

RESTORING AND PROTECTING RIVERS & WETLANDS:



20 ANI 
ÎN ROMÂNIA

20 YEARS OF IMPACT IN ROMANIA

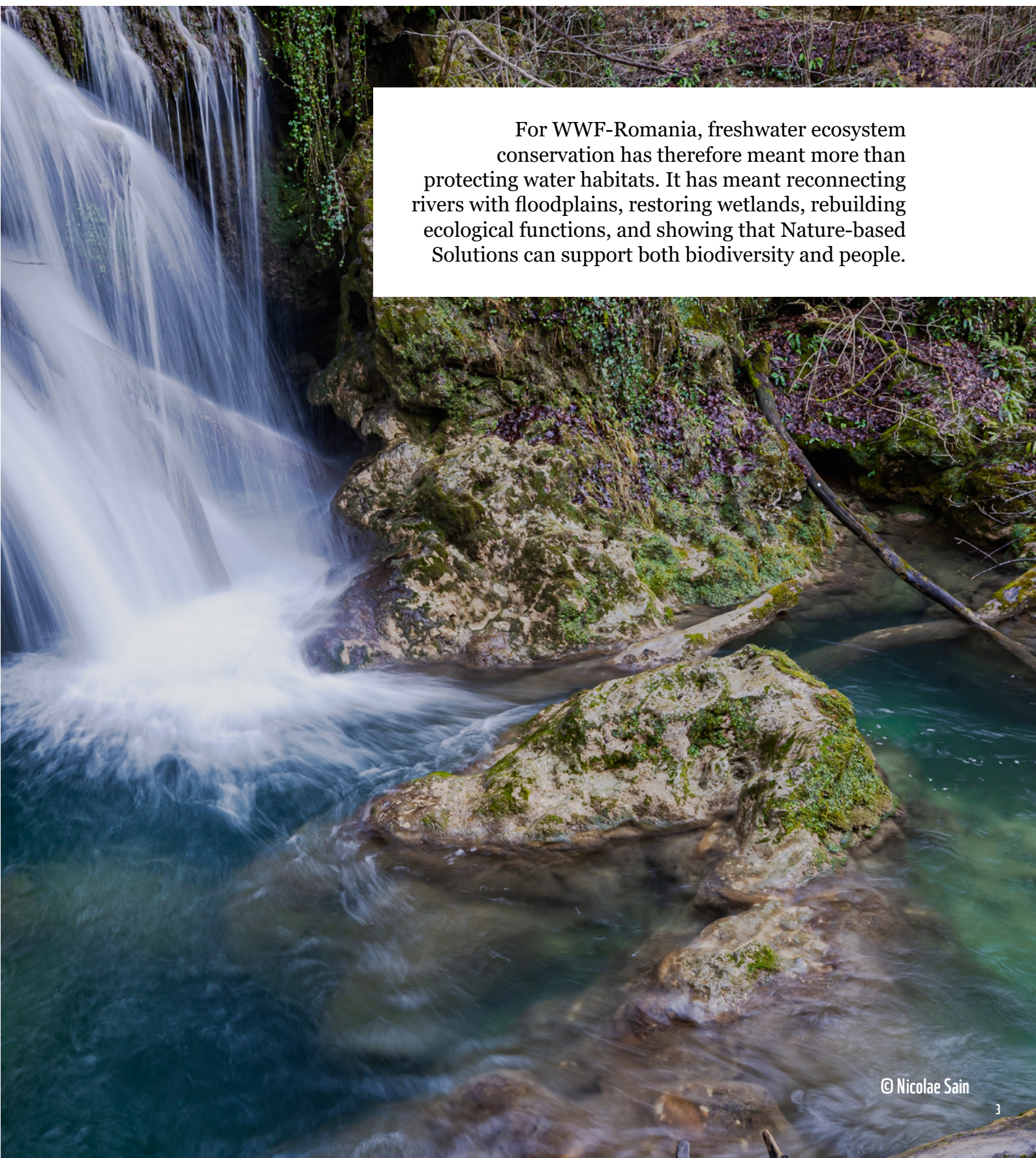




**ROMANIA'S RIVERS, WETLANDS
AND FLOODPLAINS ARE AMONG
THE COUNTRY'S MOST
VALUABLE NATURAL ASSETS.**

From mountain streams to the Lower Danube and the Danube Delta, freshwater ecosystems sustain biodiversity, regulate floods and droughts, support fisheries and local livelihoods, store carbon, improve water quality, and shape cultural identity.

Yet, over the last century many of these systems have been heavily altered. Floodplains were diked and drained, wetlands were almost entirely converted to agricultural or intensive aquaculture polders, rivers were fragmented by barriers, and natural water dynamics were interrupted. These changes reduced biodiversity, weakened natural flood protection, and made communities more vulnerable to climate change.

A long-exposure photograph of a waterfall cascading over mossy rocks into a stream. The water is blurred, creating a soft, ethereal effect. The surrounding environment is lush with green moss and vegetation. A white text box is overlaid on the right side of the image.

For WWF-Romania, freshwater ecosystem conservation has therefore meant more than protecting water habitats. It has meant reconnecting rivers with floodplains, restoring wetlands, rebuilding ecological functions, and showing that Nature-based Solutions can support both biodiversity and people.

WWF'S ROLE IN THIS JOURNEY



Over the past two decades, WWF-Romania has acted as a catalyst for freshwater restoration by connecting field projects, scientific evidence, policy processes, and local communities.

OUR ROLE HAS BEEN TO:

- demonstrate ecological restoration on the ground through pilot projects;
- build partnerships with local authorities, research institutes, protected area administrations and communities;
- identify and prioritize restoration opportunities at landscape scale;
- bring freshwater restoration into national and European policy discussions;
- promote Nature-based Solutions for climate adaptation, flood protection and water security.



This work has helped move freshwater restoration from isolated pilot initiatives toward a more strategic national agenda.





HOW WE ACT

WWF-ROMANIA'S FRESHWATER WORK BRINGS TOGETHER FOUR COMPLEMENTARY DIRECTIONS:

1 RESTORING WETLANDS AND FLOODPLAINS

By reconnecting agricultural polders, ponds and floodplain habitats to natural water dynamics.

2 BUILDING EVIDENCE AND RESTORATION PIPELINES

By mapping, assessing and prioritizing sites where ecological restoration can deliver the greatest benefits.



3 STRENGTHENING COOPERATION AND GOVERNANCE

By supporting transboundary collaboration, Ramsar designation, local engagement and integration of management documents.

4 RECONNECTING RIVERS

By developing methodologies and pilot projects for identifying obsolete barriers and safely restoring free-flowing river stretches.

MAJOR ACHIEVEMENTS



1 MAHMUDIA–CARASUHAT BECAME A NATIONAL MODEL FOR WETLAND RESTORATION

924 hectares restored in the Danube Delta

1.A SITUATION 20 YEARS AGO

Large parts of the Lower Danube floodplain and the Danube Delta had been diked and drained during the 20th century, converting wetlands into agricultural polders. By the early 2000s, the former Carasuhat polder near Mahmudia remained disconnected from the seasonal flood pulse; biodiversity declined and traditional livelihoods (fishing, reed-based activities, nature-based tourism) suffered.

The area reflected a wider challenge across the Danube: natural wetlands had been treated as land to be drained, rather than living systems that protect communities, sustain biodiversity and support local economies.

1.B WWF'S STRATEGIC APPROACH

WWF-Romania partnered with the Mahmudia Local Council, the Danube Delta Biosphere Reserve Administration and the “Danube Delta” National Research and Development Institute to re-establish hydrological connectivity: breaching/reprofiling dikes, excavating the Carasuhat Canal, creating shallow basins and microtopography, followed by ecological monitoring and community engagement to build local ownership.

The project was designed not only as an ecological intervention, but as a demonstration that restored wetlands can generate benefits for both nature and people.



1.C CURRENT SITUATION AND PROGRESS ACHIEVED



Between 2012–2016, about 924 hectares were restored into a functional wetland with rapid biodiversity return and a visible boost to nature-based tourism.

In June 2023, a dike failure led to the Danube Delta regaining around 1,000 hectares of adjacent land; a local survey showed 97% of residents favored keeping the wetland, both new and old.

Mahmudia–Carasuhat is now one of Romania's most powerful examples of ecological restoration with community support. It shows that when people see direct benefits from nature restoration, wetlands can become a source of local pride rather than a source of conflict.

1.D NEXT STEPS

Ecological restoration is now embedded in key management documents for the Lower Danube and the Danube Delta. Pilot sites such as Mahmudia, Gârla Mare demonstrate feasibility and co-benefits, informing upscaling and funding proposals.



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2 GÂRLA MARE–VRATA (MEHEDINȚI) RECONNECTED FLOODPLAIN HABITATS TO THE DANUBE

Over 400 hectares reconnected

2.A SITUATION 20 YEARS AGO

The floodplain had been modified for aquaculture in the 1980s, with dikes and compartments isolating ponds from the Danube's natural water regime. This reduced lateral connectivity, degraded habitats and limited the area's resilience to floods and droughts.

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2.B WWF'S STRATEGIC APPROACH

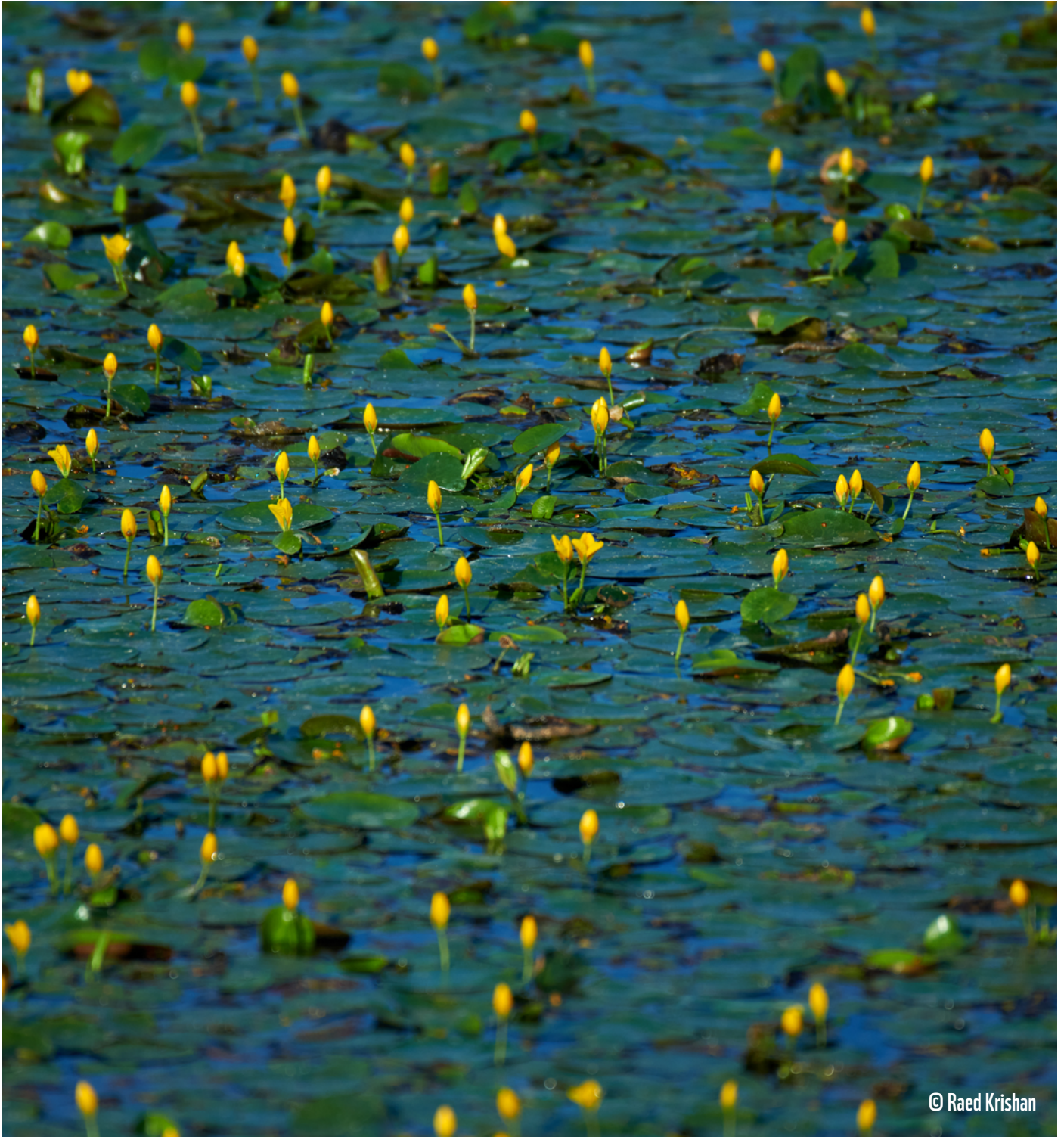
Under the *Living Danube Partnership*, WWF-Romania restored lateral connectivity by de-silting and reshaping channels, reconnecting ponds, creating open-water patches and stabilizing banks where needed. Designs included community-friendly access, such as fishing platforms.

The project combined ecological restoration with practical community use, showing that restored floodplains can support biodiversity, water management, and local needs at the same time.



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2.C CURRENT SITUATION AND PROGRESS ACHIEVED



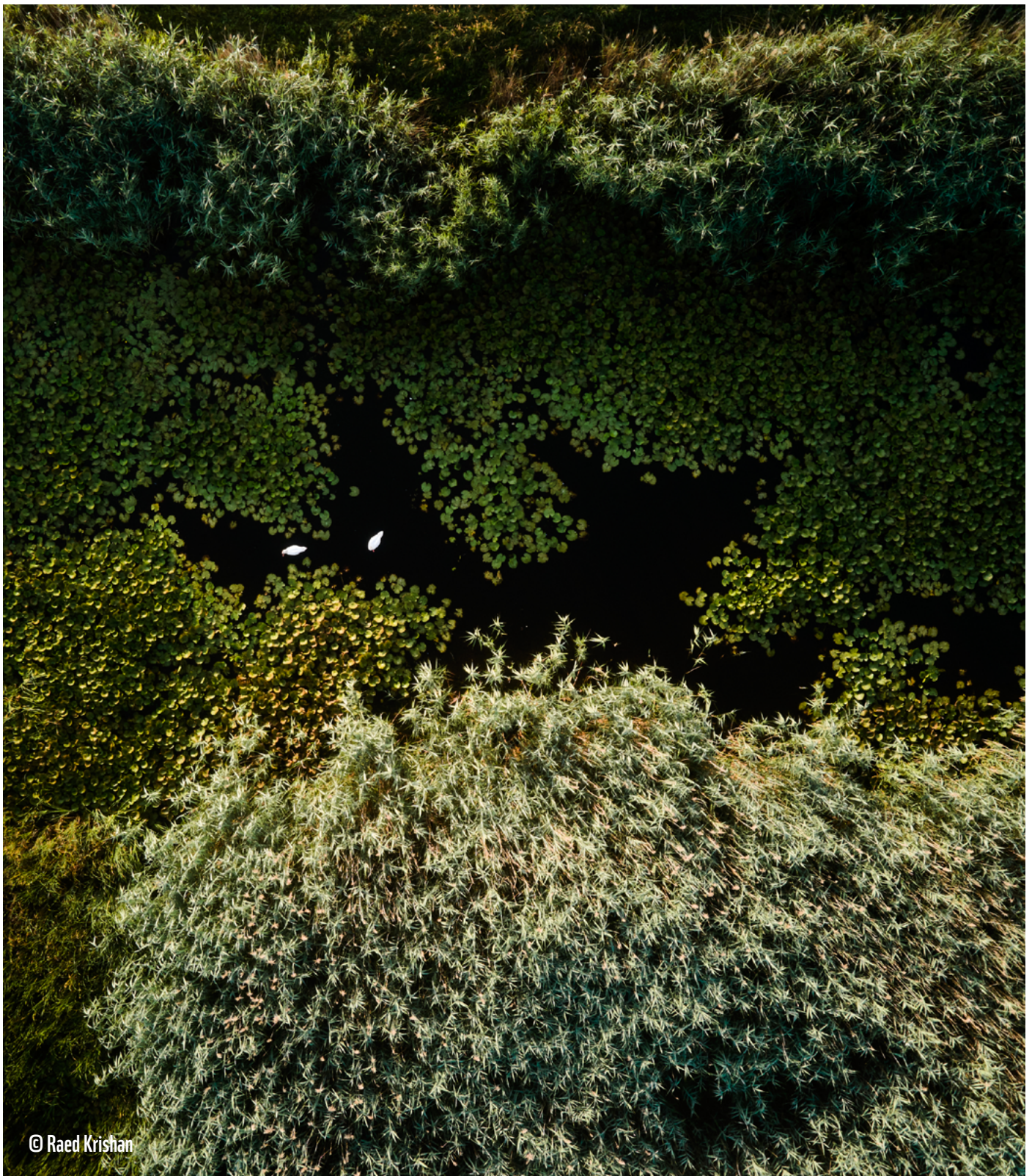
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Over 400 hectares are now reconnected, benefiting over 80 protected species and providing about 5 million m³ of floodwater retention capacity, contributing to lowering downstream risk.

The site is recognized as a replicable model for Lower Danube floodplain restoration.

2.D NEXT STEPS

Plan a new phase to secure connectivity in dry years and integrate the site into ecotourism and education circuits, coupled with water stewardship actions and continued ecological monitoring.



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3 THREE TRANSBOUNDARY RAMSAR COMPLEXES STRENGTHENED LOWER DANUBE COOPERATION

Romania–Bulgaria cooperation for wetlands and birds

3.A SITUATION 20 YEARS AGO

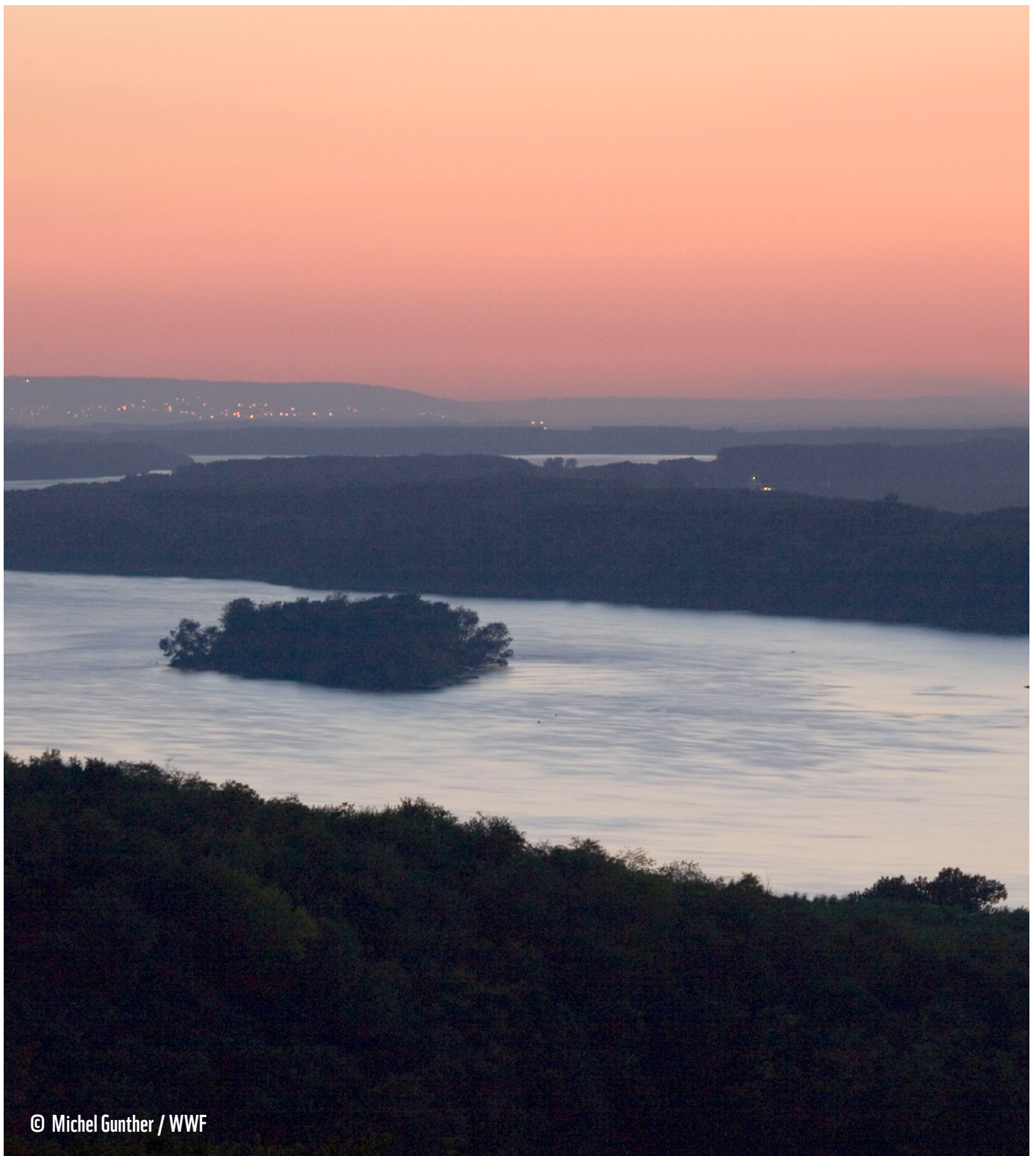
Key bird colonies fed or nested across borders, but lacked a coherent transboundary management framework, complicating coordinated habitat protection and restoration.

The ecological reality of the Danube was transboundary, but conservation governance was still largely national and fragmented.



3.B WWF'S STRATEGIC APPROACH

WWF prepared the joint designation of Bistreț–Ibisha, Suhaia–Belene and Călărași–Srebarna as transboundary Ramsar complexes, catalyzing inter-governmental cooperation and aligned measures on both river banks.



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3.C CURRENT SITUATION AND PROGRESS ACHIEVED



As of May 2013, all three complexes are officially recognized, enabling coordinated conservation and prioritization of floodplain reconnection at landscape scale.

This recognition created a stronger foundation for managing the Lower Danube as a connected ecological system rather than a set of isolated sites.

3.D NEXT STEPS

Deepen technical cooperation through joint monitoring and data exchange, and link the complexes to restoration pipelines, such as side-arm reconnection and floodplain re-wetting, using EU funds for nature-based solutions and climate adaptation.



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4 RESTORATION SITES WERE MAPPED AND KEPT ON THE PUBLIC AND INSTITUTIONAL AGENDA

From isolated projects to a restoration pipeline

4.A SITUATION 20 YEARS AGO

Around 80% of historic Danube floodplains had been lost to diking and drainage, reducing water retention, degrading water quality and biodiversity. The Lower Danube Green Corridor agreement, signed by Romania, Bulgaria, Ukraine and Moldova in 2000, pledged large-scale restoration, but implementation lagged.

The challenge was not only ecological. Romania also needed a credible pipeline of restoration sites, technical evidence, institutional ownership and public support to move from ambition to implementation.

4.B WWF'S STRATEGIC APPROACH – SUCCESSIVE PROJECTS THAT MAPPED AND PRIORITIZED SITES

WWF-Romania built a long-term, evidence-based pipeline of restoration opportunities through successive projects. Essentially, all projects centered around the principles of Nature-based Solutions (NbS): actions to protect, sustainably manage, and restore ecosystems to address societal challenges, such as climate change, water security, and disaster risks.

Projects included FROA, IDES, REXUS, MERLIN, GOVAQUA, DANUBE4all, Restore4Life and EUROLakes. Together, these projects helped identify restoration opportunities, assess ecosystem services, test governance models, build decision-support tools and prepare sites for future implementation.



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4.C CURRENT SITUATION AND PROGRESS ACHIEVED

Ecological restoration is now embedded in key management documents for the Lower Danube and the Danube Delta. Pilot sites such as Mahmudia, Gârla Mare demonstrate feasibility and co-benefits, informing upscaling and funding proposals.

WWF's efforts on communication and community engagement had visible results:

- A 2023 sociological study showed that 97% of the local community in Mahmudia wanted to preserve the extended wetland and did not agree with it being drained again for farmland.
- A 2026 study conducted in the communities near the Bistret, Potelu, and Arceru wetlands showed nearly 80% support from local communities for ecological restoration projects reconnecting former ponds to the river's natural flow.



These results show that restoration is not only technically feasible, but socially viable when communities are informed, involved, and able to see long-term benefits.

4.D NEXT STEPS – LEVERAGING THE EU NATURE RESTORATION REGULATION & NATIONAL RESTORATION PLAN

The EU Nature Restoration Regulation creates a major opportunity to bring Danube floodplain restoration sites pipeline into Romania's National Restoration Plan.

WWF will continue working to ensure that priority sites identified through years of analysis are translated into funded, legally secure and socially supported restoration projects.



5 MOUNTAIN RIVERS MOVED CLOSER TO FREE-FLOWING CONDITIONS

National methodology for identifying and prioritizing barriers for removal

5.A SITUATION 20 YEARS AGO

Romania's mountain rivers are heavily fragmented by thousands of small barriers, many obsolete, impairing fish migration, sediment transport and river resilience.

Although many of these barriers no longer serve a clear economic or safety function, they continue to disrupt river ecosystems and prevent rivers from functioning naturally.

5.B WWF'S STRATEGIC APPROACH

WWF-Romania co-developed, with experts and authorities, a multi-criteria national methodology (hydromorphology, ecology, social, technical and economic) to identify and prioritize removable barriers, aligned with EU ambitions for free-flowing rivers.



5.C CURRENT SITUATION AND PROGRESS ACHIEVED

The methodology is in an advanced stage of agreement with authorities. In parallel, pilot projects such as Dejani River, Caraş River and the Cătălina Dam are preparing the removal of multiple obsolete barriers to reopen kilometres of uninterrupted river flow and build institutional experience.



5.D NEXT STEPS

The agreed barrier-removal identification methodology is expected to contribute to restoring a certain number of kilometers of free-flowing rivers, supporting the EU target to restore 25,000 km of rivers to free-flowing condition by 2030.

The next priority is to move from methodology to implementation: securing permits, financing removals, monitoring ecological recovery and demonstrating that barrier removal can become a regular part of river restoration in Romania.



SYSTEMIC CHALLENGES AHEAD

Despite progress, freshwater biodiversity in Romania still faces important structural challenges that limit scaling and long-term resilience:

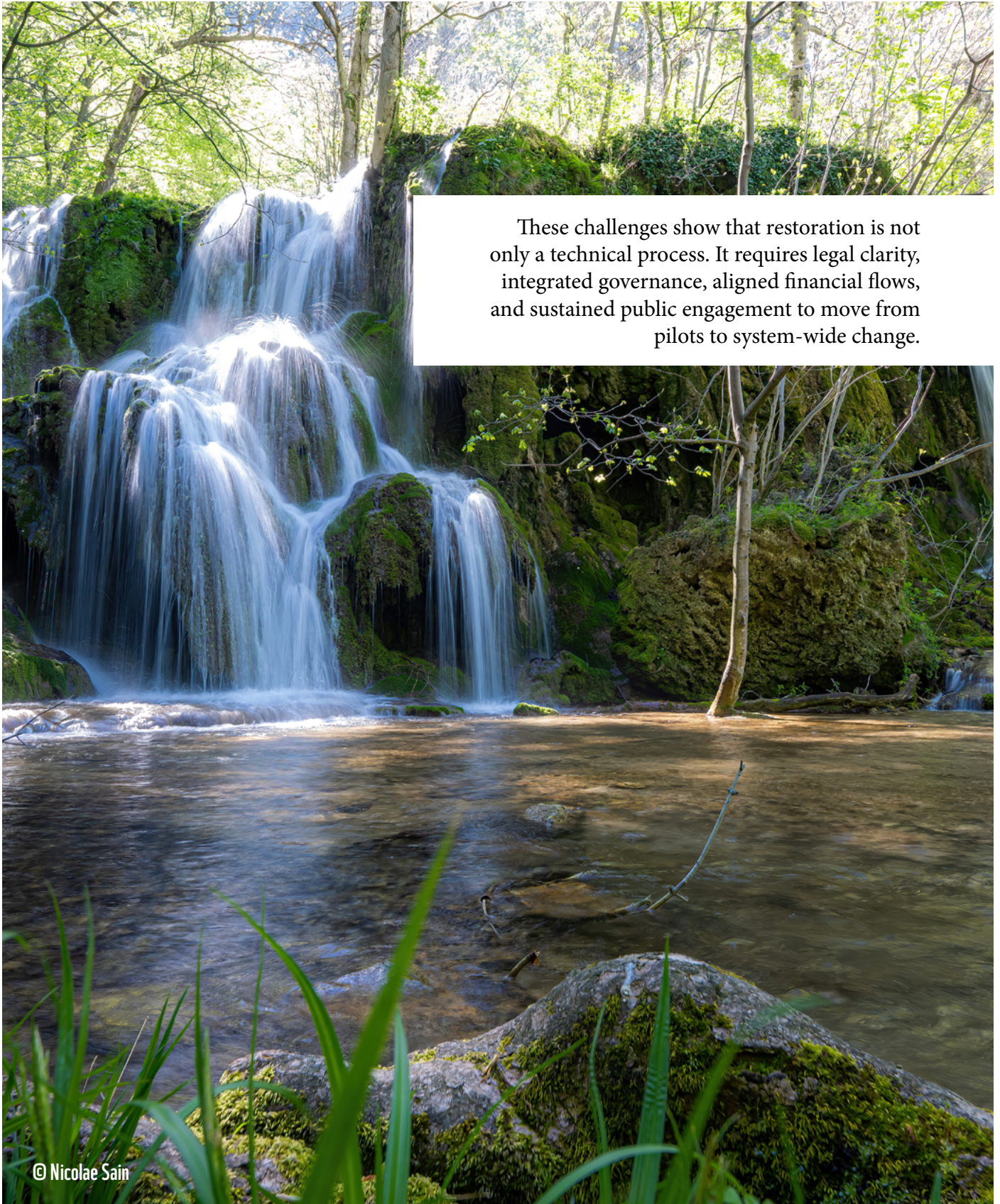
- **FRAGMENTED GOVERNANCE ACROSS SECTORS**
Responsibilities remain split across water, biodiversity, agriculture, infrastructure, and local development, hindering coordinated, catchment-level action
- **WEAK INTEGRATION INTO PLANNING AND FUNDING SYSTEMS**
Restoration priorities are only partially reflected in spatial planning and funding programs, slowing uptake and scaling
- **CONTINUED PRESSURES FROM INFRASTRUCTURE AND UNSUSTAINABLE LAND USE**
River fragmentation, obsolete infrastructure, and land practices continue to degrade ecosystem function and resilience

- **MISALIGNMENT OF FINANCE AND ECONOMIC INCENTIVES**

Public and private flows still favor grey infrastructure or degrading activities, while investment in restoration and Nature-based Solutions remains limited

- **NEED FOR SUSTAINED COMMUNITY TRUST AND PARTICIPATION**

Long-term success depends on maintaining local support, fair benefit-sharing, and inclusive governance processes



These challenges show that restoration is not only a technical process. It requires legal clarity, integrated governance, aligned financial flows, and sustained public engagement to move from pilots to system-wide change.

LOOKING AHEAD

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The next chapter of WWF-Romania's freshwater work will focus on scaling restoration from successful pilots to catchment- and landscape-level transformation, while contributing to a broader shift toward a type of economy favorable to both nature and human communities.

Key priorities include:

- **SECURING DURABLE LEGAL PROTECTION FOR RESTORED WETLANDS**
Ensuring long-term conservation outcomes through clear legal status and safeguards
- **SCALING NATURE-BASED SOLUTIONS FOR CLIMATE ADAPTATION AND RISK REDUCTION**
Using wetlands, floodplains, and river connectivity to reduce flood and drought risks and complement or replace grey infrastructure
- **RESTORING RIVER CONNECTIVITY AT SCALE**
Advancing barrier removal and modernizing infrastructure to enable free-flowing rivers and ecological recovery

- **MOBILIZING FINANCE AND MARKET ACTORS FOR RESTORATION**

Expanding mechanisms such as PES, water stewardship, and blue-green finance, while engaging companies to integrate ecosystem services into operations and supply chains

- **STRENGTHENING GOVERNANCE AND PARTNERSHIPS AT LANDSCAPE LEVEL**

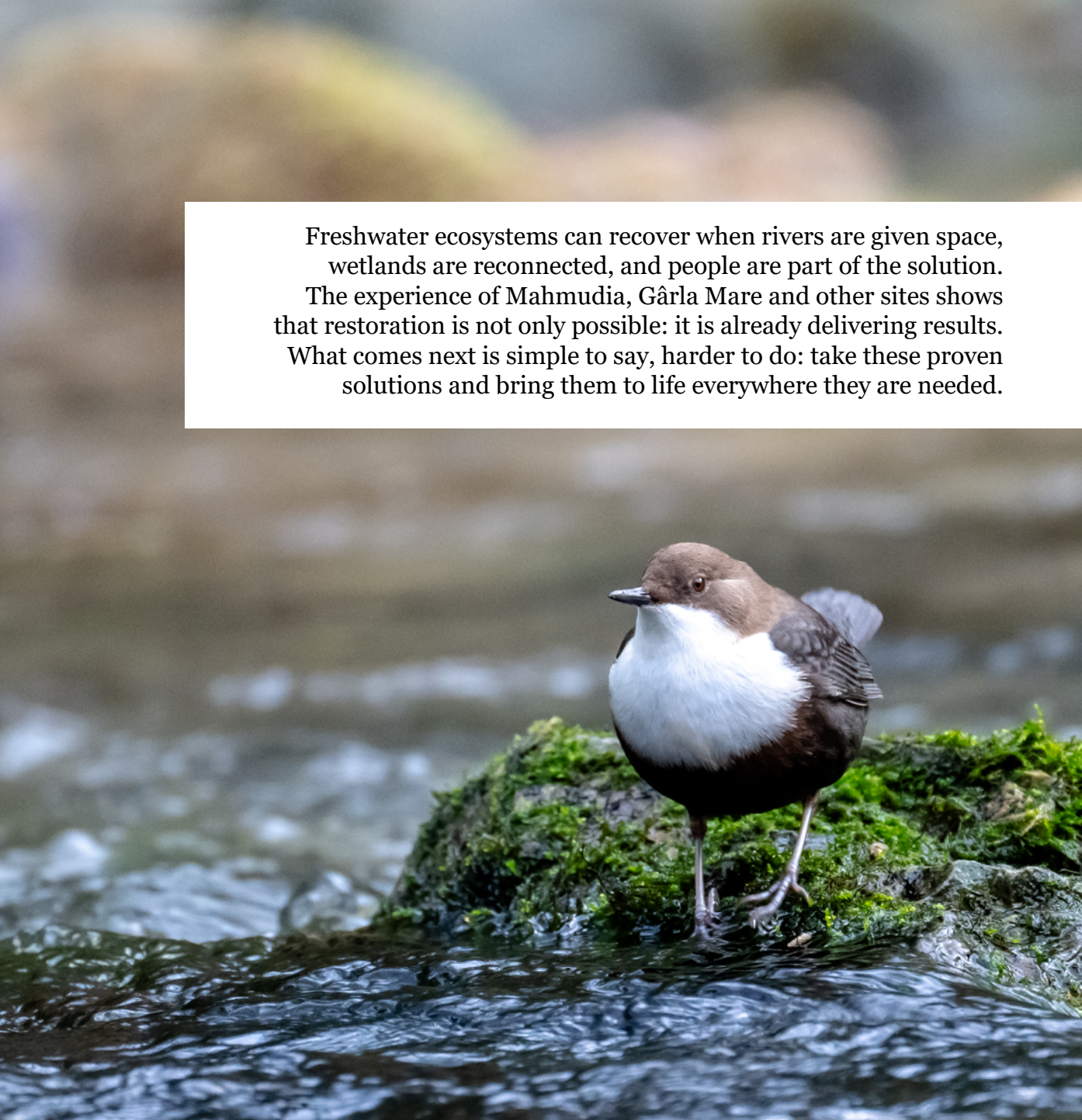
Improving coordination across authorities and sectors, and building institutional capacity for large-scale implementation

- **STRENGTHENING MONITORING AND EVIDENCE SYSTEMS**

Tracking ecological and socio-economic outcomes to support scaling and investment

- **SUSTAINING COMMUNITY ENGAGEMENT AND OWNERSHIP**

Ensuring long-term trust, participation, and fair benefit-sharing



Freshwater ecosystems can recover when rivers are given space, wetlands are reconnected, and people are part of the solution. The experience of Mahmudia, Gârla Mare and other sites shows that restoration is not only possible: it is already delivering results. What comes next is simple to say, harder to do: take these proven solutions and bring them to life everywhere they are needed.

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