Floodplain restoration in the Russenski Lom Nature Park, Bulgaria

Year of issue

2025

Summary

The project was implemented in 2009 by the Russenski Lom Nature Park Directorate, Club “Friends of Russenski Lom” and WWF, with the support of the Ministry of Culture, and was funded by WWF and the German Federal Ecological Foundation (DBU). Applying the principle “more space for the river – more safety for people”, it aimed to open sections of the dykes, allowing water to re-enter the floodplain, reducing road flooding risk, and restoring river–floodplain connectivity.

Since then, the intervention has been embedded in the park’s long-term management framework. In 2022, an updated 10-year Management Plan for the park was formally adopted, prepared under the Interreg V-A Romania–Bulgaria “GreenManagement” project. This plan integrates the earlier floodplain restoration into a wider strategy for Natura 2000 site conservation, hydromorphological monitoring, sustainable tourism, and cross-border cooperation. WWF has also reported complementary river restoration measures within the park, including barrier removals and the installation of a fish pass to improve longitudinal connectivity and support protected fish species. These actions consolidate the ecological and hydrological benefits initiated in 2009, now supported by structured governance, mapping tools, and systematic monitoring.

Photo Gallery



Location

43.6983, 25.97972

Project

NWRM

National ID

Bulgaria_03

Sector

Hydromorphology

Installation Date

2009-03

Implementation status

Completed

Contact

REC

Overview

Location of the project

The site is within the Russenski Lom Nature Park, Ruse Province, near the village of Ivanovo.

Country

Belgium

NUTS2 Code

Prov. Hainaut

Sponge measures implemented in the case study

Floodplain restoration and management

Removal of dams and other longitudinal barriers

Objectives

Primary goal: Apply the principle “more space for the river – more safety for people” by opening sections of existing dykes to restore river–floodplain connectivity.
Flood risk reduction: Reduce flooding on nearby roads by allowing water to spread into the floodplain rather than being constrained by dykes.
Hydrological restoration: Reconnect the Russenski Lom river with its natural floodplain to improve flow dynamics.
Biodiversity support: Enhance habitats for riparian and aquatic species by increasing lateral connectivity.
Community benefit: Improve safety and reduce damage from high water events.

Involved partners

Authority type	Authority name	Authority role	Comments	Authority responsibility
Local water authority	Russenski Lom Nature Park Directorate	Implementation	—	Responsible
NGO	Club "Friends of Russenski Lom"	Implementation	—	Supporting
NGO	WWF	Initiation of the measure	—	Supporting
Other	Ministry of Culture	Implementation	Culture national authority	Supporting
NGO	WWF Gemany	—	—	Supporting
Other	German Federal Ecological Foundation DBU; Deutsche bundesstiftung umwelt (DBU)	Financing	German environmental fundation	Supporting

Site Information

Climate Zone

Cool temperate dry

Precipitation

525.00 mm

Temperature (°C)

12.00 °C

Runoff

0.80 mm

Runoff coefficient

0.50

Elevation range

42

Slope range

5.0

Vegetation class

Riparian forests dominated by Populus alba, Salix alba, Alnus glutinosa.Alluvial meadows.Reedbeds (Phragmites australis) in wetter zones.

WFD Ecological status

Bad

WFD Chemical status

Failing to achieve good

Water quality status

Pollution from untreated urban wastewater entering the rivers. Diffuse agricultural pollution (nutrients, pesticides). Illegal waste disposal in and near the riverbed. Illegal waste disposal in and near the riverbed. Overextraction of inert materials .

Design and Implementation

Project scale

Meso

Project scale specifications

The project targets a defined section of the Russenski Lom Nature Park, specifically the “Lomovete” protected area and its floodplains along the Cherni, Beli, and Malki Lom rivers, near Ivanovo in Ruse Province. It covers multiple kilometres of river and adjacent habitats within a sub-basin of the Danube, and is part of broader regional management and cross-border cooperation (GreenManagement project), but does not span an entire national catchment. It addresses hydromorphological restoration, fish passage, and habitat conservation at a regional river-floodplain scale rather than at a single small site.

Area subject to Land use change or Management/Practice change (ha)

3.00 ha

Size

2.00

Size unit

km

Constraints

It is a Nature park

Favourable preconditions

Dyke was broken by high waters at 3 spots - thus the weak spots indicated naturally and then used to design sluices

Financing

Total cost information

N/A info

Costs investment information

N/A info

Costs maintenance information

Less than 1000

Administrative annual cost information

Less than 1000

Financing authorities

Authority name	Type of funding	Comments
WWF Bulgaria	Other	—
German Federal Ecological Foundation DBU	Private funds	—
Interreg V-A Romania–Bulgaria	Other	GreenManagement project

Policy and Governance

Policy description

River was trained by dyke; Frequent flod events - water overflow the dyke at peak levels and remains on the arable lands

Policy targets

Runoff control

Peak-flow reduction

Oher Societal Benefits

Part of a wider plan

Oui

Wider plan

Name
Management plan of Rusenski Lom Nature park

Public consultation

Non

Has contractual arrangements

Non

Impacts and Monitoring

Monitoring System

Monitoring requirements

Monitoring is required under the Natura 2000 framework and the park’s Management Plan, with regular assessment of habitat condition, key species populations, and pressures.

Monitoring parameters

Habitat quality: extent, structure, and function of riparian forests, alluvial meadows, and reedbeds.
Species presence and abundance: especially target species under the Habitats and Birds Directives (e.g., otter Lutra lutra, certain bird species, protected fish).
Pressures: evidence of pollution (wastewater inflow, agricultural runoff), illegal waste deposits, and hydromorphological changes.
Hydrological regime: qualitative assessment of flow connectivity between river and floodplain, presence of blockages or erosion.

Upstream station

BG1RL00001MS020

Downstream station

BG1RL00001MS010

Maintenance

Maintenance requirements

Maintenance consists mainly of preserving floodplain and riparian habitats through vegetation management, removal of invasive species, and preventing illegal activities such as waste dumping and unregulated construction.

Impact Assessment Methodology

Performance impact assessment method

Catchment outlet

Performance impact estimation information

Regular visits

Socio-economic Impacts

Direct benefits information

N/A info

Ancillary benefits information

N/A info

Biophysical impacts: Hydrology

Retained water

3000.00

Retained water unit

m3/month

Biophysical impacts: Biodiversity

Improved biodiversity

Oui

Information on improved biodiversity

Improve the habitat of the black stork

Biophysical impacts: Water & Soil Quality

Water quality overall improvements

Neutral impact-no change in WQ status

Soil quality overall improvements

Neutral impact-no change in SQ status

Ecosystem erosion control

Oui

Biophysical impacts: Others

Ecosystem impact climate regulation

Not relevant for the specific application

Lessons Learned

Key lessons

The restoration project is successful because the habitat restoration objectives are not in contradiction with the interests of the local population and authorities. The measure allows improved flood control on agriculture lands and improves the road safety.

Drivers

Driver type	Driver role	Comments
Other	Main driver	Continuous flooding during heavy rainfall ???

Success factors

Success factor type	Success factor role
Attitude of decision makers	Main factor
Existing staff and consultant knowledge	Main factor
Financing possibilities	Secondary factor
Available support tools	Secondary factor

Sources

Sources

Case study:Restoration of Rusenski Lom River near Ivanovo

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