GEF Danube River Basin Hydromorphology And River Restoration project (DYNA)

Component 3. Demonstration Pilots –

Restoration of the Botar River Morphology and Its Hydrological Regime

Environmental and Social Management Framework

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1. Introduction

The Danube River Basin covers more than 800,000 square kilometres – 10% of continental Europe – and extends into the territories of 19 countries. This makes it the most international river basin in the world. Over 80 million people live in this basin, depending on the Danube for drinking water, energy production, agriculture, and transport. The Danube River Basin covers numerous sub-basins, including Sava, Tisza and Prut.

Over 100 years of navigation, flood-protection, hydropower generation, and sediment extraction have significantly altered the morphological structure of the Danube River Basin, leaving only 17% of water bodies in a 'natural' state. This resulted in a range of environmental problems and hydromorphological alterations.

The Danube River Basin Hydromorphology and River Restoration (DYNA) project builds on nearly 30 years' experience through the Global Environment Fund (GEF), European Union (EU) and other national actors within the Danube River Basin. The GEF has supported key activities through multiple projects and provided over 100M USD in grants to strengthen the management of environmental issues in the region whilst enabling sustainable and improving socio-economic conditions.

1.1 The DYNA Project

The DYNA project aims to "Strengthen integrated and harmonised approaches for river restoration and aquatic biodiversity conservation responding to pressures from hydromorphological alterations in the Danube River Basin" with a focus on the five non-EU countries (Bosnia-Herzegovina, Moldova, Montenegro, Serbia, and Ukraine). This objective will be achieved through 4 interlinked components:

- Harmonising regional approaches to reduce hydromorphological pressures;
- Strengthening country-level efforts to implement relevant Danube River Basin Management Plans;
- Demonstration pilot projects for Danube river restoration;
- Knowledge management and effective project Monitoring and Evaluation.

Component 3 of the DYNA Project will comprise of the preparation of one transboundary pilot project across two non-EU Member States and three pilots in non-EU Member States, which will demonstrate hydromorphological pressure reduction and integrated approaches in river basin and flood risk management planning and implementation. The pilots will showcase good practices in river basin management with respect to addressing pressures from hydromorphological alterations and assist with increasing national capacity on project design and implementation.

1.2 The Botar River Pilot

One of the pilots that was selected for implementation is the project on "Restoration of the Botar River morphology and its hydrological regime." The location of the pilot is at the Vynohgradivskyi Rayon, Zakarpats'ka oblast in Ukraine.

Botar River is a left tributary of the Tisza River. The major part of the river basin is in Ukraine, shared with Hungary and Romania.

The river basin of Botar is prone to flooding, hence man-made defense structures have been created to protect human settlements. Since the 1930s, the river has been channelized, strengthened with dykes and divided into two parts (Old and New Botar) to discharge water to the Tisza River during flooding. As a result, the hydromorphological aspects of the river has been significantly altered, with almost no water flowing in the Old Botar from the point of the divide, giving way to overgrown vegetation. The Botar melioration system used to be linked to the local irrigation scheme, but it has been out of use since the 1990s. The sluices at the divide of old and new Botar are leaking. Small scale irrigation and drinking water supply in local villages rely on local wells.

According to observations of local stakeholders, these developments have caused the groundwater table to drop by approx. 3m within the last 10 years. Pumped groundwater for household use is increasingly of poor quality and sometimes even not good enough for irrigation. The Botar River has also lost its recreational value during summer time, and local children bath in the dangerous Tisza waters instead.

Attempts by the Tisza River Basin Water Resources Directorate to improve discharge into old Botar riverbed failed most likely because the channel was blocked downstream by vegetation and sediment accumulation.

The suggested pilot aims to restore the hydromorphological and ecological characteristics of the Botar River through riverbed re-naturalization and other related activities. Its main benefits will consist of securing improved water sources for local farming and wildlife. The pilot was originally proposed by the Tisza Basin River Basin Water Resources Management Directorate, and further

developed by the WWF staff and other local stakeholders. The pilot project is a follow-up of the previous project Hungary-Slovakia-Romania-Ukraine ENPI CBC Programme 2007-2013 "Sustainable Management of Natural Resources in Interfluves of Tisza-Tur Rivers" (HUSKROUA/0901/040).

While the pilot is expected to contribute to long-term ecological benefits, its development planning are still in process and full information regarding the planned activities is not yet available.

1.3 Objective of the ESMF

The DYNA Project will be financed by the Global Environment Facility (GEF), and WWF is the accredited entity negotiating the Project with GEF. Hence, the WWF's Environmental and Social Safeguard Integrated Policies and Procedures (SIPP) apply to the project, and require the preparation of an Environmental and Social Monitoring Framework (ESMF).

The principles and procedures of the ESMF apply both to project activities that are funded through GEF and to activities that are funded from other sources.

The preparation of this ESMF was required in accordance with the WWF's SIPP in order to identify and manage the environmental and social risks and impacts of the demonstration pilot on the "Restoration of the Botar River morphology and its hydrological regime," which will be carried out as part of the GEF DYNA project. The ESMF aims to outline the principles, procedures, and mitigation measures for addressing environmental and social impacts associated with the project in accordance with the laws and regulations of Ukraine and with SIPP.

Since the precise scope of activities that will be implemented as part of the pilot will only be determined during the implementation phase, site-specific social and environmental impacts are uncertain at this stage. Thus, the development of site-specific Environmental and Social Management Plans (ESMPs) is currently not feasible, and an ESMF is necessary to set out procedures for addressing potential adverse social and environmental impacts that may occur during project activities. Site-specific ESMPs will be developed pursuant to the guidance provided by this ESMF during project implementation.

The specific objectives of the ESMF include the following:

- Identify the positive and negative social and environmental impacts and risks associated with the implementation of the Project;
- Outline the legal and regulatory framework that is relevant to the Project implementation;
- Specify appropriate roles and responsibilities of actors and parties involved in the ESMF implementation;
- Propose a set of actionable recommendations and measures to mitigate any negative impacts and enhance positive impacts;
- Develop a screening and assessment methodology for potential activities, that will allow an environmental/social risk classification and the identification of appropriate safeguards instruments;
- Set out procedures to establish mechanisms to monitor the implementation and efficacy of the proposed mitigation measures;

- Outline requirements related to disclosure, grievance redress, capacity building activities, and budget required for the implementation of the ESMF.

In general, the anticipated adverse environmental and social impacts of project activities are positive, and adverse impacts are temporary, site-specific, reversible and can be readily mitigated. Thus, the DYNA Project is classified as a "Category B" project under the WWF Environmental and Social Safeguards Categorization Memorandum.

1.4 ESMF Preparation Methodology

The ESMF was prepared based on the following information:

a) Technical documentation provided by WWF Ukraine;

b) Desk review of the WWF SIPP and Ukrainian environmental and social assessment laws, regulations, and policies;

c) Stakeholder engagement workshop that was carried out by WWF Ukraine May and September 2018 in Nevetlenfolvo and Pyiterfolvo, Ukraine;

d) Meetings and discussions with stakeholders undertaken as part of a safeguards mission for the DYNA project in January 2019.

2. Project Description

2.1 Pilot objectives

The Botar River belongs to the Danube River basin and is the left tributary of the Tisza River. Over the years, the Botar River was channelized mainly for flood protection, as well as irrigation purposes and strengthened with dykes. Additionally, the New Botar channel was constructed, dividing the river into two parts – Botar and Old Botar . The Old Botar River (12.678 km) downstream area is completely dry most of the year due to siltation and the water flow has been altered significantly resulting in vegetation growth. There is no migration of fish due to the limited free flow of water and sedimentation and overgrown vegetation has resulted in the rise of water levels in the Old Botar to 2 meters and even at times to 3 meters which has resulted in flooding. In addition, this has impacted the groundwater levels which is used at present for irrigation and drinking purposes.

The lack of water in the Botar river basin has resulted in challenges both for biodiversity conservation and for farming, which is the main source of income for local communities. The pilot aims to restore the hydromorphological and ecological characteristics of Botar River, by increasing the water level in the Botar river to benefit both agriculture and wildlife conservation.

The Botar River Basin has been studied in detail as part of the EU CBC project "Sustainable Management of Natural Resources in Interfluves of Tisza-Tur Rivers". It included a preliminary ecological status determination of the Botar River as well as a biodiversity assessment according to Natura 2000 requirements. These studies have concluded that the restored river basin could serve as potential Area of Significant Conservation Interest (ASCI Emerald network).

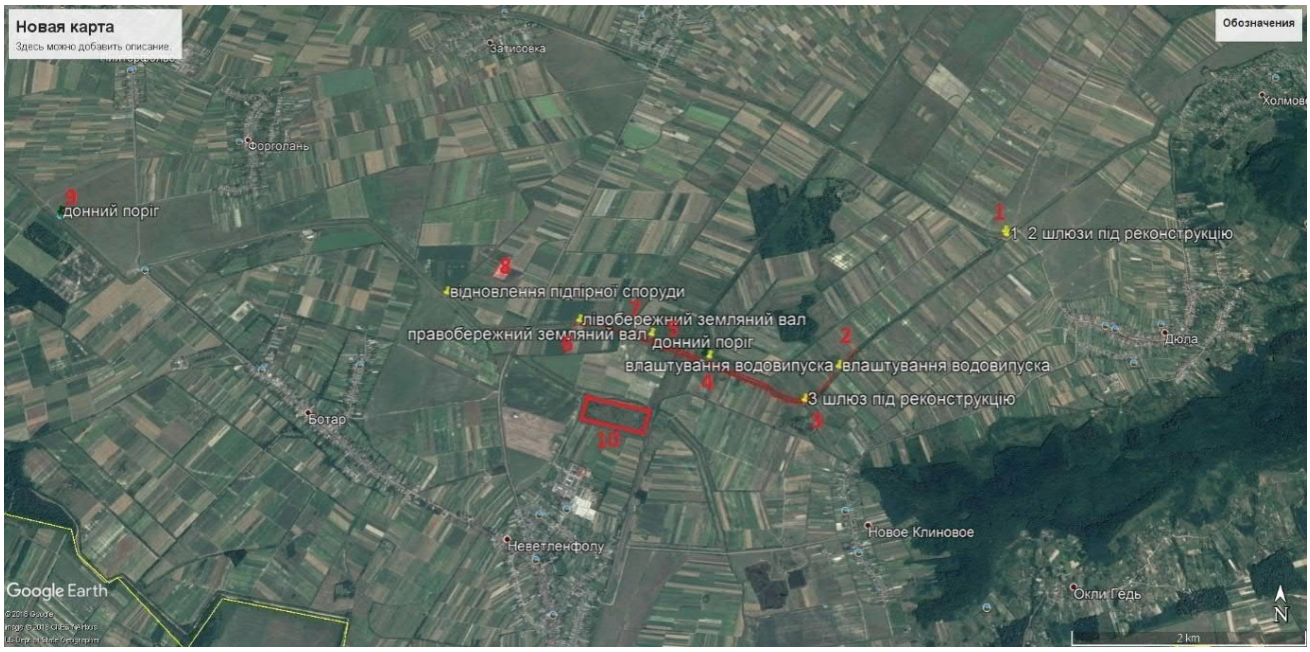
Specific objectives include the following:

- Securing the leak tightness and strengthening the operability of sluices at the divide between New and Old Botar.
- Improving the conveyance capacity of Old Botar.
- Supporting hydromorphological requirements in Old Botar to enable flood waters to pass through.
- Securing the flow path in Old Batar, while avoiding impact on existing vegetation, creating recreational opportunities for local villages, and generating a retreat for fauna (not just fish) during low flow conditions.
- Constructing rock sills to ensure stable water flow.
- Reforestation of one of the river banks

The project shall demonstrate that the ecological restoration of the riverbed can have a positive impact on the water level and biodiversity of Old Botar, while also contributing to the socio-economic wellbeing of the local community.

2.2 Proposed pilot activities

The pilot will consist of riverbed re-naturalization and restoration measures of the Botar River (without affecting the current flooding scheme). Indicative activities that were identified during consultations with stakeholders and experts and that are considered for implementation include the following:



I. Studies and design of the project for the construction work

(1) Feasibility study

(2) Design of the construction project

II. Construction and ground work(the numbers in red refer to the locations marked on the map above):

(1) "1" Rehabilitation of two sluices (one of Old Batar Channel, one on New Batar Channel, where river is divided into two channels).

(2) "2", "3", "4" – Construction of three culvert inlets in the dykes to accept the access water from the fields under bridges.

(3) "5", "8", "9" – Construction of three rock sills, one which may include a sluice to accumulate the water and regulate the flow (the sluice construction is still to be confirmed).

(4) From "1" to "5" (distance about 5.4km) – restoration the natural riverbed and building dykes "6", "7" (dykes are needed for the small area). This will include excavation activities, and the sediment will be used for dykes construction. Design drawings will be prepared as part of the feasibility study.

(5) From "5" a little bit further than "9" – partial restoration of the riverbed (the part of the riverbed does not have too much of the sediment, so it could do for the fragmented restoration. Distance about 7.6 km, no new dykes will be constructed.)

(6) "10" – It is considered, but not yet confirmed, to reconstruct the storage facility to accept and accumulate water from the Klenovskyi brook. The construction of the facility began in 1980s, but had never been finalized (it is currently 70% complete). The land belongs to the Water Management Authority. Excavation work would be necessary, as well as construction of two sluices and one revetment wall. A recreational area for local communities may also be established.

(7) Construction of two recreation zones (beach area with sand) -- one on Botar River near the village, second on the storage facility mentioned above.

(8) It is considered, but not yet confirmed, to construct a recreation spot near the Botar River source in the mountain area. No communities reside in the area and the land is currently not used for any purpose.

(9) Reforestation – Planting 1300 trees on one side of the river bank

III. Monitoring of water level of the surface and underground water

(1) Establishing surface water level monitoring sites on the New Batar and/or Old Batar

(2) Establishing ground water monitoring sites (wells) in New Batar and/or Old Batar

It is expected that the feasibility studies phase of the project will last for nearly one year, and only then pilot activities could be started. The implementation of these activities would require 1-2 years, based on the recommendations of the feasibility studies.

3. Project Area Profile

3.1 Geographic and hydrological information

The Botar River originates on the southwestern slopes of the Avesh mountains near the village of Novoselytsia (Vynohradiv district) and falls into the Tisza river near the village of Vilok. The length of the river is 53 km, and the area of the river basin is 345 km^2. All tributaries of the river are begin on the slides of the Avesh Mountains. The new Botar canal is located in the vicinity of the Piyterfolvo village and falls into Tisza, and its length is 9.3 km.

The Old Botar River is divided into 4 water bodies totaling a distance of 53km. Sections 1 (2 Km) and 2 (6 km) are considered upstream and are high up in the mountain areas. Sections 3 (17 Km)

is between upstream and low land while section 4 (28 km) is in the low land. The GEF proposed pilot interventions will take place within section 4 is a round 6km of the section 4.

The mountainous area of the river occupies 36% of the catchment area (125 km^2) and is part of the Awash ridge, which gradually decreases from east to west and is strongly dissected by valleys of mountain rivers, gullies, ravines, on the background of which stand dome-shaped peaks covered with thick beech forest. About 43 km^2 of the catchment area with altitudes above 200 m falls to the territory of Ukraine, and the greater, 82 km^2 - to the territory of Romania. About 2/3 of the catchment area is plain, sometimes weakly waterlogged, with a network of drainage channels. Most of it is occupied by crops and bows. 25% of the territory of the pool is covered with forest.

The river network of the basin is well developed in the mountainous part, where it consists of numerous mountain streams. In the plain, it is poorly developed and complemented by a network of channels. In the summer, on the plain, the channeled riverbed often dries. The upstream part of the river is clean with no sewerage, the lower part is canalized with no meanders. In the summertime, this part of the river dries, turning into a cascade of detached small ponds, which in some years can also almost completely dry out.

The annual course of water level is characterized by rising water in the spring during snow melting and rain floods. The highest annual water levels are observed in the fall period, as well as in the spring during snowmaking and precipitation at the same time. The lowest levels are observed in the winter, as well as in the summer, in the absence of precipitation.

Changes in the hydrological regime of the river occurred after 1939, when the New Botar channel was constructed and other modifications were made. This resulted in the degradation of Old Botar due to lack of waterflow for most of the year.

The majority of nearby villages and settlements have no sewage or treatment facilities. These waste discharges exacerbate the rapid degradation of the river.

Images that exemplify the conditions of the Botar River pilot sites are available below.

River bed of the Botar River

Sluices that divide the Botar River and the channel New Botar.

The Botar River before the New Botar sluice.

Sluice on New Botar Channel

New Botar Channel

Old Botar River after the sluice.

Sluice on the Old Botar River

3.2 Flora and fauna

In the beginning of the 20th century, the Botar river basin was home to various waterbirds, and the local population grazed cattle on its embankments. These original flora and fauna were largely lost altered after the canalization of the river and the construction of dams. Natural non-transformed areas have been preserved only fragmentarily - in the form of small islands with vegetation on the slopes of the Yuliiv Mountains, as well as in the floodplains in the lower reaches of Botar, on the border with Hungary and on the river Routine on the border with Romania.

While the flora and fauna of the past have not disappeared, the restoration of the riverbed could create the conditions for the return of water birds and different fish species.

3.3 Demographic information

The Vynohradiv district, where the pilot sites will be located, is part of the Zakarpatye region, which borders in its south Hungary and Romania. As of October 2018, an estimated 121,100 people lived in the district. 71.4% of the population are Ukrainians, while 26.2% are of Hungarian ethnicity, 1.2% are Russians, and 0.8% are Roma. In 2012, Hungarian was recognized as a "regional" language in the district.

According to the national census of 2001, 1,632 individuals reside in the village of Nevetlenfolu (85% are Hungarian), and 2,016 people live in the village of Piyterfolvo—the two settlements that are located in the vicinity of the planned pilot sites. There is no detailed demographic information regarding the socio-economic conditions and income sources of the residents of these villages. This data will have to be collected after the completion of the feasibility study and once the precise project activities will be determined.

However, field visits conducted in preparation of the pilots showed that proposed intervention areas are not highly populated. Most communities around the proposed activity area engage in subsistence agriculture. There is some Mangalica pig farming and duck rearing in the communities, and recreational fishing is also practiced. These communities are Hungarian speaking minorities.

The proposed activities will not need any land acquisition however, activities may have temporary restriction to duck rearing activities during construction phases of the above-mentioned interventions.

4. Environment and Social Policy, Regulations and Guidelines

4.1 Ukraine's Policies, laws, Regulations Guidelines

Several legislative provisions and policies may be pertinent to the pilot project.

(i) Environmental aspects

The Ukrainian legislative and regulatory base which governs environmental issues is quite comprehensive, sophisticated and sometimes contradictory. It consists of: international conventions, treaties, protocols and agreements ratified by the Parliament (Verkhovna Rada); laws; resolutions (Postanova) and decrees (Rozporiadzhennia) of the Cabinet of Ministers of Ukraine (CMU); orders of the Ministries. By Resolutions of the CMU and orders of the Ministries various norms, rules, standards and guidances, often jointly referred to as regulations (normatyvno-pravovi akty) are approved.

The Law on Environmental Protection (1991) regulates institutional relations on environmental protection; water resources usage; renewable resources usage; environmental safety; prevention of negative impacts of productive activities on natural environment; preservation of nature and genetic fund of living organisms; preservation of unique landscapes including historical heritage. It sets a mandatory requirement for carrying out environmental impact assessment.

Law on Nature Reserve Fund (1992) defines the list of territories and objects of the nature reserve fund of national importance and the financing source. This law covers nature reserves, biosphere reserves, national nature parks, botanical gardens, parks, and zoological parks.

The Law of Ukraine on Pesticides and Agrichemicals (1995) regulates the state registration, production, purchase, transportation, storage and trade of pesticides and agro-chemicals. It is also regulates health and safety of the environment and people using pesticides and agro-chemicals. Specifically, the law assigns responsibility to test and register pesticides and agrochemical before their production, purchase and usage in Ukraine to the Ministry of Ecology and Natural Resources (MENR). The MENR must keep the registration list of pesticides and agro-chemicals that are permitted in Ukraine.

The Water Code was adopted in 1995 and amended regulates water conservation; rational water use; protection of water resources from pollution, contamination, and depletion; improvement of ecologic conditions of water bodies; and protection of water user's rights. The Water Code provides a background for the development of state targeted programs, regional programs, water cadaster and various legal acts. It foresees conducting ecological expertise during modernization and building the facilities related to water use; conducting a state recording of water consumption and sewage discharge; conducting standardization in the area of water protection and usage; and implementation of state monitoring of water resources.

Key environmental regulations and standards in the field of water resource management include:

- Resolution by CMU "On the Order of Approval and Obtaining Permits for Special Water Use";
- Resolution by CMU "On the Procedure of Development and Approval of Pollution Discharge Limits and the List of Polluting Substances, for which the Discharge Limits are Set";
- State Sanitary Rules and Norms: "Drinking Water. Hygienic Requirements to the Centrally Supplied Drinking Water Quality";
- Order by the Ministry of Environment and Nuclear Safety of Ukraine "The Guidance on the Procedure for Developing and Setting the Discharge Limit Values for Polluting Substances Released into Surface Waters with Effluent Discharges";
- Regulation "On the Rules of Designing and Operation of the Sanitary-Protection Zones of the Sources of Drinking Water".

The legal and institutional frameworks and key environmental requirements in the field of ambient air protection are defined in the Law of Ukraine “On Ambient Air Protection” (1992). This Law aims to facilitate the maintenance and restoration of ambient air to its natural state, the provision of safe living conditions and environmental safety, and the prevention of harmful effects of ambient air on human health and environment.

Key regulations and standards in the field of air protection include:

- Resolution by the Cabinet of Ministers of Ukraine, approving the Regulation "On the Procedure for Determining the Level of Impacts on Ambient Air, Attributed to Physical and Biological Factors";

- Resolution by the Cabinet of Ministers of Ukraine, approving the Regulation "On the Air Emission Permitting Regime for Stationary Sources";
- Resolution by the Cabinet of Ministers of Ukraine, approving the Regulation "On the Execution of State Control Functions in the Field of Ambient Air Protection";
- Guidelines on Preparing the Inventory of Air Emissions and Sources;
- Maximum Admissible Concentrations and "Probable Safe Effect Levels" for Polluting Substances Present in the Ambient Air in the Populated Areas.

The legal framework for waste management in Ukraine is provided in the Law of Ukraine “On Waste” (1998) and other legislative acts, designed to regulate activity in order to avoid or minimize generation of waste, their storage and handling, the prevention and mitigation of harmful effects of waste generation, storage and handling on the environment and human health. This Law also covers the sphere of responsibility of Ministry of Ecology and Natural Resources, Ministry of Regional Development and Construction, several other ministries and local authorities.

Key existing regulations and standards in the field of waste management include:

- The Law of Ukraine “On Sanitary and Epidemiological Well being of population” (1994);
- The Law of Ukraine “On Handling of Radioactive Wastes” (1995);
- The Law of Ukraine “On Metal Scrap” (1999);
- Resolution by the Cabinet of Ministers of Ukraine, approving the Regulation "On Governmental Accounting and Certification of Waste" (1999);
- Resolution by the Cabinet of Ministers of Ukraine, approving the Regulation “On Maintenance of Register of Waste Generation, Handling and Utilization Objects” (1998);
- Resolution by the Cabinet of Ministers of Ukraine, approving the Regulation "On Submission of the Declaration of Waste" (2016);
- Order by the State Committee on Standardization, Metrology and Certification, approving the “Waste Classifier” (1996).

The recently adopted Law of Ukraine ‘On Environmental Impact Assessment’ came into force in December 2017. The Law sets legal and organizational policies for an environmental impact assessment with a view to avoid and prevent environmental damage, ensure environmental safety, environmental protection, rational use and restoration of natural resources, in the process of decision-making on economic activities likely to cause a significant impact on the environment, taking into account state, public and private interests. The law requires mandatory assessment of effects (both direct and indirect) on the environment of certain industrial installations and activities including as follows:

- Chemical production including production of basic mineral fertilizers, production and storage of nano-materials of more than 10 tons per year.
- Hydro technical facilities of sea and river ports that can take vessels of over 1 350 tons.
- Deep water vessel ways including those along natural river beds, specialized canals on land and in shallow marine waters permitting the passage of vessels of over 1 350 tons.
- Groundwater abstraction or artificial groundwater recharge schemes where the annual volume of water abstracted or recharged is equivalent to or exceeds 10 million cubic meters.

As part of the assessment process, the environmental authorities (MENR or MENR’s regional offices) need to be provided with an assessment of the environmental effect and the report will be subject to public discussion. Based on this, environmental authorities provide their opinion on the assessment. A report on the environmental impact assessment, a report for public discussion, and an opinion of environmental authorities forms the basis for local authorities to issue a relevant permit.

(ii) Social Aspects

The following legal framework shall be used for the land acquisition purposes:

- The Constitution of Ukraine (Art. 13, 14, 41) stipulating that "no one shall be unlawfully deprived of the right of property. The right of private property is inviolable and "The expropriation of objects of the right of private property may be applied only as an exception for reasons of social necessity, on the grounds of and by the procedure established by law, and on the condition of advance and complete compensation of their value. The expropriation of such objects with subsequent complete compensation of their value is permitted only under conditions of martial law or a state of emergency" (Art. 41);

- Land Code of Ukraine (1 January 2002) (especially Articles 143, 146, 147, 149-151). The 'Land Code' of Ukraine (2001) regulates land relations to ensure the right to land of citizens, legal entities, territorial communities and the state, as well as the rational use and protection of the land in the interests of current and future generations. This law also regulates water relations, as well as relations of the use and protection of underground resources, as this concerns land relations.

- The Civil Code of Ukraine (16.01.2003, No. 435-IV), determining the procedure for termination of the ownership rights for immovable property due to the acquisition or alienation of lands on which the property is located for public needs; and regulating issues related to protection of ownership rights (Articles 350-351);

- The Code of Administrative Proceedings of Ukraine (06.07.2005), determining the way proceedings related to acquisition of land plots for public needs are conducted, e.g., legal courts make judgments about the cases of forced alienation of land plots, and other immovable property objects located on these plots, for public needs within two months from the moment of claim filing;

- Law of Ukraine "On allocation (condemnation) of plots of land, other objects of private estate property situated thereon, for public purpose" dated 17.11.2009 #1559-VI

Compensation for the temporary use of land during construction is established in the following Regulations of the Cabinet of Ministers:

- Regulation of the Cabinet of Ministers of Ukraine of 17.11.1997 No.1279 "On Size of and Procedure for Calculation of Agricultural and Forestry Losses Subject to Compensation" and Appendix
- "Procedure for Calculation and Compensation of Losses to Land Owners and Land Users" approved by Regulation of the Cabinet of Ministers of Ukraine of 19.04.1993 No.284

The Law of Ukraine 'On Access to Public Information' determines procedure for exercising and ensuring the right of everyone to access to information in possession of public authority and other administrators of public information determined by the Law and to information of public interest. The law specifies requirements for environmental information provision, not only by governmental organizations, but also by other economically active organization must provide information (if they posses it) on the state of environment; quality of food and consumer goods; disasters, hazardous natural events and other events which can pose threat to the health and well-being of citizens.

4.2 WWF Safeguards Policies and Procedures Applicable to the Project

WWF's safeguards policies require that any potentially adverse environmental and social impacts are identified, avoided, or mitigated. Safeguards policies that are relevant to this project are as follows.

(i) Policy on Environment and Social Risk Management

The project is classified as Category B based on initial analysis. Adverse environmental and social impacts that may occur as a result of project activities are expected to be site-specific, negligible and easily mitigated.

The exact location and impact of specific activities cannot be determined at this stage, and will only be known during project implementation. Thus, an ESMF was prepared to set out guidelines and procedures on how to identify, assess and monitor environmental and social impacts, and how to avoid or mitigate adverse impacts. Site-specific ESMP will be prepared as required, based on principles and guidelines of the ESMF.

(ii) Policy on Protection of Natural Habitats

As stated above, the overall environmental and social impacts of the proposed project are expected to be overwhelmingly positive and the project expected impacts on Natural Habitats are also expected to be significantly positive, through efforts to restore and re-naturalize the riverbed of the Botar river.

Nonetheless, potential minor small-scale impacts on Natural Habitats may occur during construction and reforestation activities. Provisions are be made in the ESMFs to adequately address such possibilities. Any other activity under the project will be screened for its potential to cause negative impacts to natural habitats under the ESMF procedures. If any such activity is likely to cause irreversible or significant damage to habitats it will be excluded from project grant funding.

(iii) Policy on Involuntary Resettlement

The WWF's policy seeks to ensure that adverse social or economic impacts on resource-dependent local communities as a result from conservation-related restrictions on resource access and/or use are avoided or minimized. Resolution of conflicts between conservation objectives and local livelihoods is sought primarily through voluntary agreements, including benefits commensurate with any losses incurred. Involuntary resettlement is avoided or minimized, including through assessment of all viable alternative project designs and, in limited circumstances where this is not possible, displaced persons are assisted in improving or at least restoring their livelihoods and standards of living relative to pre-displacement or pre-project levels (whichever is higher).

The project is not expected to involve land acquisition leading to involuntary resettlement of project affected persons (PAPs). All project activities will be executed on government- or community-owned lands. Any project activities that might affect privately owned land will only be carried out if no adverse impacts are caused to land owners and after obtaining their explicit and written permission.

Some of the planned activities may have some minor effects on the livelihoods of local communities, such as temporarily restricting access to duck rearing during the construction activities. To mitigate any adverse impacts, all activities that may affect local communities' access livelihoods will be closely coordinated with community representatives and only carried out after consultations with all relevant stakeholders. If disturbance of access to livelihoods cannot be

avoided, full and timely compensation shall be provided to all livelihood users, irrespective of their formal land ownership status or title.

(iv) Policy on Accountability and Grievance System

Project-affected communities and other interested stakeholders may raise a grievance at any time to WWF Ukraine and the Vynogradiv Interrayon Water Management Administration. The WWF Ukraine project team will be responsible for informing project-affected parties about the Accountability and Grievance Mechanism. Contact information of the Project Team and WWF will be made publicly available. Relevant details are also provided in the Grievance Redress & Process Framework section of this ESMF.

The WWF Policy on Accountability and Grievance Mechanism is not intended to replace project- and country-level dispute resolution and redress mechanisms. This mechanism is designed to: Address potential breaches of WWF's policies and procedures; be independent, transparent, and effective; be accessible to project-affected people; keep complainants abreast of progress of cases brought forward; and maintain records on all cases and issues brought forward for review.

(v) Health and Safety

While there is no separate WWF policy on occupational and community health and safety, these issues are taken into account as part of the general WWF policy on Environment and Social Risk Management, and the screening process that applies to all project-related activities. These general standards require employers and supervisors to implement all reasonable precautions to protect the health and safety of workers through the introduction of preventive and protective measures. They also require to ensure that the labor rights of project-employed workers are observed, as indicated in the screening tool in Annex II.

Project activities should also prevent adverse impact involving quality and supply of water to affected communities; safety of project infrastructure, life and properties; protective mechanisms for the use of hazardous materials; disease prevention procedures; and emergency preparedness and response.

4.3 Gaps between Ukrainian laws and policies and the WWF's SIPP

In general, the laws, policies, and guidelines of Ukraine are in line with the WWF's environmental and social safeguards requirements. However, there are a few differences between the two systems, as discussed below. In all cases of conflict or discrepancy, the requirements of the WWF will prevail, for the purpose of the DYNA project, over Ukrainian laws and regulations.

With regard to environmental impacts, there are no direct contradictions between Ukrainian laws and regulations and the WWF's SIPP, but the requirements of the latter are more extensive. For instance, WWF's SIPP require a thorough environmental and social analysis of the impact of specific project activities on the environment and on local communities before the activity is formally approved and any funds are disbursed. These requirements are beyond the environmental clearance process prescribed by the Ukrainian legislation. All project activities should fully comply both with the Ukrainian Regulations on the Environmental Impact Assessment, and with the procedures and mitigation measures prescribed in this ESMF. In case that the WWF's SIPP requirements are more extensive, strict, or detailed than the Ukrainian legislation and policies, the former will apply to all project activities.

With regard to social impacts, the primary discrepancies between Ukrainian laws and regulations and the WWF's SIPP refer to the status of non-title holders and informal land use, and the commitment to participatory decision-making processes. First, according to the WWF's SIPP, all

users of land and natural resources (including people that lack any formal legal ownership title or usage rights) are eligible to some form of assistance or compensation if the project adversely affects their livelihoods. Ukrainian laws only recognize the eligibility of land owners or formal users to receive compensation in such cases. Second, the WWF's SIPP require extensive community consultations as part of the development of various safeguards documents and during project activities. Ukrainian legislation does not include similar requirements.

For the purposes of the DYNA project, the provisions of the WWF's SIPP shall prevail over the Ukrainian legislation and policies in all cases of discrepancy.

5. Institutional Framework

Several government institutions are pertinent for the implementation of pilot activities.

- ICPDR: will be responsible for the overall execution of the project and will chair the PSC. The ICPDR will be responsible for submission of all reports to the GEF Agency (technical and financial). The ICPDR will be responsible for hiring and supervising the project manager.
- WWF Ukraine will coordinate and manage all pilot activities, carrying out feasibility studies, preparing technical documentation and obtaining all necessary permits, as well as stakeholder engagement and communication.
- The Tisza River Basin Water Resources Directorate (TRBWRD) in Uzhgorod will be subcontracted by WWF Ukraine to carry out construction activities. It will be in charge of procuring the construction works, and overseeing the implementation of safeguards and other WWF requirements. TRBWRD has significant knowledge and experience implementing projects in the area.

Pilot activities will also be closely coordinated with the following entities:

- The Vynogradiv Inter-rayon Water Management Administration: to obtain all necessary permits and ensure that pilot activities are well integrated with other priorities and programs of the Administration.
- Nevetlenfolivs'ka village council and Pijterfolvivs'ka village council: to ensure that pilot activities do not cause any adverse impacts to the village residents, address their needs, and reflect their priorities.

6. Anticipated Environmental and Social Impacts and Mitigation Measures

The first phase of the project will consist of feasibility studies, and will thus have no adverse environmental or social impacts.

The second phase of the project will consist of construction and ground works. The following activities are considered:

- Rehabilitation of two sluices (one of Old Batar Channel, one on New Batar Channel, where river is divided into two channels).
- Construction of three culvert inlets in existing dykes to accept the access water from the fields under bridges.
- Construction of three rock sills, one which may include a sluice to accumulate the water and regulate the flow (the sluice construction is still to be confirmed).

- Restoration the natural riverbed and building dykes. This will include excavation activities, and the sediment will be used for dykes construction.
- Rehabilitation of a storage facility to accept and accumulate water from the Klenovskyi brook (The land and the facility belong to the Water Management Authority). Excavation work would be necessary, as well as construction of two sluices and one revetment wall. A recreational area for local communities may also be established.
- Construction of recreation zones (beach area with sand) -- one on Botar River near the village, second in the vicinity of the storage facility mentioned above.
- Construction of a recreation spot near the Botar River source in the mountain area. No communities reside in the area and the land is currently not used for any purpose.
- Reforestation – Planting 1300 trees on one side of the river bank

The purpose of all construction activities is to restore the hydromorphological and ecological characteristics of the Botar River through riverbed re-naturalization and other related activities. Its main benefits will consist of securing improved water sources for local farming and wildlife.

Adverse environmental impacts may include an increase in dust, noise, vibration, waste generation, traffic hindrance, public safety, and exploitation of construction materials (soil, gravel, rocks, etc.). These potential negative impacts will be moderate, localized, temporary, and can be mitigated through the application of good construction and management practices and with close supervision of contractor performance by field engineers and in close consultation with local communities.

Adverse social impacts are expected to be minimal and may consist of restricting access to duck rearing and recreation. There should be no conflict expected as lands are either owned by the government or farmers have agreed to contribute to the river restoration project by providing parts of their lands. The water use of individuals and communities should not expect any negative impact; on the contrary, water use shall be improved thanks to the pilot project. As demographic information regarding the pilot sites is scarce, it is recommended that the feasibility study which is planned as part of the pilot would include a demographic survey of the local population (including land ownership and usage rights and income sources).

Potential adverse impacts and recommended mitigation measures are outlined below.

While this ESMF outlines potential adverse impacts and general mitigation measures, an Environmental Management Plan will have to be developed upon the selection of the pilot implementation site. The EMP will rely on the specific conditions of the site and reflect the hazards that might result from the construction method that will be selected. It will include site-specific mitigation measures and monitoring requirements that will need to be undertaken by the implementing entities of each pilot activity (WWF Ukraine and TRBWRD). The ESMP's mitigation measures encompass actions that will reduce hazards, which could impact health and safety of the construction workers, and the public; measures related to soil and water pollution from oil and fuel, noise, air quality (dust), excavation of materials and disposal of surplus soil/earth and other materials; etc.

WWF Ukraine and TRBWRD will need to allocate a staff person to the oversight of safeguard requirements. Necessary budget will have to be assigned accordingly.

Annex II to this ESMF provides a format for the Screening of Environmental and Social Impacts for Pilot Activities that should be undertaken before any pilot activities are carried out.

Annex III provides a format for Environmental and Social Compliance Monitoring that should be carried out during the implementation of pilot activities.

Potential adverse impact	Mitigation measures	Responsible authority
Environmental impacts		
Soil pollution and waste disposal during construction works ➢ Contamination of surrounding soil with emission of gases or dust from transportation vehicles /construction machines. ➢ Soil erosion ➢ Loss of existing biodiversity and impacts on natural habitats ➢ Contamination caused by temporary construction activities, such as disposing of waste.	➢ Conduct on-site investigation of local conditions, incl. soil survey ➢ Provide slope protection through soil compaction, riprapping on critical sections, or vegetative stabilization ➢ Minimize soil excavation and dispose spoils in designated areas; to the extent possible, all excavated soil shall be reused on site for dykes construction or other purposes. ➢ Collect construction waste and dispose properly in designated areas by licensed collectors ➢ Do not permit rubbish to fall freely from any locations of the project and/or access by animals (dogs, cats, pigs, etc.). Use appropriate containers. ➢ Maintain properly construction equipment and vehicles; ➢ Conduct on-site monitoring and protection	TRBWRD; contractor
Air pollution during construction ➢ Construction works might result with increased concentration of polluting substances, primarily dust and exhaust gases from vehicles (machines engaged in the works execution). ➢ Suspended particles (dust) that will rise from transport roads when used for machinery transportation or trucks passing.	➢ Contractor to present proof of compliance with emission standards ➢ Wet areas of dust sources to minimize discomfort to nearby residents ➢ Control of vehicle speed to lessen suspension of road dust	TRBWRD; contractor

	➢ Keep the surrounding environment (sidewalks, roads) free of debris to minimize dust	
Noise levels ➢ Human presence and execution of works at the location, and movement of vehicles and construction mechanization.	➢ Schedule equipment movement during non-peak hours of daytime vehicular traffic ➢ Avoid night-time construction activities and abide by local laws on construction hours	TRBWRD; contractor
Health and safety risks ➢ Construction workers, as well as the local population, may be exposed to health and safety risks during road construction works	➢ Notify the public of the works through appropriate notification in the media and/or at publicly accessible sites (including the site of the works). ➢ Formally agree with the Contractor that all work will be carried out in a safe and disciplined manner designed to minimize impacts on neighboring residents and environment. ➢ Formally agree with the Contractor that workers health and safety requirements will comply with international good practice (always hardhats, as needed masks and safety glasses, harnesses and safety boots). ➢ Appropriate signposting of the sites will inform workers of key rules and regulations to follow and emergency contact numbers. ➢ Provide on-site medical services and supplies for any emergency, through institutional and administrative arrangements with the local health unit. ➢ Provide portable water & sanitary facilities for construction workers.	TRBWRD; contractor

Social Impacts		
Impacts on settlements, population, and livelihoods during afforestation activities ➢ Restriction of access to duck rearing or other income generation areas during construction activities ➢ Carrying out pilot activities on privately owned lands	➢ Carry out a demographic survey of the local population (including land ownership and usage rights and income sources); ➢ Provide timely notification to the public regarding the planned works ➢ Ensure that alternative duck rearing areas are available ➢ Conduct pilot activities on private lands only if land owners expressed their interest in such intervention and provided their explicit and written consent to it. ➢ Minimize the disturbance of local population by construction works by following the recommendations above.	WWF Ukrain (for the survey) TRBWRD; contractor (for all other activities)

7. Procedures for the Identification and Management of Environmental and Social Impacts

The following activities will not be financed by the DYNA project:

1. Activities that involve procurement or use of any pesticides categorized IA, IB, or II by the World Health Organization;
2. Activities that require private land acquisition;
3. Activities that require physical displacement of persons from their homes or legal businesses, irrespective of ownership;
4. Activities that involve quarrying and mining;
5. Activities that involve commercial logging.

In advance of the initiation of any project activity, the implementing entity (WWF Ukraine and TRBWRD, or the hired contractors) should fill in detailed information regarding the nature of the activity and its specific location in the Screening of Environmental and Social Impacts questionnaire (Annex II). Part 1 of this form comprises of basic information regarding the activity; Part 2 is based on the WWF's SIPP and applicable Ukrainian laws and regulations. The implementing entity shall respond to the specific questions in Part 2 of the form, provide general conclusions regarding the main environmental and social impacts of the proposed activity, outline the required permits or clearances, and specify whether any additional assessments or safeguard documents (e.g., ESMP) should be prepared.

Issues that are considered as part of this environmental and social screening include the following:

a. Need for land acquisition;
b. Environmental impacts (e.g., dust, noise, smoke, ground vibration, pollution, flooding, etc.) and loss or damage to natural habitat;
c. Social impacts: identification of vulnerable groups, impacts on community resources, impacts on livelihoods and socio-economic opportunities, restrictions of access to natural resources, land usage conflicts, etc.; and
d. Health and safety issues (both for workers and for local communities).

The screening format should be undertaken by the implementing entity and reviewed by WWF Ukraine. If the screening process indicates that additional assessments or safeguards documents shall be prepared, these should be carried out by the implementing entity.

WWF Ukraine will review the application and environmental clearances with terms and conditions or outline additional conditions that should be met in order to obtain an environmental clearance.

8. Guidelines for ESMP Development

In case that the Environmental and Social screening process identifies any adverse environmental or social impacts as a result of specific project activities, the implementing entities should develop

a site- and activity-specific ESMP. The ESMP should be prepared before the initiation of the project activity and closely follow the guidance provided in this ESMF.

The ESMP should describe adverse environmental and social impacts that are expected to occur as a result of the specific project activity, outline concrete measures that should be undertaken to avoid or mitigate these impacts, and specify the implementation arrangements for administering these measures (including institutional structures, roles, communication, consultations, and reporting procedures).

The structure of the ESMP should be as follows:

(i) A concise introduction: explaining the context and objectives of the ESMP, the connection of the proposed activity to the project, and the findings of the screening process.

(ii) Project description: Objective and description of activities, nature and scope of the project (location with map, construction and/or operation processes, equipment to be used, site facilities and workers and their camps; bill of quantities if civil works are involved, activity schedule).

(iii) Baseline environmental and social data: Key environmental information or measurements such as topography, land use and water uses, soil types, flow of water, and water quality/pollution; and data on socioeconomic conditions of the local population. Photos showing the existing conditions of the project sites should also be included.

(iv) Expected impacts and mitigation measures: Description of specific environmental and social impacts of the activity and corresponding mitigation measures.

(v) ESMP Implementation arrangements: Responsibilities for design, bidding and contracts where relevant, monitoring, reporting, recording and auditing.

(vi) Capacity Need and Budget: Capacity needed for the implementation of the ESMP and cost estimates for implementation of the ESMP.

(vii) Consultation and Disclosure Mechanisms: Timeline and format of disclosure.

(viii) Monitoring: Environmental and social compliance monitoring with responsibilities.

(ix) A stakeholder engagement plan: in order to ensure that local communities and other relevant stakeholders are fully involved in the implementation of the ESMP, a stakeholder engagement plan should be included in the ESMP. The Plan should specify the issues outlined in Table 2:

Table 2: Stakeholder Engagement Plan

Stakeholders Identification	Develop a list of relevant stakeholders that will be engaged in the particular activity.
Proposed method of engagement	Method of engagement to be used (workshops, forums, meetings).
Timing and outreach	Timing issues or requirements (at what stage of activity planning and implementation will stakeholders be engaged. Most of the communities have identified winter season as best time for community consultations.);

	and outreach requirements needed to ensure that all community members have an equal opportunity to take part in the consultations.
Identify Resources needed	Resources required for the engagement process.
Responsibility	Implementing entities and specific individuals that are responsible for carrying out the consultations.
Identify Key messages to communicate	Key messages to be conveyed to during the stakeholder consultations.
Managing Risk	Identifying the risks associated with the consultation process and measures that will be undertaken to mitigate or manage such risks.

9. Monitoring

The compliance of the Botar River pilot activities with the ESMF will be thoroughly monitored by various entities after the selection of the locality for pilot implementation and initiation of construction activities.

Monitoring at the project level. The overall responsibility for implementing the ESMF and for monitoring compliance with the Project's environmental safeguard activities lies with WWF Ukraine, which shall oversee the implementation of all field activities and ensure their compliance with the ESMF. It will carry out environmental and social screenings, and prepare ESMPs and any other necessary documentation. It shall also monitor the project's grievance redress mechanism (GRM) and assess its effectiveness (i.e., to what extent grievances are resolved in an expeditious and satisfactory manner). These monitoring activities will be done under the supervision of ICPDR.

Monitoring at the field activity level: The institutional arrangements for the implementation of pilot activities will be divided among WWF Ukraine and TRBWRD (as outlined in section 5). WWF Ukraine shall closely monitor all field activities, and ensure that they fully comply with the ESMF and with the terms and conditions included in the environment clearances issued by national authorities. The relevant implementing entities will be fully responsible for the compliance of all external contractors and service providers with the safeguards requirements outlined in the ESMF and ESMP (as applicable). After the beginning of the construction works, the respective implementing entities will provide WWF Ukraine with monthly monitoring reports.

WWF Ukraine may conduct ad-hoc compliance monitoring visits to project sites to monitor compliance with the environmental clearance and with other safeguards provisions outlined in the ESMF, ESMP and/or in Ukrainian legislation, as applicable. As part of such monitoring, the WWF Ukraine may issue recommendations or impose penalties on contractors as appropriate.

10. Grievance Redress

The Botar River pilot may have impact on communities and individuals residing in the vicinity of the pilot site activities. There is thus a need for an efficient and effective Grievance Redress Mechanism (GRM) that collects and responds to stakeholders' inquiries, suggestions, concerns, and complaints. The GRM shall constitute an integral part of the pilot and assist WWF Ukraine and TRBWRD in identifying and addressing the needs of local communities.

It is in the interest of the DYNA project to ensure that all grievances or conflicts that are related to pilot activities are appropriately resolved at the local level, without escalation to higher authorities or the initiation of court procedures. Project affected communities will therefore be encouraged to approach the project's GRM.

The GRM will operate based on the following principles:

1. Fairness: Grievances are assessed impartially, and handled transparently.

2. Objectiveness and independence: The GRM operates independently of all interested parties in order to guarantee fair, objective, and impartial treatment to each case.

3. Simplicity and accessibility: Procedures to file grievances and seek action are simple enough that project beneficiaries can easily understand them.

4. Responsiveness and efficiency: The GRM is designed to be responsive to the needs of all complainants. Accordingly, staff persons handling grievances must be trained to take effective action upon, and respond quickly to, grievances and suggestions.

5. Speed and proportionality: All grievances, simple or complex, are addressed and resolved as quickly as possible. The action taken on the grievance or suggestion is swift, decisive, and constructive.

6. Participation and inclusiveness: A wide range of affected people—communities and vulnerable groups—are encouraged to bring grievances and comments to the attention of the project implementers. Special attention is given to ensure that poor people and marginalized groups, including those with special needs, are able to access the GRM.

7. Accountability and closing the feedback loop: All grievances are recorded and monitored, and no grievance remains unresolved. Complainants are always notified and get explanations regarding the results of their complaint. An appeal option shall always be available.

Complaints may include, but not be limited to, the following issues:

(i) Allegations of fraud, malpractices or corruption by staff or other stakeholders as part of any project or activity financed or implemented by the DYNA Project;

(ii) Environmental and/or social damages/harms caused by projects financed or implemented (including those in progress) by DYNA Project;

(iii) Complaints and grievances by permanent or temporary workers engaged in project activities.

Complaints could relate to pollution prevention and resource efficiency; negative impacts on public health, environment or culture; destruction of natural habitats; disproportionate impact on marginalized and vulnerable groups; discrimination or harassment; violation of applicable laws and regulations; destruction of physical and cultural heritage; or any other issues which adversely impact communities or individuals in project areas. The grievance redress mechanism will be implemented in a culturally sensitive manner and facilitate access to vulnerable populations.

The Botar River GRM will be administered by WWF Ukraine in coordination with TRBWRD. WWF Ukraine will be in charge of the operation of the GRM, and TRBWRD will assign an individual that will be responsible for collecting and processing grievances that address activities in the pilot site. The GRM will operate according to the following guidelines.

(1) Submitting complaints: Project affected people, workers, or interested stakeholders can submit grievances, complaints, questions, or suggestions either to WWF Ukraine or

TRBWRD through a variety of communication channels, including phone, regular mail, email, text messaging/SMS, or in-person, by visiting the TRBWRD offices. It is important to enable to separate channels for complaint submissions to ensure that project affected people have sufficient opportunities to lodge their complaints to impartial and neutral authorities of their choice.

(2) Processing complaints: all grievances submitted to WWF Ukraine and/or TRBWRD shall be registered and considered. A tracking registration number should be provided to all complainants. To facilitate investigation, complaints will be categorized into four types: (a) comments, suggestions, or queries; (b) complaints relating to nonperformance of obligations; (c) complaints referring to violations of law and/or corruption while implementing project activities; (d) complaints against authorities, officials or community members involved in project activities; and (e) any complaints/issues not falling in the above categories.

(3) Acknowledging the receipt of complaints: once a grievance is submitted, WWF Ukraine and/or TRBWRD shall acknowledge its receipt, brief the complainant on the grievance resolution process, provide the contact details of the person in charge of handling the grievance, and provide a registration number that would enable the complainant to track the status of the complaint.

(4) Investigating complaints: WWF Ukraine and/or TRBWRD will gather all relevant information, conduct field visits as necessary, and communicate with all relevant stakeholders as part of the complaint investigation process. The concerned authorities/offices dealing with the investigation should ensure that the investigators are neutral and do not have any stake in the outcome of the investigation. A written response to all grievances will be provided to the complainant within 10 working days. If further investigation is required, the complainant will be informed accordingly and a final response will be provided after an additional period of 10 working days. Grievances that cannot be resolved by grievance receiving authorities/office at their level should be referred to a higher level for verification and further investigation.

(5) Appeal: In the event that the parties are unsatisfied with the response provided by the GRM, he/she will be able to submit an appeal to the Vynogradiv Inter rayon Water Management Administration within 10 days from the date of decision, depending on the nature of the activity against which the grievance is lodged. The Administration shall verify and investigate the complaint according to its regular procedures. In the event that the parties are unsatisfied with the decision of the Administration, they can submit their grievances to the Court of Law for further adjudication.

(6) Monitoring and evaluation: WWF Ukraine shall coordinate with TRBWRD on monitoring the grievances on a monthly basis.

Information about channels available for grievance redress shall be widely communicated in communities residing in the vicinity of the pilot activities site and to all relevant stakeholders. The contact details (name, phone number, mail and email address, etc.) of WWF Ukraine and TRBWRD shall be disseminated as part of all public hearings and consultations, in the local villages offices, in the local media, in all public areas in affected communities, and on billboards in the vicinity of project activity sites.

The GRM seeks complement, rather than substitute, the judicial system and other dispute resolution mechanisms. All complainants may therefore file their grievance in local courts or approach mediators or arbitrators, in accordance with the legislation of Ukraine.

11. Disclosure and Stakeholder Engagement

Stakeholder engagement workshops were organized by WWF Ukraine in May and September 2018 with representatives of national and regional water management institutions, local government and state-owned corporations, private companies, local community, and local non-governmental organizations in Nevetlenfolvo and Pyiterfolvo villages. Additional meetings with local stakeholders were undertaken as part of a safeguards mission conducted in January 2019.

All affected communities and relevant stakeholders shall be informed about the ESMF requirements and commitments. The ESMF shall be available on the websites of WWF Ukraine and TRBWRD. Hard copies of the ESMF will be placed in appropriate public locations in the villages of Nevetlenfolvo and Pyiterfolvo. The local village authorities will be responsible of raising community awareness regarding the requirements of the ESMF, and will also ensure that all external contractors and service providers are fully familiar and comply with the ESMF and other safeguards documents.

During the implementation of construction activities, activity-specific ESMPs shall be prepared in consultation with affected communities and disclosed to all stakeholders prior to project concept finalization. The draft ESMP shall be reviewed and approved by WWF Ukraine.

Disclosure should be carried out in a manner that is meaningful and understandable to the affected people. For this purpose, the executive summary of ESMPs or the terms and conditions in environment clearances should be disclosed on the websites of WWF Ukraine and TRBWRD.

Table 3: Disclosure framework for ESMF related documents

Documents to be disclosed	Frequency	Where
Environment and Social Management Framework	Once in the entire project cycle. Must remain on the website and other public locations throughout the project period.	On the website and in the offices of WWF Ukraine and TRBWRD
Environmental Assessment Reports	Once in the entire project cycle for every activity that requires an EA. Must remain on the website and other public locations throughout the project period.	On the website and in the offices of WWF Ukraine and TRBWRD
Environmental Management Plan/s	Once in the entire project cycle for every activity that requires EMP. Must remain on the website and other disclosure locations throughout the project period.	On the website and in the offices of WWF Ukraine and TRBWRD, and in the offices of the village authorities.
EMP - Monthly Progress Report	Monthly	On the websites of WWF Ukraine and TRBWRD.
Grievance redress process	Throughout the project cycle	In the offices of WWF Ukraine and TRBWRD.

12. Budget

The EMSF implementation costs, including all costs related to compensation to project affected people, will be fully covered from the DYNA Botar River pilot budget.

WWF Ukraine and TRBWRD will need to allocate a staff person to the oversight of safeguard requirements. Necessary budget will have to be assigned accordingly.

Annex I. Stakeholder Engagement Workshop – Botar River Project

GEF DYNA STAKEHOLDER ENGAGEMENT WORKSHOP Botar sub-basin Pilot Project (Ukraine)	
GEF-6 Project "Regional (Bosnia-Herzegovina, Moldova, Montenegro, Ukraine, Serbia) Danube River Basin Hydromorphology and River Restoration (GEF DYNA)" 12 May, 14 September 2018 - Nevetlenfolvo, Pyiterfolvo, Ukraine.	

Prepared by:

Olga Denyshchyk

Iryna Kostenko

Contact:

Olga Denyshchyk
Freshwater Manager
WWF Ukraine
Raisy Okipnoi, 4 office 170, Kyiv, Ukraine
Phone: +380 667654781, Skype: olga.denyshchyk
odenyshchyk@wwfdcp.org

1 Project Presentation

A PPT presentation was prepared by WWF in Ukraine representative Olga Denyshchyk. She shortly described the suggested pilot project on May 12, to:

1. Tizesh Pavlo – organic farmer in Botar village,
2. Orosi Yosyp Pavlovich, Head of Nevetlenfolivs'ka village council,
3. Tovt Valentyn Valentynovych, head of Pijterfolvivs'ka village council,
4. Representatives of the Tisza River Basin Water Resources Directorate (TRBWRD) in Uzhgorod,
5. Vynogradiv Interrayon Water Management Administration.

On September 12, to:

1. The community people of Pyiterfolvo (please see the list of the participant below),
2. Tisza River Basin Water Resources Directorate (TRBWRD) in Uzhgorod,
3. Vynogradiv Interrayon Water Management Administration

2 Aspects discussed (project & proposed pilot project)

After the presentations, the WWF team called for an interactive discussion involving all of the participants. They discussed their opinions about the project, their interests in participating during implementations, the benefits and possible outcomes of the project as well as other thoughts.

The following aspects were brought to the attention:

Need of the local communities in the water from the Botar River for irrigation (brought by the local people).

Importance of the Botar River for recreation purposes for the local community (brought by the local people).

Need for a dike construction on the Botar River to protect the fields during the flood (brought by the Tisza River Basin Water Resources Directorate people).

There was also a description of the Botar River back in time made by Ilona Engi (born in 1934). She described the landscape 50 years ago and how the local community was dependent on the resources.

Possible interventions for the pilot project.

3 Conclusions

In general, the project got high level of support from the local community of Pyiterfolvo due to the high need for surface water in the area.

Tisza River Basin Water Resources Directorate (TRBWRD) in Uzhgorod is also interested, because the results of the projects could be disseminated on other irrigation system in Zakarpattya oblast.

During the discussion, no interventions for the pilot were suggested either by the local community or Tisza River Basin Water Resources Directorate representatives.

4 Gender issue

A total of six local women (please see the list below) participated in the gender session, which was held at the end of the main presentation, conducted by Olga Denyshchyk. This special gender session was conducted in a form of discussion and Irina Kostenko was taken notes. Below is the map/table that outlines the questions along with the answers received.

QUESTION MAP

Area of interest	Questions	Predominant women's feedback	Unique women's answers	Predominant men's feedback	Unique men's answers
1. Needs and interests	1.1. What are the most salient needs in your area at the moment?	New job places. Surface water (underground water is not good enough for the irrigation). Restart of sewage infrastructure.	Sewage infrastructure.	More jobs. Surface water.	
	1.2. What do you lack most of all in the community?	New job places. Recreation site on Batar River.	Recreation.	More jobs. Surface water.	
	1.3. Why are these water resources important to you?	Agriculture production		Agriculture production	

	1.4. How do you use these water resources in your everyday life?	Irrigation. Household needs.	Household needs.	Irrigation.	
	1.5. Do your work and income depend on this water basin? In what ways? - Your personal? - Your family's?	Yes. Most family or household activities depend on water availability, plus every family is producing vegetables for sale.	Household needs.	Most families grows vegetables for sale.	
2. Participation in the implementation of the project	2.1. Who do you think has the most responsibility for the success of the project?	Project team. Tisza Basin Directorate.	Project team.	Tisza Basin Directorate.	
	2.2. Do you feel that the community has knowledge and capacity to contribute to the project?	Not sure, it will depend on the scope of the project.	Not sure	Yes, it will provide a proper support.	Yes, it will provide a proper support.
	2.3. Whose opinions are necessary to account for while implementing the project, to your mind?	Opinion of professionals in their respective field. The qualified experts of the team.	The qualified experts of the team.	Tisza Basin Directorate and its rayon branch in Vynogradiv.	Tisza Basin Directorate and its rayon branch in Vynogradiv
E. Results: expectations, benefits, and potential losses NB! Observe and specify who is mostly answering to THIS question and what: women, men	3.1. What would you see as the best outcomes of the project? - For you personally, for your family, for the community?	Increased water amount in the Batar River		Enough water for irrigation.	
	3.2. What do you expect from the project realistically?	Increased water amount in the Batar River Recreation site on the River	Recreation site on the River	Enough water for irrigation.	

	3.3. Which improvements in the community or in your life do you want to have?	Surface water for irrigation, place for recreation	Recreation site on the River	Enough water for irrigation.	
	3.4. What are your main concerns and worries about the project?	Project will not bring more water, then now exist.		Project will failed to bring more water	
	3.5. In what ways can the project activities make lives of other members of the community better? Children? Elderly?	Creating recreation area.	Creating recreation area.	Provide enough surface water.	Provide enough surface water
	3.6. Are there any reasons why you do not want the project or any of its parts to take place?	No, from what was presented.	No.	No.	No.

GENERAL SUMMARY OF THE MEETING (TO BE FILLED IN AFTER THE MEETING)

1. Total number of men in the meeting: 2 local men (representing Pyiterfolvo community).
2. Total number of women in the meeting: 6 women (representing Pyiterfolvo community).
3. Was there any conflict of interests between and among men and women during the meeting? No.
4. Did men or women dominate over each other considerably in terms of time they spoke, the amount of feedback they gave, etc.? Women dominated.
5. Describe briefly how men and women responded to each other's comments and opinions. (Supportive/indifferent/disapproving? Are they aware of each other's special needs and expectations?) Women were very independent and more active.
6. Other comments: Representatives of the Tisza River Basin Water Resources Directorate (TRBWRD) found gender sessions very useful and learned a lot from the local people.

5 Annex – List of participants

Nr. Crt.	Name	Institution/Country	Position	Contact details
1.	Olga Denyshchyk	WWF Ukraine	Freshwater Manager	02035 Kyiv, Ukraine, Tel: +38 066 765 47 81, E-mail: odenyshchyk@wwfdcp.org
2.	Irina Kostenko	WWF Ukraine	F&A	Ukraine, Tel: + 380687088308 +380509165863 E-mail: ikostenko@wwfdcp.org
3.	Geor Rast	WWF-Germany	Restoration expert	
4.	Eduard Osiiskiy	Tisza River Basin Water Resources Directorate (TRBWRD) in Uzhgorod	Deputy Head	+38 (050) 934 7202
5.	Oleh Kysil	Tisza River Basin Water Resources Directorate (TRBWRD) in Uzhgorod	Head	
6.	Evgen Kedyk	Vynogradiv Interrayon Water Management Administration	Chief Engineer	+38 (050) 826 0775
7.	Orosi Yosyp Pavlovich	Nevetlenfolivs'ka village council	Head	+38(096) 176 33 16
8.	Tovt Valentyn Valentynovych	Pijterfolvivs'ka village council	Head	+38(067) 849 94 84
9.	Tizesh Pavlo		Organic farmer in Botar village	+38(097)381 4052
10	Ilona Engi	Pijterfolvivs'ka village council	Local resident	
11	Katerina Markesii	Pijterfolvivs'ka village council	Local resident	
12	Katerna Petrash	Pijterfolvivs'ka village council	Local resident	
13	Silvia Moshar	Pijterfolvivs'ka village council	Local resident	
14	Maria Bognar	Pijterfolvivs'ka village council	Local resident	
15	Vasyl Uifolush	Pijterfolvivs'ka village council	Local resident	
16	Kateryna Sverenko	Pijterfolvivs'ka village council	Local resident	

17	Mykola Turyanytsya	Pijterfolvivs'ka village council	Local resident	

Annex II. Format for Screening of Environmental and Social Impacts for Pilot Activities

PART 1: BASIC INFORMATION

1	Pilot Activity Name	
2	Pilot location:	
3	Design Parameters (area/length)	
4	Preparation period	
5	Construction	
6	Project completion and operation	
7	Total investment capital	

PART 2: IMPACTS SCREENING

Answer the questions below and follow the guidance to provide basic information regarding the suggested activity and describe its potential impacts.

Describe the total land requirement as well as the current land use pattern of the proposed project site under the following headings:

Agricultural

Government

Forest

Private

Others

Total

State the reasons for selecting the proposed site:

Describe the terrain characteristic at the project site and in surrounding area:

Describe the project activities

Technology to be used

Provide the following details, wherever it is applicable

Total site area: ---sq feet

Total built up area (provide area details) and total activity area:

Source of water and total water requirement (m^3/day)

Source of energy and total energy requirement

Parking/Stockyard requirements

Describe the list of raw materials to be used in the manufacturing process, their daily consumption, sourcing, and methods of storage.

Describe list of hazardous chemicals, toxic or inflammable substances (including carcinogenic materials) to be used in the process, if yes, then specify

Type of material

Daily requirements

Storage methods

Details of waste types (solid/liquid and gas) including the quantity and characteristic of waste, if any.

Employment potential in term of numbers, during construction and operational stage including the daily or average working hour:

Table 1: Sensitivity of the project site and adjoining areas

S.No	Information/Checklist confirmation	Yes/No	Provide explanation and supporting documents wherever applicable
	The suggested activity will affect the access of people to common resources. For example, the site was initially used as common grazing land, or fishing pond, or source of revenue for local community/ community forests etc.)		
	The suggested activity entails risk to aquatic flora and fauna due to release of wastewater		

	The suggested activity's site or adjoining areas used as routes by the public/tourists to access recreational/tourist site areas in the vicinity		
	The suggested activity's site or adjoining areas occupied by sensitive man-made land user (schools, park, playground/religious site/community facilities)		

Table 2: Change in physical structure (topography, land use, changes in water bodies, etc.) due to construction and operation of the development project

S.No	Information/Checklist confirmation	Yes/No	Provide explanation and supporting documents wherever applicable
	Potential to cause permanent or temporary change in land use, land cover or topography.		
	Will the suggested activity involve clearance of existing land vegetation?		Number of trees to be cut down: Total land area of vegetation cover removed: Estimated economic value of the trees, crops and vegetation to be cut down / removed and any replacement costs (e.g., fees, registration, taxes):
	Will the suggested activity involve demolition of existing structures?		
	Will the suggested activity trigger land disturbance, erosion, subsidence and instability		

	Will the suggested activity involve construction of new roads during construction and operation?		
	Will the suggested activity involve closure or diversion or realignment of existing natural drain?		
	Will the suggested activity have potential to increase influx of people either temporarily (workers) or permanently to an area?		
	Will the project involve abstraction or transfers of water from ground or surface water?		

Table 3: Use of resources for construction or operation of the project (such as land, water, materials or energy

S.No	Information/Checklist confirmation	Yes/No	Provide explanation and supporting documents wherever applicable
	Expected quantity of water to be used by the project during construction and operation including source of water		
	Expected Quantity of construction materials to be used – stone, aggregates and soil (in MT) and mode and place of sourcing.		
	Energy requirement – electrical energy (in kWh) and fuel (coal, gas, diesel others in tons) and mode of sourcing.		
	Will the suggested activity interrupt with power line right of way, irrigation canals, drains, roads, etc. exist, they may be affected or cause any other blockage?		
	Any other resources (use appropriate standard units)		

Table: 4 Production of solid wastes and liquid during project construction and operation

S.No	Information/Checklist confirmation	Yes/No	Provide explanation and supporting documents wherever applicable
	Will the suggested activity have potential to generate solid wastes, if yes, then specify types and quantity of wastes, wherever it is applicable		
	Will the suggested activity have potential to generate sewage sludge, wastes such as domestic and commercial wastes		
	Will the suggested activity have potential to produce hazardous waste from process, treatment plant and other allied activities?		
	Any other wastes (specify)		

Table: 5 Air pollution and emissions

S.No	Information/Checklist confirmation	Yes/No	Provide explanation and supporting documents wherever applicable
	Will the suggested activity have potential to alter ambient air quality during construction and operation?		
	Emissions from production processes and/or utilities, specify the type of pollutants, if applicable.		
	Potential to generate odour from handling, storage, process and operation of pollution control equipment.		
	Emissions from incineration of waste, if applicable. If yes, specify the type of pollutants.		
	Potential to generate fugitive emissions		

	Potential to release gaseous pollutants, if yes, then specify		
	Will the suggested activity have potential to release toxic gas from handling, transport, storage and its use?		
	Any other emissions, specify		

Table 6: Generation of noise

S.No	Information/Checklist confirmation	Yes/No	Provide explanation and supporting documents wherever applicable
	Will the suggested activity have potential to alter the ambient noise due to the following listed activities Construction of project Plant operations Increase in traffic		
	Will the suggested activity have potential to increase the risk of occupational noise hazard or cause disturbance to adjoining human settlements?		
	Any other potential sources that may cause occupational hazard specify.		

Table 7: Risks of contamination of land or water from release of pollutants into the sewers, surface waters and groundwater

S.No	Information/checklist confirmation	Yes/No	Provide explanation and supporting documents wherever applicable
	Located in potential erosion/landslide prone area		
	Will project activities increase the sediment load in the local water bodies?		
	Potential to contaminate land and water due to handling, transport, storage of raw material/chemical or hazardous substances		
	Discharge of sewage or other effluents to water or land (Expected mode and place of discharge)		
	Will the suggested activity change on-site or downstream water flows (including increases or decreases in peak and flood flows, low flows through extraction diversion or containment of surface of ground water e.g. through dams, reservoirs, canals, levees, river basin developments, ground water extraction) or through other activities?		
	Will the suggested activity affect water quality of waterways (e.g. through defuse water pollution from agricultural run off or other activities?		
	Is there a risk that the suggested activity negatively affects water dynamics, river connectivity or the hydrological cycle in ways other than direct changes of water flows (e.g. water filtration and aquifer recharge, sedimentation)? Also consider reforestation activities as originators of such impacts.		
	From any other sources, specify		

Table 8: Negative Impacts on Species

S.No	Information/checklist confirmation	Yes/No	Details thereof (with Approximate quantities /rates, wherever possible) with source of information data/ provide explanations, Wherever applicable.
	Will the suggested activity result in negative impacts to any endemic, rare or threatened species; species that have been identified as significant through global, regional, national, or local laws, treaties, or processes; species with a narrow range? Does the suggested activity introduce or use potentially invasive, non-indigenous, species? Will the suggested activity have negative impacts on other native species?		

Table 9: Pest Management

S.No	Information/checklist confirmation	Yes/No	Details thereof (with Approximate quantities /rates, wherever possible) with source of information data/ provide explanations, Wherever applicable.

	Does the suggested activity use or promote the use of any substances listed under the Stockholm Convention on Persistent Organic Pollutants? Will the suggested activity involve or promote the use of pesticides and/or fertilizers? If pesticides/fertilizers are to be used, what pesticides or fertilizers will be used? Are they a product classified by the World Health Organization as Classes IA, IB, or II? Will the procurement of the pesticides, procurement of suitable protective and application equipment, and intended usage comply with the FAO International Code of Conduct on the Distribution and Use of Pesticides? Has full consideration been given to the transport, storage, application, distribution, and disposal of the pesticides and fertilizer? Has full and due consideration been given to the potential impacts of that use of pesticides/fertilizers on the health of project executors and nearby communities?		

Table 10: Risk and disaster

S.No	Information/checklist confirmation	Yes/No	Details thereof (with Approximate quantities /rates, wherever possible) with source of information data/ provide explanations, Wherever applicable.

	Activities/operations or processes leads to fire risk/ explosion/ electrocution and others.		
	Risk of road accident		
	Any other risk, specify		

Table 11: Information on Socio-economic environment

S.No	Information/checklist confirmation	Yes/No	Provide explanation and supporting documents wherever applicable
	Will the suggested activity involve land acquisition?		
	Access to livelihoods Will the suggested activity introduce restrictions on access to natural resources (e.g., watersheds or rivers, grazing areas, forestry, NWFP) or restrict the way natural resources are used, in ways that will impact livelihoods? This may be the result of new legal restrictions (e.g., on hunting) or law enforcement activities; creation or enforcement of new protected areas; demarcation of land boundaries, etc. Does the suggested activity involve restriction of access to sacred sites of indigenous communities or other local communities' and/or places relevant for women's or men's religious or cultural practices?		

	Cultural heritage Is the suggested activity located in or near a site officially designated or proposed as a cultural heritage site (e.g. UNESCO World Cultural or Mixed Heritage Sites or Cultural Landscapes) or a nationally designated site for cultural heritage protection? Does the suggested activity area harbor cultural resources such as tangible, movable or immovable cultural resources with archeological, historical, cultural, artistic, religious, spiritual or symbolic value for a national, people or community. This could include burial grounds, buildings, monuments or cultural landscapes. Will the suggested activity involve excavation or movement of earth, flooding or physical environmental changes (e.g., as part of ecosystem restorations? Will this physical intervention affect known or unknown (buried) cultural resources?)		
	Impacts on local culture due to construction If construction takes place agriculture area, construction materials, waste, wastewater and surface runoff from construction sites, camps may enter rice or plantation nearby disturbed areas and cause loss or harm to plants, trees Dust, noise, vibration from construction or interactions between workers with local people may cause nuisance and conflict between the workers and local community. In some cases, workers may also involved in "social evils" in the project areas such as gambling, drinking, drugging, etc. to have bad impacts on local people, particularly where ethnic minority groups present.		
	Occupational health and safety Will the suggested activity involve any risks related to transportation and loading of construction materials, working high above the ground or in canals where slops are unstable, machinery operations, electrical uses for office, camp and construction		

	Community health and safety If local people presence at or near construction site, they would be exposed to safety risks related to construction (e.g., loading and unloading of construction materials, excavated areas, fuel storage and usage, electrical use, machinery operations etc, adequacy of accommodation etc.).		
	Participation and consultation Does the project respect the rights of local communities with customary rights to lands and resources to free, prior, informed consent to interventions directly affecting their lands, territories or resources? Does the project support traditional conservation initiatives and/or promote related enabling policies, legislation, and participation in broader processes?		
	Vulnerability Is there a risk that the project might negatively affect vulnerable groups in terms of material or non-material livelihood conditions or contribute to their discrimination or marginalisation (only issues not captured in any of the sections above)?		
	Community conflicts Is there a risk that the project would stir or exacerbate conflicts among communities, groups or individuals? Also consider dynamics of recent or expected migration including displaced people		
	Identify and describe site-specific and type-specific issues, concerns, risks, potential impacts		

List of documents to be attached with this IESE form:

1	Layout plan of the project
2	Summary of the project proposal
3	No objection certificate from various departments and others relevant stakeholders (applicable if EA is not required)
4	Environment Management Plan (applicable if EA is not required)

Screening Conclusions.

i. Main environmental issues are:.....

ii. Permits/ clearance needed are:. .....

iii. Main social issues are. .....

iv. Land acquisition and involuntary resettlement (permanent or temporary) if any;

v. Further assessment/ investigation needed and next step.

   a. Need for any special study:.....

   b. Preparation ESMP (main issue to be addressed by the ESMP):.....

   c. Any other requirements/ need/ issue etc:

Screening Tool Completed by:

Signed:

Name: _____

Title and Date: _____

Screening Tool Reviewed by:

Signed:

Name: _____

Title and Date: _____

Annex III: Format for Environmental and Social Compliance Monitoring

Project Activity/Contract package:

Monitoring Officer:

Name: Mobile phone number email

Date reporting:

	Environmental issues	Description of Mitigation Measures implemented	Evaluation 1=good; 0 = acceptable; -1 = bad
1	Dust, smoke		
2	Noise, vibration		
3	Disturb vegetation cover, cut trees		
4	Waste generation		
5	Water pollution		
6	Localized flooding		
7	Traffic disturbance		

8	Public health and safety		
9	Damages or disrupt operations of existing infrastructure		
10	Disturb Socio economic activities		
11	Social impacts related to mobilization of workers to the site		
12	Impacts on physical cultural objects		
	Others (specify)		

Signature

Name and Designation

Name of the CA

GEF Danube River Basin Hydromorphology And River Restoration project (DYNA)

Component 3. Demonstration Pilots –Reconnecting the Karaš River Pilot

Environmental and Social Management Framework

Table of Contents

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1. Introduction

The Danube River Basin covers more than 800,000 square kilometres – 10% of continental Europe – and extends into the territories of 19 countries. This makes it the most international river basin in the world. Over 80 million people live in this basin, depending on the Danube for drinking water, energy production, agriculture, and transport. The Danube River Basin covers numerous sub-basins, including Sava, Tisza and Prut.

Over 100 years of navigation, flood-protection, hydropower generation, and sediment extraction have significantly altered the morphological structure of the Danube River Basin, leaving only 17% of water bodies in a 'natural' state. This resulted in a range of environmental problems and hydromorphological alterations.

The Danube River Basin Hydromorphology and River Restoration (DYNA) project builds on nearly 30 years' experience through the Global Environment Fund (GEF), European Union (EU) and other national actors within the Danube River Basin. The GEF has supported key activities through multiple projects and provided over 100M USD in grants to strengthen the management of environmental issues in the region whilst enabling sustainable and improving socio-economic conditions.

1.1 The DYNA Project

The DYNA project aims to "Strengthen integrated and harmonised approaches for river restoration and aquatic biodiversity conservation responding to pressures from hydromorphological alterations in the Danube River Basin" with a focus on the five non-EU countries (Bosnia-Herzegovina, Moldova, Montenegro, Serbia, and Ukraine). This objective will be achieved through 4 interlinked components:

- Harmonising regional approaches to reduce hydromorphological pressures;
- Strengthening country-level efforts to implement relevant Danube River Basin Management Plans;
- Demonstration pilot projects for Danube river restoration;

Knowledge management and effective project Monitoring and Evaluation Component 3 of the DYNA Project will comprise of the preparation of one transboundary pilot project across two non-EU Member States and three pilots in non-EU Member States, which will demonstrate hydromorphological pressure reduction and integrated approaches in river basin and flood risk management planning and implementation. The pilots will showcase good practices in river basin management with respect to addressing pressures from hydromorphological alterations and assist with increasing national capacity on project design and implementation.

1.2 The Karaš River Pilot

One of the pilots that was selected for implementation is the project on "Reconnecting the Karaš River." The Karaš River is a 110 Km long river in the Banat region of Vojvodina Serbia and Romania and a left tributary of the Danube, originating in the Anina Mountains in Romania.

Figure 1: Location of the pilot site in Serbia

The total surface of the basin is 1447 km2 of which ca. 12% is in Serbia and the rest is in Romania. The river length in Serbia is ca. 30 km. Karaš represents the last as least partially free flowing river in the Banat region in Serbia, with residues of the natural riverbed still in existence. The river is partially trained and channelized, especially the lower part, which is directed into the Danube-Tisza-Danube canal, an important hydro-engineering system for flood control in the region.

Due to river regulation works, the hydromorphology of the Karaš has been greatly altered especially considering that the river mouth has been moved ca. 14 km to the north to be incorporated into the last part of the Danube-Tisza-Danube canal. Furthermore, there are two weirs and one barrage on the river stretch in Serbia. The first weir is right next to the village Jasenovo, the second weir is in the Straža locality and the barrage is near to the Vojvodinci village. The weirs were built in the beginning of the 20th century for diverting water into mills; these mills however are at present out of function.

The aim of the pilot is to restore river connectivity and thus rehabilitate the natural fish population of Karaš River by designing and constructing fish passes that take into account the specific nuances of each locality.

Given the lack of technical specifications of the type of fish pass and given that the site for the fish pass construction is yet to be determined, it was determined that an Environment and Social Management Framework (ESMF), rather than an Environmental and Social Management Plan, would be prepared for this pilot project.

1.3 Objective of the ESMF

The DYNA Project will be financed by the Global Environment Facility (GEF), and WWF is the accredited entity negotiating the Project with GEF. Hence, the WWF's Environmental and Social Safeguard Integrated Policies and Procedures (SIPP) apply to the project, and require the preparation of an Environmental and Social Monitoring Framework (ESMF).

The principles and procedures of the ESMF apply both to project activities that are funded through GEF and to activities that are funded from other sources.

The preparation of this ESMF was required in accordance with the WWF's SIPP in order to identify and manage the environmental and social risks and impacts of the demonstration pilot on "Reconnecting the Karaš River," which will be carried out as part of the GEF DYNA project. The ESMF aims to outline the principles, procedures, and mitigation measures for addressing environmental and social impacts associated with the project in accordance with the laws and regulations of the Republic of Serbia and with SIPP.

Since the precise scope of activities that will be implemented as part of the pilot will only be determined during the implementation phase, site-specific social and environmental impacts are uncertain at this stage. Thus, the development of site-specific Environmental and Social Management Plans (ESMPs) is currently not feasible, and an ESMF is necessary to set out procedures for addressing potential adverse social and environmental impacts that may occur during project activities. Site-specific ESMPs will be developed pursuant to the guidance provided by this ESMF during project implementation.

The specific objectives of the ESMF include the following:

- Identify the positive and negative social and environmental impacts and risks associated with the implementation of the Project;
- Outline the legal and regulatory framework that is relevant to the Project implementation;
- Specify appropriate roles and responsibilities of actors and parties involved in the ESMF implementation;
- Propose a set of actionable recommendations and measures to mitigate any negative impacts and enhance positive impacts;
- Develop a screening and assessment methodology for potential activities, that will allow an environmental/social risk classification and the identification of appropriate safeguards instruments;
- Set out procedures to establish mechanisms to monitor the implementation and efficacy of the proposed mitigation measures;
- Outline requirements related to disclosure, grievance redress, capacity building activities, and budget required for the implementation of the ESMF.

In general, the anticipated adverse environmental and social impacts of project activities are positive, and adverse impacts are temporary, site-specific, reversible and can be readily mitigated. Thus, the DYNA Project is classified as a "Category B" project under the WWF Environmental and Social Safeguards Categorization Memorandum.

1.4 ESMF Preparation Methodology

The ESMF was prepared based on the following information:

a) Technical documentation provided by WWF Adria;

b) Desk review of the WWF SIPP and the Republic of Serbia's environmental and social assessment laws, regulations, and policies;

c) Stakeholder engagement workshop that was carried out by WWF Adria in June-August 2018 in Jasenovo, Bela Crkva Vršac;

d) Meetings and discussions with stakeholders undertaken as part of a safeguards mission for the DYNA project in January 2019.

2. Project Description

2.1 Background

The Karas River is a 110 Km long river in the Banat region of Vojvodina Serbia and Romania and a left tributary of the Danube. The lower part of the river is directed into the Danube- Tisza-Danube canal.

(i) Jacenovo

There are three weirs that were built on the river stretch in Serbia. The first weir is close to the Jasenovo village situated in the Bela Crkva municipality in the Vojvodina province. The frontal weir is located near the mill which is not in operation. There is also a side weir close to the mill. The sluice gate which is not in a good condition regulates the water flow and there is also a side weir which is a local pond used for recreation purposes during the summer months. The weirs are at least 1 m high and do not allow any upstream migration of fish. The width of the entrance to the side branch is 45 m.

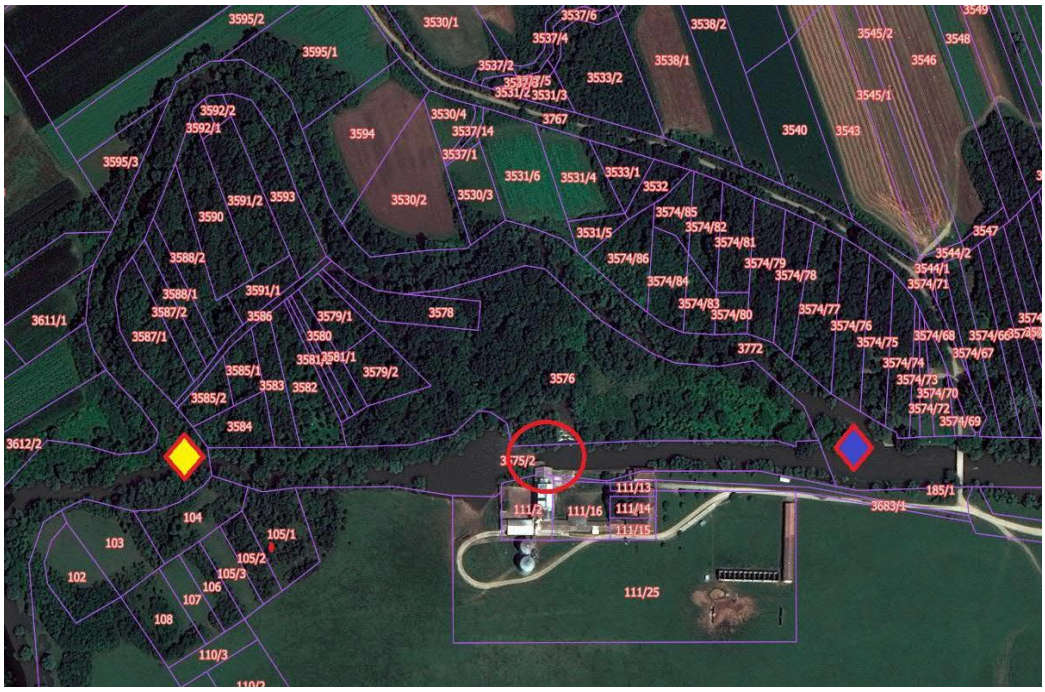


Figure 2: The mill by Jasenovo. Red circle: frontal and side weirs, blue square: entrance to side branch with side weir, yellow square: confluence of side branch and main course

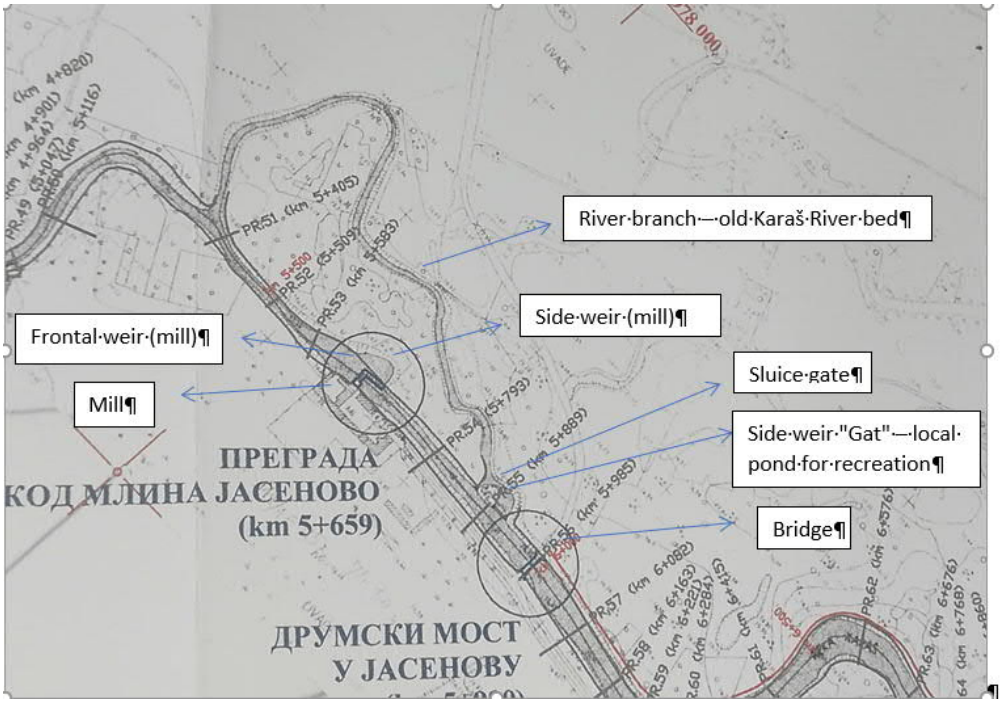


Figure 3: Details of the Jasenovo mill

(ii) Straza

The second weir is in the Straza locality, which is situated 2.2 km upstream from the bridge between Hasnovo and Straza village. The weir is 38 m wide with a gradual descent. This weir is too high to allow upstream fish migration. The channel previously used for diversion for water to the mill is blocked.

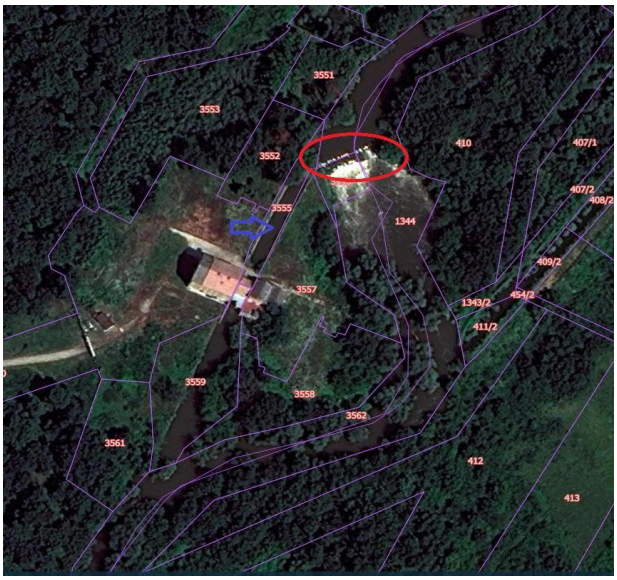


Figure 4: The mill by Straža. Red circle: the barrage, blue arrow: diversion channel

(iii) Vojvodinci

The third proposed site is a barrage situated next to the Vojvodinci village and is used as a bridge. The mill is out of use and not operational, and the current function of the barrage is not clear. There is a diversion channel that is out of use and surrounds the mill on the west side. The barrage does not allow upstream fish migration due to increased flow velocity.

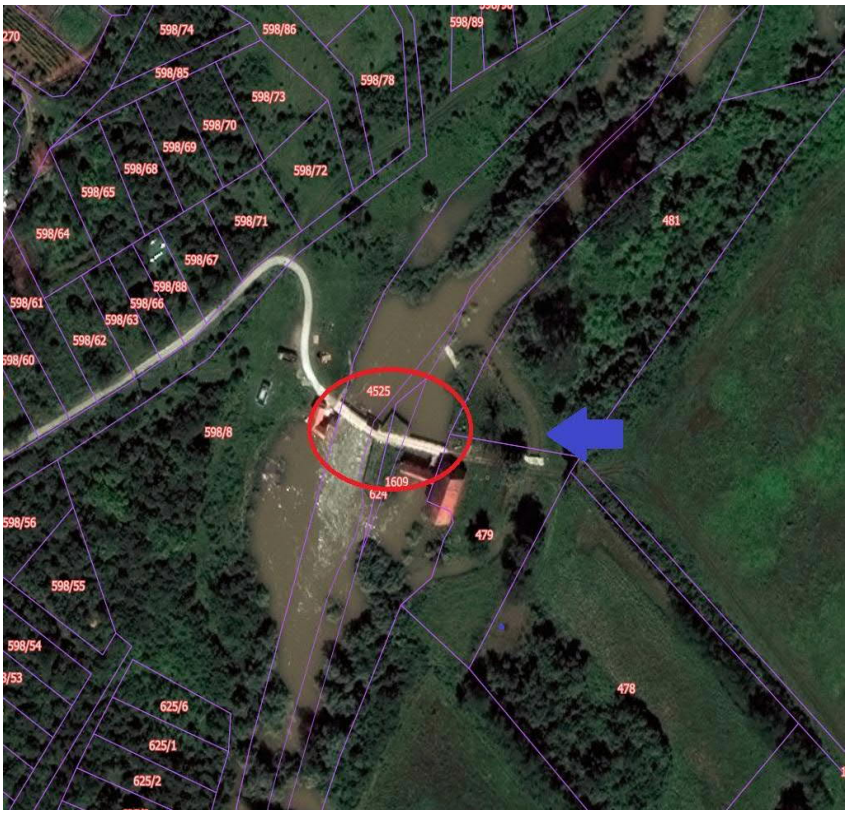


Figure 5: The mill by Vojvodinci village. Red circle: the barrage, blue arrow: diversion channel

2.2 Pilot objectives

The three weirs block fish migration and disrupt fish spawning. Local species are outcompeted by invasive species that are better adapted to the altered river hydromorphology. Furthermore, old meanders of the natural Karaš riverbed have high conservation values with a large number of species and habitats that are of European concern (Natura 2000). However, these old meanders are in danger due to siltation processes, exposure to natural succession and arrival of unwanted invasive species. The pilot project aims to tackle these problems.

The pilot project aims to demonstrate how to mitigate water engineering mistakes through sustainable solutions and how native species can be recovered. Karaš River was chosen for a pilot project as construction works are not expected to be significant and tangible progress can be made with limited budget.

The proposed activities will also strengthen compliance with the Water Framework Directive, restore populations of native species, and provide good practices examples and lessons for future interventions in other rivers in Serbia. They will also pave the way for planning future projects that will focus on recreational activities on the Karaš River for the benefit of local communities. Long-term maintenance and investment plans will be made after finishing the project-planning phase.

All pilot project concepts are based on ideas derived from interaction between water and nature management authorities and WWF and partner team members (pilot project development team).

2.3 Proposed pilot activities

Proposed pilot activities will include feasibility studies for each of the three sites that would identify the most appropriate designs for the construction of fish passes to allow upstream fish migration and increase the population of the Tinca Tinca (Tench) fish specifies. For one of the sites, which will be selected at a later stage, project activities will also include the preparation of technical documentation needed to obtain construction permit sites and the construction of the fish pass in accordance to the feasibility study. The specific technical specification of the fish passes will depend on the feasibility study to be conducted, taking into account the type of fish and their migration patterns.

Specific activities will include the following:

1. Feasibility studies for restoration measures at all three localities:
    1.1. Gathering relevant data on land use, land ownership an other legal requirements
    1.2. Conducting basic technical measurements for the purpose of feasibility studies
    1.3. Development of feasibility studies for all three localities
    1.4. Selection of one locality for implementation (construction)
2. Planning and design phase for a selected locality:
    2.1. Conducting detailed technical measurements: geodetic survey, sediment sampling, velocity measurements, etc.
    2.2. Planning permit and construction design according to local conditions and environmental impact assessments

2.3. Obtaining a construction permit

3. Construction work phase

3.1. Construction works (implementation of restoration measures)

4. Biomonitoring phase

4.1 Development of monitoring standard

4.2 Baseline sampling

4.3 Post-construction sampling

5. Project development for other two localities with a mid-term plan for bypassing of weirs

5.1. Consultations with major stakeholders: land owners, local government and responsible institutions on possible solutions

5.2. Recommending possible solutions and scenarios for bypass construction

5.3. Developing a mid-term plan for bypass construction

3. Project Area Profile

3.1 Geographic information

See the description of the pilot sites in section 2.1.

3.2 Biodiversity information

Karaš River is an atypical river in the Pannonia lowlands of Vojvodina, based on hydromorphological characteristics and the composition of fish fauna. Besides Nera River, in Vojvodina Province it is the only submontane river. It represents a transition between the region of barbel and upper cyprinid region. Based on data from field surveys and literature overview, a total of 24 species were found in the river (5 are strictly protected and 12 are protected on national level). Based on the ecological guilds, 8 species are reophilic (Table 1.).

Table 1. Fish species of Karaš River

	Species	Strictly protected species	Protected species	Ecological guild
1.	Esox lucius		○	EU
2.	Alburnus alburnus			EU
3.	Alburnus bipunctatus		○	RA
4.	Aspius aspius		○	RB
5.	Barbus balcanicus		○	RA

6.	Carassius carassius	·		ST
7.	Carassius gibelio			EX
8.	Chondrostoma nasus		○	RA
9.	Cyprinus carpio		○	EU
10.	Romanogobio vladikovy	·		RB
11.	Pseudorasbora parva			EX
12.	Rhodeus amarus	·		EU
13.	Rutilus rutilus			EU
14.	Scardinius erythrophthalmus			ST
15.	Squalius cephalus		○	RA
16.	Tinca tinca	·		ST
17.	Vimba vimba		○	RA
18.	Cobitis elongatoides	·		RB
19.	Silurus glanis		○	EU
20.	Perca fluviatilis		○	EU
21.	Sander lucioperca		○	EU
22.	Sander volgense		○	ST
23.	Lepomis gibbosus			EX
24.	Protherorhinus semilunaris			EX

Legend:

RA – Rheophilic A

RB – Rheophil B

EU – Eurytopic

ST – Stagnophilic

EX – Exotic (non native)

· – Strictly protected species (Annex I - Rulebook on the designation and protection of strictly protected and protected wild species of plants, animals and fungi („Official Gazette RS“ No. 5/2010, 47/2011, 32/2016 and 98/2016))

○ – Protected species (Annex II - Rulebook on the designation and protection of strictly protected and protected wild species of plants, animals and fungi („Official Gazette RS“ No. 5/2010, 47/2011, 32/2016 and 98/2016))

As a result of river regulation works during the last century, the lower course of the river became part of the Danube-Tisza-Danube Hydrosystem and its mouth was moved ca. 14 km to the north. The confluence is no longer with the Danube River, but with the Danube-Tisza-Danube channel

near the village of Dupljaja. These hydromorphological alterations (along with the construction of three barrages) caused changes in the composition and dispersion of fish fauna.

Fish species are unequally affected by the barrages, especially because of their specific ecological requirements. In general, the changes had a negative impact on the populations of rheophil and potamodromous species either by altering habitats, spawning and feeding grounds, or by disconnection with spawning grounds (no passability over the barrages). Short distance (up to 30 km/year) and long distance (between 30 and 300 km/year) migrations are limited to migrations up to the first barrage near Jasenovo, or local migrations between Jasenovo and Straza barrages, as well as Straza and Vojvodinci barrages and upstream above Vojvodinci barrage. Upstream migration of potamodromous species, e.g. Chondrostoma nasus, Barbus barbus and Vimba vimba, was interrupted. Thus, the number of their specimens upstream of the barrage is much smaller.

Downstream passability over these three barrages are rarely active, they are mostly random and accidental, and occur by drift with the currents mainly in spring or in the period of the year with high water levels (dependant on hydrometeorological conditions in the Karaš basin). The disruption of fish spawning by transverse barriers is considered one of the most harming effects on the freshwater fish populations, which results in spawning alteration and progressive depopulation of certain sepcific species.

The barrages also caused changes in fish populations; stagnophilous and eurytopics species became more abundant in Karaš. Formerly, the majority of fish species inhabiting Karaš were cyprinids, typical for the upland rivers characterized by rocky bottom and fast running waters.

Due to the connection of Karaš with the Danube-Tisza-Danube channel (artificial channel), the importance of upstream located natural river sections in Karaš, as well as near natural state river sections is far more greater, as well as the longitudinal connectivity.

Invasive exotic species (Pseudorasbora parva, Lepomis gibossus and Carassius gibelio), stagnophilous and eurytopic species are mainly present along the entire river stream of Karaš with varying abundance. Their numbers are increasing in slow flowing sections and backflows of barrages, where sediment deposition occurs (e.g. modified habitats on the stream sections immediately above the barrages). Hydrological alterations are present upstream of all three barrages, slowing down the stream and increasing the water level.

A detailed baseline study of biodiversity will be conducted prior to the initiation of construction works in the selected locality. Part of this study will be done in parallel with feasibility studies that address the restoration measures that need to be carried out in the three chosen localities. The estimated time for such a study is 12 months. The estimated costs are included in the budget for biodiversity monitoring.

3.3 Demographic information

Preliminary data on landownership has been collected and is provided below, but additional check-up on data relevance and accuracy (formal inquiries) will be done prior to the start of the planning and design phase in the locality that will be selected for fish pass construction. The estimated time needed for this stage is 3 months and the expected costs are 5000 euro.

(i) Jacenovo

Landownership is both state and private. The mill is privately owned, and the cadastral parcel north of the mill (No. 3576) is state owned. Most communities near the site grow corn, wheat, and soy for agriculture purposes. The communities would like to keep the weirs in place, as they use the area for recreational fishing and swimming.

(ii) Straza

The mill and surrounding forest are protected as national monument “Straza” on an area of 61 ha. The river is not included in the protected area. The mill is privately owned. It is currently out of use and is being renovated into a hotel. Any construction works in the vicinity of the mill would require a written access request to the mill owners.

(iii) Vojvodinci

The land on the right side of the river, adjacent to the barrage and including diversion channel is private, while the land on the left side of the river is state owned. The mill is out of use and not operational, and the current function of the barrage is not clear. There is a diversion channel that is out of use and surrounds the mill on the west side.

4. Environment and Social Policy, Regulations and Guidelines

4.1 Republic of Serbia Policies, laws, Regulations Guidelines

Several legislative provisions and policies may be pertinent to the pilot project.

(i) Water management

The central legal act that regulates water management in the Republic of Serbia is the Law on Waters (“OG OF RSRB”, no 30/2010 and 93/2012 , 101/2016, 95/2018 and 95/2018 - oth. law). The Law on Waters regulates the legal status of water resources, IWRM, water facilities and river basin land management, sources and means of financing water resources management, supervision over the implementation of the Law, as well as other issues, which are significant for water management (Article 1). Furthermore, the Law on Waters prescribes several types of planning documents, including: 1) Water Management Strategy for the Territory of the Republic of Serbia; 2) Water Management Plan; 3) Annual Water Management Program; 4) Plans for protection against adverse effects of water, consisting of: Flood Risk Management Plan, General and Operational Plan for protection against flood, as well as plans regulating water protection (Plan for protection of water against pollution and monitoring program) (Article 29). Strategy for the Water Management on the Territory of the Republic of Serbia was adopted in 2017 (“OG OF RSRB”, no 3/2017)

A draft Danube River Basin Management Plan was prepared in 2014, but was not adopted. It has to be harmonized with the current legislation (Water law amendments from 2016 and the Water Management Strategy from 2017).

The Water Law aimed at harmonization with the EU Water Framework Directive (WFD) and other EU legislation. Full harmonization is expected by 2021. Certain challenges are expected with the implementation of WFD in Republic of Serbia are due to lack of necessary data on monitoring as well as insufficient capacity of institutions that directly implement the EU WFD.

The monitoring of the status of water bodies is based on the Rulebook on Parameters of Ecological and Chemical Status of Surface Water and Parameters of Quantitative and Chemical Status of Groundwater (“OG OF RSRB”, no 74/2011) and complies with the requirements of WFD. However, certain elements that are required for monitoring are missing (macrophytes, fish and hydromorphology elements). Monitoring is currently implemented through national annual monitoring programmes, but its limited due to budget deficiencies (insufficient number of water bodies are covered, frequency of certain parameters is inadequate, etc.).

The implementation of the Flood Directive is currently under preparation. The first Preliminary Flood Risk Assessment (PFRA) was adopted in 2012. The aim and result of the PFRA is the determination and identification of areas with potential significant flood risk (APSFR) that affects human health, the environment, cultural heritage and economic activities. Based on significant floods in the past and possible future floods, 99 APSFR have been defined.

The National Environmental Protection Program ("OG OF RSRB", No. 12/10) provides the general policy framework in the field of environment, while basic law and "umbrella act" in the field of environmental protection is the Law on Environmental Protection ("OG OF RSRB", No. 135/04, 36/09, 36/09, 72/09, 43/11, 14/2016, 76/2018, 95/2018- other law). The act regulates systemic issues, thus having effect on certain aspects of water management, and furthermore contains general provisions (including the Article 23) that directly regulate water management. The on-going process of amending the law will provide several new aspects, such as: approval to use surface and ground waters as natural resources (Article 15), base for establishment of "Green Fund of the Republic of Serbia", determining deadline for their gradual breakdown, limit values reaching by legal entities and entrepreneurs who discharge wastewaters into the recipients or public sewage system, as well as treatment, disposal and usage of sludge, that is processing of sludge which is residue from waste water treatment plants.

Protection and conservation of nature, biological, geological and landscape diversity are regulated by the Law on Nature Protection ("OG of RSRB", No. 36/2009, 88/2010, 91/2010, corr. 14/2016 and 95/2018 - oth. law) and also by other regulations, including the Law on National Parks ("OG of RSRB", no. 84/15 and 95/2018- other law), Law on Wildlife and Hunting ("OG of RSRB", No. 18/10 and 95/2018- other law) and others. The Law on Nature Protection contains several provisions that directly refer to water resources management (e.g. Article 18 of the LNP - in wetlands and aquatic ecosystems with coastal areas, all actions and activities which endanger hydrological phenomena and preservation of biological diversity shall be prohibited (paragraph 3); in speleological objects (e.g. caves) and their surrounding area, it is forbidden to conduct construction works that may cause major unfavorable and permanent alterations of geomorphological and hydrological nature (Article 25, paragraph 4).

(ii) Land Management and Expropriation

The Republic of Serbia Expropriation Law (passed in 1995 and enacted on January 1, 1996, amended in March 2001, amended again on March 19, 2009), does not use the term "involuntary resettlement", which is used in the relevant IFI policy documents, but instead uses the term expropriation. This law enables government institutions to acquire private property for projects that are considered to be of national and/or local interest, while protecting the interests of all project-affected persons with legal title, whose assets are to be expropriated. The law also enshrines the principle of fair compensation.

Expropriation can only be undertaken for public interest, which must be documented in the proposal for an expropriation decision. The Government agency responsible for property and legal affairs confirms public interest, based on a proposal by the investor. The agency that authorizes public interest can permit the investor to conduct preliminary studies on the lands to be expropriated after consultation with the owner(s). The investor submits an expropriation proposal to the local organ in charge of property and legal rights in the municipality in which the land is located. The proposal is based on a preliminary design and includes documentation confirming the investment in spatial plans and establishing public interest; Identification of the location and ownership of affected plots, with cadastre extract; Estimated cost of expropriation, based on standard evaluation principles; Proof that the estimated cost is deposited in an expropriation account. Plot owners are consulted before the expropriation decision is issued.

Compensation is based on the market value of the land and assets (or market rental value, if expropriation is temporary), transition expenses and damages. Compensation can be in cash or in kind-including substituting land or structures and replacing or moving structures. After public interests have been established, the investor can negotiate the amounts and condition of purchase with owners without resorting to expropriation. After the expropriation decision is issued, owners are notified in writing of the decision of their right to request expropriation of a whole plot, proposed compensation method and amounts and the timetable for processing; and are invited to negotiate. If negotiations are not successful, the local property and legal affairs office forwards documentation to the local court to determine compensation. The owner can also appeal to the court for a decision on compensation and the amount of land to be expropriate.

(iii) Environmental Management

An Environmental Impact Assessment (EIA) in Republic of Serbia is regulated by the Law on Environmental Impact Assessment ("OG of RSRB"; No. 135/04 and 36/09) and complementary by-laws. The law and by-laws set out the requirements for undertaking environmental assessments of the potential environmental impacts of public and private projects which are likely to have a significant impact on the environment (anticipate potential environmental harm and to avoid or mitigate such harm while balancing environmental, social and economic objectives) before development consent / construction permit is granted in the form of an approval for project implementation.

The Serbian Ministry of Environmental Protection is the competent administrative authority for the EIA process for projects for which project development consent (e.g. construction permit) is issued by a State (national) authority, as it the Ministry responsible for environmental matters.

The types of projects that may require an EIA are determined in the "Decree determining a list of projects for which an environmental impact assessment shall be carried out and a list of projects for which an environmental impact assessment may be required" - EIA Decree ("OG of RSRB", No. 84/05 and 114/08).

Under the EIA Decree, projects are classified in two groups (lists): projects listed in List 1 are all subject to compulsory EIA while for projects in List 2, the assessment contains an element of discretion, noting that an EIA procedure will, in any event, be required for projects with potentially significant environmental impacts. The public and other parties are to be consulted on the EIA.

(iv) Access to Information and Public Participation

In Republic of Serbia the access to information and public participation is regulated by several acts related to environmental protection, water management and other act, among which the Law on Free Access to Public Information ("OG of RSRB", No.120/04, 54/07, 104/09, 36/10) as a general framework law, the Law on Waters and the Law on Environmental Protection.

Serbia is a member state of the Convention on access to information, public participation in decision-making and access to justice relating to environmental issues (Aarhus Convention) ("OG of RSRB – International Agreements", No. 38/09). Apart of legislation framework, Serbia since 2011 has an Strategy for Implementing the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters ("OG of RSRB", No. 103/11), accompanied by an action plan. Both documents aim is to improve the dialogue between the public and decision makers on environmental matters. In that respect

Serbia also has four Aarhus centers (Kragujevac, Niš, Novi Sad and Subotica). The acts that have most developed procedure and rules for public participation in decision-making, are the ones regulating public participation in carrying out the EIA procedure, and in SEA.

4.2 WWF Safeguards Policies and Procedures Applicable to the Project

WWF's safeguards policies require that any potentially adverse environmental and social impacts are identified, avoided, or mitigated. Safeguards policies that are relevant to this project are as follows.

(i) Policy on Environment and Social Risk Management

The project is classified as Category B based on initial analysis. Adverse environmental and social impacts that may occur as a result of project activities are expected to be site-specific, negligible and easily mitigated.

The exact location and impact of specific activities cannot be determined at this stage, and will only be known during project implementation. Thus, an ESMF was prepared to set out guidelines and procedures on how to identify, assess and monitor environmental and social impacts, and how to avoid or mitigate adverse impacts. Site-specific ESMP will be prepared as required, based on principles and guidelines of the ESMF.

(ii) Policy on Protection of Natural Habitats

As stated above, the overall environmental and social impacts of the proposed project are expected to be overwhelmingly positive and the project expected impacts on Natural Habitats are also expected to be significantly positive, through efforts to address impacts from hydromorphological alterations through river restoration, nature-based solutions. Nonetheless, potential minor small-scale impacts on Natural Habitats may occur during construction of fish passes.

Provisions are be made in the ESMFs to adequately address such possibilities. Any other activity under the project will be screened for its potential to cause negative impacts to natural habitats under the ESMF procedures. If any such activity is likely to cause irreversible or significant damage to habitats it will be excluded from project grant funding.

(iii) Policy on Involuntary Resettlement

The WWF's policy seeks to ensure that adverse social or economic impacts on resource-dependent local communities as a result from conservation-related restrictions on resource access and/or use are avoided or minimized. Resolution of conflicts between conservation objectives and local livelihoods is sought primarily through voluntary agreements, including benefits commensurate with any losses incurred. Involuntary resettlement is avoided or minimized, including through assessment of all viable alternative project designs and, in limited circumstances where this is not possible, displaced persons are assisted in improving or at least restoring their livelihoods and standards of living relative to pre-displacement or pre-project levels (whichever is higher).

The project is not expected to involve land acquisition leading to involuntary resettlement of project affected persons (PAPs). All project activities will be executed on government- or community-owned lands. Project activities are also expected to positively affect local communities' access to livelihoods. However, some of the planned activities may have some minor effects on the livelihoods of local communities, such as temporarily restricting access to fishing or recreational areas. To mitigate any adverse impacts, all activities that may affect local

communities' access livelihoods should be closely coordinated with community representatives and only carried out after consultations with all relevant stakeholders. If disturbance of access to livelihoods cannot be avoided, full and timely compensation shall be provided to all livelihood users, irrespective of their formal land ownership status or title.

(iv) Policy on Accountability and Grievance System

Project-affected communities and other interested stakeholders may raise a grievance at any time to the WWF Adria team and the Water Management Company in Vojvodine. The WWF Adria team will be responsible for informing project-affected parties about the Accountability and Grievance Mechanism. Contact information of the Project Team and WWF will be made publicly available. Relevant details are also provided in the Grievance Redress & Process Framework section of this ESMF.

The WWF Policy on Accountability and Grievance Mechanism is not intended to replace project- and country-level dispute resolution and redress mechanisms. This mechanism is designed to: Address potential breaches of WWF's policies and procedures; be independent, transparent, and effective; be accessible to project-affected people; keep complainants abreast of progress of cases brought forward; and maintain records on all cases and issues brought forward for review.

(v) Health and Safety

While there is no separate WWF policy on occupational and community health and safety, these issues are taken into account as part of the general WWF policy on Environment and Social Risk Management, and the screening process that applies to all project-related activities. These general standards require employers and supervisors to implement all reasonable precautions to protect the health and safety of workers through the introduction of preventive and protective measures. They also require to ensure that the labor rights of project-employed workers are observed, as indicated in the screening tool in Annex II.

Project activities should also prevent adverse impact involving quality and supply of water to affected communities; safety of project infrastructure, life and properties; protective mechanisms for the use of hazardous materials; disease prevention procedures; and emergency preparedness and response.

4.3 Gaps between the Republic of Serbia laws and policies and the WWF's SIPP

In general, the laws, policies, and guidelines of the Republic of Serbia (RoS) are in line with the WWF's environmental and social safeguards requirements. However, there are a few differences between the two systems, as discussed below. In all cases of conflict or discrepancy, the requirements of the WWF will prevail, for the purpose of the DYNA project, over RoS laws and regulations.

With regard to environmental impacts, there are no direct contradictions between the RoS laws and regulations and the WWF's SIPP, but the requirements of the latter are more extensive. For instance, WWF's SIPP require a thorough environmental and social analysis of the impact of specific project activities on the environment and on local communities before the activity is formally approved and any funds are disbursed. These requirements are beyond the environmental clearance process prescribed by the RoS legislation. All project activities should fully comply both with the RoS's Regulations on the Environmental Clearance of Projects, and with the procedures and mitigation measures prescribed in this ESMF. In case that the WWF's SIPP requirements are more extensive, strict, or detailed than the RoS legislation and policies, the former will apply to all project activities.

With regard to social impacts, the primary discrepancies between the RoS laws and regulations and the WWF's SIPP refer to the status of non-title holders and informal land use, and the commitment to participatory decision-making processes. First, according to the WWF's SIPP, all users of land and natural resources (including people that lack any formal legal ownership title or usage rights) are eligible to some form of assistance or compensation if the project adversely affects their livelihoods. The RoS laws only recognize the eligibility of land owners or formal users to receive compensation in such cases. Second, the WWF's SIPP require extensive community consultations as part of the development of various safeguards documents and during project activities. RoS legislation does not include similar requirements.

For the purposes of the DYNA project, the provisions of the WWF's SIPP shall prevail over the RoS legislation in all cases of discrepancy.

5. Institutional Framework

The primary government institution in charge of WRM in Serbia is the Water Directorate that is part of the Ministry of Agriculture, Forestry, and Water Economy. The Directorate is responsible for the following activities: water management policy; multi-purpose water use; water supply, excluding water distribution; water protection; implementation of water protection measures and systematic rationalization of water consumption; development of water regimes; tracking and maintaining water regimes creating and cutting RS borders; inspection oversight in the sphere of water management, as well as other activities set by law.

Monitoring and enforcement of environmental sectorial laws falls under the Ministry of Environmental Protection, whose responsibilities encompass: implementation of state monitoring over the quality of water, along with the implementation of prescribed and harmonized programs for surface water quality control, as well as groundwater of unconfined aquifers and precipitation; National Laboratory management; collection and integration of data on the environment, their processing and compiling of the report on the state of the environment and environmental protection policy; keeping the national information system in environmental protection; Cooperation with the European Environment Agency (EEA), etc.

While these two government ministries are the primary authorities for issues related to water resources management and environment protection, their engagement in the pilot activities will be relatively limited. The activities will be executed by the following entities:
ICPDR: will be responsible for the overall execution of the project and will chair the PSC. The ICPDR will be responsible for submission of all reports to the GEF Agency (technical and financial). The ICPDR will be responsible for hiring and supervising the project manager.

WWF Adria: overall management and oversight of the pilot activities; coordinating all activities and procuring the services of external institutions.

Institute for Water Management Jaroslav Černi: The Institute has long ranging experience with different projects on the Karaš river, and among other initiatives was engaged in the development of a flood prevention plan for the Karaš area.The suggested pilot activities will primary consist of feasibility studies for each of the three localities and thus will not require permits or approvals from the Water Directorate or the Ministry of Environmental Protection. These feasibility studies will be undertaken by the Institute for Water Management Jaroslav Černi, which was also the initiator of the pilot idea. As the Institute is primarily research-oriented, a separate entity will be required for the construction of a fish pass at the locality that will be selected based on the feasibility study findings.

Public Water Management Company of Vode Vojvodine: The company is a state-owned enterprise with extensive experience of procuring and overseeing construction works, as well as developing all technical documentations that is necessary to obtain construction permits. The WWF Adria team thus intends to delegate the management and oversight of the fish pass construction works to the Company.

The WWF Adria team will also engage the Institute for Nature Conservation of Vojvodina Province in the preparation of feasibility studies and any related research activities.

6. Anticipated Environmental and Social Impacts and Mitigation Measures

The Karas River pilot will include feasibility studies that would identify the most appropriate designs for the construction of fish passes to allow upstream fish migration and increase the population of the Tinca Tinca (Tench) fish specifies in three localities. For one of the sites, which will be selected at a later stage, project activities will also include the preparation of technical documentation needed to obtain construction permit sites and the construction of the fish pass in accordance to the feasibility study. The specific technical specification of the fish passes will depend on the feasibility study to be conducted, taking into account the type of fish and their migration patterns.

The impacts of the pilots are thus expected to be overwhelmingly positive. Minor and site-specific negative environmental impacts may include the following.

Feasibility studies preparation phase

The first part of pilot activities will consist of research and preparation of feasibility studies, and will not have any negative impacts on the environment. Impacts on land access and usage are also not expected.

Construction phase

Based on the findings of the feasibility studies, one locality will be selected for civil works and construction of a fish pass. Adverse environmental or social impacts as a result of these activities are expected to be minor and temporary.

Adverse environmental impacts that might be expected during fish pass construction works are temporary and may include minor water and soil pollution, noise, waste disposal, damage to flora and fauna, and health and safety risks. These impacts are expected to be local, temporary and can be readily mitigated. The potential environmental impacts and some recommended mitigation measures are outlined in the Table below.

Adverse social impacts. All construction works will be undertaken on government-owned land and no significant impact on local population quality of life is expected as no major construction is envisioned. There are no settlements in the area, but at least one of the potential locations (Jacenovo) is used for recreational fishing, swimming, picnics, cultural events, etc. Further, access to the construction site might be required through some of the privately-owned lands in other locations (Straza). Thus, minor social impacts may include restriction of access to recreational areas and the need to pass through privately-owned land to access the fish pass construction site. To mitigate these impacts, construction works should be carried out when the recreational areas are not used (or least used) by the public (e.g., out of the swimming season). Written access request should be provided to private land owners that may be affected by construction works,

and all adverse impacts of the works should be minimized. The potential social impacts and some recommended mitigation measures are outlined in Table 2 below.

While this ESMF outlines potential adverse impacts and general mitigation measures, an Environmental Management Plan will have to be developed upon the selection of the pilot implementation site. The EMP will rely on the specific conditions of the site and reflect the hazards that might result from the construction method that will be selected. It will include site-specific mitigation measures and monitoring requirements that will need to be undertaken by the Contractor and the Water Management Company. The EMP's mitigation measures encompass actions that will reduce hazards, which could impact health and safety of the construction workers, and the public; measures related to soil and water pollution from oil and fuel, noise, air quality (dust), excavation of materials and disposal of surplus soil/earth and other materials; etc.

WWF Adria will need to allocate a staff person to the oversight of safeguard requirements. Necessary budget will have to be assigned accordingly.

Annex II to this ESMF provides a format for the Screening of Environmental and Social Impacts for Pilot Activities that should be undertaken before any pilot activities are carried out.

Annex III provides a format for Environmental and Social Compliance Monitoring that should be carried out during the implementation of pilot activities.

Adverse impact	Mitigation measures	Responsible authority
Environmental impact		
Soil pollution • Soil degradation. • Contamination of surrounding soil with emission of gases or dust from transportation vehicles /construction machines. • Contamination caused by temporary construction sites, temporary roads or disposing of waste. • Contamination from discharging used waters from the construction site into soil.	• Provide slope protection through bank compaction, riprapping on critical sections, or vegetative stabilization • Designate a Spoils Storage Area, with topsoil set aside for later use and allow maximum re-use of spoils • Use material for restoration of degraded areas • Discharge used waters in designated areas only	Contractor & Public Water Management Company
Water pollution • Discharging diverse waste products from construction site process and construction site complex (liquids, particles and solid waste) on banks or directly into river beds leads to spread of pollution along the watercourse. • Discharging used waters from the construction site (technological and hygienic) into watercourses. • Waste material, mechanical oil, fuel etc. can be disseminated by malfunctioning construction machines and vehicles or negligent personnel. • Location of machines, temporary construction material depots near rivers or surface watercourses.	• Ensure no pollutants, waste, or oil are released into the water • Set up sediment traps along rivers and/or gabions along banks to filter out eroded sediments • Provide slope protection through bank compaction, rip-rapping on critical sections, or vegetative stabilization • Adjacent wetlands and streams shall be protected from construction site run-off with appropriate erosion and sediment control feature to include by not limited to hay bales and silt fences	Contractor & Public Water Management Company
Waste disposal • Environmental pollution caused by improper waste management	• Waste collection and disposal pathways and sites will be identified for all major waste types expected from construction activities. • Mineral construction will be separated from general refuse, organic, liquid and chemical wastes by on-site sorting and stored in appropriate containers. • Construction waste will be collected and disposed properly by licensed collectors	Contractor & Public Water Management Company

	• No open burning of wastes on or off site	
Air • Construction works might result with increased concentration of polluting substances, primarily dust and exhaust gases from vehicles (machines engaged in the works execution). • Suspended particles (dust) that will rise from transport roads when used for machinery transportation or trucks passing.	• Contractor to present proof of compliance with emission standards • Wet areas of dust sources to minimize discomfort to nearby residents • Control of vehicle speed to lessen suspension of road dust • Keep the surrounding environment (sidewalks, roads) free of debris to minimize dust	Contractor & Public Water Management Company
Noise levels • Human presence and execution of works at the location, and movement of vehicles and construction mechanization.	• Schedule equipment movement during non-peak hours of daytime vehicular traffic • Avoid night-time construction activities and abide by local laws on construction hours	Contractor & Public Water Management Company
Flora and fauna • Construction works might cause temporary disturbance of fish biodiversity and other wildlife. • Emissions from trucks and construction machines might have negative impacts on vegetation around the construction site.	• Closely collaborate with WWF Adria, the Institute for Water Management Jaroslav Černi to ensure that the selected construction method does not adversely impact the fish biodiversity and other wildlife. • Minimize any levels of emissions avoid heavy machines	Contractor & Public Water Management Company
Impacts on climate • Sub-projects implementation will have no negative impact on climate.		
Health and safety risks • Construction workers, as well as the local population, may be exposed to health and safety risks during construction works	• Notify the public of the works through appropriate notification in the media and/or at publicly accessible sites (including the site of the works). • Formally agree with the Contractor that all work will be carried out in a safe and disciplined manner designed to minimize impacts on neighboring residents and environment. • Formally agree with the Contractor that workers health and safety requirements will comply with international good practice (always	Contractor & Public Water Management Company

	hardhats, as needed masks and safety glasses, harnesses and safety boots). • Appropriate signposting of the sites will inform workers of key rules and regulations to follow and emergency contact numbers. • Provide on-site medical services and supplies for any emergency, through institutional and administrative arrangements with the local health unit. • Provide portable water & sanitary facilities for construction workers.	
Social Impacts		
Impacts on settlements, population, and livelihoods • Restriction of access to recreational areas (for fishing, swimming, etc.) • Need to access construction sites by passing through privately owned land	• Provide timely notification to the public regarding the planned works • Carry out construction works out of the recreational season or when the usage of recreational areas is limited • Obtain from private land owners access permits in a written form as prescribed by national legislation • Minimize the disturbance of local population by construction works by following the recommendations above.	

7. Procedures for the Identification and Management of Environmental and Social Impacts

The following activities will not be financed by the DYNA project:

1. Activities that involve procurement or use of any pesticides categorized IA, IB, or II by the World Health Organization;
2. Activities that require private land acquisition;
3. Activities that require physical displacement of persons from their homes or legal businesses, irrespective of ownership;
4. Activities that involve felling of trees in project areas;
5. Activities that involve quarrying and mining;
6. Activities that involve commercial logging.

In advance of the initiation of any project activity, the implementing entity (the Public Water Management Company of Vode Vojvodine) should fill in detailed information regarding the nature of the activity and its specific location in the Safeguards Eligibility and Impacts Screening questionnaire (Annex II). Part 1 of this form comprises of basic information regarding the activity; Part 2 is based on the WWF's SIPP and applicable RoS laws and regulations. The implementing entity shall respond to the questionnaire, provide general conclusions regarding the main environmental and social impacts of the proposed activity, outline the required permits or clearances, and specify whether any additional assessments or safeguard documents (e.g., ESMP) should be prepared.

Issues that are considered as part of this environmental and social screening include the following:

a. Need for land acquisition;
b. Environmental impacts (e.g., dust, noise, smoke, ground vibration, pollution, flooding, etc.) and loss or damage to natural habitat;
c. Social impacts: identification of vulnerable groups, impacts on community resources, impacts on livelihoods and socio-economic opportunities, restrictions of access to natural resources, land usage conflicts, etc.; and
d. Health and safety issues (both for workers and for local communities).

The screening format should be undertaken by the implementing entity and reviewed by WWF Adria. If the screening process indicates that additional assessments or safeguards documents shall be prepared, these should be carried out by the implementing entity.

WWF Adria will review the application and environmental clearances with terms and conditions or outline additional conditions that should be met in order to obtain an environmental clearance.

8. Guidelines for ESMP Development

In case that the Environmental and Social screening process identifies any adverse environmental or social impacts as a result of specific project activities, the implementing entities should develop a site- and activity-specific ESMP. The ESMP should be prepared before the initiation of the project activity and closely follow the guidance provided in this ESMF.

The ESMP should describe adverse environmental and social impacts that are expected to occur as a result of the specific project activity, outline concrete measures that should be undertaken to avoid or mitigate these impacts, and specify the implementation arrangements for administering

these measures (including institutional structures, roles, communication, consultations, and reporting procedures).

The structure of the ESMP should be as follows:

(i) A concise introduction: explaining the context and objectives of the ESMP, the connection of the proposed activity to the project, and the findings of the screening process.

(ii) Project description: Objective and description of activities, nature and scope of the project (location with map, construction and/or operation processes, equipment to be used, site facilities and workers and their camps; bill of quantities if civil works are involved, activity schedule).

(iii) Baseline environmental and social data: Key environmental information or measurements such as topography, land use and water uses, soil types, flow of water, and water quality/pollution; and data on socioeconomic conditions of the local population. Photos showing the existing conditions of the project sites should also be included.

(iv) Expected impacts and mitigation measures: Description of specific environmental and social impacts of the activity and corresponding mitigation measures.

(v) ESMP Implementation arrangements: Responsibilities for design, bidding and contracts where relevant, monitoring, reporting, recording and auditing.

(vi) Capacity Need and Budget: Capacity needed for the implementation of the ESMP and cost estimates for implementation of the ESMP.

(vii) Consultation and Disclosure Mechanisms: Timeline and format of disclosure.

(viii) Monitoring: Environmental and social compliance monitoring with responsibilities.

(ix) A stakeholder engagement plan: in order to ensure that local communities and other relevant stakeholders are fully involved in the implementation of the ESMP, a stakeholder engagement plan should be included in the ESMP. The Plan should specify the issues outlined in Table 2:

Table 2: Stakeholder Engagement Plan

Stakeholders Identification	Develop a list of relevant stakeholders that will be engaged in the particular activity.
Proposed method of engagement	Method of engagement to be used (workshops, forums, meetings).
Timing and outreach	Timing issues or requirements (at what stage of activity planning and implementation will stakeholders be engaged. Most of the communities have identified winter season as best time for community consultations.); and outreach requirements needed to ensure that all community members have an equal opportunity to take part in the consultations.
Identify Resources needed	Resources required for the engagement process.
Responsibility	Implementing entities and specific individuals that are responsible for carrying out the consultations.
Identify Key messages to communicate	Key messages to be conveyed to during the stakeholder consultations.

Managing Risk	Identifying the risks associated with the consultation process and measures that will be undertaken to mitigate or manage such risks.

9. Monitoring

The compliance of the Karaš River pilot activities with the ESMF will be thoroughly monitored by various entities after the selection of the locality for pilot implementation and initiation of construction activities.

Monitoring at the project level. The overall responsibility for implementing the ESMF and for monitoring compliance with the Project's environmental safeguard activities lies with WWF Adria, which shall oversee the implementation of all field activities and ensure their compliance with the ESMF. WWF Adria will also provide the implementing entity (the Water Management Company) with technical support in carrying out environmental and social screenings and preparing ESMPs and any other necessary documentation. It shall also monitor the project's grievance redress mechanism (GRM) and assess its effectiveness (i.e., to what extent grievances are resolved in an expeditious and satisfactory manner).

Monitoring at the field activity level: The Water Management Company, which is the implementing entity, shall closely monitor all field activities, and ensure that they fully comply with the ESMF and with the terms and conditions included in the environment clearances issued by RoS's national authorities. The Water Management Company is also fully responsible for the compliance of all external contractors and service providers with the safeguards requirements outlined in the ESMF and ESMP (as applicable). After the beginning of the construction works, the implementing entity will provide WWF Adria with monthly monitoring reports. Disbursement of project funds to the Water Management Company will be contingent upon their full compliance with the safeguards requirements.

WWF Adria may conduct ad-hoc compliance monitoring visits to project sites to monitor compliance with the environmental clearance and with other safeguards provisions outlined in the ESMF, ESMP and/or in the RoS's legislation, as applicable. As part of such monitoring, the WWF Adria may issue recommendations or impose penalties as appropriate.

10. Grievance Redress

The Reconnecting Karaš River pilot may have impact on communities and individuals residing in the vicinity of the pilot site activities. There is thus a need for an efficient and effective Grievance Redress Mechanism (GRM) that collects and responds to stakeholders' inquiries, suggestions, concerns, and complaints. The GRM shall constitute an integral part of the pilot and assist WWF Adria and the Water Management Company in identifying and addressing the needs of local communities.

It is in the interest of the DYNA project to ensure that all grievances or conflicts that are related to pilot activities are appropriately resolved at the local level, without escalation to higher authorities or the initiation of court procedures. Project affected communities will therefore be encouraged to approach the project's GRM.

The GRM will operate based on the following principles:

1. Fairness: Grievances are assessed impartially, and handled transparently.
2. Objectiveness and independence: The GRM operates independently of all interested parties in order to guarantee fair, objective, and impartial treatment to each case.
3. Simplicity and accessibility: Procedures to file grievances and seek action are simple enough that project beneficiaries can easily understand them.

4. Responsiveness and efficiency: The GRM is designed to be responsive to the needs of all complainants. Accordingly, staff persons handling grievances must be trained to take effective action upon, and respond quickly to, grievances and suggestions.
5. Speed and proportionality: All grievances, simple or complex, are addressed and resolved as quickly as possible. The action taken on the grievance or suggestion is swift, decisive, and constructive.
6. Participation and inclusiveness: A wide range of affected people—communities and vulnerable groups—are encouraged to bring grievances and comments to the attention of the project implementers. Special attention is given to ensure that poor people and marginalized groups, including those with special needs, are able to access the GRM.
7. Accountability and closing the feedback loop: All grievances are recorded and monitored, and no grievance remains unresolved. Complainants are always notified and get explanations regarding the results of their complaint. An appeal option shall always be available.

Complaints may include, but not be limited to, the following issues:

(i) Allegations of fraud, malpractices or corruption by staff or other stakeholders as part of any project or activity financed or implemented by the DYNA Project;

(ii) Environmental and/or social damages/harms caused by projects financed or implemented (including those in progress) by DYNA Project;

(iii) Complaints and grievances by permanent or temporary workers engaged in project activities.

Complaints could relate to pollution prevention and resource efficiency; negative impacts on public health, environment or culture; destruction of natural habitats; disproportionate impact on marginalized and vulnerable groups; discrimination or harassment; violation of applicable laws and regulations; destruction of physical and cultural heritage; or any other issues which adversely impact communities or individuals in project areas. The grievance redress mechanism will be implemented in a culturally sensitive manner and facilitate access to vulnerable populations.

The Reconnecting Karaš River GRM will be administered by WWF Adria in coordination with the Water Management Company. WWF Adria will be in charge of the operation of the GRM, and the Water Management Company will assign an individual that will be responsible for collecting and processing grievances that address activities in the pilot site. The GRM will operate according to the following guidelines.

(1) Submitting complaints: Project affected people, workers, or interested stakeholders can submit grievances, complaints, questions, or suggestions either to the Water Management Company or directly to WWF Adria through a variety of communication channels, including phone, regular mail, email, text messaging/SMS, or in-person, by visiting the Water Management Company offices. It is important to enable to separate channels for complaint submissions in order to ensure that project affected people have sufficient opportunities to lodge their complaints to impartial and neutral authorities of their choice.

(2) Processing complaints: all grievances submitted to the Water Management Company and to WWF Adria shall be registered and considered. A tracking registration number should be provided to all complainants. To facilitate investigation, complaints will be categorized into four types: (a) comments, suggestions, or queries; (b) complaints relating to nonperformance of obligations; (c) complaints referring to violations of law and/or corruption while implementing project activities; (d) complaints against authorities, officials or community members involved in project activities; and (e) any complaints/issues not falling in the above categories.

(3) Acknowledging the receipt of complaints: once a grievance is submitted, the Water Management Company and/or WWF Adria shall acknowledge its receipt, brief the

complainant on the grievance resolution process, provide the contact details of the person in charge of handling the grievance, and provide a registration number that would enable the complainant to track the status of the complaint.

(4) Investigating complaints: The Water Management Company and/or WWF Adria will gather all relevant information, conduct field visits as necessary, and communicate with all relevant stakeholders as part of the complaint investigation process. The concerned authorities/offices dealing with the investigation should ensure that the investigators are neutral and do not have any stake in the outcome of the investigation. A written response to all grievances will be provided to the complainant within 10 working days. If further investigation is required, the complainant will be informed accordingly and a final response will be provided after an additional period of 10 working days. Grievances that cannot be resolved by grievance receiving authorities/office at their level should be referred to a higher level for verification and further investigation.

(5) Appeal: In the event that the parties are unsatisfied with the response provided by the GRM, he/she will be able to submit an appeal to the Republic Water Directorate at the Ministry of Agriculture, Forests, and Water Economy within 10 days from the date of decision. The Ministry shall verify and investigate the complaint according to its regular procedures. In the event that the parties are unsatisfied with the decision of the Ministry, they can submit their grievances to the Court of Law for further adjudication.

(6) Monitoring and evaluation: The Water Management Company shall submit a monthly report with full information on the grievances they received to WWF Adria. The report shall contain a description of the grievances and their investigation status. Summarized GRM reports shall constitute part of the regular pilot progress reporting.

Information about channels available for grievance redress shall be widely communicated in communities residing in the vicinity of the pilot activities site and to all relevant stakeholders. The contact details (name, phone number, mail and email address, etc.) of the Water Management Company authorities and WWF Adria shall be disseminated as part of all public hearings and consultations, in the Water Management Company offices, in the local media, in all public areas in affected communities, and on billboards in the vicinity of project activity sites and workers' camps.

The GRM seeks complement, rather than substitute, the judicial system and other dispute resolution mechanisms. All complainants may therefore file their grievance in local courts or approach mediators or arbitrators, in accordance with the legislation of the RoS.

11. Disclosure and Stakeholder Engagement

Stakeholder engagement workshops were organized by WWF Adria in June-August 2018 with representatives of national and regional water management institutions, local government and state-owned corporations, private companies, local community, and local non-governmental organizations. Additional meetings with local government in Vojvodina and the Water Management Company were undertaken as part of a safeguards mission conducted in January 2019.

All affected communities and relevant stakeholders shall be informed about the ESMF requirements and commitments. The ESMF shall be available on the websites of WWF Adria and the Water Management Company, as well as the website of the WWF US. Hard copies of the ESMF will be placed in appropriate public locations in the Water Management Company. The Company will be responsible to raise community awareness regarding the requirements of the ESMF, and will also ensure that all external contractors and service providers are fully familiar and comply with the ESMF and other safeguards documents.

During the implementation of construction activities, activity-specific ESMPs shall be prepared in consultation with affected communities and disclosed to all stakeholders prior to project concept finalization. The draft ESMP shall be reviewed and approved by WWF Adria.

Disclosure should be carried out in a manner that is meaningful and understandable to the affected people. For this purpose, the executive summary of ESMPs or the terms and conditions in environment clearances should be disclosed on the Water Management company and WWF web sites.

Table 3: Disclosure framework for ESMF related documents

Documents to be disclosed	Frequency	Where
Environment and Social Management Framework	Once in the entire project cycle. Must remain on the website and other public locations throughout the project period.	On the website and in the offices of the Water Management Company and WWF Adria.
Environmental Assessment Reports	Once in the entire project cycle for every activity that requires an EA. Must remain on the website and other public locations throughout the project period.	On the website and in the offices of the Water Management Company and WWF Adria.
Environmental Management Plan/s	Once in the entire project cycle for every activity that requires EMP. Must remain on the website and other disclosure locations throughout the project period.	On the website and in the offices of the Water Management Company and WWF Adria.
EMP - Monthly Progress Report	Monthly	Water Management Company
Grievance redress process	Throughout the project cycle	Offices of the Water Management Company and WWF Adria

12. Budget

The EMSF implementation costs, including all costs related to compensation to project affected people, will be fully covered from the DYNA Karas pilot budget.

WWF Adria, which will be in charge of coordinating and supervising all pilot activities, will need to allocate a staff person to the oversight of safeguard requirements. Necessary budget will have to be assigned accordingly.

Annex I. Stakeholder Engagement Workshop

GEF DYNA STAKEHOLDER ENGAGEMENT WORKSHOP Karaš Pilot Project	z
GEF-6 Project "Regional (Bosnia-Herzegovina, Moldova, Montenegro, Ukraine, Serbia) Danube River Basin Hydromorphology and River Restoration (GEF DYNA)" June- August 2018 - Jasenovo, bela Crkva and Vršac, Serbia	

Prepared by: Goran Sekulić, Ljubomir Pejčić

Contact:

Goran Sekulić

gsekulic@wwfadria.org

1 Introduction

Stakeholder positions and opinions for the Karaš Pilot site were assessed in series of meetings. The area was visited in June (one visit) and August 2018 (two visits). Before the first visit an initial mapping of stakeholders was done by consultation with experts working in the region and by internet research. The focus was on local stakeholders: local community, local government and local organizations. However, stakeholders which are not local sensu stricto were assessed as well, if their power and interest was estimated as high and relevant for the project.

During the mapping and searching for stakeholders, specific attention was given to gender mainstreaming and equal participation of genders in the assessment. The intention was to look for representatives of less represented gender (in this case women). The target area is multi-ethnic, since it is very close to Romanian border. Therefore, all relevant information about the ethnic minorities or any other vulnerable groups were collected.

All stakeholders who were met during the assessment were asked with standard set of questions (previously agreed within the project team) and then continued with free-form discussion (or semi-structured discussion). All stakeholders were met in the localities around the pilot sites (Jasenovo, Bela Crkva, Vršac) or on the Karaš pilot sites.

The assessment was done by Goran Sekulić (in June) and Ljubomir Pejčić (in August)

2 Introduction of participants

The stakeholders met during the assessment can be grouped in a following way:

1. Representatives on national institutional stakeholders – (1 representative)
2. Representatives of regional institutional stakeholders- (3 representatives)
3. Representatives of local government and public companies- (3 representatives)
4. Private companies (2 representatives)
5. Local community (5 representatives)
6. Local organizations (2 representatives)

3 Project Presentation

Short presentation of the GEF-DYNA project was given to each stakeholder met (on each meeting). Printed maps and illustrations were used. The content and details provided were adapted to the stakeholders (with professionals the discussion about the project was more detailed.

4 Pilot Project Presentation

The presentation of the planned activities on pilot sites was given to each stakeholder (on each meeting). The presentation was adapted according to the stakeholder background. Maps and illustrations were used to ensure easier understanding. With some stakeholders, presentation was done directly on the site, what was found the best way for discussion with local stakeholders.

5 Aspects discussed (project & proposed pilot project)

Generally, the discussed issues were focused on the proposed activities on the site. Each of the meeting started with standard questions about the project. In particular, those were:

- How they find the idea?- no stakeholder involved in the assessment was strictly against the proposed actions. All of them don't see the idea as problematic or conflicting their interest. Some of the local stakeholders were sceptic about the functionality and effects of the proposed measures. Many of the interviewed stakeholders (local and those not working in water management or nature conservation) are not familiar with specific issues related to water management and they didn't have clear idea what the proposed actions will look like in reality.

- Is it feasible?- there were no major issues identified in regards feasibility of the actions. Some of the interviewed stakeholders have significant experience with the water management. As well, local stakeholders (fishermen and local environmental organization) have some experience in regulating and management on the Jasenovo locality since they use it for recreation for many years (maintaining of a beach and recreation area by the river). Some local stakeholders raised concerns about feasibility of activities on private land (Straža locality).

- Is it relevant for them?- river connectivity is a new topic in Serbia, even among professionals. Public awareness is on ecological connectivity issues or nature based solutions in water management is still very low. Due to that, it was somehow expected that local stakeholders will not recognize or understand the relevance for them. Some of the stakeholders see the high relevance of the pilot activities. Those are mostly institutional stakeholders dealing with water management and nature conservation. As well, some of the local anglers and their organizations have recognized the relevance of the pilot actions but they are not sure whether the activation will be effective. For most of the others, relevance is not that much recognized, primarily because they don't see any direct connections with their activities. However, any improvement of the Karaš river is welcomed since they find it as an important local resource.

- Is it in conflict with any other function/activity? – no major conflicts were identified during discussions with the stakeholders. On Jasenovo locality the situation is pretty much clear. The locality is very much visited by local inhabitants and used for recreation (bathing, fishing, picnics, cultural events). If the proposed actions don't interfere with this, and it is assumed it will not, they don't see any issues. However, some potential synergies and additional values are identified as possible and achievable (improving of recreation area, beach etc.). Part of the land around Jasenovo locality is in private hands (Mill Stari Banat). The private owner has supported local activities on the locality before and it is expected they will not oppose the planned activities.

- Will it affect their work/life? -the recognized potential impact of planned activities on the stakeholders differs among groups. Professionals working in the institutions see the activities as a great opportunity to scale up the issue of river connectivity. As well, representatives of local governments (tourism organization) see them as an opportunity for raising of the visibility and tourism potentials of the region (although not that high). Local stakeholders are mostly indifferent in regards this question. They don't see direct impacts by themselves, although they positively react on explanations and discussion with interviewers or other stakeholders.

- How Karaš river is important for them? - local stakeholders are very proud of the Karaš river and they would like to protect it and to improve its status. Many recreational and cultural activities are connected with the river. Angling is important activity for locals with some potentials in tourism. Comparing to other neighbouring, bigger waters like Danube-Tisa-Danube chanell or Danube, Karaš is attracting much less people. Traditional agriculture (cattle grazing) is as well present in and around project localities. The farmers still use the water from the river for cattle and they find that important. Local governments as well find Karaš as an important part of their communities, although some concerns about flooding exists. The regional and national stakeholders emphasize that Karaš is one of the last almost unregulated rivers in Vojvodina province and due to that it has specific significance. Private companies don't use the water from the river directly (although that was the practice before: mills and hydropower). Now, they recognize it mostly as ambiental/landscape value important for tourism (especially at the Straža locality).

- Who should be involved/asked about?- for sure additional discussion have to be done with private companies working in the region. Their representatives always emphasized that their inputs cannot be taken as definite but just as an orientation for future discussions. Local government representatives as well raised the issue of their limited responsibilities.

The stakeholders were allowed to raise additional issues which they find relevant (not necessarily in direct link with the proposed activities). Among them were:

- Issue of flooding in the area- the area is very sensitive to flooding. Some serious floods happen in the past period. After regulation works in Romania after 2000, the floods have decreased in the intensity and frequency. Anglers which are regular on the river say that the water level fluctuates for 1 to 1.5 maximally. However, concern about flood disasters is still present among the people living in the area. Some plans for, extensive flood prevention (without river regulation and building of large semi-natural flooding areas) exist but their implementation is questioned.

- Traditional activities on proposed sites-on the Jasenovo locality there are a lot of different cultural and recreational activities and the locality is important and often used by the community. They organize artist colonies, picnics, school events and similar activities. Almost all local stakeholders emphasized that.

- Local economy- as in other regions of Serbia there is an obvious depopulation trend in rural areas. People are living small villages and settlements and leaving for bigger cities (Pančevo, Vršac, Novi Sad, Beograd). Most of the stakeholders name the current economic situation, especially unfavourable situation in agricultural sectors, as the main cause for that. Some opposite trends are happening, but they are very limited in number and mostly include elder people coming back to

rural areas. Generally, this can be pointed out as one of the main issues in the community. Most of them see larger investments and intensive agriculture projects as something which could change the situation.

- Angling and anglers associations- they are one of the main beneficiaries of the proposed activities although some of them are not convinced with the effectiveness of the proposed actions. Representatives of anglers association Nera from Bela Crkva were involved in the assessment together with fish-guards from public enterprise Vodevojvodine, which is the user of "Banat" fishing area.

- Eutrophication of the river: the interviewed anglers raised the issue of eutrophication of rivers and step-wise over-growing of wetlands and river banks. This is probably the consequence of recent water regulation measures (upstream in Romania) which has disturbed the natural water regime. As well, decrease in cattle numbers probably contributes to this as well.

- Protected area Karaš-Nera: the area is recently established (2015). It is managed by local government, actually Public utility company "Belocrkvanski komunalac" (recently nominated). The area is not including the proposed pilot sites. Karaš river is not within the boundaries of the protected areas which is located south from Karaš towards Nera. Generally, local inhabitants do not recognize the importance of the area, they are not informed or involved in the management and they don't recognize any specific benefit from it.

- Drinking water supply- Karaš is not significant source of drinking water. There are no larger facilities for water extraction and distribution. Some wells near the river are still present and used by local inhabitants (drinking, farming, for cattle). Irrigation is on a individual scale and incidental.

6 Conclusions

Stakeholder assessment for the Karaš pilot site was conducted in June and August 2018 in series of meetings with identified institutional and local stakeholders. No major conflicts with the project idea were identified and almost all interviewed stakeholders expressed themselves positively about the project idea. The relevance of the project is not evenly recognized. Institutional stakeholders working in the field of water management and conservation are much more positive when they rate the project relevance in comparison to local stakeholder. Generally, the awareness on environmental issues and especially river connectivity is very low. Local stakeholders which are not directly engaged in environmental policies don't have enough knowledge to recognize the significance of such specific activities. During discussions, when some potential positive aspects were explained, local stakeholders were able to link them with their needs and current activities. This points out the need for additional awareness raising and capacity building activities for local people which should be integrated in the project if possible.

No current activities or plans which are in direct conflict with the project were identified. Even the ongoing activities in privately owned areas (hotel reconstruction on Straža locality) are not necessary conflicting.

Jasenovo and Straža locality are very important for local stakeholders because of cultural and recreational activities they practice there. As well, pastures along Karaš near Jasenovo and Straža, are important for farmers and cattle breeders. Some synergies and added values of the project should be considered.

Due to low awareness of the local people additional assessment and engagement process with local inhabitants should be considered. As well, specific attention should be given to private companies and landowners who should be additionally approached with more specific information.

7 Next steps

In the assessment process some gaps were identified which should be addressed in the future implementation of the project. These gaps are mainly related to lower participation of local inhabitants and private owners. Due to that, additional activities should be considered:

- to improve assessment of local inhabitants and local community with specific attention on gender and vulnerable group issues

- to improve engagement with major private owners since they prove to be very delicate in accessing and expressing definite positions.

For the engagement of local inhabitants specific efforts for approaching them should be planned. During this assessment several local organizations were identified which could help in this (i.e. local women organization "Jasenovčanke").

Private owners should be approached with more information and technical details if they are asked to bring more decisive positions. Specific meetings should be organized with support of responsible institutions (water management authorities, nature conservation authorities)

8 Gender issue

QUESTION MAP

Below you find outlined the questions contributing to the gender mainstreaming in the project. They are formulated as assumed they are asked after the explanation of the essence of the project. Fill in the cells with the summaries of answers. Add comments if needed.

Notes

Predominant feedback = what most of men or women say, what the commonly agreed ideas are

Unique feedback = ideas that are expressed by 1 or 2 members should be documented as well

Area of interest	Questions	Predominant women's feedback	Unique women's answers	Predominant men's feedback	Unique men's answers

1. Needs and interests	1.1. What are the most salient needs in your area at the moment?	-economic development -depopulation -unemployment		economic development -depopulation	
	1.2. What do you lack most of all in the community?	-people (depopulation) - job positions - social content (events, activities)	x	-people (depopulation) - developed agriculture	
	1.3. Why are these water resources important to you?	- tradition - recreation - landscape value - culture events	X X	- farming and tradition - recreation -fishing	
	1.4. How do you use these water resources in your everyday life? E.g.: - everyday activities - health - access to food and water - etc.	-recreation -farming/ cattle breeding - culture and tourism		-farming/ cattle breeding - fishing -recreation	

	1.5. Do your work and income depend on this water basin? In what ways? - Your personal? - Your family's?	- Not directly - Cultural events =		-Not directly -For cattle breeding (pastures are depending on water from the river)	
2. Participation in the implementation of the project	2.1. Who do you think has the most responsibility for the success of the project?	- national governmental institutions - local governments		- national governmental institutions - local governments	
	2.2. Do you feel that the community has knowledge and capacity to contribute to the project?	- yes		- yes - not really	
	2.3. Whose opinions are necessary to account for while implementing the project, to your mind?	- local government (high positions) - private owners			
3. Results: expectations, benefits, and	3.1. What would you see as the best outcomes of the project?	- improved public space around the river		- improved fish populations and improved potential for fishing tourism	

potential losses	- For you personally, for your family, for the community?				
	3.2. What do you expect from the project realistically?	- more people visiting the area	x	- this is more relevant for national and governmental level, not so for local community	
	3.3. Which improvements in the community or in your life do you want to have?	- better economic situation - more people living in the area and visiting the area		- better economic situation - improved agricultural production	
NB! Observe and specify who is mostly answering to THIS question and what: →	3.4. What are your main concerns and worries about the project?	- disturbing traditional activities		- other ecological issues can undermine the effect of the project	
	3.5. In what ways can the project activities make lives of other members of the community better? Children? Elderly?	- improving of recreational facilities and programs		- Increase the visibility of the region	
	3.6. Are there any reasons why you do not want the project or any	-no		no	

	of its parts to take place?				

GENERAL SUMMARY OF THE MEETING (TO BE FILLED IN AFTER THE MEETING)

1. . Total number of men in the meetings: ___16 + anonymous local inhabitants _____
2. Total number of women in the meetings: ____8_____
3. Was there any conflict of interests between and among men and women during the meeting?
   _No_____
4. Did men or women dominate over each other considerably in terms of time they spoke, the amount of feedback they gave, etc.? __There were no significante difference between women and men during the meetings. However, men were clearly dominating in random talks in the field (farmers, shepards)_____
5. Describe briefly how men and women responded to each other's comments and opinions. (Supportive/indifferent/disapproving? Are they aware of each other's special needs and expectations?) _

In talks with institutional stakeholders, the discussion was supportive and there were no significant negative reactions between men and women. Women representatives of local governments and local public companies were reserved in bringing definite conclusions and have emphasized the need of additional consultations with superior. Women were underrepresented among local inhabitants and it is hard to estimate their positions in local community. Additional consultations would be needed.

6. Other comments: no

9 Annex - List of participants

Nr. Crt.	Name	Institution/Country	Position	Contact details
1	Marija Lazarević	Ministry of Agriculture, Forestry and Water Management, Directorate for Waters	Head of department for international cooperation	marija.lazarevic@minpolj.gov.rs
2.	Sanja Pantelić	PE Vodevojvodine	Expert associate	
3.	Đorđe Zlatanović	USR Nera bela Crka	President	zlatanovic.dj@gmail.com
4.	Dušan Aničić	PE Vodevojvodine	Fish warden	+381 64 8070508
5.	Tibor Mesaroš	Vršac	Local inhabitant/angler	+381 60 3390655
6.	Vlada Todorović	Bela Crkva	Local inhabitant/angler	+391 62 212757
7.	Tanja Bošnjak	Institute for Nature Conservation of Vojvodina Province	Expert associate	Tanja.bosnjak@pzzp.rs
8.	Laszlo Galamboš	Institute for Nature Conservation of Vojvodina Province	Expert associate	Laszlo.galambos@pzzp.rs

9.	Srpko Savić	Ecological Society “Karaš”	President	+
10.	Šandor Šipoš	Fish study and protection society		Sljandor@gmail.com
11.	Snežana Jungić	Public water management company “Ušće” / Bela Crkva	Expert associate	+381 69 403 00 47
12.	Mladen Jordanov	Kovin	Local inhabitant	+381 65 4959250
13.	Nataša Kovačević	Mlin Stari Banat-Jasenovo- Dubako doo	Privat owner	Interviewed by phone
14.	Milica Vitomirov	Public Utility Company “Belocrkvanski komunalac”	Director	+381 13 2851255
15	Tamara Kovačević	Celanova Capital ltd/ Vršac	Director	Interviewed by phone
16.	Jelena Petković	Jasenovo	Local inhabitant	-

Annex II. Format for Screening of Environmental and Social Impacts for Pilot Activities

PART 1: BASIC INFORMATION

1	Pilot Activity Name	
2	Pilot location:	
3	Design Parameters (area/length)	
4	Preparation period	
5	Construction	
6	Project completion and operation	
7	Total investment capital	

PART 2: IMPACTS SCREENING

Answer the questions below and follow the guidance to provide basic information regarding the suggested activity and describe its potential impacts.

Describe the total land requirement as well as the current land use pattern of the proposed project site under the following headings:

Agricultural

Government

Forest

Private

Others

Total

State the reasons for selecting the proposed site:

Describe the terrain characteristic at the project site and in surrounding area:

Describe the project activities

Technology to be used

Provide the following details, wherever it is applicable

Total site area: ---sq feet

Total built up area (provide area details) and total activity area:

Source of water and total water requirement (m^3/day)

Source of energy and total energy requirement

Parking/Stockyard requirements

Describe the list of raw materials to be used in the manufacturing process, their daily consumption, sourcing, and methods of storage.

Describe list of hazardous chemicals, toxic or inflammable substances (including carcinogenic materials) to be used in the process, if yes, then specify

Type of material

Daily requirements

Storage methods

Details of waste types (solid/liquid and gas) including the quantity and characteristic of waste, if any.

Employment potential in term of numbers, during construction and operational stage including the daily or average working hour:

Table 1: Sensitivity of the project site and adjoining areas

S.No	Information/Checklist confirmation	Yes/No	Provide explanation and supporting documents wherever applicable
	The suggested activity will affect the access of people to common resources. For example, the site was initially used as common grazing land, or fishing pond, or source of revenue for local community/ community forests etc.)		
	The suggested activity entails risk to aquatic flora and fauna due to release of wastewater		
	The suggested activity's site or adjoining areas used as routes by the public/tourists to access recreational/tourist site areas in the vicinity		
	The suggested activity's site or adjoining areas occupied by sensitive man-made land user (schools, park, playground/religious site/community facilities)		

Table 2: Change in physical structure (topography, land use, changes in water bodies, etc.) due to construction and operation of the development project

S.No	Information/Checklist confirmation	Yes/No	Provide explanation and supporting documents wherever applicable
	Potential to cause permanent or temporary change in land use, land cover or topography.		
	Will the suggested activity involve clearance of existing land vegetation?		Number of trees to be cut down: Total land area of vegetation cover removed: Estimated economic value of the trees, crops and vegetation to be cut down / removed and any replacement costs (e.g., fees, registration, taxes):
	Will the suggested activity involve demolition of existing structures?		
	Will the suggested activity trigger land disturbance, erosion, subsidence and instability		
	Will the suggested activity involve construction of new roads during construction and operation?		
	Will the suggested activity involve closure or diversion or realignment of existing natural drain?		
	Will the suggested activity have potential to increase influx of people either temporarily (workers) or permanently to an area?		

	Will the project involve abstraction or transfers of water from ground or surface water?		

Table 3: Use of resources for construction or operation of the project (such as land, water, materials or energy

S.No	Information/Checklist confirmation	Yes/No	Provide explanation and supporting documents wherever applicable
	Expected quantity of water to be used by the project during construction and operation including source of water		
	Expected Quantity of construction materials to be used – stone, aggregates and soil (in MT) and mode and place of sourcing.		
	Energy requirement – electrical energy (in kWh) and fuel (coal, gas, diesel others in tons) and mode of sourcing.		
	Will the suggested activity interrupt with power line right of way, irrigation canals, drains, roads, etc. exist, they may be affected or cause any other blockage?		
	Any other resources (use appropriate standard units)		

Table: 4 Production of solid wastes and liquid during project construction and operation

S.No	Information/Checklist confirmation	Yes/No	Provide explanation and supporting documents wherever applicable
	Will the suggested activity have potential to generate solid wastes, if yes, then specify types and quantity of wastes, wherever it is applicable		

	Will the suggested activity have potential to generate sewage sludge, wastes such as domestic and commercial wastes		
	Will the suggested activity have potential to produce hazardous waste from process, treatment plant and other allied activities?		
	Any other wastes (specify)		

Table: 5 Air pollution and emissions

S.No	Information/Checklist confirmation	Yes/No	Provide explanation and supporting documents wherever applicable
	Will the suggested activity have potential to alter ambient air quality during construction and operation?		
	Emissions from production processes and/or utilities, specify the type of pollutants, if applicable.		
	Potential to generate odour from handling, storage, process and operation of pollution control equipment.		
	Emissions from incineration of waste, if applicable. If yes, specify the type of pollutants.		
	Potential to generate fugitive emissions		
	Potential to release gaseous pollutants, if yes, then specify		
	Will the suggested activity have potential to release toxic gas from handling, transport, storage and its use?		
	Any other emissions, specify		

Table 6: Generation of noise

S.No	Information/Checklist confirmation	Yes/No	Provide explanation and supporting documents wherever applicable
	Will the suggested activity have potential to alter the ambient noise due to the following listed activities Construction of project Plant operations Increase in traffic		
	Will the suggested activity have potential to increase the risk of occupational noise hazard or cause disturbance to adjoining human settlements?		
	Any other potential sources that may cause occupational hazard specify.		

Table 7: Risks of contamination of land or water from release of pollutants into the sewers, surface waters and groundwater

S.No	Information/checklist confirmation	Yes/No	Provide explanation and supporting documents wherever applicable
	Located in potential erosion/landslide prone area		
	Will project activities increase the sediment load in the local water bodies?		
	Potential to contaminate land and water due to handling, transport, storage of raw material/chemical or hazardous substances		
	Discharge of sewage or other effluents to water or land		

	(Expected mode and place of discharge)		
	Will the suggested activity change on-site or downstream water flows (including increases or decreases in peak and flood flows, low flows through extraction diversion or containment of surface of ground water e.g. through dams, reservoirs, canals, levees, river basin developments, ground water extraction) or through other activities?		
	Will the suggested activity affect water quality of waterways (e.g. through defuse water pollution from agricultural run off or other activities?		
	Is there a risk that the suggested activity negatively affects water dynamics, river connectivity or the hydrological cycle in ways other than direct changes of water flows (e.g. water filtration and aquifer recharge, sedimentation)? Also consider reforestation activities as originators of such impacts.		
	From any other sources, specify		

Table 8: Negative Impacts on Species

S.No	Information/checklist confirmation	Yes/No	Details thereof (with Approximate quantities /rates, wherever possible) with source of information data/ provide explanations, Wherever applicable.
	Will the suggested activity result in negative impacts to any endemic, rare or threatened species; species that have been identified as significant through global, regional, national, or local laws, treaties, or processes; species with a narrow range?		

	Does the suggested activity introduce or use potentially invasive, non-indigenous, species? Will the suggested activity have negative impacts on other native species?		

Table 9: Pest Management

S.No	Information/checklist confirmation	Yes/No	Details thereof (with Approximate quantities /rates, wherever possible) with source of information data/ provide explanations, Wherever applicable.
	Does the suggested activity use or promote the use of any substances listed under the Stockholm Convention on Persistent Organic Pollutants? Will the suggested activity involve or promote the use of pesticides and/or fertilizers? If pesticides/fertilizers are to be used, what pesticides or fertilizers will be used? Are they a product classified by the World Health Organization as Classes IA, IB, or II? Will the procurement of the pesticides, procurement of suitable protective and application equipment, and intended usage comply with the FAO International Code of Conduct on the Distribution and Use of Pesticides? Has full consideration been given to the transport, storage, application, distribution, and disposal of the pesticides and fertilizer?		

	Has full and due consideration been given to the potential impacts of that use of pesticides/fertilizers on the health of project executors and nearby communities?		

Table 10: Risk and disaster

S.No	Information/checklist confirmation	Yes/No	Details thereof (with Approximate quantities /rates, wherever possible) with source of information data/ provide explanations, Wherever applicable.
	Activities/operations or processes leads to fire risk/ explosion/ electrocution and others.		
	Risk of road accident		
	Any other risk, specify		

Table 11: Information on Socio-economic environment

S.No	Information/checklist confirmation	Yes/No	Provide explanation and supporting documents wherever applicable
	Will the suggested activity involve land acquisition?		
	Access to livelihoods		

	Will the suggested activity introduce restrictions on access to natural resources (e.g., watersheds or rivers, grazing areas, forestry, NWFP) or restrict the way natural resources are used, in ways that will impact livelihoods? This may be the result of new legal restrictions (e.g., on hunting) or law enforcement activities; creation or enforcement of new protected areas; demarcation of land boundaries, etc. Does the suggested activity involve restriction of access to sacred sites of indigenous communities or other local communities' and/or places relevant for women's or men's religious or cultural practices?		
	Cultural heritage Is the suggested activity located in or near a site officially designated or proposed as a cultural heritage site (e.g. UNESCO World Cultural or Mixed Heritage Sites or Cultural Landscapes) or a nationally designated site for cultural heritage protection? Does the suggested activity area harbor cultural resources such as tangible, movable or immovable cultural resources with archeological, historical, cultural, artistic, religious, spiritual or symbolic value for a national, people or community. This could include burial grounds, buildings, monuments or cultural landscapes. Will the suggested activity involve excavation or movement of earth, flooding or physical environmental changes (e.g., as part of ecosystem restorations? Will this physical intervention affect known or unknown (buried) cultural resources?)		
	Impacts on local culture due to construction If construction takes place agriculture area, construction materials, waste, wastewater and surface runoff from construction sites, camps may enter rice or plantation nearby disturbed areas and cause loss or harm to plants, trees Dust, noise, vibration from construction or interactions between workers with local people may cause nuisance and conflict between the workers and local community. In some cases, workers may also involved in "social evils" in the project areas such as		

	gambling, drinking, drugging, etc. to have bad impacts on local people, particularly where ethnic minority groups present.		
	Occupational health and safety Will the suggested activity involve any risks related to transportation and loading of construction materials, working high above the ground or in canals where slops are unstable, machinery operations, electrical uses for office, camp and construction		
	Community health and safety If local people presence at or near construction site, they would be exposed to safety risks related to construction (e.g., loading and unloading of construction materials, excavated areas, fuel storage and usage, electrical use, machinery operations etc, adequacy of accommodation etc.).		
	Participation and consultation Does the project respect the rights of local communities with customary rights to lands and resources to free, prior, informed consent to interventions directly affecting their lands, territories or resources? Does the project support traditional conservation initiatives and/or promote related enabling policies, legislation, and participation in broader processes?		
	Vulnerability Is there a risk that the project might negatively affect vulnerable groups in terms of material or non-material livelihood conditions or contribute to their discrimination or marginalisation (only issues not captured in any of the sections above)?		
	Community conflicts Is there a risk that the project would stir or exacerbate conflicts among communities, groups or individuals? Also consider dynamics of recent or expected migration including displaced people		

	Identify and describe site-specific and type-specific issues, concerns, risks, potential impacts		

List of documents to be attached with this IESE form:

1	Layout plan of the project
2	Summary of the project proposal
3	No objection certificate from various departments and others relevant stakeholders (applicable if EA is not required)
4	Environment Management Plan (applicable if EA is not required)

Screening Conclusions.

i. Main environmental issues are:……..
ii. Permits/ clearance needed are:. ……..
iii. Main social issues are. ……
iv. Land acquisition and involuntary resettlement (permanent or temporary) if any;
v. Further assessment/ investigation needed and next step.
    a. Need for any special study:……..
    b. Preparation ESMP (main issue to be addressed by the ESMP):……..
    c. Any other requirements/ need/ issue etc:

Screening Tool Completed by: Screening Tool Reviewed by:

Signed: Signed:

Name: _____ Name: _____

Title and Date: _____ Title and Date: _____

Annex III:Format for Environmental and Social Compliance Monitoring

Project Activity/Contract package:
Monitoring Officer:
Name: Mobile phone number email
Date reporting:

	Environmental issues	Description of Mitigation Measures implemented	Evaluation 1=good; 0 = acceptable; -1 = bad
1	Dust, smoke		
2	Noise, vibration		
3	Disturb vegetation cover, cut trees		
4	Waste generation		

5	Water pollution		
6	Localized flooding		
7	Traffic disturbance		
8	Public health and safety		
9	Damages or disrupt operations of existing infrastructure		
10	Disturb Socio economic activities		
11	Social impacts related to mobilization of workers to the site		
12	Impacts on physical cultural objects		
	Others (specify)		

Signature

Name and Designation

Name of the CA

GEF Danube River Basin Hydromorphology And River Restoration project (DYNA)

Component 3. Demonstration Pilots –

Reducing Siltation Processes in the Beleu Lake

Environmental and Social Management Framework

Table of Contents

1. Introduction

The Danube River Basin covers more than 800,000 square kilometres – 10% of continental Europe – and extends into the territories of 19 countries. This makes it the most international river basin in the world. Over 80 million people live in this basin, depending on the Danube for drinking water, energy production, agriculture, and transport. The Danube River Basin covers numerous sub-basins, including Sava, Tisza and Prut.

Over 100 years of navigation, flood-protection, hydropower generation, and sediment extraction have significantly altered the morphological structure of the Danube River Basin, leaving only 17% of water bodies in a more or less 'natural' state. This resulted (and still results) in a range of environmental problems and hydromorphological alterations.

The Danube River Basin Hydromorphology and River Restoration (DYNA) project builds on nearly 30 years' experience through the Global Environment Fund (GEF), European Union (EU) and other national actors within the Danube River Basin. The GEF has supported key activities through multiple projects and provided over 100M USD in grants to strengthen the management of environmental issues in the region whilst enabling sustainable and improving socio-economic conditions.

1.1 The DYNA Project

The DYNA project aims to "Strengthen integrated and harmonised approaches for river restoration and aquatic biodiversity conservation responding to pressures from hydromorphological alterations in the Danube River Basin" with a focus on the five non-EU countries (Bosnia-Herzegovina, Moldova, Montenegro, Serbia, and Ukraine). This objective will be achieved through 4 interlinked components:

- Harmonising regional approaches to reduce hydromorphological pressures;
- Strengthening country-level efforts to implement relevant Danube River Basin Management Plans;
- Demonstration pilot projects for Danube river restoration;
- Knowledge management and effective project Monitoring and Evaluation.

Component 3 of the DYNA Project will compose of the preparation of one transboundary pilot project across two non-EU Member States and three pilots in non-EU Member States, which will demonstrate hydromorphological pressure reduction and integrated approaches in river basin and flood risk management planning and implementation. The pilots will showcase good practices in river basin management with respect to addressing pressures from hydromorphological alterations and assist with increasing national capacity on project design and implementation.

1.2 The Beleu Lake Pilot

One of the pilots that was selected for implementation is the project that focuses on "Restoring hydrologic regime through reducing siltation processes in the Beleu Lake."

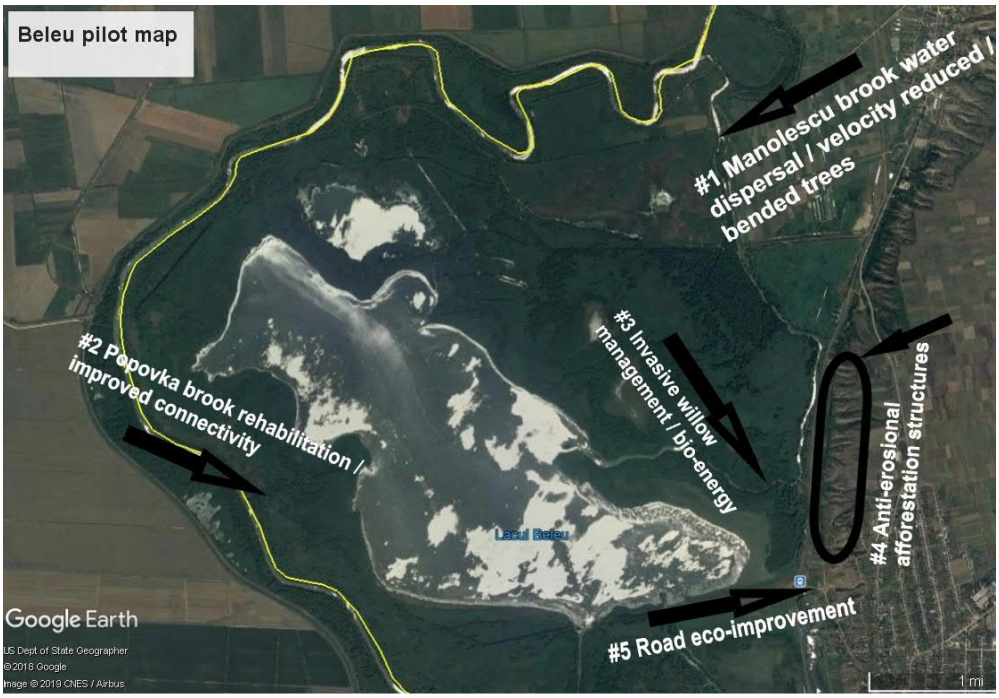
Lake Beleu is a natural water body with circa 500-1000 ha of water surface. The lake conditions are degrading due to increased siltation and advanced eutrophication processes. These are primarily caused by sediment spills from an artificial canal called Manolescu brook, which was built upstream the lake for industrial fishing in the 1930s to connect the Prut river (left tributary

of the Danube) with Beleu lake. Advanced soil erosion on the eastern hilly bank of the lake as a result of deforestation (for fuelwood and grazing) in the recent years is exacerbating the situation.

These processes have caused the bottom of the lake to rise and the water surface to shrink, generating an ecological imbalance that is unfavourable for water and conservation status (including internationally protected species), and that also invites unwanted invasive plant and animal species. Also, the native willow species moved rapidly into the lake across an area of 200 ha over the last 15 years and several invasive alien species (such as ragweed or cocklebur, but some still to be identified) started to significantly affect the ecosystems and native biota.

These resulted in significant biodiversity loss (including fish communities) and landscape changes as well as an invasion of alien species and worsening of the socio-economic conditions of local communities who historically have profited from the ecosystem services of this wetland.

Figure 1. Beleu site map (yellow line – is Prut river; black arrows / oval shape is the planned work) [data from Google Earth Pro 2018]



Several small or medium-size projects were undertaken in Lake Beleu with international support (e.g. EU/ENPI CBC), but no river/wetland restoration was done. For this reason, local stakeholders (Agency Moldsilva, Agency Apele Moldovei, local administrations) have suggested the current pilot to WWF for possible cooperation, and a Protocol of Intention with all stakeholders was signed in June 2018.

1.3 Objective of the ESMF

The DYNA Project will be financed by the Global Environment Facility (GEF), and WWF is the accredited entity negotiating the Project with GEF. Hence, the WWF's Environmental and Social Safeguard Integrated Policies and Procedures (SIPP) apply to the project, and require the preparation of an Environmental and Social Monitoring Framework (ESMF).

The principles and procedures of the ESMF apply both to project activities that are funded through GEF and to activities that are funded from other sources.

The preparation of this ESMF was required in accordance with the WWF's SIPP in order to identify and manage the environmental and social risks and impacts of the demonstration pilot on "Reducing Siltation Processes in the Beleu Lake," which will be carried out as part of the GEF DYNA project. The ESMF aims to outline the principles, procedures, and mitigation measures for addressing environmental and social impacts associated with the project in accordance with the laws and regulations of the Republic of Moldova and with SIPP.

Since the precise scope of activities that will be implemented as part of the pilot will only be determined during the implementation phase, site-specific social and environmental impacts are uncertain at this stage. Thus, the development of site-specific Environmental and Social Management Plans (ESMPs) is currently not feasible, and an ESMF is necessary to set out procedures for addressing potential adverse social and environmental impacts that may occur during project activities. Site-specific ESMPs will be developed pursuant to the guidance provided by this ESMF during project implementation.

The specific objectives of the ESMF include the following:

- Identify the positive and negative social and environmental impacts and risks associated with the implementation of the Project;
- Outline the legal and regulatory framework that is relevant to the Project implementation;
- Specify appropriate roles and responsibilities of actors and parties involved in the ESMF implementation;
- Propose a set of actionable recommendations and measures to mitigate any negative impacts and enhance positive impacts;
- Develop a screening and assessment methodology for potential activities, that will allow an environmental/social risk classification and the identification of appropriate safeguards instruments;
- Set out procedures to establish mechanisms to monitor the implementation and efficacy of the proposed mitigation measures;
- Outline requirements related to disclosure, grievance redress, capacity building activities, and budget required for the implementation of the ESMF.

In general, the anticipated adverse environmental and social impacts of project activities are positive, and adverse impacts are temporary, site-specific, reversible and can be readily mitigated. Thus, the DYNA Project is classified as a "Category B" project under the WWF Environmental and Social Safeguards Categorization Memorandum.

1.4 ESMF Preparation Methodology

The ESMF was prepared based on the following information:

a) Technical documentation provided by WWF DCP;

b) Desk review of the WWF SIPP and the Republic of Moldova environmental and social assessment laws, regulations, and policies;

c) Stakeholder engagement workshop that was carried out by WWF DCP in July 2018 in Valeni, Moldova;

d) Meetings and discussions with stakeholders undertaken as part of a safeguards mission for the DYNA project in January 2019.

2. Project Description

2.1 Pilot objectives

The pilot project aims to address the siltation processes in Lake Beleu and restore the long-term natural water balance in the lake by applying nature-based solutions. As such, the pilot will demonstrate how a water engineering mistake of the past (i.e. an artificial canal with limited purpose) and unsustainable use of natural resources (e.g. deforestation and abusive grazing) can be mitigated to restore ecosystems functioning in line with the Water Framework Directive, nature conservation objectives, and for the benefit of local communities. It will show the value of nature-based solutions and that hydromorphology measures in support of freshwater ecosystem functioning can also benefit local livelihoods.

The restored hydromorphology of the area will provide a healthy ecosystem for the local wildlife, and secure clean water, fishing opportunities, recreation and other ecosystem services for the local population. Once restored, wetlands will be able to absorb more flood waters and ensure a normality of ecological processes. Wetlands provide important habitats and breeding territories for an important biological diversity of flora and fauna, including internationally protected species.

The precise location and scope of the pilot activities will be determined based on a feasibility assessment that will be undertaken during the 1st year of the pilot implementation.

2.2 Proposed pilot activities

Indicative activities that were identified during consultations with stakeholders and experts from the two management state authorities (Agency Moldovan Waters and the Nature Reserve Lower Prut, which is subordinate to Agency Modlsilva) and that are considered for implementation include the following:

1. Reduction of sediment flow through the artificial Manolescu brook by using nature-based solutions such as fallen trees to decrease and trap sediment;
2. Ecological rehabilitation of the natural brook Popovka to improve connectivity between the Beleu lake and Prut river;
3. Sustainable management of invasive/aggressive vegetation by allowing locals to harvest them for bio-energy use;
4. Reforestation of some degraded land and bank, and stabilization of eroding ravines to prevent/reduce runoff water flow into the lake;
5. Modification of a country access road to reduce organic matter flow into the Beleu lake.

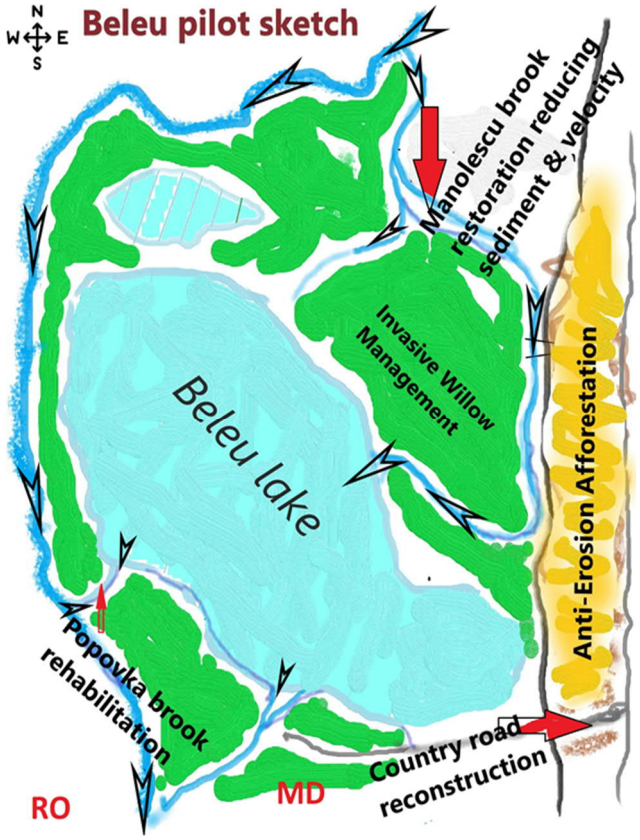


Photo 1. Beleu Lake overview (core area of the Lower Prut Nature Reserve): water surface is reduced compared to what it was some 50 years ago; the willow stands are invading aggressively, nourished by sediments brought from the Manolescu artificial canal, creating favourable habitat for other exotic weeds and introduced invertebrates, which produce even more disbalance. Made by Aurel Lozan, June 2018

Photo 2. The riverbank on the eastern slopes from Beleu Lake used to be covered with forest vegetation, now the vegetation is gone and active erosion is in place. Erosion will affect not only the lake's surroundings, but also the roads to the Slobozia Mare village nearby and human properties. Made by Aurel Lozan, May 2016.

Photo 3. The Manolescu artificial canal, believed to cause siltation, is located upstream the lake Beleu in the Valeni village community land; all attempts to terminate it in the past were unsuccessful. The pilot project aims to apply only nature-based solutions (living trees, other eco-techniques) to reduce sediment flow and redirect water flow into more canals as it used to be in the past. Made by Veaceslav Purcic, July 2018.

3. Project Area Profile

3.1 Geographic information

Beleu Lake represents one of the largest natural lakes in the Republic of Moldova, is located in the southwest part of the country, in the lower course of the Prut River. It is situated between Slobozia Mare and Văleni villages in Cahul district, in the —Lower Prut Reserve – also a wetland of international importance. It occupies about two thirds of the territory of the reservation and it is surrounded by floodable meadows and small forests. The lake is 5 km long and 2 km wide, with medium depth of 1.5 meter and area of 6,26 km². It has an oval shape, elongated from NW to S-E, its perimeter being of circa 15 km

The bottom of the lake is flat with mild unevenness, covered mostly with mud. The water level of the Lake depends on the water levels in the Danube and Prut Rivers and varies depending on spring and summer floods. The Lake is connected to the Prut River through 4 brooks: Manolescu (partly artificial), Popovca, Nevodul and Rotaru.

3.2 Flora and fauna

The Lake is the core zone of a protected area (wetland) of 1691 hectares and the size of the lake itself is about 500 – 1000 hectares (depending on the water level/flooding). The wetland is surrounded by reed vegetation and flooded forests that consist mainly of willow stands and rare while poplar species (or other poplars) and Common Oak, and the Russian Olive bushes that invade the landscape. Due to siltation and flooding situation, the willow species have become 'invasive'. The lake ecosystems are home to an important biodiversity with many nationally/internationally protected plants (such as Water White Lily, Water Chestnut or Floating Fen) and animals (Eurasian Otter, Great White Pelican or Spoonbill). The lake area is inhabited by more than 30 species of fish (including rare species) that play a crucial role to sustain local communities.

3.3 Hydromorphologic information

The input of water into the Lake is provided by the Manolescu brook in the North and Popovca brook in the South-West. The Manolescu brook is one of the biggest affluent brooks and has an input of ≈ 70% from the inflow into the lake. In the Southern part, the Beleu Lake gets water from two brooks: Rotaru and Nevodului. The affluent brooks transport into Beleu large quantities of suspended solids which sediment in Beleu Lake and exacerbate the siltation process. A comparison of topographic maps from 1984, 1999 and 2013 years reveals that the hydromorphometric characteristics of Beleu Lake have evolved—the waterline has decreased and aquatic vegetation has covered the surface, contributing to the lake's eventual disappearance. There is a high risk that the lake will disappear in the near future and the area will be transformed into a large space covered by reed vegetation with small islands of water bodies within.

3.4 Demographic information

The Beleu Lake is part of the Lower Prut Reserve, located between the Slobozia Mare and Văleni villages – where pilot interventions are primarily planned (most in the vicinity of Slobozia Mare). The villages around the lake are inhibited by a population of nearly 25,000, which primarily depends on subsistence agriculture.

Livelihoods. Livestock grazing of horses and sheep on Community land was observed in and around the project area. Grazing practices have increased in the last several years, mostly on community land. Illegal logging is also practiced. Fishing from the lake is limited due to the poor quality of fishing stock that results from sedimentation; however, most fishing is illegal (although traditional and done by locals to sustain their families). In the years 1960/70, lake Beleu was used for industrial fishing with harvest levels reaching 70-80 tones annually. Nowadays, the lake cannot support such industrial activities as fish communities have dramatically decreased.

Land ownership.

- The Beleu Lake territory is owned and managed by the Lower Prut Nature Reserve (Moldsilva's subdivision).
- The newly created Biosphere Reserve Lower Prut, to which Beleu lake belongs, has neither administration nor cadastral (land) registration. It is formally managed by Moldsilva (subdivision of the Ministry of Agriculture, Regional Development and Environment).
- The eroded hills and some of the wetlands around the lake are community lands that partially belong to the Slobozia Mare and Valeni villages, and partially to the Forest Enterprise Silva-Sud (MoldSilva's subdivision).
- The Manolescu brook is local government land that belongs to the Valeni village.
- There are also some private land plots in the vicinity of the lake, and a government-owned railroad that is located alongside in its immediate vicinity.

Oil refinery. An oil refinery is located in the northern corner of the lake and has been active since the Soviet times. The refinery was founded for exploration purposes. The location currently occupied by the refinery used to be part of the core protected area of the reserve, but since the establishment of the refinery the reserve area has been reshaped and the oil refinery area categorized as a buffer zone to allow exploration activities.

The planned pilot activities will not be carried out in the vicinity of the refinery, and the latter is not expected to have any direct impacts on the project. However, the WWF project team was informed by the Mayor of Valeni (the town closest to the refinery), that communities have had several conflicts with the oil refinery since it is on community land and does not provide any benefits to the village. There have also reportedly been some oil spills that were not addressed.

Local village authorities have no legal mandate to enforce safety measures on the refinery either. However, this is not expected to affect planned pilot activities.

4. Environment and Social Policy, Regulations and Guidelines

4.1 Republic of Moldova Policies, laws, Regulations Guidelines

Several legislative provisions and policies may be pertinent to the pilot project.

(i) Environmental protection

Law #1515 on Environmental Protection (1993). This Law establishes the basic legal framework for drafting special normative acts and instructions in particular issues of environmental protection in order to:

- Ensure the right of each person to a healthy and aesthetically pleasant environment;
- Achieve the ultimate responsibility of each generation for environmental protection towards the future generations;

- Obtain a wider range of use of natural resources without exceeding the allowable limits, avoiding their depletion and degradation, the risk for people's health and other unwanted and unpredictable consequences;
- Protect the soil and subsoil, water and air from chemical, physical and biological pollution;
- Maintain the biodiversity and genetic resources, integrity of natural systems, historical and cultural national values; and
- Restore ecosystems and components affected by human activity or natural disasters

Law #851 on Ecological Expertise and Environment Impact Assessment (1996). The law determines the goals, objectives and principles of State Ecological Expertise (SEE) and Environmental Impact Assessment (EIA), as well as fundamentals of both procedures. The Law describes in detail EIA procedures, demands the reporting, rules for compliance and submission of documentation on EIA, public involvement, revision of EIA documentation, and rules for conducting the State Ecological Expertise (SEE). The SEE refers to the assessment of potential environmental impacts of planned economic activities, compliance with legislation and policies, and mitigation measures.

According to the Law, project documentation for the objects that may adversely affect the environment is a subject of State Ecological Expertise which in turn determines whether it complies or not with environmental protection requirements. Decisions on Ecological Expertise can be considered as the basis for approval or refusal of the project. Ecological Expertise is conducted prior to making decisions on planned economic activities, and it is mandatory for all economic activities that may have a negative impact on the environment regardless of their destination, ownership, investments, location, source of financing etc. In case the objects can affect the environment severely, their planning documentation is a subject of EIA to be conducted prior to Ecological Expertise.

Law #86 on Environmental Impact Assessment (2014). This Law establishes the goal of preparing documentation on the Environmental Impact Assessment (EIA), its procedure, coordination and approval, and includes the List of objects and types of activities for which an EIA is compulsory prior to their design. The EIA is carried out to determine the requisite measures to prevent adverse ecological impacts due to the implementation of certain planned objects and types of activities.

The EIA should be conducted at an early stage of the project in case of new construction, upgrading, reconstruction, modernization, production of profile changes, conservation or liquidation of existing enterprises, or new development planning.

The EIA process works as follows:

Project environmental screening. Following national environmental approval procedures, all projects may be conventionally divided into three main categories:

- First category - projects which may have a significant impact on the environment. They require a full EIA before the design stage and can be further developed (detailed engineering design) with a positive approval (Environmental Agreement) of the EIA findings by the State Ecological Expertise (SEE). The projects in this category mainly correspond to WWF Category A projects.
- Second category - projects not listed in "First category" projects, which may have less significant impact on the environment. They require ecological substantiation of project activities. Such substantiation should be described in a special Environmental Chapter of the project design documentation, which has to contain information on potentially

affected environment as well as outline the main potential environmental impacts and mitigation measures. The Environmental Chapter has to be included in the project design documentation and, respectively, be passed through the State Ecological Expertise before project implementation. This category mainly corresponds to WWF Category B projects.

- Third category - projects which are expected to have minor impact on the environment and therefore do not need to be passed through the formal procedures of EIA and SEE. This Category fully corresponds to WWF Category C projects.

EIA review and approval process. According to the Law #86 on EIA (2014), documentation for the projects that may adversely affect environment is subject to examination by the Ministry of Environment. The main goal of this examination is to determine whether the project documentation complies with environmental protection requirements and to check whether all environmental standards/principles are adhered, and the environmental protection measures are addressed. An EIA should be conducted prior to making decisions on planned economic activity, and is compulsory for project and planning documentation with regard to planned economic objectives and activities that affect or may affect environmental conditions and/or envisage use of natural resources, regardless of destination, placement, type of ownership and subordination of these objectives, the amount of capital investments, source of funding and method of execution of construction works.

EIA disclosure and consultation. Public consultations for the projects which require a full EIA are compulsory at the initial stage of the project before preparing the EIA (at the scoping stage) and at a later stage, when the Statement on EIA is disclosed to the public prior to reviewing the final (updated) documentation by the state environmental authority; the existing national public consultation procedure for "First category" fully complies with the WWF's required procedures for Category A projects. For projects not listed in the Law, public consultation is not compulsory, thus the procedure is not consistent with WWF requirements for Category B projects.

Law #439 on Animal Kingdom (1995). The main purpose of the Law is creating conditions for effective protection and rational use of fauna resources. The Law determines that design and construction of any facility should be implemented only if animal protection measures (habitat, reproduction, and means of migration) are undertaken. Art. 13 stipulates that sites for construction of enterprises, facilities, installations and other objects are coordinated with the Ministry of Environment, with local public authorities and other agencies; Art. 14: while carrying out agricultural and construction works, exploitation of transport and implementation of other activities, physical and juridical persons are obliged to undertake measures to prevent the loss of animals.

Law #1422 on Air Protection (1997). This Law is aimed at maintaining the air purity and improving the air quality - component of the environment, preventing and reducing the adverse effects of physical, chemical, biological, radioactive and other factors on the atmosphere, with adverse consequences for the population and /or the environment, and regulates the activity of individuals and legal entities, irrespective of type of ownership and legal form of organization, when he/she directly or indirectly affects or may affect the air quality.

Law #1236 on Regime of Harmful Products and Substances (1997). The Law establishes the role and responsibilities of the Government and other central and local authorities in relation to harmful products and substances, and describes the regime of harmful products and substances (licensing, production, storing, transportation, use, registration, neutralization, import and export).

Law #1540 on Taxes for Pollution of the Environment (1998). This Law refers to the penalties for the discharge of pollutants into the environment. Art. 9(1) describes the penalty charges for pollutants released from waste water discharges both to water bodies and effluents into sewerage

systems where such discharges exceed established limits. Part (2) indicates that penalties for pollutants released into sewage facilities and on filtration fields are to be imposed on the basis of the total volume of water allocation. Part (3) describes the penalty for release of water from fish ponds in the case of excessive volume of pollutants. Annex 6 of the Law provides norm for counting of fees for pollutants released from cattle, pig and poultry farms into septic tanks; Annex 7 - for collection and storage of other solid wastes, including toxic.

(ii) WRM, Forestry & Natural Areas Protection

Forest Code #887 (1996). The Code aims to regulate housekeeping of the forest fund through its rational use and regeneration, forest defense and protection, maintenance, conservation and improvement of forest biodiversity to ensure current and future needs of society for forest resources.

Law #440 on Water Protection Strips along the Rivers and Water Bodies (1995). The Law establishes the rules for creation of water protection zones and strips along rivers and water bodies, the regime of their use and protection. The Law determines: (i) dimension of protected zones and strips; (ii) water protection regime (permitted economic activities) within the water protection strips, etc. According to the Law, use of pesticides is restricted on the strip of 300 m width along the river bank; sitting of livestock farms, septic tanks and solid waste from livestock farms, location of technical services stations, machinery and transport wash, location of municipal and industrial waste disposals, and irrigation by sewage is to be controlled with respect to distance from river bank.

Law #1102 on Natural Resources (1997). This Law provides the basic principles of natural resource management and use. The legal act includes, among others, provisions for “payment for use of natural resources” and “payment for pollution pay” principles and other economic mechanisms aimed at the improvement of economic entities’ production technology to minimize utilization of natural resources and enhance their protection and encouraging environmentally friendly economic activities.

Law #1538 on state natural protected areas (1998). It states legal conditions for the creation and function of the state protected areas as well as principles, mechanisms and approaches to conservation, including responsibilities of national and local public authorities, non-governmental organizations and citizens. It also establishes the list of objects/areas under state protection, protection regime and buffer zones around protection objects/areas.

Law #1041 on Improvement of Degraded Lands by Afforestation (2000). In accordance with the Law, these lands, regardless of property type, can be ameliorated by afforestation works to protect soil, restore water balances and to improve environmental conditions. According to this Law, the degraded lands shall be considered the one that by erosion, pollution or destructive action of anthropogenic factors have lost the agricultural production capacity, but which can be improved by afforestation and other works to restore ecosystems, namely:

a) lands with strong and excessive erosion surface;
b) lands with deep erosion - basins, ravines, etc.;
c) lands affected by active landslides, collapses, landslides and mud leakage;
d) sandy soils exposed to erosion by wind or water;
e) gravel lands, blocks, detritus, and torrential alluvial deposits;
f) lands with permanent excess humidity;
g) salty lands;
h) lands polluted with chemicals, oil or noxious;
i) lands occupied by open pit, mining tailings, waste production or household etc.;

j) lands with damaged or destroyed biocenosis, unproductive lands.

Law #149 on Fish reserve, fishing and fish-farming (2006). Most of national natural water streams, lakes and reservoirs are classified as fish-water. The Law prohibits; (i) to discharge to fish water of un-treated waste water, (ii) to use fertilizers, pesticides and other chemicals on the water bodies and at the banks (300 m), (iii) to lowering water level or use water for agricultural purposes without a permit issued by Fishery Service under the State Ecological Inspectorate, (iv) to abstract water without fish protection installations, etc.

Law #94 on the Ecological Network (2007). The Law establishes a legal framework for creation and maintenance of the National Ecological Network as an integral part of Pan-European Ecological Network.

(iii) Land management

Land Code #828 (1991). The Land Code establishes the relations and rights of land ownership and the basic framework of land use. Art. 5 states that land conservation should be a priority while implementing any kind of activities. Art. 23 is particularly important because it stipulates cases of termination of land rights, including use of the land in ways that result in soil degradation, chemical and other pollution, deterioration and destruction of ecosystems or their components. The obligations of the land owners (art. 29) are: use of land to conform to its intended and planned use, observe conditions of land exploitation, to ensure structure of crop rotation to conform to good agricultural practices, to apply chemical inputs only to recommended levels and to provide protection and improvement of soil fertility.

Law #721 on Quality in Construction (1996). This Law determines juridical, technical, economic and institutional aspects related to the construction activities and its quality. The Law stipulates that construction requirements should guarantee resistance and stability, fire, hygiene and environmental safety, etc. Art. 13: construction, modernization, strengthening, repair/renovation are implemented only in accordance with project documentation worked out by physical and juridical persons authorized for such types of works and verified by authorized specialists in the field; Art. 14: design and construction of buildings is implemented by physical and juridical persons licensed for activity in the field.

4.2 WWF Safeguards Policies and Procedures Applicable to the Project

WWF's safeguards policies require that any potentially adverse environmental and social impacts are identified, avoided, or mitigated. Safeguards policies that are relevant to this project are as follows.

(i) Policy on Environment and Social Risk Management

The project is classified as Category B based on initial analysis. Adverse environmental and social impacts that may occur as a result of project activities are expected to be site-specific, negligible and easily mitigated.

The exact location and impact of specific activities cannot be determined at this stage, and will only be known during project implementation phase. Thus, an ESMF was prepared to set out guidelines and procedures on how to identify, assess and monitor environmental and social impacts, and how to avoid or mitigate adverse impacts. Site-specific ESMP will be prepared as required, based on principles and guidelines of the ESMF.

(ii) Policy on Protection of Natural Habitats

As stated above, the overall environmental and social impacts of the proposed project are expected to be overwhelmingly positive and the project expected impacts on Natural Habitats are also expected to be significantly positive, through efforts to address siltation processes and to restore the natural water balance in the Beleu lake by exclusively applying nature-based solutions.

Nonetheless, potential minor small-scale impacts on Natural Habitats may occur during reforestation activities. Provisions are to be made in the ESMFs to adequately address such possibilities. Any other activity under the project will be screened for its potential to cause negative impacts to natural habitats under the ESMF procedures. If any such activity is likely to cause irreversible or significant damage to habitats it will be excluded from project grant funding.

(iii) Policy on Involuntary Resettlement

The WWF's policy seeks to ensure that adverse social or economic impacts on resource-dependent local communities as a result of conservation-related restrictions on resource access and/or use are avoided or minimized. Resolution of conflicts between conservation objectives and local livelihoods is sought primarily through voluntary agreements, including benefits commensurate with any losses incurred. Involuntary resettlement is avoided or minimized, including through assessment of all viable alternative project designs and, in limited circumstances where this is not possible, displaced persons are assisted in improving or at least restoring their livelihoods and standards of living relative to pre-displacement or pre-project levels (whichever is higher).

The project is not expected to involve land acquisition leading to involuntary resettlement of project affected persons (PAPs). All project activities will be executed on (local)government- or community-owned lands. Any project activities that might affect privately owned land will only be carried out if no adverse impacts are caused to land owners and after obtaining their explicit and written permission.

Some of the planned activities may have some minor effects on the livelihoods of local communities, such as temporarily restricting access to grazing and/or restricting access to the lake during the rehabilitation of the access road. To mitigate any adverse impacts, all activities that may affect local communities' access livelihoods it will be closely coordinated with community representatives and only carried out after consultations with all relevant stakeholders. If disturbance of access to livelihoods cannot be avoided, a full and timely compensation shall be provided to all livelihood users, irrespective of their formal land ownership status or title.

(iv) Policy on Accountability and Grievance System

Project-affected communities and other interested stakeholders may raise a grievance at any time to WWF CEE and the village of authority of Slobozia Mare. The WWF DCP project team will be responsible for informing project-affected parties about the Accountability and Grievance Mechanism. Contact information of the Project Team and WWF will be made publicly available. Relevant details are also provided in the Grievance Redress & Process Framework section of this ESMF.

The WWF Policy on Accountability and Grievance Mechanism is not intended to replace project- and country-level dispute resolution and redress mechanisms. This mechanism is designed to: Address potential breaches of WWF's policies and procedures; be independent, transparent, and effective; be accessible to project-affected people; keep complainants abreast of progress of cases brought forward; and maintain records on all cases and issues brought forward for review.

(v) Health and Safety

While there is no separate WWF policy on occupational and community health and safety, these issues are taken into account as part of the general WWF policy on Environment and Social Risk Management, and the screening process that applies to all project-related activities. These general standards require employers and supervisors to implement all reasonable precautions to protect the health and safety of workers through the introduction of preventive and protective measures. They also require to ensure that the labor rights of project-employed workers are observed, as indicated in the screening tool in Annex II.

Project activities should also prevent adverse impact involving quality and supply of water to affected communities; safety of project infrastructure, life and properties; protective mechanisms for the use of hazardous materials; disease prevention procedures; and emergency preparedness and response.

4.3 Gaps between the Republic of Moldova's laws and policies and the WWF's SIPP

In general, the laws, policies, and guidelines of the Republic of Moldova (RoM) are in line with the WWF's environmental and social safeguards requirements. However, there are a few differences between the two systems, as discussed below. In all cases of conflict or discrepancy, the requirements of the WWF will prevail, for the purpose of the DYNA project, over RoM laws and regulations.

With regard to environmental impacts, there are no direct contradictions between the RoM laws and regulations and the WWF's SIPP, but the requirements of the latter are more extensive. For instance, WWF's SIPP require a thorough environmental and social analysis of the impact of specific project activities on the environment and on local communities before the activity is formally approved and funds are disbursed. These requirements are beyond the environmental clearance process prescribed by the RoM legislation. All project activities should fully comply both with the RoM's Regulations on the Environmental Impact Assessment, and with the procedures and mitigation measures prescribed in this ESMF. In case that the WWF's SIPP requirements are more extensive, strict, or detailed than the RoM legislation and policies, the former will apply to all project activities.

With regard to social impacts, the primary discrepancies between the RoM laws and regulations and the WWF's SIPP refer to the status of non-title holders and informal land use, and the commitment to participatory decision-making processes. First, according to the WWF's SIPP, all users of land and natural resources (including people that lack any formal legal ownership title or usage rights) are eligible to some form of assistance or compensation if the project adversely affects their livelihoods. The RoM laws only recognize the eligibility of land owners or formal users to receive compensation in such cases. Second, the WWF's SIPP require extensive community consultations as part of the development of various safeguards documents and during project activities. The Moldovan Law on "mechanisms for public consultations with civil society in decision-making processes" (Nr. 265-276, 09.08.2016) includes requirements for consultations with civil society organizations, but does not necessarily cover all project affected people.

For the purposes of the DYNA project, the provisions of the WWF's SIPP shall prevail over the RoM legislation in all cases of discrepancy.

5. Institutional Framework

Several government institutions are pertinent for the implementation of pilot activities.

Ministry of Agriculture, Regional Development andf Environment (MARDE). This is the central authority body responsible for the development and promotion of state policy in the field of environment and natural resources. It is responsible for: state control over the natural resources use; coordination and control over the implementation of environmental laws and policies; initiating and drafting laws and regulations and issuing relevant instructions/decisions; issuing permits on natural resources uses and licenses for polluting emissions; elaboration, approval and introduction of environmental standards and normative documents in the field of its competence; environmental monitoring; imposing economic sanctions in case of violations of environmental legislation; supervising territorial development and its infrastructure, town-planning, architecture, industry of construction materials and introduction of new techniques and technologies in the sphere of its competence; and drinking water supply and waste water treatment in urban areas, etc.

- The following institutions are subordinated to the Ministry of the Environment: State Ecological Inspectorate; State Hydrometeorological Service, Agency for Geology and Mineral Resources, Agency "Apele Moldovei", Agency "Moldsilva", Fisheries Service, State Enterprise Hydro-geological Expedition from Moldova, and Institute of Ecology and Geography.

Agency "Apele Moldovei" (Moldova Waters). This institution is subordinated to MARDE. It is the central technical and administrative body dealing with surface water resources, and is responsible for management of water resources used for irrigation, domestic and industrial water supply purposes, as follows: development of long-term programs concerning river basins and water administration works throughout the country, including centralized water supply facilities, irrigation and drainage, protection against floods or other damage, coordinating of construction, design, and operation activities in the field of water. [www.apelemoldovei.gov.md]

Nature Reserve Lower Prut, under Agency "Moldsilva". Moldsilva is subordinated to MARDE and is the central public administration body on state policy in forestry and hunting in the country. The general task of the Agency is to implement the constitutional prerogatives and international ratified obligations of the Republic of Moldova on development, promotion and implementation of its policy in forestry and hunting, directed on the international trends of socio-economic sustainable development, rural development, rural employment, sustainable forestry, development, guarding, forests and wildlife protection, maintenance and conservation of biodiversity, professional training, access to environmental benefits and forestry research and education. [www.moldsilva.gov.md]

State Ecological Inspectorate (SEI). The SEI is an environmental protection regulatory and enforcement agency which performs the state control over the rational use and protection /conservation of natural resources. Its role is to control implementation of environmental legislation. The SEI through its country-wide network of territorial headquarters monitors industrial facilities with impacts on environment – its central body deals with the higher-level risk while the district level inspections – with lower risk projects. The SEI issues permits on use of natural resources and environmental pollution in admissible limits; supervises the level of respecting ecological norms and requirements, instructions, recommendations, norms on use of natural resources, dangerous products and substances, and wastes; evaluates EIA applications for new developments; provides ecological expertise; regulates and establishes Emission Limit Values (ELVs) and Maximum Allowable Concentrations (MACs) and regulates the emission of dangerous substances into the environment as well as the storage limits of industrial, domestic, hazardous and other wastes; performs environmental pollution monitoring; carries out enforcement of the permits by inspection visits, monitors, and levies fines in cases of non-compliance, initiates legal processing, ceases the activity in case of non-compliance with environmental protection requirements, etc.

Local public authorities. The responsibilities of local governments include: approval and supervision of local programs in the field of environmental protection; protection and conservation of historical and natural monuments; natural parks and protected areas; and approval of admissible limit values of emissions and discharges (admissible level of environmental pollution) and limits of natural resources (water, soil) use. These institutions do not have any responsibilities with regard to environmental review of project documents– all these are done by the national or local environmental authorities, depending on the level of environmental risks – as specified above.

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The Lake Beleu pilot activities will require coordination among several government entities. The institutional implementation arrangements are envisioned in the following manner.

- ICPDR: will be responsible for the overall execution of the project and will chair the PSC. The ICPDR will be responsible for submission of all reports to the GEF Agency (technical and financial). The ICPDR will be responsible for hiring and supervising the project manager.
- WWF CEE will be in charge of coordinating and supervising all pilot activities.
- Agency Moldovaa Waters will be responsible for the implementation of all activities related to water resources management:
    - Reduction of sediment flow through artificial brook Manolescu;
    - Ecological rehabilitation of the natural brook Popovka to improve connectivity between Beleu lake and Prut river;
- Agency "Moldsilva" (through Lower Prut Nature Reserve & State Forest Enterprise "Silva-Sud") will be in charge of activities that are related to afforestation:
    - Reforestation of some degraded land and bank and stabilization of eroding ravines to prevent/reduce runoff water flow into the lake
    - Sustainable management of invasive/aggressive vegetation.
- The village authorities of Slobozia Mare and Valeni will oversee all activities that will be undertaken on community land within their jurisdiction and procure civil works related to the rehabilitation of the lake access road.
- Private contractors will be responsible for the implementation of road rehabilitation works, under the close supervision of the local village authorities and WWF DCP.

Additional institutional partners will be as follows:

- Planned afforestation activities will also be agreed upon and coordinated with the Forest Research and Management Institute (ICAS Chisinau) and the State Ecological Inspectorate.
- As the site is a state border area (with Romania), all activities should also be coordinated with the Moldovan border police.
- The State Hydometeorological Service may be engaged for water measurements and field analysis.
- Staff and students from the State University of Moldova for fieldwork and research.

6. Anticipated Environmental and Social Impacts and Mitigation Measures

Potential pilot activities, their potential adverse impacts, and recommended mitigation measures are as outlined follows.

i. Reduce velocity from Manolescu brook (northern canal of River Prut). Since the main source of sedimentation is the artificial canal (in fact a man-made, enlarged and deepened, natural canal), this activity includes bending trees to form a natural barrier to reduce the velocity of the water and drain sedimentation that move into the wetland which acts as a natural filter. The trees would not be cut completely but unrooted. The reduction of sedimentation will be complemented by another activity focused on willow management, which will reduce the invasive nature of the willow stands downstream alongside the lake.

   - No adverse environmental or social impacts are expected.

ii. Afforestation. Planting of trees or bushes and other 'integrated' vegetation in a waive between community land and government-owned land in the surrounding hills to stabilize eroding ravines and preventing/reducing runoff water flow into the lake

   - Potential adverse impacts may temporary cause restrictions of access to grazing. There is currently no grazing on the hills except in some rare occasions as these areas are not easily accessible and grazing mostly occurs in other locations. However, measures will be undertaken to ensure that alternative grazing areas are available to local communities before any afforestation activities take place. Local public administration of Slobozia mare village will take care fo this and will provide alternatives in other community areas.

   - To prevent erosion, afforestation may need to take place on privately owned land. This will only be done upon the receipt of the written consent of the land owners. Most of afforestation will take place on Moldsilva and community land, and afforestation of private land will only be considered upon the request of land owners.

iii. Popvka Brook. This is a natural canal which is currently obstructed by invasive/aggressive vegetation, organic (or other) waste, trees and twigs, so undertaking a clear-up of these would enable a better river connectivity and water flow to the Danube.

   - No adverse environmental or social impacts are expected.

iv. Sustainable management of invasive/aggressive vegetation by allowing locals to harvest them for bio-energy use. This is to be done in cooperation between the administration of Nature Reserve Lower Prut and the two local public administrations (villages of Slobozia Mare and Valeni), all based on the needs of the local population to supply their households with fuel wood and biomass/fodder. This will require certain arrangement and timetable for actions, which should be regulated by the said administrations in accordance with existing legal and normative frame.

   - No adverse environmental or social impacts are expected.

v. Rural road rehabilitation. The road currently serves as the primary access road to the lake. This includes building small erosion control structures along the side of the rural rode to stop sedimentation reaching the access road. A feasibility study planned for the 1st year of the project will determine the optimal design for access road rehabilitation that would reduce organic matter flow into Beleu lake.

- Access to the lake will be temporarily restricted during rehabilitation works, and some minor adverse construction impacts may be caused. See Table 2 below for details on potential details and mitigation measures.

While this ESMF outlines potential adverse impacts and general mitigation measures, an Environmental Management Plan will have to be developed upon the selection of the pilot implementation site. The EMP will rely on the specific conditions of the site and reflect the hazards that might result from the construction method that will be selected. It will include site-specific mitigation measures and monitoring requirements that will need to be undertaken by the implementing entities of each pilot activity (WWF ECC, Nature Reserve Lower Prut under Moldsilva, Moldovan Waters, and relevant local authorities). The EMP's mitigation measures encompass actions that will reduce hazards, which could impact health and safety of the construction workers, and the public; measures related to soil and water pollution from oil and fuel, noise, air quality (dust), excavation of materials and disposal of surplus soil/earth and other materials; etc.

WWF CEE, which will be in charge of coordinating and supervising all pilot activities, will need to allocate a staff person to the oversight of safeguard requirements. Necessary budget will have to be assigned accordingly.

Annex II to this ESMF provides a format for the Screening of Environmental and Social Impacts for Pilot Activities that should be undertaken before any pilot activities are carried out.

Annex III provides a format for Environmental and Social Compliance Monitoring that should be carried out during the implementation of pilot activities.

Potential adverse impact	Mitigation measures	Responsible authority
Environmental impacts		
Damage to flora and fauna during pilot activities on restoring sediment flows, management of invasive vegetation, etc. ➢ Pilot activities might cause temporary disturbance of fish biodiversity and other wildlife.	A critical element for the success of the project is that all fieldwork must avoid conflicts with native fauna (especially during reproduction seasons and/or migration), and conducted between September and November (depending on weather, rain/flooding) when water level is usually low. No intervention is allowed that involves the use of machinery at the core zone. A detailed action plan needs to developed to take these limitations into consideration.	Moldovan Waters; WWF
Soil pollution and waste disposal during road rehabilitation works ➢ Contamination of surrounding soil with emission of gases or dust from transportation vehicles /construction machines. ➢ Contamination caused by temporary construction activities, such as disposing of waste.	➢ Provide slope protection through soil compaction, riprapping on critical sections, or vegetative stabilization ➢ Designate a Spoils Storage Area, with topsoil set aside for later use and allow maximum re-use of spoils ➢ Construction waste will be collected and disposed properly by licensed collectors	Local authorities of Slobozia Mare and/or Valeni; Contractor
Air pollution during road rehabilitation ➢ Construction works might result with increased concentration of polluting substances, primarily dust and exhaust gases from vehicles (machines engaged in the works execution).	➢ Contractor to present proof of compliance with emission standards ➢ Wet areas of dust sources to minimize discomfort to nearby residents	Local authorities of Slobozia

➢ Suspended particles (dust) that will rise from transport roads when used for machinery transportation or trucks passing.	➢ Control of vehicle speed to lessen suspension of road dust ➢ Keep the surrounding environment (sidewalks, roads) free of debris to minimize dust	Mare and/or Valeni; Contractor
Noise levels ➢ Human presence and execution of works at the location, and movement of vehicles and construction mechanization.	➢ Schedule equipment movement during non-peak hours of daytime vehicular traffic ➢ Avoid night-time construction activities and abide by local laws on construction hours	Local authorities of Slobozia Mare and/or Valeni; Contractor
Health and safety risks ➢ Construction workers, as well as the local population, may be exposed to health and safety risks during road construction works	➢ Notify the public of the works through appropriate notification in the media and/or at publicly accessible sites (including the site of the works). ➢ Formally agree with the Contractor that all work will be carried out in a safe and disciplined manner designed to minimize impacts on neighboring residents and environment. ➢ Formally agree with the Contractor that workers health and safety requirements will comply with international good practice (always hardhats, as needed masks and safety glasses, harnesses and safety boots). ➢ Appropriate signposting of the sites will inform workers of key rules and regulations to follow and emergency contact numbers. ➢ Provide on-site medical services and supplies for any emergency, through institutional and administrative arrangements with the local health unit.	Local authorities of Slobozia Mare and/or Valeni; Contractor

	➢ Provide portable water & sanitary facilities for construction workers.	
Social Impacts		
Impacts on settlements, population, and livelihoods during afforestation activities ➢ Restriction of access to grazing areas during afforestation activities ➢ Carrying out afforestation on privately owned lands	➢ Provide timely notification to the public regarding the planned works. ➢ Ensure that alternative grazing areas are available. ➢ Conduct afforestation on private lands only if land owners expressed their interest in such intervention and provided their explicit and written consent to it.	Local authorities of Slobozia Mare and/or Valeni; MoldSilva
Restricting access to the lake during road rehabilitation works	➢ Provide timely notification to the public regarding the planned works. ➢ To the extent possible, provide an alternative (temporary) access to the lake. ➢ Minimize the disturbance of local population by construction works by following the recommendations above.	Local authorities of Slobozia Mare and/or Valeni; Contractor

7. Procedures for the Identification and Management of Environmental and Social Impacts

The following activities will not be financed by the DYNA project:

1. Activities that involve procurement or use of any pesticides categorized IA, IB, or II by the World Health Organization;
2. Activities that require private land acquisition;
3. Activities that require physical displacement of persons from their homes or legal businesses, irrespective of ownership;
4. Activities that involve quarrying and mining;
5. Activities that involve commercial logging.
6. Replanting will only consist of native vegetation and any invasive species will be avoided.

In advance of the initiation of any project activity, the implementing entity (MoldSilva, Moldovan Waters Agency, the local authorities of Slobozia Mare and/or Valeni, or the hired contractors) should fill in detailed information regarding the nature of the activity and its specific location in the Screening of Environmental and Social Impacts questionnaire (Annex II). Part 1 of this form comprises of basic information regarding the activity; Part 2 is based on the WWF's SIPP and applicable RoM laws and regulations. The implementing entity shall respond to the specific questions in Part 3 of the form, provide general conclusions regarding the main environmental and social impacts of the proposed activity, outline the required permits or clearances, and specify whether any additional assessments or safeguard documents (e.g., ESMP) should be prepared.

Issues that are considered as part of this environmental and social screening include the following:

a. Need for land acquisition;
b. Environmental impacts (e.g., dust, noise, smoke, ground vibration, pollution, flooding, etc.) and loss or damage to natural habitat;
c. Social impacts: identification of vulnerable groups, impacts on community resources, impacts on livelihoods and socio-economic opportunities, restrictions of access to natural resources, land usage conflicts, etc.; and
d. Health and safety issues (both for workers and for local communities).

The screening format should be undertaken by the implementing entity and reviewed by WWF Adria. If the screening process indicates that additional assessments or safeguards documents shall be prepared, these should be carried out by the implementing entity.

WWF DCP will review the application and environmental clearances with terms and conditions or outline additional conditions that should be met in order to obtain an environmental clearance.

8. Guidelines for ESMP Development

In case that the Environmental and Social screening process identifies any adverse environmental or social impacts as a result of specific project activities, the implementing entities should develop a site- and activity-specific ESMP. The ESMP should be prepared before the initiation of the project activity and closely follow the guidance provided in this ESMF.

The ESMP should describe adverse environmental and social impacts that are expected to occur as a result of the specific project activity, outline concrete measures that should be undertaken to avoid or mitigate these impacts, and specify the implementation arrangements for administering these measures (including institutional structures, roles, communication, consultations, and reporting procedures).

The structure of the ESMP should be as follows:

(i) A concise introduction: explaining the context and objectives of the ESMP, the connection of the proposed activity to the project, and the findings of the screening process.

(ii) Project description: Objective and description of activities, nature and scope of the project (location with map, construction and/or operation processes, equipment to be used, site facilities and workers and their camps; bill of quantities if civil works are involved, activity schedule).

(iii) Baseline environmental and social data: Key environmental information or measurements such as topography, land use and water uses, soil types, flow of water, and water quality/pollution; and data on socioeconomic conditions of the local population. Photos showing the existing conditions of the project sites should also be included.

(iv) Expected impacts and mitigation measures: Description of specific environmental and social impacts of the activity and corresponding mitigation measures.

(v) ESMP Implementation arrangements: Responsibilities for design, bidding and contracts where relevant, monitoring, reporting, recording and auditing.

(vi) Capacity Need and Budget: Capacity needed for the implementation of the ESMP and cost estimates for implementation of the ESMP.

(vii) Consultation and Disclosure Mechanisms: Timeline and format of disclosure.

(viii) Monitoring: Environmental and social compliance monitoring with responsibilities.

(ix) A stakeholder engagement plan: in order to ensure that local communities and other relevant stakeholders are fully involved in the implementation of the ESMP, a stakeholder engagement plan should be included in the ESMP. The Plan should specify the issues outlined in Table 2:

Table 2: Stakeholder Engagement Plan

Stakeholders Identification	Develop a list of relevant stakeholders that will be engaged in the particular activity.
Proposed method of engagement	Method of engagement to be used (workshops, forums, meetings).
Timing and outreach	Timing issues or requirements (at what stage of activity planning and implementation will stakeholders be engaged. Most of the communities have identified winter season as best time for community consultations.); and outreach requirements needed to ensure that all community members have an equal opportunity to take part in the consultations.
Identify Resources needed	Resources required for the engagement process.
Responsibility	Implementing entities and specific individuals that are responsible for carrying out the consultations.
Identify Key messages to communicate	Key messages to be conveyed to during the stakeholder consultations.
Managing Risk	Identifying the risks associated with the consultation process and measures that will be undertaken to mitigate or manage such risks.

9. Monitoring

The compliance of the Beleu Lake pilot activities with the ESMF will be thoroughly monitored by various entities after the selection of the locality for pilot implementation and initiation of construction activities.

Monitoring at the project level. The overall responsibility for implementing the ESMF and for monitoring compliance with the Project's environmental safeguard activities lies with WWF DCP, which shall oversee the implementation of all field activities and ensure their compliance with the ESMF. It will carry out environmental and social screenings, and prepare ESMPs and any other necessary documentation. It shall also monitor the project's grievance redress mechanism (GRM) and assess its effectiveness (i.e., to what extent grievances are resolved in an expeditious and satisfactory manner).

Monitoring at the field activity level: The institutional arrangements for the implementation of pilot activities will be divided among ICPDR, WWF CEE, Nature Reserve Lower Prut, Moldova Waters, and the local village authorities of Slobozia Mare and Valeni (as outlined in section 5). WWF DCP shall closely monitor all field activities, and ensure that they fully comply with the ESMF and with the

terms and conditions included in the environment clearances issued by national authorities. The relevant implementing entities will be fully responsible for the compliance of all external contractors and service providers with the safeguards requirements outlined in the ESMF and ESMP (as applicable). After the beginning of the construction works, the respective implementing entities will provide WWF DCP with monthly monitoring reports.

WWF CEE may conduct ad-hoc compliance monitoring visits to project sites to monitor compliance with the environmental clearance and with other safeguards provisions outlined in the ESMF, ESMP and/or in the RoM's legislation, as applicable. As part of such monitoring, the WWF may issue recommendations or impose penalties on contractors as appropriate.

10. Grievance Redress

The Beleu Lake pilot may have impact on communities and individuals residing in the vicinity of the pilot site activities. There is thus a need for an efficient and effective Grievance Redress Mechanism (GRM) that collects and responds to stakeholders' inquiries, suggestions, concerns, and complaints. The GRM shall constitute an integral part of the pilot and assist WWF DCP and the village authorities of Slobozia Mare and Valeni in identifying and addressing the needs of local communities.

It is in the interest of the DYNA project to ensure that all grievances or conflicts that are related to pilot activities are appropriately resolved at the local level, without escalation to higher authorities or the initiation of court procedures. Project affected communities will therefore be encouraged to approach the project's GRM.

The GRM will operate based on the following principles:

1. Fairness: Grievances are assessed impartially, and handled transparently.
2. Objectiveness and independence: The GRM operates independently of all interested parties in order to guarantee fair, objective, and impartial treatment to each case.
3. Simplicity and accessibility: Procedures to file grievances and seek action are simple enough that project beneficiaries can easily understand them.
4. Responsiveness and efficiency: The GRM is designed to be responsive to the needs of all complainants. Accordingly, staff persons handling grievances must be trained to take effective action upon, and respond quickly to, grievances and suggestions.
5. Speed and proportionality: All grievances, simple or complex, are addressed and resolved as quickly as possible. The action taken on the grievance or suggestion is swift, decisive, and constructive.
6. Participation and inclusiveness: A wide range of affected people—communities and vulnerable groups—are encouraged to bring grievances and comments to the attention of the project implementers. Special attention is given to ensure that poor people and marginalized groups, including those with special needs, are able to access the GRM.

7. Accountability and closing the feedback loop: All grievances are recorded and monitored, and no grievance remains unresolved. Complainants are always notified and get explanations regarding the results of their complaint. An appeal option shall always be available.

Complaints may include, but not be limited to, the following issues:

(i) Allegations of fraud, malpractices or corruption by staff or other stakeholders as part of any project or activity financed or implemented by the DYNA Project;

(ii) Environmental and/or social damages/harms caused by projects financed or implemented (including those in progress) by DYNA Project;

(iii) Complaints and grievances by permanent or temporary workers engaged in project activities.

Complaints could relate to pollution prevention and resource efficiency; negative impacts on public health, environment or culture; destruction of natural habitats; disproportionate impact on marginalized and vulnerable groups; discrimination or harassment; violation of applicable laws and regulations; destruction of physical and cultural heritage; or any other issues which adversely impact communities or individuals in project areas. The grievance redress mechanism will be implemented in a culturally sensitive manner and facilitate access to vulnerable populations.

The Beleu Lake GRM will be administered by WWF DCP in coordination with the local authority of Slobozia Mare. WWF DCP will be in charge of the operation of the GRM, and the local village authorities of Slobozia Mare and Valeni will assign individuals that will be responsible for collecting and processing grievances that address activities in the pilot site. The GRM will operate according to the following guidelines.

(1) Submitting complaints: Project affected people, workers, or interested stakeholders can submit grievances, complaints, questions, or suggestions either to the Slobozia Mare / Valeni local authorities or directly to WWF through a variety of communication channels, including phone, regular mail, email, text messaging/SMS, or in-person, by visiting the Slobozia Mare or Valeni offices. It is important to enable to separate channels for complaint submissions to ensure that project affected people have sufficient opportunities to lodge their complaints to impartial and neutral authorities of their choice.

(2) Processing complaints: all grievances submitted to Slobozia Mare / Valeni and to WWF shall be registered and considered. A tracking registration number should be provided to all complainants. To facilitate investigation, complaints will be categorized into four types: (a) comments, suggestions, or queries; (b) complaints relating to nonperformance of obligations; (c) complaints referring to violations of law and/or corruption while implementing project activities; (d) complaints against authorities, officials or community members involved in project activities; and (e) any complaints/issues not falling in the above categories.

(3) Acknowledging the receipt of complaints: once a grievance is submitted, Slobozia Mare, Valeni, and/or WWF shall acknowledge its receipt, brief the complainant on the grievance resolution process, provide the contact details of the person in charge of handling the grievance, and provide a registration number that would enable the complainant to track the status of the complaint.

(4) Investigating complaints: Slobozia Mare, Valeni and/or WWF will gather all relevant information, conduct field visits as necessary, and communicate with all relevant stakeholders as part of the complaint investigation process. The concerned authorities/offices dealing with the investigation should ensure that the investigators are neutral and do not have any stake in the outcome of the investigation. A written response to all grievances will be provided to the complainant within 10 working days. If further investigation is required, the complainant will be informed accordingly and a final response will be provided after an additional period of 10 working days. Grievances that cannot be resolved by grievance receiving authorities/office at their level should be referred to a higher level for verification and further investigation.

(5) Appeal: In the event that the parties are unsatisfied with the response provided by the GRM, he/she will be able to submit an appeal to the Moldova Waters or to Moldsilva within 10 days from the date of decision, depending on the nature of the activity against which the grievance is lodged. The respective Ministry shall verify and investigate the complaint according to its regular procedures. In the event that the parties are unsatisfied with the decision of the Ministry, they can submit their grievances to the Court of Law for further adjudication.

(6) Monitoring and evaluation: WWF DCP shall coordinate with Slobozia Mare and Valeni on monitoring the grievances on a monthly basis.

Information about channels available for grievance redress shall be widely communicated in communities residing in the vicinity of the pilot activities site and to all relevant stakeholders. The contact details (name, phone number, mail and email address, etc.) of the local village authorities of Slobozia Mare and Valeni, and WWF shall be disseminated as part of all public hearings and consultations, in the Slobozia Mare and Valeni offices, in the local media, in all public areas in affected communities, and on billboards in the vicinity of project activity sites.

The GRM seeks complement, rather than substitute, the judicial system and other dispute resolution mechanisms. All complainants may therefore file their grievance in local courts or approach mediators or arbitrators, in accordance with the legislation of the Republic of Moldova.

11. Disclosure and Stakeholder Engagement

Stakeholder engagement workshops were organized by WWF DCP in July 2018 with representatives of national and regional water management institutions, local government and state-owned corporations, private companies, local community, and local non-governmental organizations. Additional meetings with local government in Slobozia Mare and Valeni were undertaken as part of a safeguards mission conducted in January 2019.

All affected communities and relevant stakeholders shall be informed about the ESMF requirements and commitments. The ESMF shall be available on the websites of WWF, Moldsilva, Moldovan Waters, Slobozia Mare and Valeni villages, as well as the website of the WWF US. Hard copies of the ESMF will be placed in appropriate public locations Slobozia Mare and Valeni. The local authorities of Slobozia Mare and Valeni will be responsible to raise community awareness regarding the requirements of

the ESMF, and will also ensure that all external contractors and service providers are fully familiar and comply with the ESMF and other safeguards documents.

During the implementation of construction activities, activity-specific ESMPs shall be prepared in consultation with affected communities and disclosed to all stakeholders prior to project concept finalization. The draft ESMP shall be reviewed and approved by WWF CEE.

Disclosure should be carried out in a manner that is meaningful and understandable to the affected people. For this purpose, the executive summary of ESMPs or the terms and conditions in environment clearances should be disclosed on the websites of WWF CEE, Moldsilva, Moldovan Waters, administrations of Slobozia Mare and Valeni villages.

Table 3: Disclosure framework for ESMF related documents

Documents to be disclosed	Frequency	Where
Environment and Social Management Framework	Once in the entire project cycle. Must remain on the website and other public locations throughout the project period.	On the website and in the offices of WWF CEE, Slobozia Mare, Valeni, Moldsilva, and Moldovan Waters.
Environmental Assessment Reports	Once in the entire project cycle for every activity that requires an EA. Must remain on the website and other public locations throughout the project period.	On the websites of WWF CEE, Slobozia Mare and Valeni.
Environmental Management Plan/s	Once in the entire project cycle for every activity that requires EMP. Must remain on the website and other disclosure locations throughout the project period.	On the websites of WWF CEE, Slobozia Mare and Valeni, and in the offices of the village authorities.
EMP - Monthly Progress Report	Monthly	WWF CEE, Slobozia Mare and Valeni websites.
Grievance redress process	Throughout the project cycle	Offices of Slobozia Mare and Valeni

12. Budget

The EMSF implementation costs, including all costs related to compensation to project affected people, will be fully covered from the DYNA Beleu Lake pilot budget.

Annex I. Stakeholder Engagement Workshop – Beleu Pilot Project

GEF DYNA STAKEHOLDER ENGAGEMENT WORKSHOP	

Beleu Pilot Project (Moldova)

GEF-6 Project "Regional (Bosnia-Herzegovina, Moldova, Montenegro, Ukraine, Serbia) Danube River Basin Hydromorphology and River Restoration

(GEF DYNA)"

27/28 July 2018 – Valeni, Moldova

Prepared by:

Aurel Lozan, Doctor of biology

Veaceslav Purcic, Doctor of hydrobiology/ichthyology

Contact:

Aurel Lozan
Programme & Project Development Lead Expert Moldova
WWF International Danube-Carpathian Programme

Ottakringer Str. 114-116, 1160 Vienna, Austria

Phone: +373 69044172, Skype: aura1969

alozan@wwfdcp.org

Welcome

The meeting took place in Valeni village (Cahul district) at the local gymnasium "Stefan cel Mare". It was opened by Mr Aurel Lozan (moderator) who welcomed all participants and thanked them for their time. The purpose of the meeting was very briefly described along with the general scope of the proposed project. The agenda of the two-day workshop was presented: the meeting on the 27th of July and the field mission the next day on the 28th of July. The local mayor of Valeni public administration (Mrs Silvia Stirbet) and the director of the gymnasium (Mr Nicoale Burca) welcomed the audience too and thanked WWF for the opportunity to discuss the project in their community.

Introduction of participants

Introductions continued with the tour du table, with participants providing their names, institutions and connections to HYMO and DYNA (List of participants in the annex). A total of 20 people participated: 14 locals (inhabitants, people working for local institutions), two officials from Agency Moldovan Waters (including acting director), two visitors and two on behalf of WWF. Each of the participants shared their views and their expectations from the stakeholder gathering. All of them agreed that the dialogue would allow them to exchange opinions and make their voices heard. The introduction took a little longer than expected, as participants seemed to be excited about the project idea and wanted to tell about their own experiences related to the project location. Many participants told exciting stories about their villages; one from Slobozia Mare community described in a passionate way her experiences with visitors and tourists from many foreign countries who came especially to see the Beleu Lake and the amazing wetlands around it. Two foreign tourists (a mixed family from USA and Moldova) who were at that time in the Valeni pension for a vacation expressed their willingness to join the meeting and their presence was warmly accepted by the audience, especially by the locals.

Project Presentation

A PPT presentation was prepared by Aurel Lozan (WWF Moldova) and updated/verified by Veaceslav Purcic. The PPT was structured into three parts: starting with the GEF DYNA project, then the Beleu pilot, and an interactive discussion at the end. The presentation was in Romanian language.

Pilot Project Presentation

The Beleu pilot project presentation was split into the following parts: general data (name, location, area, map, historical versus actual data), goals and activities (overall aim, proposed preliminary activities, possible actions and technological/methodological interventions, other aspects), stakeholder engagement and commitment, and challenges to be addressed (including similar activities/actions elsewhere). The presentation was based not only on the many sources of available data/information (since this is a Nature Reserve, there is a compulsory annual census of biodiversity and other changes in the environment), but also on field observations and analyses done by the WWF team over the last period. All of the proposed activities have already been discussed among the main stakeholders in advance (including some representatives present at the meeting) and confirmed by a protocol of intention (PoI signed recently on 12th of June, 2018, at Nature Reserve Lower Prut). However, these activities are not yet finalised, they are preliminary concepts for restoring the hydrologic regime in the Beleu Lake and for connecting brooks with the wetland system. The reason for action is that there are visible signs of degradation in the lake's ecosystems (especially aquatic) and water regime. Thanks to recent visits to the area and meetings with local people, it is known that those who live here are extremely worried about the lake's current condition; they claim that there is less water, much less fish, and the bottom of the lake is raising, and they think this is a real peril to their own living conditions. Finally, the meeting was organised to make sure that the voices and opinions of locals are heard and taken into consideration in the preparatory phase of the project.

Aspects discussed (project & proposed pilot project)

A special attention was paid to the current aggressive erosion around the lake, namely on its eastern side (ravines between the southern exit of Valeni community towards the northern entry into Slobozia Mare village). Here active erosion of the land is occurring because of deforestation in the recent past, when local people abusively cut trees down for energy needs (=fuelwood) and let their cattle graze after deforestation – a process that happened during 1990s (after the collapse of Soviet Union). In addition, run-off water coming from agricultural fields of Slobozia Mare was re-directed by a dam through the village that eventually ends up in the eastern side of deforested ravines, thus the run-off water flows directly into the areas near the lake and also damages the rail construction around the lake.

The staff of the Nature Reserve Lower Prut raised the issue of willow's invasive behaviour, which started rapidly after 2008 and is taking place now with even more aggressive trend: between the first Forest Management Planning (FMP) in 2001 and the latest update (re-FMP) in 2015 the area of willow increased by circa 200 ha, eventually advancing into the lake's surface (thus reducing the lake's surface). A local inhabitant from Slobozioa Mare proposed the idea of (controlled) cattle grazing as part of the invasive plant management during dry seasons when the uprooting of willow is being planned.

Many participants pointed out the active siltation process associated with a visible eutrophication process in the water, which is happening right now in the lake with an aggravated pace. Despite various cyclic phenomena, such as almost total drying out of the lake and of the feeding brooks (for instance in 2015), all participants regarded water balance as a normal process; however, all the visible changes of the last decade(s) are putting certain stress on locals because they have less traditionally used resources available (for instance fish).

Locals have helped to clarify the name and origin of the brook that WWF have called Manolescu artificial brook or canal. It turned out that the brook should not be named as that in the first half of its length till Cioroiu brook junction: this portion is called by local elderly people "The brook", and it is of natural origin. The continuation of the brook after Cioroiu junction is in fact the "Manoelscu brook/canal", called that way also by the local elderly people, and it is of artificial origin, built in the 1930s.

Many participants mentioned that despite some progress (meaning reduction of incidents), poaching is still a relevant problem in the area, Beleu Lake included. The lake is a protected area that falls under legislation where poaching and/or illegal activities are prohibited. Participants also confirmed that most of the local people were traditionally involved in fishing, be it legal or illegal, as fish is an important source of existence for their families.

Locals have shared thoughts on the railroad built recently in the area; it goes on the edge of the Beleu Lake and spans over the whole wetland ecosystems from Giurgiulesti port to Cahul town. They said the chosen location for the railroad is unsuccessful (was a mistake) because in some areas the water damages it during flooding while in other areas there is a risk that the railroad will be destroyed by run-off water coming from the deforested hills.

All concerns described above were discussed in the field mission the next day. The purpose of the field visit was to see (and provide an update of) the environmental conditions at present moment, including hydrologic regime, depth measurements, biodiversity, water flow and other observations that might be useful. The team was split into two groups: the Ground Group (led by Aurel Lozan, with representatives of high management of Moldovan Waters and a water engineering specialist of a water planning institute) that went by car to the upstream canals and the Prut River (to so-called Manolescu brook), and the Water Group (led by Veaceslav Purcic, with representatives from the Nature Reserve Lower Prut) that went by a motor boat through the Beleu Lake to visit all the brooks (Manolescu, Popovka, Rotaru, Navodului, and the Prut River itself) and the areas where willow is advancing into the lake's water surface. The final roundtable took place after the field visits at the administration building of the Nature Reserve Lower Prut (director, Mr Gheorghe Vasilachi), where all observations were shared and discussed.

Conclusions

Most participants agreed that the main cause of siltation in the Beleu Lake is likely to be the run-off water (with stones, debris, agricultural organic matter etc.) coming through the eastern ravines, which are now under aggressive and active erosion process. The best way to try to address this is to undertake a combined land erosion control, which can be done through (re)afforestation (trees, shrubs, or bio-groups) and terracing, using various techniques and materials (including appropriate plant/tree/shrub species). Additionally, a drainage canal (that was built at the edge of the Slobozia Mare village close to Beleu Lake to avoid water flow through the village) is believed to aggravate the situation, so redirecting this canal to its initial direction would help run-off water to flow into its natural ravine, thus avoiding entering Beleu Lake.

The initial idea of terminating the Manolescu brook should be dropped/abandoned at this stage, as it doesn't seem feasible for several reasons. First, the upper part of the brook is of natural origin and the lower part is (partially) artificial, and since the water anyway ends up in the Beleu (terminating entirely would require a great amount of work and money), nothing would change if it was redirected or stopped at any point. Second, the siltation caused by the brook that splits from Prut River near Valeni village (whether it is natural or artificial) is much less severe compared to siltation caused by run-off water from eroded hills of the eastern deforested ravines. Third, there might be a problem in receiving ecological expert authorization for intervention (according to legislation), given that this is a protected area.

Rehabilitation of the brooks like the Popovka brook is very relevant. Only manual work should be envisaged and only in dry seasons (depending on climate condition) when the water level is very low, which would make it more accessible (at this point, water level is rather high, so access to the brook is only possible by boat). Our field observations showed that the water flow from Prut into the Beleu Lake was not high (thus less sediments entering the lake), and the water transparency in Popovka brook was good (not advanced by various sediments), which are good signs.

The management of invasive willow should be a priority as it is considered extremely important and vital for Beleu's stability. The DYNA project (along with stakeholders) should design a management plan with a clear approach methodology to identify selected lots for uprooting. This should take into consideration the zoning of the Nature Reserve, so that the core zone will be avoided (although the core area is already affected by the invasive willow).

The road that connects the Beleu Lake with the main road of Slobozia Mare village should be improved, as it is also a source of siltation (it is a country road without any drainage or other system of rain or run-off water control).

Next steps

Administration of the Nature Reserve will undertake further observations, so all changes in the Beleu and the wetlands around it will be documented and shared with the project team. They will also try to obtain the dam construction documentation for the drainage system in the Slobozia Mare village as they believe the whole drainage system was done incorrectly (or with serious errors), which is now one of the causes of run-off water flow to the Beleu Lake.

As proposed at the meeting, WWF (Aurel Lozan) will get in touch with State Enterprise Moldovan Rail Roads (MRR) to discuss the Beleu pilot (DYNA project) and the threat of the siltation along with possible land-sliding from the deforested ravines on the eastern side of Beleu Lake. The MRR is interested in the project and is also a potential stakeholder and contributor to the activities.

All stakeholders will be updated on the Beleu pilot project preparation. All necessary information or other relevant data will be shared among stakeholders. The final draft of the Beleu pilot will be presented to local stakeholders once it is finalised.

Gender issue

A session was organized at the end of the meeting on July 27th, 2018, and it took about one hour. Both men and women actively participated: 3 local men and 9 local women expressed their willingness to stay at the session. Mr Veaceslav Purcic conducted the session; the results of the meeting are documented below (according to the list of participants and gender issue lists).

QUESTION MAP

Below are the questions with answers that would contribute to the gender mainstreaming in the project.

Notes
Predominant feedback = what most of men or women say, what the commonly agreed ideas are

Unique feedback = ideas that are expressed by 1 or 2 members should be documented as well

Area of interest	Questions	Predominant women's feedback	Unique women's answers	Predominant men's feedback	Unique men's answers
1. Needs and interests	1.1. What are the most salient needs in your area at the moment?	No waste sewage system in their communities. No waste management system in place. Lack of skilled specialists and jobs.	Heavy tracks that make noise and destroy the road infrastructure.	Drinking water of low quality. Deforestation and illegal logging.	Low salary and massive emigration of their country mates.
	1.2. What do you lack most of all in the community?	No stable future (no stability). No trust in federal Government (or ruling power).	More women emigrate for jobs than men.	Emigration abroad of whole families (not only women or men). Increasing pressure from the federal Government to ordinary local people.	More stability in their communities.
	1.3. Why are these water resources important to you?	Shrinkage (reduction) of drinking water resources. Climate change is affecting water resources availability in their region.	Abusive and unsustainable use of drinking water.	Strategic water resources are becoming scarce.	Water is essential for their families.
	1.4. How do you use these water resources in your everyday life? E.g.: - everyday activities - health - access to food and water - etc.	Water in wells and springs contains more calcium. Waste sewage in their community is primitive (use of holes and latrines) that affects water quality.	Wells close to river/lake (roots of the hills) are of poor quality.	Water contains calcium (according to their data). Water levels are lowering. Existing water treatment facility is inefficient and obsolete (from old times).	Chemical (hazardous) spots, soviet remnants still present in the area, are a true danger.
	1.5. Do your work and income depend on this water basin? In what ways?	Partially, yes! It is used for garden (small-scale or improvised) irrigation	Rather Yes than No, as we sell agro-foods from garden to	Partially, yes! Irrigation at households, gardens. Armature fishing.	Rather Yes than No – all for irrigation.

	- Your personal? - Your family's?		local markets.		
2. Participation in the implementation of the project	2.1. Who do you think has the most responsibility for the success of the project?	Project team. Local population. Local administration (mayoralty, council).	Local public authority.	Project team. Local activists. Locals involved in the project implementation.	Local administration.
	2.2. Do you feel that the community has knowledge and capacity to contribute to the project?	Yes, the society has enough knowledge, but some training and workshops would be desirable.	Yes!	There are skilled locals, but some awareness and training (based on specific skill development) would be acceptable.	Yes!
	2.3. Whose opinions are necessary to account for while implementing the project, to your mind?	Local administration. Skilled specialists in specific areas (with technical knowledge).	Experts.	Local council (board) of the community. Experts in various fields that can complement each other for the project.	Elderly (older) persons from the community.
3. Results: expectations, benefits, and potential losses	3.1. What would you see as the best outcomes of the project? - For you personally, for your family, for the community?	All proposed activities (presented today) are important for our communities. Ravines land erosion is much more important than the artificial brook.	Reduced land erosion (and siltation).	All proposed activities are important for the communities (unanimously said by all men).	Restored water balance.
	3.2. What do you expect from the project realistically?	General ecological condition of the area improved. More eco-tourism movement, and facilities.	More opportunities.	Land erosion is a real peril and should be stopped!	Re-afforestation of the destroyed riverbank forests and vegetation.
	3.3. Which improvements in the community or in your life do you want to have?	Improved attitude towards nature (=environment) and for the Beleu Lake (a protected area).	Healthier environment.	Better living condition. More woody (forest) areas to provide energetic wood.	Healthier environment.

NB! Observe and specify who is mostly answering to THIS question and what: → women, men

	3.4. What are your main concerns and worries about the project?	Reaction of local population towards the project and its activities.	Receptiveness of local population.	Relation between locals (and groups) with the project.	Project connection to locals.
	3.5. In what ways can the project activities make lives of other members of the community better? Children? Elderly?	More tourism (eco- or rural-tourism). More flora and fauna (as attractiveness for tourists).	More income opportunities.	Improved tourism activities. More fish (species) community as a basis for fishing tourism or leisure in nature.	More opportunities.
	3.6. Are there any reasons why you do not want the project or any of its parts to take place?	No	No	No	No

GENERAL SUMMARY OF THE MEETING (TO BE FILLED IN AFTER THE MEETING)

1. Total number of men in the meeting: 7 participated in the meeting, but only 3 provided answers.

2. Total number of women in the meeting: 11 participated in the meeting, only 9 provided answers.

3. Was there any conflict of interests between and among men and women during the meeting? No conflict, all went great.

4. Did men or women dominate over each other considerably in terms of time they spoke, the amount of feedback they gave, etc.? No such domination, all seemed equally done.

5. Describe briefly how men and women responded to each other's comments and opinions. (Supportive/indifferent/disapproving? Are they aware of each other's special needs and expectations?) All were polite and the meeting was a very friendly one.

6. Other comments: We were very pleased that two foreign visitors wanted to join the meeting. Local people invited them to their homes, and the administration of Nature Reserve invited them to their building canton (although not a modern facility, but rather a rustic one) and field visits too. The tourist couple (Lucia and Heath) seemed to be very happy and excited about the nature.

Annex - List of participants

Nr. Crt.	Name	Institution/Country	Position	Contact details
1.	Mr Nicolae Burca	Gymnasium "Stefan cel Mare" of Valeni community	Director	Tel (landline): 0299 63222 Cell: 079009147

2.	Mrs Mariana Burca	Gymnasium "Stefan cel Mare" of Valeni community	Ecology master	Cell: 078571252
3.	Mrs Elena Tataru	Valeni village administration	Secretary	Tel (landline): 0299 61238
4.	Mr Ion Capatina	Slobozia Mare village	Local inhabitant (pensionary)	Cell: 079195211
5.	Ms Maria Capatina	Nature Reserve Lower Prut	Non-administrative worker	Cell: 068696400
6.	Mrs Viorica Paladi	Nature Reserve Lower Prut	Science Officer (Ornithology)	Cell: 078796375
7.	Ms Polina Cassir	Nature Reserve Lower Prut	Research officer (Botany)	Cell: 078353311
8.	Mr Gheorghe Vasilachi	Nature Reserve Lower Prut	Director	Cell: 068383000
9.	Mrs Silvia Stirbet	Valeni village local administration	Mayor	Cell: 079017151
10.	Mr Veaceslav Purcic	State University of Moldova / WWF	Vice-dean of Biology	Cell: 079541187
11.	Mr Constantin Bostan	Oil extraction company "Valiexchimp" SRL	Social protection officer	Cell: 078641834
12.	Mrs Lucia Melrose	QSI school (master, English/Romanian)	Tourist	Cell: 069790693
13.	Mr Heath Melrose	QSI school (master, general education)	Tourist	Cel: 060018618
14.	Mrs Maria Niculita	Kindergarten of Valeni community	Master (local inhabitant)	Tel (landline): 0299 63190
15.	Mrs Lidia Brinza	Valeni village local administration	Secretary	Tel (landline): 0299 63239
16.	Mrs Lidia Erni	Slobozia Mare local administration	Economist	Tel (landline): 0299 64382
17.	Mrs Nina Viuncul	Valeni village	Local inhabitant	Cell: 079414394 nincic832@yahoo.com
18.	Mr Radu Cazacu	Agency Moldovan Waters	Acting Director	Cel: 076077676 radu.cazacu@apele.gov.md

19.	Mr Gheorghe Voda	IPS "Iprocom", Agency Moldovan Waters	Planning specialist, administrator	Cel: 069579419 iprocom@mtc.md
20.	Mr Aurel Lozan	WWF DCP	Lead Expert Moldova	Cel: 069044172 alozan@wwfdcp.org

Annex II. Format for Screening of Environmental and Social Impacts for Pilot Activities

PART 1: BASIC INFORMATION

1	Pilot Activity Name	
2	Pilot location:	
3	Design Parameters (area/length)	
4	Preparation period	
5	Construction	
6	Project completion and operation	
7	Total investment capital	

PART 2: IMPACTS SCREENING

Answer the questions below and follow the guidance to provide basic information regarding the suggested activity and describe its potential impacts.

Describe the total land requirement as well as the current land use pattern of the proposed project site under the following headings:

Agricultural

Government

Forest

Private

Others

Total

State the reasons for selecting the proposed site:

Describe the terrain characteristic at the project site and in surrounding area:

Describe the project activities

Technology to be used

Provide the following details, wherever it is applicable

Total site area: ---sq feet

Total built up area (provide area details) and total activity area:

Source of water and total water requirement (m^3/day)

Source of energy and total energy requirement

Parking/Stockyard requirements

Describe the list of raw materials to be used in the manufacturing process, their daily consumption, sourcing, and methods of storage.

Describe list of hazardous chemicals, toxic or inflammable substances (including carcinogenic materials) to be used in the process, if yes, then specify

Type of material

Daily requirements

Storage methods

Details of waste types (solid/liquid and gas) including the quantity and characteristic of waste, if any.

Employment potential in term of numbers, during construction and operational stage including the daily or average working hour:

Table 1: Sensitivity of the project site and adjoining areas

S.No	Information/Checklist confirmation	Yes/No	Provide explanation and supporting documents wherever applicable
	The suggested activity will affect the access of people to common resources. For example, the site was initially used as common grazing land, or fishing pond, or source of revenue for local community/ community forests etc.)		
	The suggested activity entails risk to aquatic flora and fauna due to release of wastewater		

	The suggested activity's site or adjoining areas used as routes by the public/tourists to access recreational/tourist site areas in the vicinity		
	The suggested activity's site or adjoining areas occupied by sensitive man-made land user (schools, park, playground/religious site/community facilities)		

Table 2: Change in physical structure (topography, land use, changes in water bodies, etc.) due to construction and operation of the development project

S.No	Information/Checklist confirmation	Yes/No	Provide explanation and supporting documents wherever applicable
	Potential to cause permanent or temporary change in land use, land cover or topography.		
	Will the suggested activity involve clearance of existing land vegetation?		Number of trees to be cut down: Total land area of vegetation cover removed: Estimated economic value of the trees, crops and vegetation to be cut down / removed and any replacement costs (e.g., fees, registration, taxes):
	Will the suggested activity involve demolition of existing structures?		
	Will the suggested activity trigger land disturbance, erosion, subsidence and instability		

	Will the suggested activity involve construction of new roads during construction and operation?		
	Will the suggested activity involve closure or diversion or realignment of existing natural drain?		
	Will the suggested activity have potential to increase influx of people either temporarily (workers) or permanently to an area?		
	Will the project involve abstraction or transfers of water from ground or surface water?		

Table 3: Use of resources for construction or operation of the project (such as land, water, materials or energy

S.No	Information/Checklist confirmation	Yes/No	Provide explanation and supporting documents wherever applicable
	Expected quantity of water to be used by the project during construction and operation including source of water		
	Expected Quantity of construction materials to be used – stone, aggregates and soil (in MT) and mode and place of sourcing.		
	Energy requirement – electrical energy (in kWh) and fuel (coal, gas, diesel others in tons) and mode of sourcing.		
	Will the suggested activity interrupt with power line right of way, irrigation canals, drains, roads, etc. exist, they may be affected or cause any other blockage?		
	Any other resources (use appropriate standard units)		

Table: 4 Production of solid wastes and liquid during project construction and operation

S.No	Information/Checklist confirmation	Yes/No	Provide explanation and supporting documents wherever applicable
	Will the suggested activity have potential to generate solid wastes, if yes, then specify types and quantity of wastes, wherever it is applicable		
	Will the suggested activity have potential to generate sewage sludge, wastes such as domestic and commercial wastes		
	Will the suggested activity have potential to produce hazardous waste from process, treatment plant and other allied activities?		
	Any other wastes (specify)		

Table: 5 Air pollution and emissions

S.No	Information/Checklist confirmation	Yes/No	Provide explanation and supporting documents wherever applicable
	Will the suggested activity have potential to alter ambient air quality during construction and operation?		
	Emissions from production processes and/or utilities, specify the type of pollutants, if applicable.		
	Potential to generate odour from handling, storage, process and operation of pollution control equipment.		
	Emissions from incineration of waste, if applicable. If yes, specify the type of pollutants.		
	Potential to generate fugitive emissions		

	Potential to release gaseous pollutants, if yes, then specify		
	Will the suggested activity have potential to release toxic gas from handling, transport, storage and its use?		
	Any other emissions, specify		

Table 6: Generation of noise

S.No	Information/Checklist confirmation	Yes/No	Provide explanation and supporting documents wherever applicable
	Will the suggested activity have potential to alter the ambient noise due to the following listed activities Construction of project Plant operations Increase in traffic		
	Will the suggested activity have potential to increase the risk of occupational noise hazard or cause disturbance to adjoining human settlements?		
	Any other potential sources that may cause occupational hazard specify.		

Table 7: Risks of contamination of land or water from release of pollutants into the sewers, surface waters and groundwater

S.No	Information/checklist confirmation	Yes/No	Provide explanation and supporting documents wherever applicable
	Located in potential erosion/landslide prone area		
	Will project activities increase the sediment load in the local water bodies?		
	Potential to contaminate land and water due to handling, transport, storage of raw material/chemical or hazardous substances		
	Discharge of sewage or other effluents to water or land (Expected mode and place of discharge)		
	Will the suggested activity change on-site or downstream water flows (including increases or decreases in peak and flood flows, low flows through extraction diversion or containment of surface of ground water e.g. through dams, reservoirs, canals, levees, river basin developments, ground water extraction) or through other activities?		
	Will the suggested activity affect water quality of waterways (e.g. through defuse water pollution from agricultural run off or other activities?		
	Is there a risk that the suggested activity negatively affects water dynamics, river connectivity or the hydrological cycle in ways other than direct changes of water flows (e.g. water filtration and aquifer recharge, sedimentation)? Also consider reforestation activities as originators of such impacts.		
	From any other sources, specify		

Table 8: Negative Impacts on Species

S.No	Information/checklist confirmation	Yes/No	Details thereof (with Approximate quantities /rates, wherever possible) with source of information data/ provide explanations, Wherever applicable.
	Will the suggested activity result in negative impacts to any endemic, rare or threatened species; species that have been identified as significant through global, regional, national, or local laws, treaties, or processes; species with a narrow range? Does the suggested activity introduce or use potentially invasive, non-indigenous, species? Will the suggested activity have negative impacts on other native species?		

Table 9: Pest Management

S.No	Information/checklist confirmation	Yes/No	Details thereof (with Approximate quantities /rates, wherever possible) with source of information data/ provide explanations, Wherever applicable.

	Does the suggested activity use or promote the use of any substances listed under the Stockholm Convention on Persistent Organic Pollutants? Will the suggested activity involve or promote the use of pesticides and/or fertilizers? If pesticides/fertilizers are to be used, what pesticides or fertilizers will be used? Are they a product classified by the World Health Organization as Classes IA, IB, or II? Will the procurement of the pesticides, procurement of suitable protective and application equipment, and intended usage comply with the FAO International Code of Conduct on the Distribution and Use of Pesticides? Has full consideration been given to the transport, storage, application, distribution, and disposal of the pesticides and fertilizer? Has full and due consideration been given to the potential impacts of that use of pesticides/fertilizers on the health of project executors and nearby communities?		

Table 10: Risk and disaster

S.No	Information/checklist confirmation	Yes/No	Details thereof (with Approximate quantities /rates, wherever possible) with source of information data/ provide explanations, Wherever applicable.

	Activities/operations or processes leads to fire risk/ explosion/ electrocution and others.		
	Risk of road accident		
	Any other risk, specify		

Table 11: Information on Socio-economic environment

S.No	Information/checklist confirmation	Yes/No	Provide explanation and supporting documents wherever applicable
	Will the suggested activity involve land acquisition?		
	Access to livelihoods Will the suggested activity introduce restrictions on access to natural resources (e.g., watersheds or rivers, grazing areas, forestry, NWFP) or restrict the way natural resources are used, in ways that will impact livelihoods? This may be the result of new legal restrictions (e.g., on hunting) or law enforcement activities; creation or enforcement of new protected areas; demarcation of land boundaries, etc. Does the suggested activity involve restriction of access to sacred sites of indigenous communities or other local communities' and/or places relevant for women's or men's religious or cultural practices?		

	Cultural heritage Is the suggested activity located in or near a site officially designated or proposed as a cultural heritage site (e.g. UNESCO World Cultural or Mixed Heritage Sites or Cultural Landscapes) or a nationally designated site for cultural heritage protection? Does the suggested activity area harbor cultural resources such as tangible, movable or immovable cultural resources with archeological, historical, cultural, artistic, religious, spiritual or symbolic value for a national, people or community. This could include burial grounds, buildings, monuments or cultural landscapes. Will the suggested activity involve excavation or movement of earth, flooding or physical environmental changes (e.g., as part of ecosystem restorations? Will this physical intervention affect known or unknown (buried) cultural resources?)		
	Impacts on local culture due to construction If construction takes place agriculture area, construction materials, waste, wastewater and surface runoff from construction sites, camps may enter rice or plantation nearby disturbed areas and cause loss or harm to plants, trees Dust, noise, vibration from construction or interactions between workers with local people may cause nuisance and conflict between the workers and local community. In some cases, workers may also involved in "social evils" in the project areas such as gambling, drinking, drugging, etc. to have bad impacts on local people, particularly where ethnic minority groups present.		
	Occupational health and safety Will the suggested activity involve any risks related to transportation and loading of construction materials, working high above the ground or in canals where slops are unstable, machinery operations, electrical uses for office, camp and construction		

	Community health and safety If local people presence at or near construction site, they would be exposed to safety risks related to construction (e.g., loading and unloading of construction materials, excavated areas, fuel storage and usage, electrical use, machinery operations etc, adequacy of accommodation etc.).		
	Participation and consultation Does the project respect the rights of local communities with customary rights to lands and resources to free, prior, informed consent to interventions directly affecting their lands, territories or resources? Does the project support traditional conservation initiatives and/or promote related enabling policies, legislation, and participation in broader processes?		
	Vulnerability Is there a risk that the project might negatively affect vulnerable groups in terms of material or non-material livelihood conditions or contribute to their discrimination or marginalisation (only issues not captured in any of the sections above)?		
	Community conflicts Is there a risk that the project would stir or exacerbate conflicts among communities, groups or individuals? Also consider dynamics of recent or expected migration including displaced people		
	Identify and describe site-specific and type-specific issues, concerns, risks, potential impacts		

List of documents to be attached with this IESE form:

1	Layout plan of the project
2	Summary of the project proposal
3	No objection certificate from various departments and others relevant stakeholders (applicable if EA is not required)
4	Environment Management Plan (applicable if EA is not required)

Screening Conclusions.

i. Main environmental issues are:.....

ii. Permits/ clearance needed are:. .....

iii. Main social issues are. .....

iv. Land acquisition and involuntary resettlement (permanent or temporary) if any;

v. Further assessment/ investigation needed and next step.

   a. Need for any special study:.....

   b. Preparation ESMP (main issue to be addressed by the ESMP):.....

   c. Any other requirements/ need/ issue etc:

Screening Tool Completed by:

Signed:

Name: _____

Title and Date: _____

Screening Tool Reviewed by:

Signed:

Name: _____

Title and Date: _____

Annex III: Format for Environmental and Social Compliance Monitoring

Project Activity/Contract package:

Monitoring Officer:

Name: Mobile phone number email

Date reporting:

	Environmental issues	Description of Mitigation Measures implemented	Evaluation 1=good; 0 = acceptable; -1 = bad
1	Dust, smoke		
2	Noise, vibration		
3	Disturb vegetation cover, cut trees		
4	Waste generation		
5	Water pollution		
6	Localized flooding		
7	Traffic disturbance		

8	Public health and safety		
9	Damages or disrupt operations of existing infrastructure		
10	Disturb Socio economic activities		
11	Social impacts related to mobilization of workers to the site		
12	Impacts on physical cultural objects		
	Others (specify)		

Signature

Name and Designation

Name of the CA