

With funding from
 Austrian
Development
Cooperation



Development of a Project Document for an Intervention on Improving Sediment Management in the Drina River Basin

- Draft Project Document -



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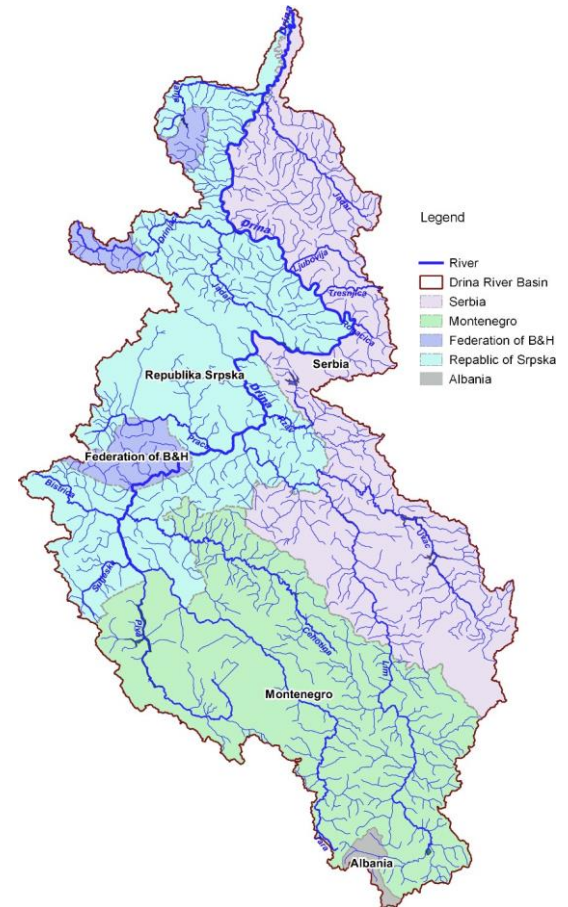
Background

- The Preparation of a Project Document for an Intervention on Improving Sediment Management in the Drina River Basin (DRB) is within the framework of the “SEE Nexus Project”, funded by the Austrian Development Agency and implemented by the GWP-Med and UNECE.
- The aim of the Nexus Project is to introduce the Nexus approach in South-East Europe and to catalyse action for its adoption and implementation. Project activities in the DRB facilitate a Nexus Dialogue Processes; include development of technical Nexus Assessments exploring cross-sectoral interlinkages and preparation of *Project Documents*.
- As the DRB is part of the Sava River Basin the riparian countries cooperate through the International Sava River Basin Commission.
- In 2017 the Parties to the Framework Agreement on Sava River Basin → Protocol on Sediment Management.
- Sediment management in DRB is part of the activities of the Drina Steering Committee and in line with the objectives of the Strategic Action Programme for the DRB.



Project Strategic Context

- Drina River is the largest tributary of Sava River.
- Area of River Basin of 19,680 km², nearly equally divided by three riparian countries: Montenegro (32%), Bosnia and Herzegovina (36%) and Serbia (31%).
- The Drina River is central for the environmental, economic, and social development of the three riparian countries. It provides water for agriculture and has an important potential for energy production (12,000 GWh/year).
- The DRB includes parts or the entire territory of 56 local government units and is home to over 1 million people.
- GDP per capita (2020) in the basin ranges from US\$6,080 in Bosnia and Herzegovina, US\$7,677 in Montenegro, and US\$7,731 in Serbia.
- Agriculture and forestry → natural conditions , but also from tradition; Majority of the population in the DRB is directly and indirectly reliant on agriculture and forestry.
- Depressed Local economy of many communities in the DRB.



Current Situation w/ Sediment Management

- Due to natural conditions and anthropological impact → variety of sediment-related problems are present in the DRB.
- Land erosion and torrents → significant pressure to the basin ecosystem, significant long-term damages and threats to multiple sectors (agriculture, forestry, water management, hydropower, transport) and infrastructure.
- Anthropogenic effects on erosion processes → deforestation, irregular agrotechnical measures, intensive grazing and livestock breeding, uncontrolled urbanization and industrialization, unplanned opening of quarries, etc.
- Present regime of sediment in the DRB, conditioned by past anti-erosion measures and construction of structures in the riverbeds (dams/water reservoirs) that have altered the natural conditions of water and sediment flow.
- No systematic system for measuring and monitoring sediment exists for the basin as a whole.
- “Towards Practical Guidance for Sustainable Sediment Management using the Sava River Basin as a Showcase” (ISRBC, 2013) → Sediment balance.
- “Scoping Study on Erosion and Sedimentation in the Drina River Basin” (2019) → overview of the state of the erosion in the basin + preliminary erosion maps for all riparian countries.

Identified Sediment Management Problems

- Insufficient awareness of erosion factors and processes across various economic sectors
- Diverse/inadequate institutional capacities of governmental and other public organizations for integrated water resource and sediment management in all DRB riparian countries
- Incomplete and non-compliant with EU Directives legislation and plans for sediment management
 - Lack of comprehensive basin-scale sediment monitoring system
 - Inefficient sharing of sediment-related data among the riparian countries
- Deteriorated anti-erosion, torrential flow, and landslide management infrastructure
 - Insufficient funding for infrastructure maintenance, restoration and upgrade



- ❖ Continuous land-loss from erosion processes
- ❖ Deposition of sediment in riverbeds and water reservoirs
- ❖ Chemical and nutrient pollution of water resources
- ❖ Increased risk from torrential floods and landslides



- ❖ Economic losses from damages
- ❖ Environmental degradation of water and other natural resources

Project Approach (guiding principles)

Focus → primarily on strengthening capacity and adaptive capabilities of riparians for managing aspects related to creation, transport and deposition of sediments

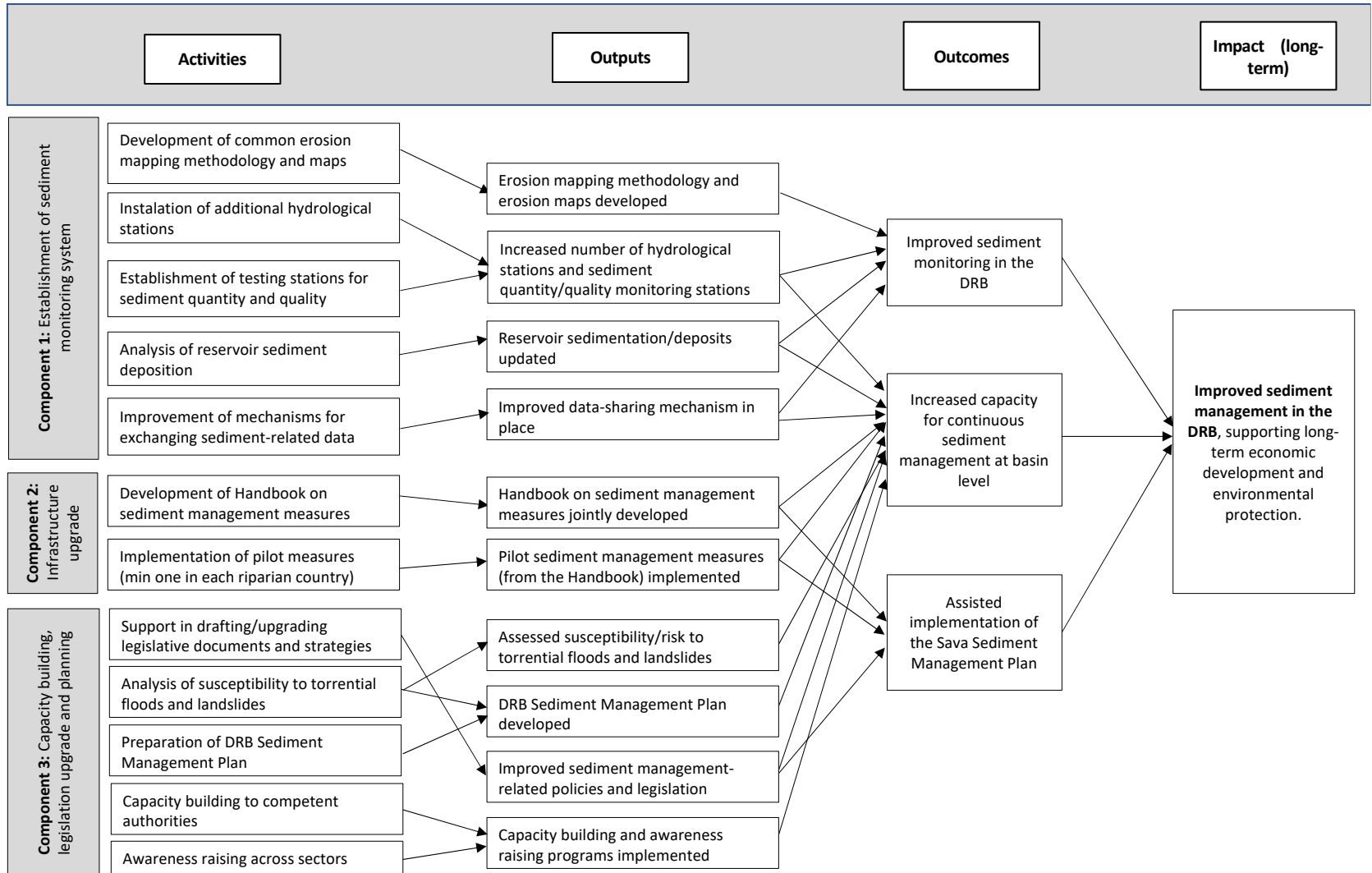
Improved sector reform → prerequisite towards accomplishing lasting impact beyond project duration

Improved sediment management planning → ongoing planning support and certainty, to assist in comprehensive infrastructure planning and encourage additional co-financing

Mobilization of stakeholders → (1) national governments and regulators; (2) sediment management utilities; (3) public or private organizations across different sectors; (4) development partners

Trans-boundary cooperation, information exchange and knowledge transfer → sharing of lessons learnt and innovative approaches between the riparian countries

Proposed Project Logic



Project Beneficiaries

Drina Steering Committee

BiH

- Ministry of Foreign Trade and Economic Relations

FBiH

- Federal Ministry of Agriculture, Water Mngt. and Forestry
- Federal Ministry of Env. and Tourism

- Sava River Watershed Agency, Sarajevo
- Federal Hydrometeorological Service, Sarajevo

RS

- Ministry of Agriculture, Forestry and Water Mngt.
- Ministry of Transport and Communication

- Public Institution “Vode Srpske”
- Republic Hydro-Meteorological Service RS
- “Hidroelektrane na Drini” AD Visegrad

MNE

- Ministry of Agriculture and Rural Development
- Ministry of Environment, Spatial Planning and Urbanism

- Environmental Protection Agency of Montenegro
- Institute for Hydrometeorology and Seismology
- “Elektroprivreda Crne Gore” AD Niksic

RSB

- Ministry of Agriculture, Forestry and Water Management
- Ministry of Environmental Protection

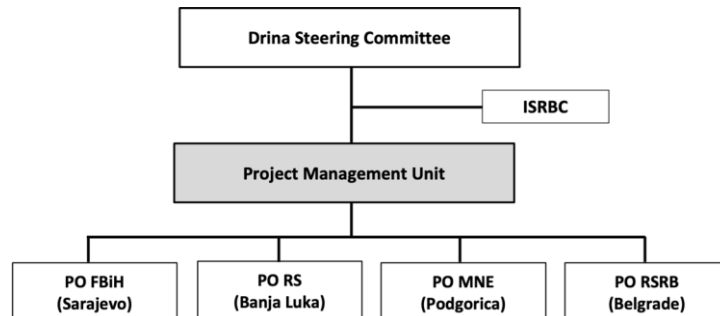
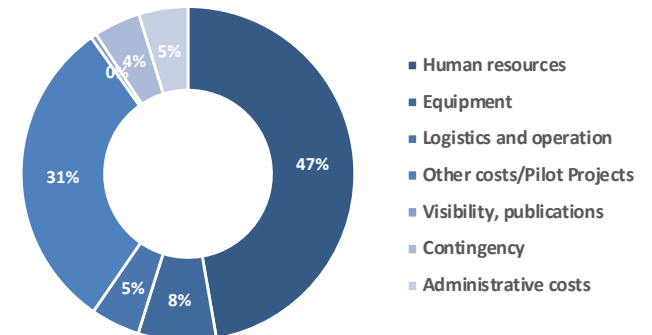
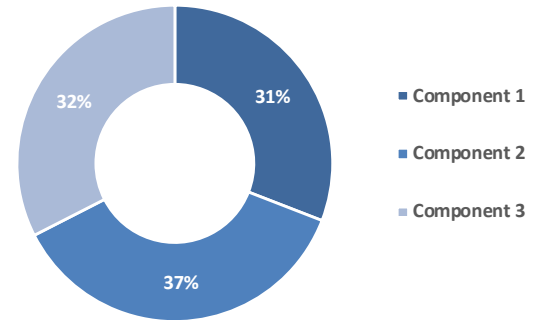
- Public Water Management Company “Srbijavode”
- Republic Hydrometeorological Office of Serbia
- “Elektroprivreda Srbije”, Bajina Bashta

Direct Project beneficiaries are also: (1) inhabitants in affected communities; (2) communities with Pilot projects; and (3) participants in awareness raising activities.

Project Workplan, Management and Budget

Project Components and Activities	Years/Quarters																			
	Y1				Y2				Y3				Y4				Y5			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Component 1: Establishment of sediment monitoring system																				
Output 1-1: Erosion map for the DRB prepared																				
1.1-1 Adoption of common erosion mapping methodology																				
1.1-2 Development of erosion maps																				
Output 1-2 Increased number of hydrological stations and sediment quantity/quality monitoring stations																				
1.2-1 Installation of additional hydrological monitoring stations																				
1.2-2 Identification of locations and setup of stations for suspended sediment quantity and quality monitoring																				
1.2-3 Continuous suspended sediment quantity/quality monitoring																				
Output 1-3 Reservoir sedimentation/ deposits updated																				
1.3 Analysis of reservoir sediment deposition																				
Output 1-4 Improved data-sharing mechanism in place																				
1.4 Improvement of mechanism and protocols for exchanging sediment-related data																				
Component 2: Infrastructure																				
Output 2-1 Handbook on sediment management measures jointly developed																				
2.1 Development of Handbook on sediment management measures																				
Output 2-2 Pilot sediment management measures implemented																				
2.2 Implementation of pilot sediment management measures																				
Component 3: Capacity building, legislation update and pilot projects																				
Output 3-1 Assessed susceptibility/risk to torrential floods and landslides																				
3.1-1 Analysis of susceptibility to torrential floods																				
3.1-2 Analysis of susceptibility to landslides																				
Output 3-2 Sediment Management Plan for the DRB developed																				
3.2 Preparation of Sediment Management Plan for the DRB																				
Output 3-3 Improved sediment management-related policies and legislation																				
3.3 Support in drafting/updating sediment management policy and legislative documents																				
Output 3-4 Capacity building and awareness raising programs implemented																				
3.4-1 Capacity building on sediment management to competent authorities																				
3.4-2 Awareness raising on erosion processes and sedimentation across sectors																				

Total: 6.54 mill Euro



Environmental, Economic and Social Impact

Nexus approach → benefits to multiple sectors + reduced pressure on ecosystems

Environmental benefits

Improved water quality

Improved environmental monitoring

Ecosystems-based response → afforestation, land management



Economic benefits

Society level

Household level

Businesses and public services



Social benefits

Improved livelihood

Sustainability of renewable energy (hydropower)

Food security



Sustainability of results

Contribution to creation of enabling environment

Development of capacities on a national and regional level related to data collection for improved weather/torrential flood forecasting, flood modelling, flood and landslide risk assessment, flood and landslide risk planning, etc.

Contribution to regulatory framework and policies

Preparation of policy documents focused on enabling sustainable performance of national and local organizations responsible for water resource management on a country level.

Potential for scaling-up and replication

Following the successful implementation of the project, the DRB region countries will be in an advanced position to replicate its specifics across other areas.