

# Restoration of the Botar River Morphology and Its Hydrological Regime: Environmental and Social Management Framework

## Executive Summary

### 1. Introduction

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.

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 Vynohradivskyi Rayon, Zakarpats’ka oblast in Ukraine. 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.

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 Botar, 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. ESMF Objectives and Methodology

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.

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.

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.

## 3. Environment and Social Policy, Regulations, and Guidelines

The project is subject to the laws and regulations of Ukraine and the WWF's SIPP. For the purposes of the project implementation, the principles and procedures of the SIPP shall prevail in all cases of discrepancies.

Applicable laws of Ukraine that may be pertinent to the project include the Constitution of Ukraine, the Law on Environmental Protection (1991), Law on Nature Reserve Fund (1992), Law of Ukraine on Pesticides and Agrichemicals (1995), Water Code (1995), Law on Ambient Air Protection (1992), Law On Environmental Impact Assessment, and several environmental regulations and standards that are listed in the ESMF text. Relevant social legislation includes the Land Code (2002), the Civil Code (2003), the Code of Administrative Proceedings (2005), and the Law on Access to Public Information.

WWF's safeguards policies that are relevant to this project are as follows: Policy on Environment and Social Risk Management; Policy on Protection of Natural Habitats; Policy on Involuntary Resettlement; Policy on Accountability and Grievance System; as well as general standards on occupational and community health and safety and on energy efficiency.

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.

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.

#### 4. 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.

#### 5. 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 Klenovskiyi 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 at pages 7-9 below of the Executive Summary.***

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.

## 6. 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; and (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: (1) Need for land acquisition; (2) Environmental impacts (e.g., dust, noise, smoke, ground vibration, pollution, flooding, etc.) and loss or damage to natural habitat; (3) 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 (4) 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.

## 7. 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.

## 8. 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. 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.

## 9. 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.

## 10. Disclosure and Stakeholder Engagement

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.

## 11. 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.

Potential adverse impact	Mitigation measures	Responsible authority
<b><i>Environmental impacts</i></b>		
<p><b>Soil pollution and waste disposal during construction works</b></p> <ul style="list-style-type: none"> <li>➤ Contamination of surrounding soil with emission of gases or dust from transportation vehicles /construction machines.</li> <li>➤ Soil erosion</li> <li>➤ Loss of existing biodiversity and impacts on natural habitats</li> <li>➤ Contamination caused by temporary construction activities, such as disposing of waste.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Conduct on-site investigation of local conditions, incl. soil survey</li> <li>➤ Provide slope protection through soil compaction, riprapping on critical sections, or vegetative stabilization</li> <li>➤ 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.</li> <li>➤ Collect construction waste and dispose properly in designated areas by licensed collectors</li> <li>➤ 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.</li> <li>➤ Maintain properly construction equipment and vehicles;</li> <li>➤ Conduct on-site monitoring and protection</li> </ul>	<p>TRBWRD; contractor</p>
<p><b>Air pollution during construction</b></p> <ul style="list-style-type: none"> <li>➤ Construction works might result with increased concentration of polluting substances, primarily dust and exhaust gases from vehicles (machines engaged in the works execution).</li> <li>➤ Suspended particles (dust) that will rise from transport roads when used for machinery transportation or trucks passing.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Contractor to present proof of compliance with emission standards</li> <li>➤ Wet areas of dust sources to minimize discomfort to nearby residents</li> <li>➤ Control of vehicle speed to lessen suspension of road dust</li> </ul>	<p>TRBWRD; contractor</p>

	<ul style="list-style-type: none"> <li>➤ Keep the surrounding environment (sidewalks, roads) free of debris to minimize dust</li> </ul>	
<p><b>Noise levels</b></p> <ul style="list-style-type: none"> <li>➤ Human presence and execution of works at the location, and movement of vehicles and construction mechanization.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Schedule equipment movement during non-peak hours of daytime vehicular traffic</li> <li>➤ Avoid night-time construction activities and abide by local laws on construction hours</li> </ul>	TRBWRD; contractor
<p><b>Health and safety risks</b></p> <ul style="list-style-type: none"> <li>➤ Construction workers, as well as the local population, may be exposed to health and safety risks during road construction works</li> </ul>	<ul style="list-style-type: none"> <li>➤ Notify the public of the works through appropriate notification in the media and/or at publicly accessible sites (including the site of the works).</li> <li>➤ 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.</li> <li>➤ 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).</li> <li>➤ Appropriate signposting of the sites will inform workers of key rules and regulations to follow and emergency contact numbers.</li> <li>➤ Provide on-site medical services and supplies for any emergency, through institutional and administrative arrangements with the local health unit.</li> <li>➤ Provide portable water &amp; sanitary facilities for construction workers.</li> </ul>	TRBWRD; contractor



<b><i>Social Impacts</i></b>		
<p><b>Impacts on settlements, population, and livelihoods during afforestation activities</b></p> <ul style="list-style-type: none"> <li>➤ Restriction of access to duck rearing or other income generation areas during construction activities</li> <li>➤ Carrying out pilot activities on privately owned lands</li> </ul>	<ul style="list-style-type: none"> <li>➤ Carry out a demographic survey of the local population (including land ownership and usage rights and income sources);</li> <li>➤ Provide timely notification to the public regarding the planned works</li> <li>➤ Ensure that alternative duck rearing areas are available</li> <li>➤ 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.</li> <li>➤ Minimize the disturbance of local population by construction works by following the recommendations above.</li> </ul>	<p>WWF Ukrain (for the survey)</p> <p>TRBWRD; contractor (for all other activities)</p>