

# Reconnecting the Karaš River Pilot: 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 “**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.

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. 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 species. 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 and 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

## 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 "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.

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: (1) Technical documentation provided by WWF Adria; (2) Desk review of the WWF SIPP and the Republic of Serbia's environmental and social assessment laws, regulations, and policies; (3) Stakeholder engagement workshop that was carried out by WWF Adria in June-August 2018 in Jasenovo, Bela Crkva Vršac; and (4) 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 the Republic of Serbia 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 the Republic of Serbia that may be pertinent to the project include laws on water management (e.g., the Law on Water and the National Environmental Protection Program), land management and expropriation (e.g., Expropriation Law), environmental management (Environmental Impact Assessment), and access to information and public participation.

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 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.

## 4. Institutional Framework

The Karas River 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 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.

## 5. 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 species 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 at pages \*\*\* 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.

## **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 (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: (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 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.

## 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 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.

## 9. 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.

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 guidelines outlined in the ESMF.

## 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 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.

## 11. Budget

The ESMF 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.

Adverse impact	Mitigation measures	Responsible authority
<b>Environmental impact</b>		
<p><b>Soil pollution</b></p> <ul style="list-style-type: none"> <li>➤ Soil degradation.</li> <li>➤ Contamination of surrounding soil with emission of gases or dust from transportation vehicles /construction machines.</li> <li>➤ Contamination caused by temporary construction sites, temporary roads or disposing of waste.</li> <li>➤ Contamination from discharging used waters from the construction site into soil.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Provide slope protection through bank compaction, riprapping on critical sections, or vegetative stabilization</li> <li>➤ Designate a Spoils Storage Area, with topsoil set aside for later use and allow maximum re-use of spoils</li> <li>➤ Use material for restoration of degraded areas</li> <li>➤ Discharge used waters in designated areas only</li> </ul>	<p>Contractor &amp; Public Water Management Company</p>
<p><b>Water pollution</b></p> <ul style="list-style-type: none"> <li>➤ 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.</li> <li>➤ Discharging used waters from the construction site (technological and hygienic) into watercourses.</li> <li>➤ Waste material, mechanical oil, fuel etc. can be disseminated by malfunctioning construction machines and vehicles or negligent personnel.</li> <li>➤ Location of machines, temporary construction material depots near rivers or surface watercourses.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Ensure no pollutants, waste, or oil are released into the water</li> <li>➤ Set up sediment traps along rivers and/or gabions along banks to filter out eroded sediments</li> <li>➤ Provide slope protection through bank compaction, rip-rapping on critical sections, or vegetative stabilization</li> <li>➤ 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</li> </ul>	<p>Contractor &amp; Public Water Management Company</p>
<p><b>Waste disposal</b></p> <ul style="list-style-type: none"> <li>➤ Environmental pollution caused by improper waste management</li> </ul>	<ul style="list-style-type: none"> <li>➤ Waste collection and disposal pathways and sites will be identified for all major waste types expected from construction activities.</li> <li>➤ Mineral construction will be separated from general refuse, organic, liquid and chemical wastes by on-site sorting and stored in appropriate containers.</li> </ul>	<p>Contractor &amp; Public Water Management Company</p>



	<ul style="list-style-type: none"> <li>➤ Construction waste will be collected and disposed properly by licensed collectors</li> <li>➤ No open burning of wastes on or off site</li> </ul>	
<p><b>Air</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> <li>➤ Keep the surrounding environment (sidewalks, roads) free of debris to minimize dust</li> </ul>	Contractor & Public Water Management Company
<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>	Contractor & Public Water Management Company
<p><b>Flora and fauna</b></p> <ul style="list-style-type: none"> <li>➤ Construction works might cause temporary disturbance of fish biodiversity and other wildlife.</li> <li>➤ Emissions from trucks and construction machines might have negative impacts on vegetation around the construction site.</li> </ul>	<ul style="list-style-type: none"> <li>➤ 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.</li> <li>➤ Minimize any levels of emissions avoid heavy machines</li> </ul>	Contractor & Public Water Management Company
<p><b>Impacts on climate</b></p> <ul style="list-style-type: none"> <li>➤ Sub-projects implementation will have no negative impact on climate.</li> </ul>		
<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 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> </ul>	Contractor & Public Water Management Company

	<ul style="list-style-type: none"> <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>	
<b>Social Impacts</b>		
<p><b>Impacts on settlements, population, and livelihoods</b></p> <ul style="list-style-type: none"> <li>➤ Restriction of access to recreational areas (for fishing, swimming, etc.)</li> <li>➤ Need to access construction sites by passing through privately owned land</li> </ul>	<ul style="list-style-type: none"> <li>➤ Provide timely notification to the public regarding the planned works</li> <li>➤ Carry out construction works out of the recreational season or when the usage of recreational areas is limited</li> <li>➤ Obtain from private land owners access permits in a written form as prescribed by national legislation</li> <li>➤ Minimize the disturbance of local population by construction works by following the recommendations above.</li> </ul>	