents of strategic planning, as the Government Activity Program and Action Plan, National Security Strategy, National Action Plan on Human Rights, Medium-term budgetary framework.

The most relevant to the Project policy documents are:

- Association Agreement between Republic of Moldova and European Union, was signed on June, 27, 2014, approved by Government Decision No. 808 of October 7, 2014 and entered into force on July 1, 2015. It is accompanied by the Action Plan. Environment Chapter of the Agreement provides for the concrete commitments and activities of the Government of Moldova in the field of environmental protection, such as: elaboration of legislation, norms and standards harmonized with the EU Directives, institutional capacity building; integration of the environment into other sectoral policies, promotion of eco-innovations, etc.
- National Development Strategy „Moldova 2020” approved by Law No. 166 of July 11, 2012, states that environmental protection is one of the major prerequisite for socio-economic development of the country.
- Environmental Strategy for the years 2014-2023, approved by Government Decision No. 301 of April 24, 2014 is accompanied by Action Plan elaborated to achieve environment protection goals. The specific goals of the Strategy are to reduce the negative impact of economic activity on the environment and improve measures to prevent environmental

pollution; to ensure rational use, protection and conservation of natural resources; improving soil quality and ecological restoration of degraded lands; extension of forest areas and ensuring efficient and sustainable management of natural ecosystems, etc.

- National Program for implementation of Water and Health Protocol during 2016-2025 aims to protect public health from water-related diseases.
- National Health Policy of the Republic of Moldova for the years 2007-2021. The objectives of Policy are to increase life expectancy and ensure healthy life, to assure life quality, etc.
- National Strategy on Agriculture and Rural Development for the period 2014-2020 (approved by Government Decision No. 409 of June 4, 2014) accounts for changing role and nature of the agricultural sector, relies on a holistic approach, and provide a guideline for the development in economic, environmental and rural aspects.
- Water Supply and Sanitation (WSS) Strategy for the years 2014-2028 (approved by Government Decision No. 199 of 30 March, 2014). Its main goal is to ensure access to safe drinking water for the entire population in Moldova. It promotes sustainable development measures and environmental protection of water resources.
- National Climate Change Adaptation Strategy by 2020, approved by Government Decision No. 1009 of December 10, 2014. Its goal is to ensure that Moldova's social and economic development is resilient to the impacts of climate change, by establishing a strong enabling environment and clear direction for effective and coherent climate change adaptation process across the all relevant sectors.
- Strategy for Equality between men and women in the Republic of Moldova for the years 2017-2021 and the Action Plan on its implementation contain the (2.6) *Area of intervention Climate change*. The document recognizes that joint efforts are required of all parties involved in order to ensure that measures to mitigate adverse climate change and disaster risk respect the gender dimension. Specific objective 1.10 is focused on: Adjusting sectoral strategies for adaptation to climate change to mainstream gender.

Among main national laws addressing environmental and water protection are Water Law (2011, in force since 2013) that aims at protection of water against pollution and sets environmental quality standards; Law on environmental protection (1993); Law on animal kingdom (1995); Law on Drinking Water (1999) that establishes requirements to ensure the safe operation of water supply; Law on water protection zones and strips along rivers and water bodies (1995 as amended); Law on fund of the natural territories protected by state (1998); Law on state control over public health (2009); Law on natural resources (1997); Law on fish resources, fishing and fish-farming (2006); Land Code (1991 as amended); Law on safety and health (2008, in force since 2009); Law on sanitary and epidemiological protection of population (1993); Subsoil Code (2009) addressing, *inter alia*, groundwater; Law on hydro-meteorological activities (1998), etc.

At the same time, appropriate water management especially in the context of the transboundary river basins still remains a matter of great concern. Human activities affect rivers in various ways. Of crucial importance are pressures, which affect the original hydro-morphological situation (e.g. hydro-peaking, reservoir flushing, bed-load retention, etc.) and/or disturbance of the natural composition of ecological communities.

In relation to the Dniester River, hydro-energy sector is generally considered as one generating the major environmental impacts with a great potential to hamper socio-economic development of the Dniester River dependent regions.

The Parliament and Government of the Republic of Moldova, as well as civil and scientific society have expressed their great concern in relation to a) current conditions of the Dniester River affected by Dniester HPC and b) a potential for their further deterioration due to hydropower generation in

Ukraine and its effects on the river water flow and level, downstream ecosystems and in general, on future socio-economic development of Moldova, in particular, regions situated in the Moldovan part of the Dniester River basin. These concerns were formulated in a comprehensive Position Paper of civil society, issued in November 2017, in the Parliament Declaration on the Dniester River No. 91 of May 26, 2017, in the Ministry of Agriculture, Regional Development and Environment (MARDE) letter calling for strong position based on national interests during the negotiations with the Ukrainian party on the Agreement on functioning of the Dniester HPC to ensure protection of the Dniester River. These concerns were also broadly expressed in numerous paper, TV and social network mass-media and during the civil society meetings.

To protect the Dniester River, a number of bilateral treaties were signed between Moldova and Ukraine. These are:

- Treaty between the Government of the Republic of Moldova and the Cabinet of Ministers of Ukraine on Cooperation in the Field of Protection and Sustainable Development of the Dniester River Basin (signed in Rome in 2012, and entered into force in 2017) identifies principles and provides a framework for cooperation on water pollution prevention and control, water flow regulation, conservation and protection of water dependant biodiversity. It also addresses exchange of monitoring data, public participation and cooperation in emergency situations;
- Agreement between the Government of the Republic of Moldova and Cabinet of the Ministry of the Ukraine on the joint management and protection of the cross-border waters (1994). The Agreement regulates joint management of the Dniester River basin, requests revision and upgrade in accordance with modern principles. This treaty is accompanied by 5 (five) Regulations, including Regulation on Ukrainian-Moldovan cooperation in flood protection in the cross-border watercourses and inland water bodies;
- Regulation of Ukrainian-Moldovan cooperation on water-ecological monitoring and water quality control; Regulation on measures at dangerous and emergency pollution of the cross-border waters, which is impossible to avoid; Regulation on stakeholder participation in the activities of the Institution of Plenipotentiaries (2007).
- Protocol of Intentions regarding cooperation for the environmental rehabilitation of the Dniester River basin (2005).

Thus, collaboration on protection and sustainable use of the Dniester River is a priority for both neighboring countries. To respond to improvement of collaboration, bilateral Treaty on Cooperation in the Field of Protection and Sustainable Development of the Dniester River Basin was signed by Moldova and Ukraine on November 29, 2012, in the framework of the high-level segment of the sixth session of the Meeting of the Parties to United Nations Economic Commission for Europe UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention). This treaty, entered into force on July 28, 2017, identifies principles and provides a framework for cooperation on water pollution prevention and control, water flow regulation, conservation of biodiversity and protection of the Black Sea environment, and addresses practically all spheres related to the river basin management except navigation and hydro energetics. The Treaty also envisaged establishing of a transboundary basin Commission on sustainable use and protection of the Dniester River basin. The GEF project "Enabling transboundary cooperation and integrated water resources management in the Dniester River basin" currently implementing in Moldova and Ukraine was recently involved in establishing and functioning of the Commission.

In addition, a number of other Dniester related treaties are being negotiated with Ukraine, including the Intergovernmental Agreement on Functioning of the Dniester Hydropower Complex.

In this sense project will support Republic of Moldova to improve water security for women and men, including in the context of expected climate change impacts. The Project shall also contribute

to positive environmental impacts due to prevention of further deterioration of the Dniester River functions and services, including water quality and availability, water related biodiversity, water dependant habitats, etc.

II. STRATEGY

The strategy of the project is carrying out the detailed Study that aims to support the Moldovan Government's efforts to avoid further environmental degradation of the Dniester River and likely socio-economic impacts resulting from functioning of the Dniester HPC, and to provide essential legal and negotiation support to Moldova in the course of the Agreement elaboration and negotiation.

The Overall Objective of the project is to support sustainable management and protection of the Dniester River.

The Specific Objectives are:

1. To ensure that Government of the Republic of Moldova is aware of the impacts of the functioning of the Dniester HPC and is fully prepared in negotiations on the Agreement on functioning of the Dniester HPC.
2. To provide the public with science-based information on the current and potential impacts of the functioning of the Dniester HPC.

The importance of the project implementation is substantiated by the facts and reasons described below. The Dniester River is the ninth largest river in Europe with total length of 1,350 km and basin area of more than 72,000 km². Approximately 8.5 million people (5.5 in Ukraine and 2.7 in Moldova) live in the river basin. In addition to the Moldovan users of the Dniester water, including city of Chisinau, the river is used as a source for drinking water for about 3,5 million peoples in cities, situated out of the Dniester River basin - Chyrynivtsy and Odesa (both, in Ukraine). It is the fourth largest river in Ukraine and the largest one in the Republic of Moldova, meeting about 70 percent the Moldova's water consumption needs, being thus considered as a strategic surface water resource for environmental and socio-economic security of the Republic of Moldova.

The first Hydro Power Station on the Dniester River was built in Moldova in the Dubasari town in 1954. Starting 1973, Ukraine is continuously constructing on the river the second hydropower facility, known as Dniester Hydro Power Complex (HPC). The initial technical design of the HPC was modified in 2000's in terms of increasing the electricity generation capacity. It was followed by installation of additional turbines and subsequent change of the initial role of the water accumulation reservoir (buffer water reservoir), constructed in the riverbed.

Currently, the Dniester HPC consists of two Hydropower Stations (HPS-1 and HPS-2) and Hydro-Accumulating Power Stations (HAPS) situated upstream of the Moldovan state border. Dam of the HPS-1 has formed the main water reservoir. Construction of HPS-1, with total power capacity of 702 MWt lasted from 1973 to 1983. Construction of HPS-2, with designed capacity of 40,8 MWt, was commenced in 1983. It is situated twenty kilometers downstream of HPS-1, near village Nagoryany in the Vinnytsia region in Ukraine and the Moldovan village Naslavcha. Its dam has formed the buffer water reservoir with a length of 19,8 kilometers. The dam of the HPS-2 buffer reservoir was initially designed to mitigate hydropeaking and to ensure uniform water flow downstream but not for the hydro power generation as it occurs now. The Dniester HPC is mainly situated on the territory of Ukraine, except HPS-2 that occupies around 20 ha of the Moldovan territory.

Further plan of Ukraine includes installation of additional 4 (four) generation units (hydro power turbines) what implies increase of water level by 7 meters in the buffer reservoir. Following to above plan, within last several years Moldova and Ukraine are negotiating about official hand over of 17 ha of the Moldovan territory to Ukraine for its further use for hydropower generation. This area represents the river bank bordered by the steep slope that shall be regularly filled in by water.

In addition, construction of 6 (six) new hydropower plants in the upper Dniester stretch is envisaged in the Ukrainian National Program on Hydropower Development until 2026, approved in 2017.

The Dniester HPC is functioning for many years and various negative environmental impacts and other consequences of its operation were registered in the Dniester River downstream. Generally, the critical pressures generated by HPC are well known. These are hydropeaking, altered water flow and fluctuating water level, sharp decrease of the natural water temperature values in the downstream river stretch which can be traced up to the Dubasari water reservoir, non-typical high transparency of water and reduced self-purification capacity of the river, drastic slow up of the gravel and sand sediments movement, extensive growth of aquatic vegetation in some river stretches, loss of valuable fish biodiversity and decline of fish population due to both blockage of migratory pattern, and changed features and loss of aquatic habitats, etc. Joint Dniester Expeditions have also indicated severe water quality problems, declining biodiversity and deteriorating ecosystems along the river.

To address cooperation on the hydro-energetics issues, currently, the Agreement on functioning of the Dniester HPC is being developed and negotiated between the Governments of Moldova and Ukraine. It aims to provide the legal background for functioning of Dniester HPC and its further upgrading for full scale operation, as well as to establish responsibilities of both contracting parties in terms of ensuring safety of the HPC functioning, parties' rights, use of properties, leasing of land, etc. The negotiation process on the Agreement was accelerated within last 2 (two) years, and in 2017, the parties came up with a revised draft of the Agreement, where some articles, addressing environmental issues still is a main obstacle for its signing. There is no consensus on the requirements made by the Moldovan party which are considered crucial for ensuring the national environmental and water security. Moldova argues that all the Ukrainian plans on hydropower development on the River Dniester mentioned above, if implemented, may intensify negative effects on downstream ecosystems, and in general, undermine the socio-economic security of Moldova in terms of water quality and quantity. To fully consider in the Agreement the reasonable Moldova's concerns regarding protection of the Dniester River against major hydro-power impacts, there shall be carried out comprehensive impact assessment Study covering a wide range of issues linked to the hydropower. Finally, the Study shall provide both the Government and broad public with scientifically based information and data to be used for revising and negotiating of the Agreement, particularly, addressing environmental issues, and for the currently developed under the GEF project Rules on the Exploitation of the Dniester water reservoirs.

Thus, along with above mentioned objectives to be achieved, implementation of the Project shall also contribute to improvement of the transboundary cooperation between Moldova and Ukraine by providing at both parties better understanding of the:

- management objectives for the large scale hydro power infrastructure, based on the improved knowledge of long-term negative environmental and socio-economic impacts on the downstream region,
- water resources management in a transboundary context, and
- state of the art requirement and proper due diligence.

The Study will be developed by the Consultant, organized as an international and local (with individuals or firm) partnership led by the international with financial support from UNDP and technical support from the Ministry of Agriculture, Regional Development and Environment as an Implementing Partner.

Gender mainstreaming has been defined by the United Nations Economic and Social Council as "a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of the policies and programs in all political, economic and societal spheres so that women and men benefit equally and inequality is not perpetuated". The relative status of men and women, the interaction between gender and race,

class and ethnicity, and questions of rights, control, ownership, power, and voice - all have a critical impact on the success and sustainability of every development intervention.

In practice, gender mainstreaming means identifying gaps in gender equality through the use of sex-disaggregated data, developing strategies to close those gaps, putting resources and expertise into implementing strategies for gender equality, monitoring implementation, and holding individuals and institutions accountable for results.

Although the activities within the Project consist of providing technical support (research, legal and negotiation), the project team will intend to promote the participation of women in consultation and decision-making meetings, to encourage participation of women in the negotiation process, and will address gender inequalities in terms of access to green job related to research and trainings planned. In the course of Project implementation, gender analysis and statistics will be applied and if necessary, the gender empowerment needs will be addressed.

III. RESULTS AND PARTNERSHIPS

Three outputs shall be produced under the Project. These are the following:

Output 1. Detailed Study on current and potential environmental and socio-economic impacts on the territory of Moldova resulting from operation of the hydro power generation facilities on the Dniester River is developed and conclusions are made

Output 2. Capacities of the Moldovan negotiation team (women and men) enhanced

Output 3. Science-based information on current and potential impacts of the functioning of the Dniester HPC is provided to public

Outputs 1 and 2 are to contribute the achievement of the Specific Objective 1, and Output 3 is to achieve Specific Objective 2.

Outline of the Project Activities:

Activities to implement Output 1

The principal aim for producing **Output 1. Detailed Study on current and potential environmental and socio-economic impacts on the territory of Moldova resulting from operation of the hydro power generation facilities on the Dniester River elaborated, and conclusions are made** is to provide the Moldovan Government and broad public with scientifically based information regarding the impacts and their consequences followed by construction and operation of the Dniester HPC. This information shall be obtained within comprehensive study of impacts and damage assessment the scopes of which are:

- i) to identify significant direct and indirect impacts originated by the Dniester HPC on the river properties, functions and services to justify required releases from HPS-2 of the Dniester HPC, and
- ii) to assess damages generated by the Dniester HPC on the basis of agreed methodology to provide the Moldovan Government with costs to be recovered by compensation measures (or other options) to be possibly negotiated with the Ukrainian party.

The Study should consist of at least the following sub-studies:

Hydrology and river morphology, including

- historical overview of the Dniester hydrological regime on the territory of Moldova before and after construction of the Dniester HPC;
- comparison of the hydrological regime before and after construction in typical years of the different water probability;

- determination the effects of permanent downstream river flow modification (e.g., daily flow changes from peaking releases, seasonal flow changes, etc.) as a result of the existing infrastructure operation, its extension and planned new hydropower plants;
- evaluation of significance and magnitude of the hydrological regime alteration in different river stretches and identification the most affected (critical) stretches from the point of view of the river functions and services provided to Moldova;
- identification of major hydro-morphological impacts generated by the altered hydrological regime (e.g., bank erosion, transport of sediments, substrates deposition/siltation of riverbed, etc.), their description and mapping;
- revealing the dependence of hydrological parameters downstream on the operation patterns of the Dniester HPC (hydro peaking, seasonal flow, etc.);
- evaluation of potential hydrological and morphological impacts due to planned upgrading of the Dniester HPC and construction of new hydro-power generation facilities.

Water quality, including

- evaluation of impact of the Dniester HPC on the physico-chemical and microbiological parameters of the Dniester River based on comparison of water quality data in the Ukrainian and Moldovan river stretches (i.e., closest to HPC unmodified river stretch in Ukraine and in selected sites in the river stretch on the territory of Moldova)
- evaluation of magnitude and distribution of the water quality changes provoked by HPC in different river stretches and identification the most affected (critical) stretches from the point of view of the river functions and services provided to Moldova;
- identification of major impacts generated by changed water quality, their description and mapping;
- revealing the dependence of water quality parameters downstream on the operation patterns of the Dniester HPC (hydro peaking, seasonal flow, etc.);
- evaluation of potential impacts on water quality due to planned upgrading of the Dniester HPC and construction of new hydro-power generation facilities;

Hydro-geology, including:

- overview of zones of ground water interactions with the Dniester River and identification the most dependent aquifers;
- establishing of dependence of the aquifer conditions with multi-annual hydrological regime of the Dniester River after construction of HPC, and if established, determination of impacts' magnitude on the aquifer status, critical river stretches and impacts mapping;
- revealing the dependence of the aquifers' status on the operation patterns of the Dniester HPC (seasonal and annual flow, water level, etc.);
- evaluation of potential impacts on the aquifer status due to planned upgrading of the Dniester HPC and construction of new hydro-power generation facilities;

Environment and hydro-biology, including:

- evaluation of multi-annual trends in the valuable fish species biodiversity and abundance, fish spawning grounds and other biota representing the fodder base before and after construction of HPC;
- identification valuable fish species the most suffered as result of the Dniester HPC construction;
- analysis of effects linked to the HPC operation (e.g., altered water flow, water level, temperature, etc.) affecting the valuable fish communities and if determined, assessment of impacts' significance, magnitude and distribution on fish;
- establishing of dependence of the water dependent ecosystems, including wetlands and terrestrial ones (e.g., forests) with multi-annual hydrological regime of the Dniester River

after construction of HPC, and if established, determination of impacts' magnitude on the ecosystems conditions;

- identification of impacts on fish and ecosystem conditions resulting from operation patterns of the Dniester HPC (seasonal and annual flow, water level, etc.), and if identified, recognizing critical river stretches and impacts mapping;
- evaluation of potential impacts on fish and ecosystems conditions due to planned upgrading of the Dniester HPC and construction of new hydro-power generation facilities.

Hydro-technical infrastructure, including:

- overview of existing hydro-technical infrastructure in the Moldovan river stretch dependent from river hydrology (drinking, technical and irrigation water intakes, navigation channels, piers, flood protection dykes, bridges, artificial spawnings, bank strengthening facilities, etc.)
- identification of significant impacts on hydro-technical infrastructure on the operation patterns of the Dniester HPC (seasonal and annual flow, water level, etc.) and critical river stretches.

Socio-economic, including:

- analysis of the Dniester HPC operational impacts downstream and on lowland areas, including artificial floods and hydrological droughts, and revealing the affected population, localities, economic activities (through gender perspective), as well as altered river functions and ecosystem services (e.g. drinking water, fish, recreation, irrigation, etc.), to determine direct and indirect costs resulting from operation of existing, upgraded and planned hydropower infrastructure in Ukraine (to be further used for implementation of Activity 8);
- develop scenarios for current and future fresh water demand by various water consumption sectors - agriculture, aquaculture, domestic and industrial water use and judge potential concurrence between water use in case of different hydrological scenarios in dependence on water flow releases from HPS-2. These scenarios must consider climate change impacts, trends of economic development, population dynamics, taking into consideration gender issues, etc.

For socio-economic sub-study, there shall be used available information and data, the results obtained within other Project's activities/ sub-studies and established cooperation with other relevant projects currently implementing in Moldova.

There shall be applied deterministic and probabilistic models to understand to what extent the core functions and services of the Dniester River, like water flow and sediments transport, ecosystems running, safe and efficient navigation, land-use in flood plains, water supply for various purposes, recreation, etc. will be affected as a result of both existing and planned upgraded/ new infrastructure. Climate change scenarios shall be definitely taken into consideration, where appropriate.

The group of Activities from 1 to 5 relates to the Study of Impacts, while the group of Activities from 6 to 11 addresses Study of Damages.

In more details, Activities 1-4, described below, address major environmental and socio-economic issues as regards long-term operation of the Dniester HPC, as well as planned HPC upgrading and construction of 6 (six) new hydropower facilities in the upper Dniester stretch on the Ukrainian territory. Respectively, Activity 5 aims to bring together the principal findings of the Study of Impacts, as it should justify the parameters of discharge from HPS-2 to meet the Moldova's concerns.

The next group of Activities from 6 to 11 addresses assessment of environmental, social and economic damages resulting from operation of the Dniester HPC (and, potentially by other projected hydropower infrastructures). In more details, Activities 6-8 relate to assessment of damage due to multiannual operation of the Dniester HPC, Activity 9 - to damage assessment to be applied in the case of failure of the water flow parameters after signing of the Agreement. Activity 10 aims to increase capacities of Moldovan environmental authorities to assess the damages on a regular basis, and Activity 11 aims to propose measures to mitigate damages so to ensure win-win transboundary Dniester River solutions for improvement of environmental conditions of the shared river.

Thus, under **Output 1**, the following activities are planned:

Activity 1. *To collect and analyze available information and data addressing hydro-morphological pressure generated by the Dniester HPC and pertaining environmental and socio-economic impacts.*

There is a lot of scientific and other information and data about environmental conditions of the Dniester River, including those resulting from the Dniester HPC operation. Yet, they are dispersed in various research papers, studies, articles and reports produced by the Moldovan, Ukrainian and international experts, including reports on the joint Dniester River expeditions, and research and sectoral institutions. Nevertheless, by date, the overall comprehensive matrix of drivers, pressure, impacts, responses and monitoring is not developed. Respectively, there exists no clearly formulated vision of Moldova as regards operation of the Dniester HPC to ensure healthy functioning of the river ecosystems and adequate water use protection to be considered in the Agreement. It is also critically, that precise locations, prevalence and magnitude of impacts are not known well. The affected downstream river stretches, and associated impacts are not prioritized as high, medium and low ones.

Activity 2. *To localize and map the major impacts, and to determine their magnitude, frequency, distribution and consequences.*

Under this Activity, it is envisaged localization, description and evaluation all significant impacts due to long term operation of the Dniester HPC and design the thematic maps of identified impacts. The effect of significant impacts on the environment, biodiversity, habitats, species, as well as economy sectors, public health and social sphere shall be clearly reasoned. In this regard, climate change scenarios and gender aspects will be taken into consideration. The sub-studies proposed to reach Output 1 should be the principal basis for identification and localization of the impacts.

Activity 3. *To design the environmental survey program and carry out field research to obtain missing or clarify available contradictory and/or fragmentary information about pressures and impacts.*

To support implementation of Activities 1 and 2, there shall be designed and implemented limited survey program aimed at conducting of the hydrological, morphological, biological, water quality, socio-economic and other pressure-impacts researches. Limited field work and site visits to clarify the impacts and consequences of Dniester HPC on the Moldovan segment of the Dniester River are expected. Where needed, a reasonable sampling and measuring of groundwater, surface water, biota, etc. have to be done (e.g., water flow and magnitude of the water level fluctuation, spawning grounds conditions and its spatial distribution, physico-chemical parameters: transparency, suspended solids, temperature, locations of the groundwater recharge, etc.). The Activity is only to support the Study by some information, which might be important but is either missing or unclear.

Activity 4. *To evaluate impacts resulting from upgrading of the Dniester HPC and planned construction of 6 (six) new HPC in the upper stretch of the Dniester River.*

This activity refers to projection of potential impact that can arise as a result of upgrading of HPS-2 and construction of 6 (six) new hydro power facilities. Particularly, additional impacts could be

generated after planned installation of 4 (four) more aggregators at HAPS and respectively, full operation of HPAS what implies Increased water level and daily water level fluctuation in the buffer reservoir. Besides, the planned construction of 6 (six) more hydro power stations in the upper river stretch on the territory of Ukraine is a matter of great concern in Moldova. Yet, by the time being, there is no clear understanding of how much these hydro power stations will worsen the existing conditions in the Moldovan part of the Dniester River. The Ukrainian party plans to carry out an EIA for a cascade of 6 (six) dams. In this regard, the activity is to identify what important aspects of the EIA for Moldova should be included and to train Moldovan EIA evaluators on assessment of quality of the EIA documentation in the transboundary context.

Activity 5. *To formulate conclusions on minimum water flow parameters, parameters of spring (ecological) and other seasonal flows from HPS-2 to ensure healthy functioning of aquatic and other river dependent ecosystems and full satisfying of the socio-economic needs downstream, also taking into consideration climate change scenarios.*

The Activity addresses formulation of the Moldova's justified requirements at least on several basic parameters = regular minimum discharges and minimum spring (ecological) and other seasonal water discharges from HPS-2. These justified parameters to be used during the negotiations with Ukraine and to be proposed to be included in the formal Agreement. Implementation of this Activity shall be based on the results obtained by Study of Impacts within Activities 1-4 and provide values of water flow to ensure functioning of riverine and aquatic ecosystems and socio-economic needs downstream, especially in the critical places of river's stretches with considering evaporation, infiltration and other factors and assumptions.

Activity 6. *To define or elaborate appropriate damage assessment methodology with use of both available data and information and those to be developed*

Up to date, there exists no reasoned monetary assessment of damages provoked by construction and long-term operation of Dniester HPC, either in Ukraine or Moldova. Most of the existing evaluations do not relay on the monetary implications but are mainly limited to narrative, judgments, logical reasoning or speculations. In Moldova, there hasn't been developed a methodology, which would allow the transfer of environmental, social and economic aspects of the impacts into the point system or monetary terms. At the same time, the expression of damage in monetary terms will allow the Moldovan Government to assess and weigh damage on environment, and social-economic conditions in the Dniester region. Respectively, Activities 6-10 aim to propose, test and validate a methodology for assessing damages resulting from the construction and operation of the Dniester HPC.

The methodology for damage assessment shall consider major impacts, be based on the results of Activities 1 – 5, and to provide monetary expression of the environmental, social and economic losses incurred by Moldova. Where appropriate, the methodology shall define the legal background for damage assessment, reference year/ years, affected by HPC river stretches and may include but not limited to assessing the damage to fish and other wild water dependent biodiversity, water quality and availability, etc., and generally, due to loss of the ecosystem services and functions.

Activity 7. *To coordinate proposed methodology on damage assessment with MARDE and assist the MARDE in the process of its approval by the Government.*

The methodology shall be formally adopted by the Government, and its elaboration shall be in compliance with all requirements for its coordination and approval, including public consultations.

Activity 8. *Following the methodology, to calculate environmental, social and economic damages*

A preliminary calculation of damage costs is envisaged with project support.

Activity 9. *To develop approach and procedure for the yearly damage assessment in the case of non-compliance with minimum water release from HPS-2.*

Approach and procedures for the yearly damage assessment in the case of failure to comply with the agreed hydrological regime and volume of discharges from HPS-2 shall be fairly simple and feasible in Moldova's conditions and consider affected features and functions at least in critical river sections, responsible institutions, cost, sources of financing, etc. The procedure shall also include mechanism of control over water discharge from HPS-2. The developed approach and procedures of the yearly damage assessment shall be coordinated with all interested parties, and corresponding Annex to the Agreement have to be prepared. This Annex might be a subject of negotiations with the Ukrainian party, including option of the joint yearly damage assessment.

Activity 10. *To conduct Training on Damage Assessment with concerned stakeholders*

A training of 1-2 days will be conducted with relevant Governmental institutions in order to present the Methodology and increase the capacities in damage assessment.

Activity 11. *To elaborate possible compensation measures based on the appropriate best international practices (monetary, construction of by-pass channels, etc.).*

The last activity under this scope of work is to elaborate the list of possible compensation measures to be a subject of further negotiations with Ukrainian party. The list of potential compensatory measures shall not be limited to the following as: construction of a bypass channel for replenishing the upper reaches of small rivers in Moldova, construction of artificial spawning grounds, fish stocking, those protecting water intakes from low water levels in the river, etc. or other cost recovery options.

The compensatory measures have to be clearly reasoned and evaluated by the cost-benefit framework of the investment needed to mitigate the damage costs of ecological, industrial and agricultural loss due to shortage of water resources, including fishery, health impact, tourism and recreational industry losses. The list of compensatory measures can be used during the negotiations on the Agreement and discussed with the Ukrainian side.

Activities to implement Output 2

Under **Output 2 Capacities of the Moldovan negotiation team (women and men) enhanced**, the following activities are envisaged:

Activity 12. *To revise draft Agreement and pertaining Annexes to make sure that all environmental and socio-economic concerns linked to operation and upgrading of the Dniester HPC are considered and they fully respond to the Moldova's interests.*

Under this Activity, there shall be

- analyzed international and European legal background, degree to which the projected activities are compliant with the international and bilateral treaties with the EU, as well as internationally accepted standards on the use of water, as well as provide examples of rules of common use of transboundary rivers from other regions;
- evaluated the possibility to implement the national Moldovan strategies in view of the possibility of extension of the HPC and construction of additional 6 HPP upstream;
- reviewed legal aspects of existing national policies of Moldova and Ukraine, legislation, codes, strategies, and planning arrangements for transboundary river management and hydropower;
- conducted in-depth analysis of international commitments of Moldova and Ukraine on water and environmental governance, transnational rivers, public participation, environmental impact assessment, strategic impact assessment, wetlands and wild birds, polluters pay principle (e.g., Espoo Convention, Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Ramsar

Convention, Energy Community Treaty, Association Agreements of Moldova and Ukraine with EU, etc.);

- performed a detailed revision of the draft Agreement, including existing Annexes, which have a relevance to environmental and socio-economic issues;
- proposed reasoned modifications in the draft Agreement, and develop additional Annexes, where necessary (e.g., based on the results obtained within Activities 1-12, like: on monitoring of water releases from HPS-2; methodology for yearly damage assessment; mitigation and compensation measures, etc.;
- developed recommendations/ suggestions on the mechanism of control over of the enforcement of the Rules on Exploitation of the Dniester water reservoirs to be included in the Agreement (suggestions made already by the Moldovan party to the Rules are provided in Annex 4).

In addition, support to the Moldovan delegation in conducting of negotiations shall be provided. In this context, next 2 (two) Activities address above:

Activity 13. *To conduct negotiation training*

The negotiating group of Moldova includes representatives (women and men) of various ministries and departments. Not all Moldovan participants of the negotiation process have the negotiation skills and sufficient experience in negotiations or sufficient technical knowledge with regards to the functioning of a HPC. The short 1-2-days training is required with the purpose to strengthening the capacity of the Moldovan delegation and selected members of the Moldo-Ukrainian Commission for the Sustainable Use and Protection of the Dniester River Basin to understand the conclusions of the study and their possible implication on the negotiation process. The training shall include practical exercises similar to the subject of the negotiations on Agreement.

Activity 14. *To support the Moldovan party during the negotiation process on the Agreement with Ukraine.*

In addition, at the request of the Moldovan negotiators, support shall be provided in terms of analyzing the agenda and essence of the issues to be discussion, preparing draft articles/ Annexes, and developing recommendations regarding conducting negotiations with the Ukrainian party on the Agreement on the functioning of the Dniester HPC and other relevant documents, if requested.

Activities to implement Output 3

Under **Output 3 Public is provided with science-based information on current and potential impacts of the functioning of the Dniester HPC**, the following activities are planned:

Activity 15. *To prepare and publish summarized information to duly inform decision makers, the civil society and the general public about the Study findings*

Currently, information on the problems linked to the operation of the Dniester HPC and planned construction of 6 (six) HPC upstream is widely publicized and discussed nationwide. Yet, in a number of state institutions, at local public authorities and broad public, there is no complete and clear information about it. In relation to this, a set of communication measures have to be developed, including design, content and amount of information to be publicized and disseminated, information target groups (based on sex, disabilities, economic statues, etc.), ways of communication and so on. These measures shall be implemented at the national and local levels. In addition, a brochure of 10-20 pages with description of the main project's findings has to be disseminated in the concerned state and public institutions.

Activity 16. *To conduct round tables in Chisinau and informational meetings in districts (rayons) situated in the Dniester River basin, involving women and men and other categories of population.*

It shall be organized 2-3 round-tables in Chisinau, including on the platform of the National Political Dialogues on Water, and to conduct a number of informational meetings in rayons adjacent to the Dniester River.

Activity 17. Mass media informing

For conducting of informational campaign leaflets/posters, brochure, as well as video clip to be posted on youtube and social media have to be produced. The results of the project shall be also publicized on the TV channels with a national coverage and published in the national mass media.

Activity 18. Supporting civil society, including representatives of women groups, in increasing its role in the Dniester River Basin management, including via involvement in the work of the Dniester River Commission.

Taking into account further gradually increasing role of the transboundary River Basin Commission in the management of the Dniester River, as well as necessity to ensure transparency and soundness of the Commission’s work and activities, project will support introducing the concept of the Commission’s Observers and to define Observers’ status into the currently developed Regulation of the bi-lateral Dniester Basin Commission. In addition, to contribute to transparency of the Commission’s work, the Project will support participation of the civil society representatives (i.e., environmental NGOs, etc.) at the meetings of the Dniester River Commission.

Structure of Project activities under the outputs is shown in the next diagrams 1, 2 and 3.

Diagram 1. Structure of Project activities under the Output 1

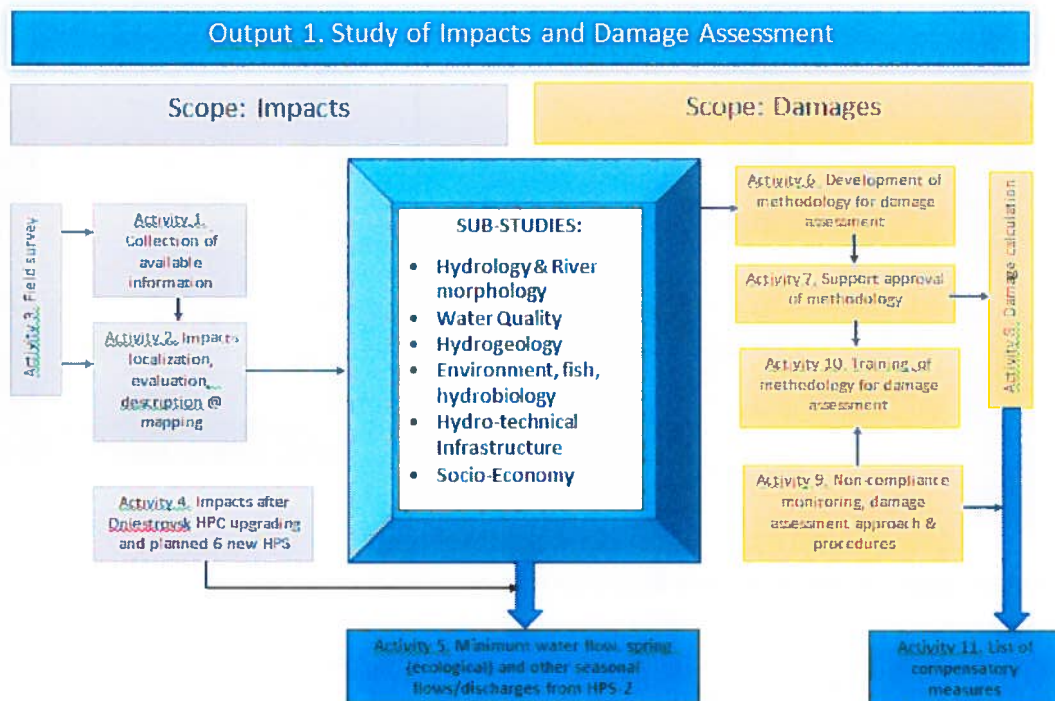


Diagram 2. Structure of Project activities under the Output 2

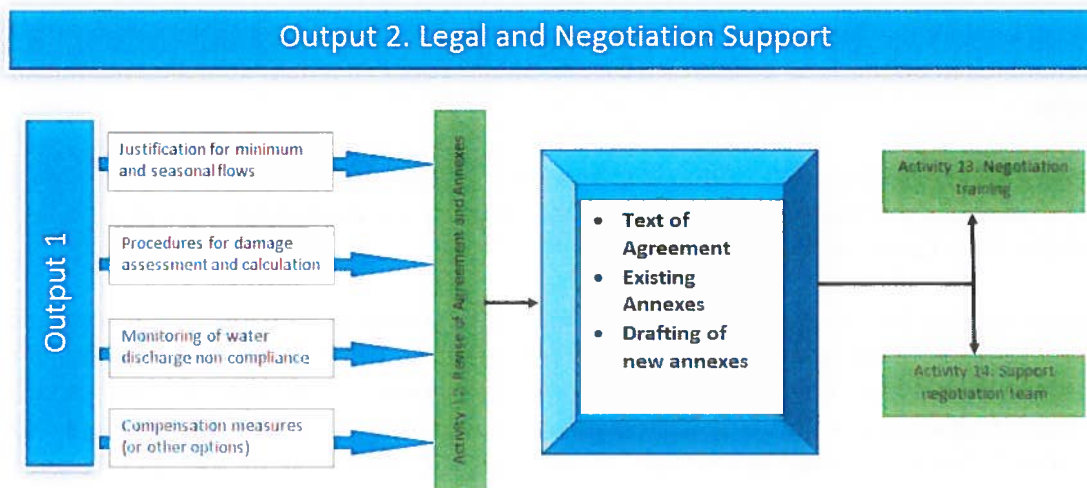
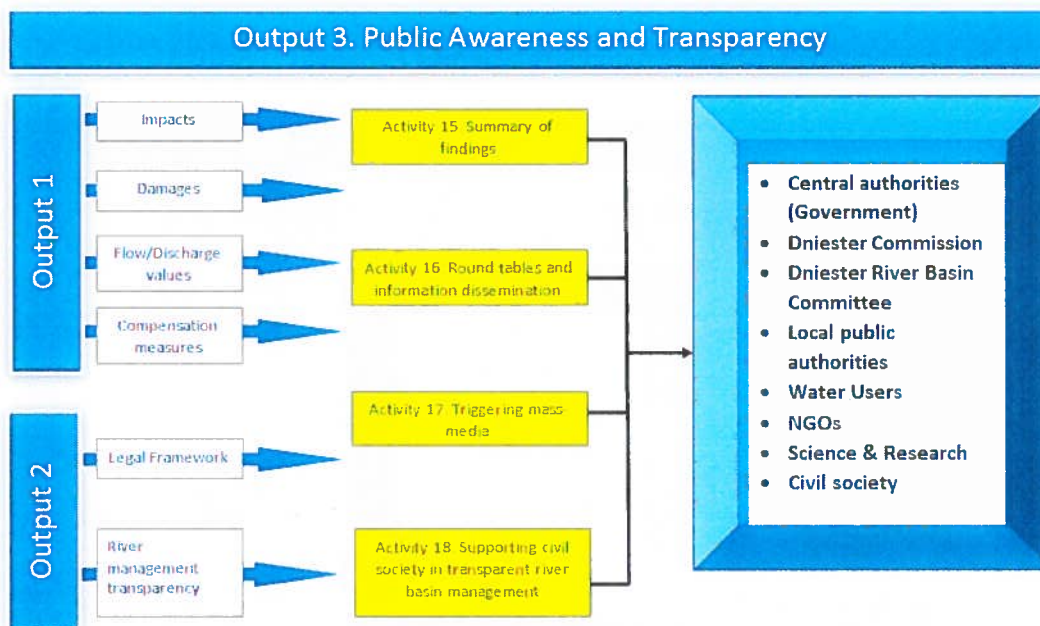


Diagram 3. Structure of Project activities under the Output 3.



Resources Required to Achieve the Expected Results

The total funds of the Project of 553,154 USD will be used for the identified project activities to achieve the objectives. This will require highly qualified international and local experts of various relevant expertise, e.g., hydrology, river morphology and water quantity; water quality and monitoring; environment, biodiversity and ecosystems; fish and hydro-biology; hydro-technical engineering; socio-economic and ecosystem services; legal, negotiation and public participation/communication. Due to the complexity of the assignments, the project team shall be managed by highly experienced team leader whose work shall be supported by the assistant.

The consultancy is expected to be undertaken during a period of 12 months (with and level of effort equal to 2595 person-days, including 240 person-days for Team Leader, 795 person-days for international experts, and 1620 person-days for local experts (women and men) and project assistance), with potential for extension depending on on-going needs.

Other resources include available information and multiannual data sets on the water quality, quantity, fish and other biodiversity, available climate change scenarios, hydraulics/ water flow and water allocation models, socio-economic indicators, etc.

The government, mainly the MARDE will assist the implementation of the project through regular monitoring and guiding of the project activities' implementation.

Partnerships and Stakeholder Engagement

The partners and stakeholder engagement is a basis for the successful Project implementation. Therefore, it envisaged strong coordination among concerned partners and stakeholders to achieve the Project objectives.

The Government of Moldova is a major beneficiary of the Project. Among the main attributions of the Government in relation to the project are appointment members of the Moldovan Delegation (including women and men) negotiating with the Ukrainian party on the Agreement on the functioning of the Dniester HPC, participation in defining of Agendas of the negotiation rounds, making decisions on issues discussed, signing the Agreement, etc., as well appointment members of the bi-lateral Dniester Commission.

Ministry of Agriculture, Regional Development and Environment (MARDE) is responsible for the development and implementation of national agricultural, regional development and environmental policy, legislation, action plans, norms and standards. The Ministry is directly responsible for protection of natural resources, including water, aquatic ecosystems, biodiversity and habitats. MARDE will oversee all aspects of the project implementation as a national *Implementing Partner*. Ministry will ensure coordination with other relevant projects and initiatives, where appropriate, and will actively monitoring of implementation of the project activities. MARDE will also support the project by ensuring involvement of subordinated organisations, providing the access to available data and information that might be required for conducting of the Study, and actively involve civil and scientific society into the project activities, where deemed necessary.

Ministry of Economy and Infrastructure (MEI) is responsible for development and implementation of national policy in the field of information technology and communication, transport and construction, energy and trade, business development and public infrastructure. As regards project, MEI is a leading ministry in the international economic cooperation and have accountable role in the negotiation process regarding formulation of a new Agreement on Functioning of the Dniester HPC to be signed between the Government of the Republic of Moldova and Cabinet of Ministries of the Ukraine. MEI along with MARDE will play an important role in monitoring of project performance and quality of obtained results.

The MEI is a key beneficiary of the project and will play important role in project performance monitoring and quality of obtained results.

Ministry of Foreign Affairs and European Integration (MFAEI) exercises the sovereign rights of the Republic of Moldova in the framework of international relations. In addition, MFAEI negotiates on behalf the Republic of Moldova or participates at the negotiations of international treaties and agreements and supervises the application of treaties and other international agreements to which the Republic of Moldova is party.

Ministry of Health, Labour and Social Protection (MHLSP). Among others duties, the Ministry is responsible for the development and implementation of national policies in the field of protection of public health, sanitary norms and rules, safety conditions of the environment, water safety and

quality of drinking water. The Ministry will be one of beneficiaries of the project results by considering health and human safety concerns as regards hydropower development on the Dniester River and including the study results in future health policy development

Ministry of Transport and Road Infrastructure (MTRI) is responsible for the development and implementation of national policies, including in the areas of water transport, navigation ways, etc. The Ministry is a direct beneficiary as its policy is to maintain navigation in the Dniester is strongly depends from the water level in the navigable stretches of the river.

Ministry of Education, Culture and Science (MECS) is responsible for development and implementation of national policies, including in the areas of tourism, water sports, and research in different spheres of science. The implication of subordinated entities into the project activities will be important. More relevant subordinated entities are: Federation of Sport and Tourism and research institutes (e.g., Institute of Zoology, Institute of Ecology and Geography, Institute of Geology and Seismology, etc.). The research institutes are important pool of expertise and data to be used by the project to carry out the scientifically based study towards achieving reliable results.

Local Public Authorities (LPAs) LPAs will be important project partners especially for providing local knowledge and concerns in regard to the Dniester River water availability for local business, water scarcity at local level, conditions of the water related local economy, local infrastructure, etc.

Regional Development Agencies (RDAs), established in 3 (three) Development Regions of the country (North, Center, South), are responsible for analysing and promoting the socio-economic development in the region, development, coordination, monitoring and evaluation of implementation of the regional development strategies, plans, programmes and projects. As such, the RDAs will serve as important partners guiding project implementation in the target communities.

Agency "Apele Moldovei" (AAM) has among others the following attributions: (i) technical exploitation of accumulation lakes for common use, according to the hydro-graphic basin principle, (ii) protection of dykes; (ii) implements projects in the field of water management, irrigation systems, drinking water supply and sewage systems; (iv) organizes the financing of works related to the construction, maintenance and reconstruction of the water management, irrigation systems, etc. The Agency plays an important role in preparation, implementation and monitoring of the Districts River Basin Management Plans, as well as Flood Risk and Drought Management Plans at the district level.

State Hydrometeorologic Service (SHS). The general task of the SHS is to monitor environmental situation over the country, including surface water quantity and quality. The SHS is principal project partner for providing of historical and recent information of Dniester River water levels, flows and quality.

Agency for Geology and Mineral Resources (AGMR). The task of the Agency is to manage nationwide important groundwater resources, by assessment of their availability, determination of their exploitation rate, establishing of water quality parameters and other issues.

Ecological Inspectorate (EI) is responsible for enforcement of environmental laws, rules, standards and normatives.

Fish Inspection (FI) is an institution directly involved in protection of fish resources, its number and diversity, and supporting economically valuable fish. For the duration of project implementation, FI will cooperate for providing hydro biological and fish data needed for the study, assessment of impacts and damage calculation.

Environmental NGOs. NGOs community will participate in the stakeholder consultation process as relevant, and will assist in the promotion and awareness raising of the project activities and results. There are several NGOs active in water sector and, particularly, in the Dniester River basin: International Association of Rivers Keepers *Eco-Tiras*, *Moldova Ecological Movement*, etc. *EcoContact* has also great experience in human rights and environment legislation as well as

possesses practical knowledge and skills in environmental issues such as: water management, risk and environmental impact assessment, vulnerability to climate change, etc. *National Environmental Center* is also focused on water governance, basin river management and works with youth, local public authorities in establishing local river basin committees. *EcoSpectrum* is another active NGO representing civil society of the Transnistria region, etc. Cooperation with Ukrainian NGOs through existing bilateral and regional platforms will be encouraged, especially for distribution of Study results.

Water Users Associations are farmers' organisations established by law for the use of irrigation systems to increase the agriculture production. They are highly dependent from water availability in the rivers. Several Water Users Associations in the Dniester River Basin (Cosnita, Jora de Sus, Jora de Jos, Criuleni, Pugacheni, Roscani, Lopatna) rely on totally reconstructed irrigation systems, including pump water intakes, mains, distribution network and irrigation equipment. The schemes were renovated with support of the MCA in the year 2015.

Apa-Canals are service organisations responsible for production and distribution of drinking water to various consumers, as well as for treatment of waste water before its discharging into the natural environment.

Other Water Users are wide range of private farmers, industries, communities and companies which use water from the river to their economic and development.

Bi-lateral Dniester River Basin Commission was established to facilitate sustainable use and protection of the basin and encourage countries to develop and implement joint and coordinated Dniester River basin management Plans.

Dniester River Basin District Committee. The purpose of the Committee is to ensure effective collaboration between central and territorial water management and protection authorities, central and local public authorities, water users in the river basin district, water management services beneficiaries, civil society organizations on issues of management, use and protection of water resources within the river basin district.

Media institutions have also a key role in public informing and raising awareness about environmental issues, which they promote through the social and media products, radio, TV programs, public debates, flash mobs, environmental campaigns and other events. They will be engaged in specific public awareness activities.

The **GEF Project** "Enabling transboundary co-operation and integrated water resources management in the Dniester River Basin". One component of the GEF project is focusing on (i) the assessment of Dniester HPC on the Dniester River basin's ecosystems, (ii) development of recommendations for new Rules of Operation of the Dniester water reservoirs, (iii) development of the model for operation of the Dniester River reservoirs, and (iv) creation of the platform for discussion of potential construction of 6 new hydropower stations at the upper part of the Dniester River.

Coordination and Consultation: The above mentioned and other partners and stakeholders will be engaged during the course of the project implementation. The active involvement of women will be supported. The project intends to maintain the coordination and consultation among stakeholders through the below indicative actions and their frequency spread over the duration of the project:

Risks and Assumptions

As per standard UNDP requirements, the Project Team will monitor risks quarterly and report on the risks' status to the UNDP Country Office. The UNDP Country Office will record progress in the UNDP ATLAS risk log. Risks will be reported as critical when the impact and probability are high (i.e. when impact is rated as 5, and when impact is rated as 4 and probability is rated at 3 or higher).

Risks

Project risks and possible mitigation measures are show in the next table 1.

Table 1. Risks and mitigation measures

Project Risks				
Description	Type	Impact & Probability 1 (low) to 5 (high)	Mitigation Measures	Owner
The Agreement on the functioning of the Dniester HPC will be signed prior to obtaining necessary data and information	Political	I = 5 P = 5	Precondition to launch the project: "Government of Moldova will commit itself not to sign the said Agreement with Ukraine before the Governmental Negotiation Group is fully prepared for negotiations, i.e. not before the project Specific Objective 1 is achieved". Must be clearly stated in the UNDP-Government of Moldova Memorandum of Understanding concerning implementation of the Project. Currently conducted negotiation process on the Agreement will be monitored, and relevant recommendations made	UNDP
Data holders will not provide free and quick (in due time) access to data / information needed to conduct the Study, both in Moldova and Ukraine.	Managerial	I = 5 P = 3	Free / quick access to requested data is crucial. The procedure of access should be agreed with all preliminary identified data holders. In case the Agreement is not respected the risk ownership should be transferred from Project Management to higher level, within the GoM. Inform and ask to mediate the situation with restricted access to data.	Project Manager/ Project Board
The Moldovan Negotiation Group will not coordinate the Agenda for re-current negotiation meetings with the Project Management.	Managerial	I=3 P=2	The Agenda should be linked to the Project deliverables. Close coordination of the Project Work Plan with the Agenda of negotiations should be a re-current and mandatory activity. The Project Manager should keep the members of the Negotiation Group informed about the results produced and the planned activities and deliverables.	Project Manager

<p>The members of Negotiation Group do not allocate enough time to participate in project activities to secure the production the Outputs 1.1 and 1.2 and implicitly achievement of the Specific Objective 1</p>	<p>Managerial</p>	<p>I=4 P=3</p>	<p>This risk is managed by informing the Top Management of respective Governmental institution about missing the sense of ownership among the appointed persons, identify the reasons of such an attitude (they can be several) and take corrective measures.</p>	<p>Project Manager</p>
<p>The Governmental Institutions do not act in transparent way – the access of general public to information and participation in environmental decision making is restricted.</p>	<p>Political</p>	<p>I=2 P=1</p>	<p>Informing about deviation from the quite well established within the Governmental institutions decision making transparency procedures. Taking corrective measures to provide access. In case the restrictions have other that organizational ground / reasons transfer the risk to higher level of governance and alert civil society.</p>	<p>Project manager / Project Partners</p>
<p>The MARDE do not support the establishment of the institute of Observers to the Dniester River Commission and to offer the status of Observer to the most advanced NGO in the field of Dniester River protection.</p>	<p>Political</p>	<p>I=2 P=4</p>	<p>This risk comes in connection with other risks impacting or likely to impact the transparency of the Commission works. Having no direct dramatic impact on the project itself it should, however, be taken into consideration as a cross-cutting political issue. The main instrument to successfully manage it is a dialog with the members of Dniester River Commission, the heads of the institutions that have appointed the members of Commission.</p>	<p>Project Manager</p>

Assumptions

Assumptions versus Project objectives, outputs and activities are presented in the next table 2 Project Logical Framework.

Table 2. The Project Logical framework

Project description	Indicators	Means of verification	Assumptions
<p>Overall objective: To support sustainable management and protection of the Dniester River</p>			
<p>Specific objectives:</p> <p>1. To ensure that Government of the Republic of Moldova is fully prepared for negotiations on the Agreement on functioning of the Dniester HPC</p> <p>2. To contribute to public awareness raising and civil society involvement in protection of the Dniester River.</p>	<p>The Memorandum of Disagreement regarding the art. 6 of the Agreement is prepared (or revised, if already exist) and Moldovan bargain position is methodically justified based on the Study findings and conclusions.</p> <p>Number events/ activities dedicated to protection of Dniester in both countries as well as events/ activities organized together by the Moldovan and Ukrainian organizations covered by social-media and other media means.</p> <p>% of women and men participating in events/ activities</p> <p>Planned outputs are produced.</p>	<p>Conclusions of peer reviews documents</p> <p>Post-event analysis of media.</p> <p>Comparative press analysis on dynamic of media coverage of the Dniester topic in social and Moldovan mass-media.</p> <p>Reports on conducted project activities.</p>	<p>The concerned Governmental institutions are willing and ready to invest staff-time in preparation of the members of negotiation group.</p> <p>General public is interested in and follows the topic of the Dniester River vital role for Moldova and river protection.</p>
<p>Project Outputs:</p> <p>Output 1: Detailed Study on current and potential environmental and socio-economic impacts on the territory of Moldova resulting from operation of the hydro power generation facilities on the Dniester River elaborated, and conclusions are made</p>	<p>% of satisfied requests of access to /provided information.</p> <p>% of data / information delivered in due time.</p> <p>Methodology of the Study approved by the Project Board.</p>	<p>Risk management chapters from project progress reports.</p> <p>Written notifications / complaints of the Consultant to the Client. Minutes of the Consultant weekly staff meetings.</p> <p>Methodology Chapter within the Inception Report. Minutes of Project Board meeting on Methodology</p>	<p>Access to needed data / information requested by the project is provided in due time and free of charge by state institutions, both in Moldova and Ukraine.</p> <p>Negotiators are appointed and they dedicate required amount of time to participate in project activities.</p>

Project description	Indicators	Means of verification	Assumptions
	<p>Acceptance of the results of sub-studies by Client and Project Board.</p> <p>The concerned stakeholders (Governmental and NGOs representatives) are familiar with the Conclusions of the Study and are able to explain the essence of impacts, their consequences as well as the methodology of damage evaluation.</p>	<p>presentation and approval.</p> <p>Minutes of sub-studies presentations' meetings.</p> <p>Results of the training sessions on Damage Assessment – evaluation questionnaire, achievement tests (the test proving that the learning process took place).</p>	<p>The Government Institutions, scientific society and NGOs are willing to provide the feedback (written and / or participation at different results presentations meetings) at the different stage of Study development in due time.</p> <p>Dniester River Commission is supportive to project activities that involve actors from both riparian countries.</p>
Output 2: Capacities of the Moldovan negotiation team (women and men) enhanced	The Memorandum of Disagreement regarding the art. 6 of the Agreement is prepared (or revised if already exist) and Moldovan bargain position is methodically justified based on Study findings and conclusions.	<p>Approved Legal Report</p> <p>Negotiation Training materials prepared</p> <p>Reports on training conducted with annexed list of participants, evaluation questionnaires and achievement tests.</p>	Only issues already backed by Project deliverables are included as topic for discussions in the negotiations Agenda.
Output 3: Public is provided with science-based information on current and potential impacts of the functioning of the Dniester HPC	<p>Communication measures are developed.</p> <p>Number of publications, press-releases, press-conferences, posters, seminars and roundtables dedicated to transboundary management of Dniester River.</p> <p>Number of women and men involved in activities.</p> <p>Drafts of produced documents are placed on web-sites of the involved/interested/partner institutions for public discussions in due time.</p>	<p>Project reports.</p> <p>Post-event analysis of media.</p> <p>Comparative press analysis on dynamic of media coverage of the Dniester topic in social and Moldovan mass-media.</p> <p>To check the web-sites of involved institutions.</p>	<p>Governmental institutions and other data holders provide access to information to interested persons in line with the existing legislation on access to information.</p> <p>Governmental institutions of both countries ensure transparency of decision making in the Dniester River management.</p> <p>The environmental NGOs active in the IWRM field are</p>

Project description	Indicators	Means of verification	Assumptions
	Number of visits and comments left on web-pages dedicated to the Dniester River management topic.	Comparative media analysis (in comparison with the baseline data).	supported by respective line ministry(ies).
Activities	Amount of funds allocated; No of hired international experts, number of hired local experts (women and men), quantity of workloads, number of data and information provided, etc.	Verification of the resources availability.	Precondition to start the project: “Government of Moldova will commit itself not to sign the said Agreement with Ukraine before the Governmental Negotiation Group is fully prepared for negotiations, i.e. not before the project Specific Objective 1 is achieved.

South-South and Triangular Cooperation

South-South Cooperation (SSC) is a broad framework of collaboration among southern countries, including in the economic, social, environmental and other domains. South–South cooperation has increasingly demonstrated its contribution to development results through a variety of flexible cooperation modalities, including knowledge exchanges, technology transfers, financing, and peer support.

Direct Triangular Cooperation (TrC) occurs mostly with the European neighborhood to maximize its development impact. The Project intends to use SSC/TrC to achieve and sustain results by fruitful collaboration with a traditional donor country Sweden through the provision of funding, expertise, training, management, as well as sharing knowledge, skills, expertise and resources to meet the country development goals through the concerted efforts.

Knowledge, Sustainability and Scaling Up

The Project will significantly contribute to gaining local knowledge about pressures and impacts on the Moldovan part of the Dniester River resulting from operation of the Dniester HPC, as well as damage assessment, and pertaining legal and negotiation aspects.

Particularly, obtained information and experience can be used by the Government for further policy development, programs and plans for national and local socio-economic development, and for elaboration of action plans for biodiversity conservation and fish protection, etc. In addition, the outputs of the projects are in line with provisions specified in the main political documents of the Republic of Moldova in the field. Thus, the Government is accountable to action on the Project outputs.

Experience and skill to be gained by local experts and members of the national negotiation team will be used in further research and evaluations under the local and international assignments and in the inter-governmental negotiations of a various nature, respectively.

Other considerations

The Project comprised solely of research, meetings, reports, preparation of communication materials, as well as of events and trainings aimed at strengthening capacities to participate in international negotiations, partnership coordination and management is anticipated to have no negative environmental, social and gender equity impacts.

IV. PROJECT MANAGEMENT

Cost Efficiency and Effectiveness

Cost efficiency and effectiveness will be ensured by use of best available international approaches and practices for procurement of services and implementation of activities required under the Project outputs, by leveraging activities and partnerships with other initiatives/ projects, as well as through careful financial and operational monitoring of the Project to be performed by both Project Board and MARDE, as appropriate.

Management

The sites of the Project implementation are city of Chisinau, with travel to selected sites in the Dniester River basin and Ukraine, where appropriate. One project office will be located in Chisinau and supplied with equipment needed for its smooth operation.

The UNDP’s Program Officer (PO) is a focal point in monitoring and facilitating project. PO will maintain a continuous partnership with the project team and participates in all project reviews, work/budget planning meetings, monitoring and evaluations. On behalf of the UNDP Country office, PO approves proposed TORs/specifications, work plans/ budgets as well as the proposed use of unspecified budget lines within the annual budget already approved for the project. In addition, PO will assist the project management team in linking up – through UNDP’s facilities at various levels - with networks of knowledge on program matters and facilitates partnerships with other donors/ programs, where appropriate. PO will also help the project management team in positioning the project as a donor coordination and information sharing platform and contributing to regular media inputs.

The project audit will be conducted accordance with the UNDP’s audit policy to manage financial risks (for more details on audit, refer to chapter Monitoring and Evaluation).

Where necessary and justified, support services of the UNDP Office in Moldova will be provided to meet the responsibilities mentioned above. UNDP will provide support in administrative and financial matters as described below:

Support Services	Schedule for the Provision of the Support Services	Cost to UNDP of providing such Support Services	Amount and Method of Reimbursement of UNDP
Payments, disbursement and other financial transactions, including direct payments, budget revisions, etc.	As agreed in the Annual Workplan (AWP) from inception to	Cost-recovery based on UNDP Universal Price List and Local Price List	Periodic billing based on actual staff costs and agreed percentage
Recruitment of staff, project personnel and consultants, including creation of vendors, selection and recruitment of SC holders,			

personnel management services and banking administration, etc.	closure of the project		
Procurement of services and goods, and disposal, including evaluation, proceeding through CAP, contracting, disposal of equipment and asset transfer, customs clearances, etc			
Travel support, including travel arrangements and authorization, ticket, visa and booking requests, F10 settlement, etc.			
Organization of conferences, workshops and trainings			
Communication support, including maintenance of undp.org accounts			

V. RESULTS FRAMEWORK¹

Results Framework to assess management results on the basis of performance indicators is shown in the next table 3.

Table 3. Results Framework

<p>Intended Outcome as stated in the UNDAF/ Programme Results and Resource Framework: Outcome 3. The people of Moldova, especially most vulnerable, benefit from enhanced environmental governance, energy security, sustainable management of natural resources, and climate and disaster resilient development.</p> <p>Outcome indicators as stated in the Country Programme Results and Resources Framework, including baseline and targets: Output 3.2 Improved national capacities for environmentally sound management practices in ecosystems, waste and chemicals.</p> <p>Applicable Output(s) from the UNDP Strategic Plan: 2.3.1. Data and risk informed development policies, plans, systems and financing incorporate integrated and gender-responsive solutions to reduce disaster risks, enable climate change adaptation and mitigation and prevent risk of conflict</p> <p>Project title and Atlas Project Number: The Dniester Hydro Power Complex Social and Environmental Impact Study</p>			
EXPECTED OUTPUTS	OUTPUT INDICATORS ²	DATA SOURCE	DATA COLLECTION METHODS & RISKS
<p>Output 1 Detailed Study on current and potential environmental and socio-economic impacts on the territory of Moldova resulting from operation of the hydro power generation facilities on the</p>	<p>1.1: % of satisfied requests of access to / provided information</p>	<p>Project progress reports.</p>	<p>Risk management chapters from project progress reports/ Data holders will not provide free and quick (in due time) access to data / information needed to conduct the Study, both in Moldova and Ukraine.</p>

¹ UNDP publishes its project information (indicators, baselines, targets and results) to meet the International Aid Transparency Initiative (IATI) standards. Make sure that indicators are S.M.A.R.T. (Specific, Measurable, Attainable, Relevant and Time-bound), provide accurate baselines and targets underpinned by reliable evidence and data, and avoid acronyms so that external audience clearly understand the results of the project.

² It is recommended that projects use output indicators from the Strategic Plan IRRF, as relevant, in addition to project-specific results indicators. Indicators should be disaggregated by sex or for other targeted groups where relevant.

<p>Dniester River elaborated, and conclusions are made</p> <p>Output 2</p> <p>Capacities of the Moldovan negotiation team (women and men) enhanced</p>	<p>1. 2: % of data / information delivered in due time</p>	<p>Written notifications / complaints</p>	<p>Written notifications / complaints of the Consultant to the Client, and Minutes of the Consultant weekly staff meetings/ notifications & complaints are not recorded</p>
	<p>1. 3: Methodology of the Study approved by the Project Board</p>	<p>Inception Report</p>	<p>Methodology Chapter within the Inception Report. Minutes of Project Board meeting on Methodology presentation and approval/ methodology and approach for the carrying out the assignment is not provided</p>
	<p>1.4: Acceptance of the results of sub-studies by Client and Project Board</p>	<p>Minutes of the meetings</p>	<p>Minutes of sub-studies presentations' meeting/ Sub-studies presentations' meetings are not conducted</p>
	<p>1.5: The concerned stakeholders (Governmental and NGOs representatives) are familiar with the Conclusions of the Study and are able to explain the essence of impacts, their consequences as well as the methodology of damage evaluation</p>	<p>Training sessions</p>	<p>Training sessions on Damage Assessment – evaluation questionnaire, achievement tests/ the test proving that the learning process took place is not conducted.</p>
	<p>2.1: The Memorandum of Disagreement regarding the art. 6 of the Agreement is prepared (or revised if already exist) and Moldovan bargain position is methodically justified based on Study findings and conclusions</p>	<p>Project Reports and other related documents</p>	<p>Legal Report; Negotiation Training materials, reports on training/trainings with annexed list of participants, evaluation questionnaires and achievement tests/ The Reports and other related documents are not prepared properly</p>

<p align="center">Output 3</p> <p align="center">Public is provided with science-based information on current and potential impacts of the functioning of the Dniester HPC</p>	<p>3.1: Number of the developed communication measures</p>	Project reports	Project output and final reports
	<p>3.2: Number of publications, press-releases, press-conferences, posters, seminars and roundtables dedicated to transboundary management of Dniester River. Number of women and men involved in activities.</p>	Media resources	Post-event analysis report of media; comparative press analysis on dynamic of media coverage of the Dniester topic in social media and Moldovan mass-media/ media analysis is not performed properly
	<p>3.3: Drafts of the produced documents are placed on web-sites of the involved/interested/partner institutions for public discussions in due time</p>	Web-sites	Check the web-sites of involved institutions/ web-sites do not contain full set/ or contain incomplete set of the produced documentation
	<p>3.4: Number of visits and comments left on web-pages dedicated to the Dniester River management topic</p>	Media resources	Comparative media analysis of social and media resources (in comparison with the baseline data)/ analysis of media resources is not performed properly

VI. MONITORING AND EVALUATION

The Project is a subject of monitoring and evaluation in accordance with UNDP's programming policies and procedures. The Project will be monitored and evaluated as per Monitoring and Evaluation Plan presented in the next table 4.

Table 4. Monitoring and Evaluation Plan

Monitoring and Evaluation Activity	Purpose	Timing/ Frequency	Expected Action
Track results progress	Progress data against the results indicators in the RF will be collected and analyzed to assess the progress of the project in achieving the agreed outputs.	Quarterly, or in the frequency required for each indicator	Slower than expected progress will be addressed by project management.
Monitor and Manage Risk	Identify specific risks that may threaten achievement of intended results. Identify and monitor risk management actions using a risk log. Audits will be conducted in accordance with UNDP's audit policy to manage financial risk	At the beginning and in the middle in the course of Project implementation/ 2 times	Risks are identified by project management and actions are taken to manage risk. The risk log is actively maintained to keep track of identified risks and actions taken
Learn	Relevant knowledge, good practices and lessons will be actively sourced from other projects and partners and integrated into the project	Continuously/ on a permanent basis	Relevant knowledge lessons are captured by the project team and used to inform management decisions.
Project Quality Assurance	The quality of the project will be assessed against the UNDP's quality standards to identify project strengths and weaknesses and to inform management decision making to improve the project.	At the end of the Project/ 1 time	Areas of strength and weakness will be reviewed by project management and used to inform decision makers to improve project performance
Review and Make Course Corrections	Internal review of data and evidence from all monitoring actions to inform decision making.	At least annually	Performance data, risks, lessons and quality will be discussed by the project board and used to make course corrections.
Project Reports	An Inception, Mid-term Progress and Final reports will be presented to the Project Board and key stakeholders, consisting of progress data showing the results achieved against pre-defined outputs, an updated risk log with mitigation measures, and any other evaluation or review reports prepared over the period.	At the beginning, in the middle and at the end of the in the course of Project	Achievements against outputs and weakness will be evaluated by project team and communicated to decision makers to improve project performance

Monitoring and Evaluation Activity	Purpose	Timing/ Frequency/ Implementation/ 3 times	Expected Action
Independent Evaluation	A final project review will be conducted during the final quarter of the project. Its purpose is to assess performance and success. It should look at the sustainability of the results, including the contribution to related outcomes (and the status of these outcomes) and capacity development.	At the end of the Project/ 1 time	Achievements against outputs and weakness will be evaluated by an independent evaluator.
Project Board	The Project Board will hold regular project reviews to assess the performance of the project against Work Plan to ensure realistic budgeting over the life of the project.	Every 4 months/ 2 times	Any quality concerns or slower than expected progress should be discussed by the project board and management actions agreed to address the issues identified.

VII. WORK PLAN

Provisional operational Project Work Plan is presented in the next table 5. A detailed Work Plan will be developed during the inception phase of the project and presented to Project Board for further evaluation and ultimate approval.

Table 5. Provisional Work Plan

Objective	Output	Activity	Months (September 2018 – August 2019)																
			1	2	3	4	5	6	7	8	9	10	11	12					
1: To ensure that Government of the Moldova is prepared for negotiations on the Agreement	1: Detailed Study is elaborated, and conclusions are made	1: Collecting and analyzing available information and data																	
		2: Localization and mapping of impacts																	
		3: Designing environmental survey program and carrying out field research																	
		4: Evaluation of impacts																	
		5: Formulating conclusions																	
		6: Elaboration of the damage assessment methodology																	

Objective	Output	Activity	Months (September 2018 – August 2019)															
			1	2	3	4	5	6	7	8	9	10	11	12				
2: To provide the public with science-based information on the current and potential impacts of the functioning of the Dniester HPC	Output 2: Legal and Negotiation support is provided to Moldovan negotiators	7: Coordination and approval of methodology																
		8: Assessment of damages																
		9: Developing approach for the yearly damage assessment																
		10: Conducting Training on Damage Assessment																
		11: Elaboration of compensation measures																
		12: Revising draft Agreement and Annexes																
		13: Conducting negotiation training																
		14: Supporting negotiation process																
		15: Preparing and publishing summarized information about the findings of the Study																
		16: Conducting round tables in informational meetings																
		17: Mass-media informing																
		18: Supporting civil society in increasing its role in the Dniester River Basin management																

Summary of Project costs disaggregated per categories is presented in the next table 6.

Table 6. Breakdown of Project costs, USD

Category	Consultant Remuneration	Other services and goods for the activities implementation	Office running cost, including international travel	Evaluation	General mangement support	Total funds
Cost	291,973	115,411	88,933	15,862	40,975	553,154

Anticipated programmatic and operational costs to support the project disaggregated per Project outputs are shown in the next table 7.

Table 7. Anticipated programmatic and operational costs disaggregated per Project Outputs

EXPECTED OUTPUTS	PLANNED ACTIVITIES	Planned Budget by Year		RESPONSIBLE PARTY	PLANNED BUDGET		
		2018	2019		Funding Source	Budget Description	Amount, USD
1: Detailed Study is elaborated, and conclusions are made	1: Collecting and analyzing available information and data	28,180	X	MARDE	Consultants	Consultants	21,617
	2: Localization and mapping of impacts	30,443	13,048	MARDE	Use of GIS application	Purchasing of data and information	5,795
	3: Designing environmental survey program and carrying out field research	21,555	14,370	MARDE	Other direct expenses	Other direct expenses	767
	4: Evaluation of impacts	X	25,797	MARDE	Consultants	Consultants	36,511
	5: Formulating conclusions	X	21,626	MARDE	6-8 field research program	Use of GIS application	5,795
	6: Elaboration of the damage assessment methodology	X	46,053	MARDE	Other direct expenses	Other direct expenses	1,185
	7: Coordination and approval of methodology	X	24,009	MARDE	Consultants	Consultants	21,037
					Visits to Ukraine	Other direct expenses	13,909
					Other direct expenses	Other direct expenses	978
					Consultants	Consultants	21,617
					Other direct expenses	Other direct expenses	3,477
					Consultants	Consultants	702
					Data generalization	Data generalization	21,037
					Other direct expenses	Other direct expenses	-
				Consultants	Consultants	589	
				Support for development of methodology	Support for development of methodology	21,617	
				Other direct expenses	Other direct expenses	23,182	
				Consultants	Consultants	1,254	
				Workshops	Workshops	21,037	
				Other direct expenses	Other direct expenses	2,318	
						654	

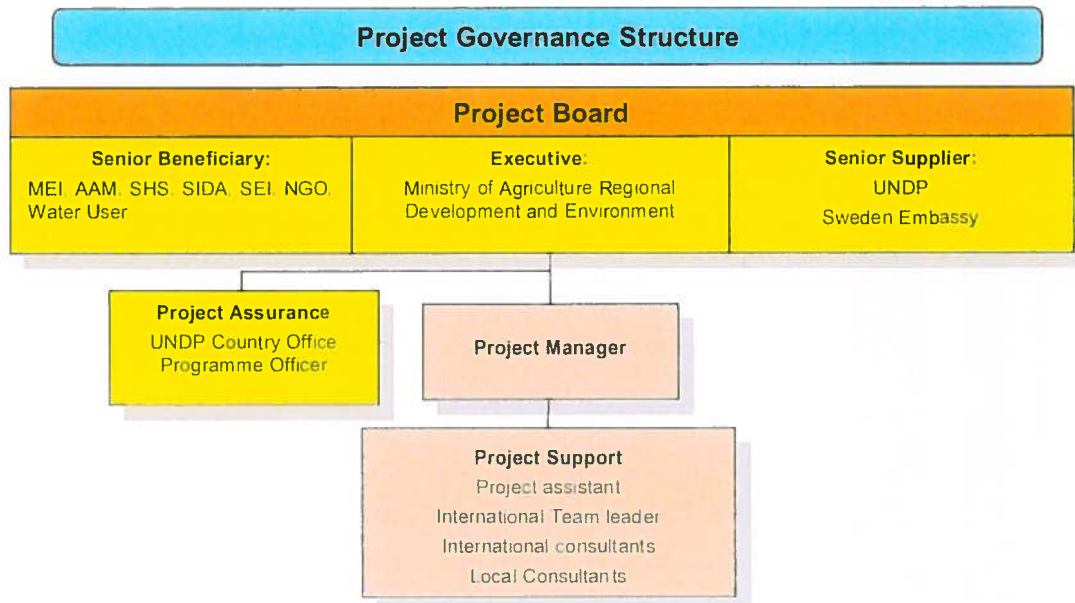
EXPECTED OUTPUTS	PLANNED ACTIVITIES	Planned Budget by Year		RESPONSIBLE PARTY	PLANNED BUDGET		
		2018	2019		Funding Source	Budget Description	Amount, USD
		X	22,222				Consultants
	8: Assessment of damages				Data generalization	-	
	9: Developing approach for the yearly damage assessment	X	28,775	MARDE	Other direct expenses	605	
	10: Conducting Training on Damage Assessment	X	22,461	MARDE	Consultants	22,196	
	11: Elaboration of compensation measures	X	29,967	MARDE	Support for development of approach and procedures	5,795	
	Sub-Total for Output 1.1.	80,178	248,327		Other direct expenses	784	
	12: Revising draft Agreement and Annexes	X	11,677	MARDE	Consultants	19,531	
	13: Conducting negotiation training	X	15,251	MARDE	1-2 days training	2,318	
	14: Supporting negotiation process	X	15,847	MARDE	Other direct expenses	612	
	Sub-Total for Output 1.2.	X	42,775		Consultants	21,037	
	Output 2: Legal and Negotiation support is provided				Support for development of measures	8,114	
					Other direct expenses	816	
					Consultants	11,359	
					Data generalization	-	
					Other direct expenses	318	
					Consultants	11,359	
					Training, 2 events, 2 days each, 12 participants	3,477	
					Other direct expenses	415	
					Consultants	10,779	
					Participation at negotiation meetings, 2 trips, 2 persons	4,636	
					Other direct expenses	431	
						42,775	

EXPECTED OUTPUTS	PLANNED ACTIVITIES	Planned Budget by Year		RESPONSIBLE PARTY	PLANNED BUDGET			
		2018	2019		Funding Source	Budget Description	Amount, USD	
Output 3: Public is provided with science-based information on current and potential impacts of the functioning of the Dniester HPC	15: Preparing and publishing of summarized information about the findings of the Study	X	9,652	MARDE	Consultants	Consultants	3,593	
	16: Conducting round tables in informational meetings	X	10,247	MARDE	Consultants	Design, printing out, distribution, 100 posters, 100 leaflets, 100 booklets Other direct expenses	5,795 263	
	17: Mass-media informing	X	15,014	MARDE	Consultants	2-3 Round Table in Chisinau, 2-3 meetings in districts Other direct expenses	3,014 6,954 279	
	18: Supporting civil society in increasing its role in the Dniester River Basin management	X	1,192	MARDE	Consultants	Consultants	409	
	Sub-Total for Output 2.	X	36,104				36,104	
	Project Management		5,795	17,966			Project Manager	23,761
			3,477	9,447			Project Assistant	12,924
			X	15,863			Evaluation	15,862
			2,318	10,895			Office Rent	13,214
			696	2,086			Stationary	2,782
			6,375	X			Office Equipment	6,375
			3,477	10,432			Transportation costs	13,909
			1,159	6,954			Translations costs	8,114
			1,250	3,750			Quality Assurance (NOB 5%; GS 5%)	5,000
			927	1,928			Other direct expenses	2,855

EXPECTED OUTPUTS	PLANNED ACTIVITIES	Planned Budget by Year		RESPONSIBLE PARTY	PLANNED BUDGET		
		2018	2019		Funding Source	Budget Description	Amount, USD
Sub-Total for Project Management		25,474	79,321			104,796	
				General Management Support (8%)			
				GRAND TOTAL			
				40,975			
				553,154			

Note: Gender dimension has been taken into consideration and integrated in planned activities and budget.

VIII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS



The project will be carried out under a **National Implementation Modality (NIM)**. Following consultations on the project implementation UNDP and the Government agreed that the UNDP country office will provide support services to the project at the request of the National Implementing Partner. In addition, UNDP CO will ensure project accountability, transparency, effectiveness and efficiency in implementation. The support services provided by the project may include: (i) Identification and/or recruitment of project personnel; (ii) procurement of goods and services; (iii) financial services.

National Implementing Partner: As the national implementing partner (NIP), the Ministry of Agriculture, Regional Development and Environment will oversee all aspects of project implementation. MARDE is accountable to the government and UNDP for ensuring (1) the substantive quality of the project; (2) the effective use of both national and UNDP resources allocated to it; (3) the availability and timeliness of national contributions to support project implementation; and (4) the proper coordination among all project stakeholders.

Project Board (PB) will be responsible for making consensus-based decisions, in particular when guidance is required by the Project Manager (PM). The Board will play a critical role in project monitoring and evaluations by assuring the quality of these processes and associated products, and by using evaluations for improving performance, accountability and learning. The Project Board will ensure that required resources are committed. It will also arbitrate on any conflicts within the project and negotiate solutions to any problems with external bodies.

The Project Board will consist of the representatives of SIDA, UNDP, Implementing Partner (MADRE) and main stakeholders, like, Ministry of Economy and Infrastructure, Agency "Apele Moldovei", water user organization and 1 (one) representative of NGO. PB may also include 1 (one) representative of the academic/ research institution. It is recommended for PB to include women and men as members.

Specific responsibilities of the PB should include:

- (i) For the processes of justifying, defining and initiating a project:
 - Appraise and approve work plans submitted by the Project Manager;
 - Delegate Project Assurance roles as appropriate;
 - Commit project resources required by the work plan.
- (ii) For the process of running a project:
 - Provide overall guidance and direction to the project, ensuring it remains within any specified constraints;
 - Review project quarterly and annual plans and approve any essential deviations from the original plans;
 - Review and approve progress and annual, as well as mid-term and final evaluation's project reports, make recommendations for follow-up actions;
 - Provide ad-hoc direction and advice for exception situations when project manager's tolerances are exceeded;
 - Assess and decide on conceptual project changes if necessary;
 - Assure that all planned deliverables are delivered satisfactorily and programme management directives are compiled;
- (iii) For the process of closing a project:
 - Assure that all products/outputs are delivered satisfactorily;
 - Review and approve the end of project report;
 - Make recommendations for follow-up actions and post project review plan;
 - Notify project closure to the stakeholders.

Project Board decisions shall be made in accordance with international standards that shall ensure management for development results, best value for money, fairness, integrity, transparency, and effective international competition. Members of the Project Board will consist of key national government representatives, UNDP senior official and other stakeholders. Potential members of the Project Board will be reviewed and recommended for approval during the Local Project Appraisal Committee (LPAC) meeting. The final composition of the Project Board will be decided at the outset of project operations and presented in the Inception Report. New members into the Board or participants into the Board meetings during the project implementation can be invited at the decision of the Board, by ensuring, however, that the Board will remain sufficiently lean to facilitate its effective operation. The Project Board will contain of three distinct roles:

Executive Role: Representing the project ownership. The Ministry of Agriculture Regional Development and Environment will appoint the representative in the project Board, who co-sign project AWP's as well as quarterly and annual Combined Delivery Reports.

Senior Supplier Role: This requires the representation of the interests of the funding parties for specific cost sharing projects and/or technical expertise to the project. The Senior Supplier's primary function within the Board will be to provide guidance regarding the technical feasibility of the project. This role will rest with UNDP Moldova Country Office and represented by the Deputy Resident Representative.

Senior Beneficiary Role: This role requires representing the interests of those who will ultimately benefit from the project. The Senior Beneficiary's primary function within the Board will be to ensure the realization of project results from the perspective of different stakeholders and beneficiaries. Local Public Authorities will represent interest of beneficiaries in the Project Board.

Project Assurance: The Project Assurance role supports the Project Board Executive by carrying out objective and independent project oversight and monitoring functions which are mandatory on all projects.

The Project Assurance role supports the Project Board by carrying out objective and independent project oversight and monitoring functions. Project Assurance has to be independent of the Project

Manager; therefore, the Project Board cannot delegate any of its assurance responsibilities to the Project Manager. The Project Assurance role will rest with the Environment, Energy and Climate Change Cluster Lead of UNDP CO. Additional quality assurance will be provided by the UNDP Regional Technical Advisor as needed.

The following list includes the key suggested aspects that need to be checked by the Project Assurance throughout the project as part of ensuring that it remains consistent with, and continues to meet, a business need and that no change to the external environment effects the validity of the project:

- Ensure that funds are made available to the project;
- Ensure that risks and issues are properly managed and monitored, and that the logs are regularly updated;
- Ensure that Project Progress/Financial Reports are prepared and submitted on time, and according to standards in terms of format and content quality and submitted to the Project Board.

The Project Management Unit (PMU) will be established and will comprise of a Project Manager and a Project Assistant. The PMU will be headed by the Project Manager (PM) who will be recruited on a competitive basis. The PM will run the project on a day-to-day basis on behalf of UNDP and MARDE within the constraints laid down by the Board. The PM's prime responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost. Development and consolidation of work plans, preparation of quarterly/annual progress reports, supervision the work of the project thematic experts, etc. are major responsibility of the PM.

Where necessary and justified, support services of the UNDP Office in Moldova will be provided to meet the responsibilities mentioned above. UNDP will provide support in administrative and financial matters as described below:

IX. LEGAL CONTEXT

This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the Government of (country) and UNDP, signed in 1992. All references in the SBAA to "Executing Agency" shall be deemed to refer to "Implementing Partner", as such term is defined and used in this document.

This project will be implemented by the Ministry of Agriculture, Regional Development and Environment ("Implementing Partner") in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP.

Any designations on maps or other references employed in this project document do not imply the expression of any opinion whatsoever on the part of UNDP concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

X. RISK MANAGEMENT

1. Consistent with the Article III of the SBAA, the responsibility for the safety and security of the Implementing Partner and its personnel and property, and of UNDP's property in the

Implementing Partner's custody, rests with the Implementing Partner. To this end, the Implementing Partner shall:

- 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;
 - assume all risks and liabilities related to the Implementing Partner's security, and the full implementation of the security plan.
2. 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 the Implementing Partner's obligations under this Project Document.
 3. The Implementing Partner agrees to undertake all reasonable efforts to ensure that no 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/sc/committees/1267/aq_sanctions_list.shtml.
 4. Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (<http://www.undp.org/ses>) and related Accountability Mechanism, <http://www.undp.org/secu-srm>.
 5. The Implementing Partner shall: (a) conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or programme to comply with such standards, and (c) engage in a constructive and timely manner to address any concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.
 6. All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any programme or project-related commitments or compliance with the UNDP Social and Environmental Standards. This includes providing access to project sites, relevant personnel, information, and documentation.
 7. The Implementing Partner will take appropriate steps to prevent misuse of funds, fraud or corruption, by its officials, consultants, responsible parties, subcontractors and sub-recipients in implementing the project or using UNDP funds. The Implementing Partner will ensure that its financial management, anti-corruption and anti-fraud policies are in place and enforced for all funding received from or through UNDP.
 8. The requirements of the following documents, then in force at the time of signature of the Project Document, apply to the Implementing Partner: (a) UNDP Policy on Fraud and other Corrupt Practices and (b) UNDP Office of Audit and Investigations Investigation Guidelines. The Implementing Partner agrees to the requirements of the above documents, which are an integral part of this Project Document and are available online at www.undp.org.
 9. In the event that an investigation is required, UNDP has the obligation to conduct investigations relating to any aspect of UNDP projects and programmes. The Implementing Partner shall provide its full cooperation, including making available personnel, relevant documentation, and granting access to the Implementing Partner's (and its consultants', responsible parties', subcontractors' and sub-recipients') premises, for such purposes at reasonable times and on reasonable conditions as may be required for the purpose of an investigation. Should there be a limitation in meeting this obligation, UNDP shall consult with the Implementing Partner to find a solution.
 10. The signatories to this Project Document will promptly inform one another in case of any incidence of inappropriate use of funds, or credible allegation of fraud or corruption with due confidentiality.

11. Where the Implementing Partner becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, the Implementing Partner will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). The Implementing Partner shall provide regular updates to the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.
12. The Implementing Partner agrees that, where applicable, donors to UNDP (including the Government) whose funding is the source, in whole or in part, of the funds for the activities which are the subject of this Project Document, may seek recourse to the Implementing Partner for the recovery of any funds determined by UNDP to have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document (the term "Project Document" as used in this clause shall be deemed to include any relevant subsidiary agreement further to the Project Document, including those with responsible parties, subcontractors and sub-recipients).
13. Each contract issued by the Implementing Partner in connection with this Project Document shall include a provision representing that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the proposal, have been given, received, or promised in connection with the selection process or in contract execution, and that the recipient of funds from the Implementing Partner shall cooperate with any and all investigations and post-payment audits.
14. Should UNDP refer to the relevant national authorities for appropriate legal action any alleged wrongdoing relating to the project, the Government will ensure that the relevant national authorities shall actively investigate the same and take appropriate legal action against all individuals found to have participated in the wrongdoing, recover and return any recovered funds to UNDP.
15. The Implementing Partner shall ensure that all of its obligations set forth under this section entitled "Risk Management" are passed on to each responsible party, subcontractor and sub-recipient and that all the clauses under this section entitled "Risk Management Standard Clauses" are included, mutatis mutandis, in all sub-contracts or sub-agreements entered into further to this Project Document.

XI. REFERENCES

1. Academician Leo Berg – 140: Collection of scientific articles. Bendery, 2016. <http://www.eco-tiras.org/docs/berg/Berg-2016-140-years-Proceedings.pdf>
2. Agreement between the Government of the Republic of Moldova and the Government of Ukraine on the Joint Use and Protection of the Cross-Border Waters, 1994, <http://www.eco-tiras.org/index.php/dniester-river-basin-treaty-rome-2012>
3. Appeal of the Ministry of Environment of the Republic of Moldova to the Ukrainian relevant authorities concerning providing the Energy Strategy, reports and other relevant information as required by the SEA Protocol, 2017.
4. Appeal of the Ministry of Environment of the Republic of Moldova to representations of the international organizations in Moldova concerning proving support in evaluation of impact on the Dniester River basin downstream due to the functioning of the Dniester Hydropower Complex, 2016.
5. Dniester HPPSS Environmental Impact Assessment Report. Ukrhydroproject. 1996. 732-T-129
6. Dniester HPPSS Environmental Impact Assessment Abridged Report. Ukrhydroproject. 2006. 732-T 31.
7. Dniester Hydropower Complex - Pumped Storage Project, Environmental Flows Analysis World Bank Ukraine, Final Report, 2007
8. Dniester River water resources study. Delft Hydraulics, Delft
9. Efros Ion. Why the Ukrainian hydropower infrastructure on Dniester will destroy Moldova and how to prevent such a disaster? Chisinau, 2018.
10. Environment in the Dniester River Basin (West Ukraine). Environ. Sci. & Pollut. Res. 11(4), p. 279-280.
11. Non-paper of the Moldovan CSOs on the situation on the negotiations between Moldovan and Ukrainian Governments regarding the Dniester Hydropower Agreement, 2018.
12. Sharapanovskaya, T. Ecological problems of the middle Dniester. Chisinau, 1999. 87 p.
13. Shevtsova, L.V., S.O. Afanas.yev, N.I. Goncharenko, N.L. Shevtsova, O.I. Tsybulskiy & L.V. Guleikova 2005. Environmental evaluation of the influence of the work of Dniester HSPS on water objects (current status and predictive estimate verification). National Academy of Sciences of Ukraine Hydrobiology Institute (HI NASU). 732-8-T202, 50 p.
14. Transboundary diagnostic study for the Dniester river basin. OSCE/UNECE Project: Transboundary Co-operation and Sustainable Management of the Dniester River. UNECE and OSCE, Kiev and Geneva, November 2005. 94 p.
15. Замечания Молдавской Стороны к Правилам эксплуатации водохранилищ Днестровского каскада ГЭС, ГАЭС при НПУ 77,10 м буферного водохранилища, 2018ю
16. План работы рабочей группы по биологическому разнообразию, <http://dniester-basin.org/ru/materials/plenipotentiaries/>
17. Протокол встречи Уполномоченных о совместном использовании и охране пограничных вод (2010 г.), <http://dniester-basin.org/ru/materials/plenipotentiaries/>
18. Протокол встречи Уполномоченных по экологическим попускам (Новоднестровск, Украина апрель 2009 г.), <http://dniester-basin.org/ru/materials/plenipotentiaries/>
19. Протокол о намерениях относительно сотрудничества в области экологического оздоровления бассейна реки Днестр, <http://dniester-basin.org/ru/materials/dnestr1/>
20. Регламент по водно-экологическому мониторингу, <http://dniester-basin.org/ru/materials/plenipotentiaries/>
21. Состояние и пути совершенствования международно-правовой базы трансграничного сотрудничества по охране и устойчивому использованию водных ресурсов бассейна реки Днестр, <http://dniester-basin.org/ru/materials/dnestr1/>

