

Proposal for Europe-INBO workshop on

“River management in a climate change context: challenges and opportunities”

Concept Note – V3

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OFB
OFFICE FRANÇAIS
DE LA BIODIVERSITÉ



OiEau
Office International
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1. CONTEXT AND OBJECTIVES

Europe's rivers, lakes and alluvial habitats are under immense pressure. Among the key pressures, fragmentation and hydromorphological changes remain in the top tier, as shown by the European assessments after two RBMP cycles.

Preserving watercourses in good ecological and functional condition and ensuring the restoration of degraded watercourses is a necessary condition for achieving good ecological status under the European Water Framework Directive (WFD): "Member States [of the European Union] protect, improve and restore all surface water bodies".

This objective of restoring and preserving waterbodies is also linked to some European policies such as the Habitats Directive, the "eel" regulation, or the strategy on green infrastructures. The recent Green Deal and its Biodiversity Strategy 2030 also aim at putting Europe's biodiversity on the path to recovery by 2030, with a view to ensuring that by 2050 all of the ecosystems are restored, resilient, and adequately protected.

In this context, a workshop was organized during 2022 Europe-INBO on **"River restoration: a European goal at the crossroads of several legislations"**.

Climate change is causing more and more extreme and repeated weather and climate episodes. European territories are facing more frequent floods since 30 years, and droughts are also increasingly occurring, in particular for Mediterranean countries. These events are causing or enhancing new pressures on rivers and causing difficulties for water resources management. For example, how to deal with temporary streams?

In so, climate change impacts affect and interact with WFD implementation activities at different states in the process. Climatic variables are the root of many of the parameters that influence water resources and therefore it is important to consider climate change when aiming to achieve the WFD objectives (good status of all waters).

In this context and for a better implementation of the existing legislation on freshwater, the Biodiversity Strategy has set the target to make at least 25 000 km of rivers free-flowing again by 2030, by removing primarily obsolete barriers and restoring floodplains and wetlands.

Indeed, beyond the longitudinal continuity, lateral connectivity is also essential to rivers. Floodplains and wetlands but more globally the whole territory of the water catchment have essential roles for the good functioning of rivers.

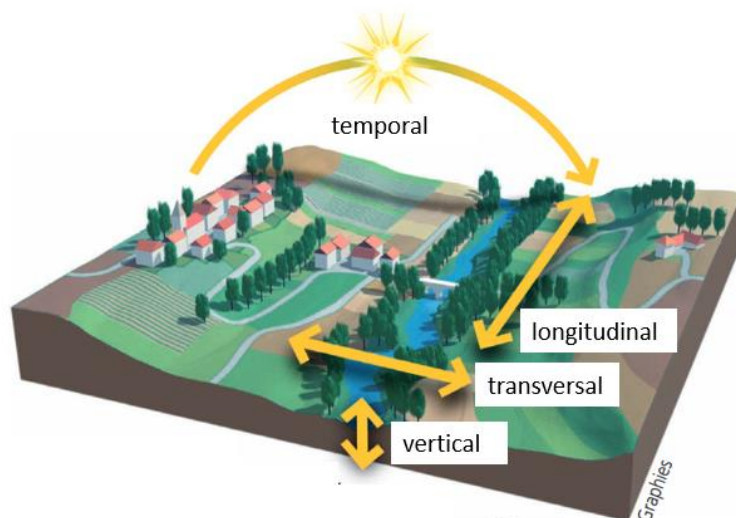


Figure 1: The four-dimensional nature of river ecosystem¹

Climate change will impact water availability, causing water scarcity. Water scarcity is both a natural and human-made phenomenon and defined as the point where there are insufficient water resources to satisfy long-term average requirements and is especially predicted in Southern Europe, but almost all Europe can be affected by severe drought events. This will lead to more water abstraction, especially by the agriculture in Southern Europe, subsequently leading to an increasing water stress with a rising water temperature, deteriorating water quality and natural habitats for flora and fauna and an increase of invasive species. Nevertheless, extreme precipitation is projected to increase until the end of the 21st century in those regions that are relatively wet under present climate conditions, such as middle and Northern Europe. These impacts might intensify existing cross sectoral competition for water resources.

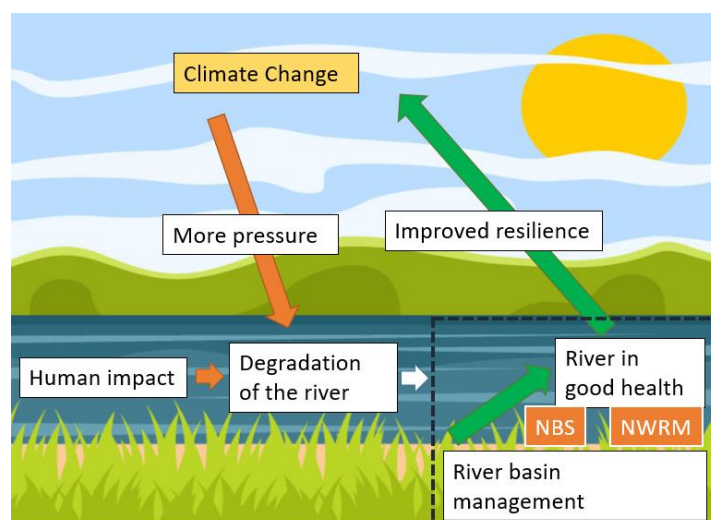
Management measures to adapt, compensate or mitigate the impacts are adapting best practice management to the situation, like land use change and regulation of water use. But there are also operational measures related to technical and / or green infrastructure.

Amongst these operational measures that can be used in the catchment, Natural water retention measures (NWRM) can help to restore, enhance and preserve the water retention capacity of aquifers, soils and ecosystems, with a view to improving their status.

NWRM provide multi-benefits including the reduction of risk of floods and droughts, water quality improvement, groundwater recharge and habitat improvement. Combined in the watershed, both in terms of the hydrographic network and land use, they may have a significant effect in increasing water retention. Natural water retention measures and Nature-based Solution (NBS), which both rely on the same focus on nature or ecosystem services, can then play a major role in the adaptation to climate change, making ecosystems more resilient.

¹ https://professionnels.ofb.fr/sites/default/files/pdf/RecueilHydro_8-gerer_2018v8.pdf

Even if these measures could be implemented at different spatial and time scales, the river basin scale seems to be particularly relevant to have significant benefits.



Questions to be answered are how to combine these measures in the water catchment? How to combine this with eco-system restoration? What else can be done?
How to manage rivers in a climate change context? How can rivers in good health help to adapt to climate change?
What regulatory and other technical tools are available, what are missing?

Each Member State has also different types of rivers, different hydro-climatic conditions and specific issues to address when dealing with climate change and river management.

This is why, for 2023 Europe-INBO, it is then proposed to organize a workshop on **“River management in a climate change context: challenges and opportunities”**. The state and management of rivers under the actual climate change context will be discussed, as well as the future of our rivers in such a context.

The objective of this workshop is to facilitate exchanges of experiences and inputs in different climatic contexts. Rivers preservation and restoration will be the central point of these exchanges, considering different scales of time and space.

This workshop will follow a **webinar** organized in June on *“Improving National River Continuity Restoration Policies for European Ecosystem-based River Management”* (ECRR/STOWA and INBO) and will allow to continue the exchanges started during the previous Europe-INBO (see Annex).

2. CONTENTS

The workshop will offer a better understanding of river management in a climate change context at European scale. It will promote exchange of experiences and points of view for the management of rivers with constraints and solutions implemented in European countries.

2.1 Workshop format

Firstly, an introduction part will set-up the scene on the EU context and the current stakes and observations to share, by EU and MS representatives.

Following this introductory part, two themes will be investigated during a workshop period including experience feedbacks from Member States, basin organisations or research projects. In order to keep as much interactions as possible, this part of the workshop will be organised with short split group sessions.

For each session in split groups, facilitators will ensure to foster participation and exchanges between participants and the future restitution of the outcomes of the workshop.

A report on outcomes of the workshop will be prepared, sent to the participants and published on Europe-INBO website: <https://www.riob.org/fr>

2.2 Draft agenda of the workshop

AGENDA - 18th October 2023 Melia Hotel Oceanic - Valencia		
Timings	Contents	Speaker
14:00 14:45	Introduction	
	5' : Short welcoming words for this second part of the first day	INBO Secretariat
	15' : European context (15') – EU Directives/guidelines	DG ENV ?
	10': Impacts of Climate Change on Rivers (Biodiversity, Ecosystems Services, Resources...)	ECRR (Bart Fokkens)
	15': River management and climate change in Spain Impacts, consequences, examples of actions	Ms. Belén Piñol Ms. Tania Silva & Mr Emilio Real Llanderal
14h45 15h50	Working session # 1 – River management and climate change nowadays	
	Introduction (5') - Plenary room	INBO
	Case studies (2 x 10') Plenary room	Irena Likar , Manager Life Project Stržen Notranjski Regional Park Republic of Slovenia.
	Restoration of the stream in the intermittent Cerknica Polje → Role of river restoration in addressing climate change. NBS, NWRM. multi-benefits of these approaches Multiple benefits of reopening rivers in Oslo → Reopening as a NBS (stormwater handling), but also touch the benefit for reintroducing more biodiversity in the city, increased local recreation and wellbeing, as well as biological reduction of pollution from surface runoff.	
		Anders Iversen (Norwegian Environment Agency)

	<p>Exchanges (30') – Two different rooms (in English)</p> <p><i>Working questions could be:</i></p> <ul style="list-style-type: none"> -How does climate change affect rivers in your territories? -How do you manage rivers under this climate change context? Main problems, solutions... 	Split groups
	Transition	INBO
15h40 – 15h55	Break	
15h55 17:00	Working session # 2 – Adapting river management to climate change	
	Introduction (5') - Plenary room	All
	<p>Case studies (2 x 10') - Plenary room</p> <p>-Monitoring and evaluating actions in rivers in a climate change context</p> <p>Case study from the network of demonstration sites (a network of sites for hydromorphological restoration operations)</p> <p>-Management of temporary rivers</p> <p>→ Example in South of Europe</p>	<p>The Network of demonstration sites + an example with the Hem river</p> <p>French Biodiversity Agency OFB (Marlène ROLAN-MEYNARD) + Stéphane JOURDAN (possibly Artois-Picardie Water Agency)</p> <p>Alejandra Tierno Cinque</p>
	<p>Exchanges (30') – Two different rooms (in English)</p> <p><i>Working questions could be:</i></p> <ul style="list-style-type: none"> -Reaction to the case studies, some thoughts regarding the future of your rivers? -WFD (limit/opportunity), linked to previous presentations? Opportunities from the recent EU legislation (Green Deal etc... Nature restoration law, climate change adaptation plan...) -Do we need to change the way we understand good ecological status and restoration because of the Climate change ? 	

	Conclusion of the working session (5')	All
17:00 17:15	Conclusion/transition : INBO	

2.3 Participants

The contents of the workshop will not be too scientific nor technically focused as the INBO's audience is made of a variety of profiles, such as river basin policy makers and managers.

Thus the profiles for this workshop are those of "generalist field managers", belonging to WFD competent authorities or basin organizations and members of the Europe-INBO network, involved in water management planning or decision making process. No high level technical profile is required given that the exchanges are not sought to be at a too technical level.

Participants of this workshop would be the usual participants to the Europe-INBO's conferences.

Participants have to register for the workshop.

Annex : Conclusion of the Euro-Inbo Workshop 2022

RIVER RESTORATION : a European goal at the crossroads of several legislations

Aquatic ecosystems are under pressures

- ✓ Europe's rivers, lakes and alluvial habitats are under **immense pressure**.
- ✓ Ensuring the restoration of watercourses is a necessary condition for achieving good ecological status under the European Water Framework Directive

Biodiversity Strategy for 2030

- ✓ Establishes several targets for aquatic ecosystems, and **set the target to make at least 25 000 km of rivers free-flowing again by 2030**
- ✓ It also proposes establishing **legally binding rules** to reach these targets.

A lot of countries are **already implementing measures** to restore **river continuity** like adding a fish passage or removing barriers.

Europe-INBO 2022

September 26th 2022 - September 29th 2022 - Annecy, France

The current context of **multiple crises** was a central point of the event: **energy, biodiversity, pollution, and climate change**.

A new dimension for River restoration

Governance

- ✓ Co-construction with all users, which especially means incorporating **human and social sciences analysis**.
- ✓ **Information and awareness** are crucial for citizens
- ✓ **Information and training** are still needed for decision makers

Technical aspects

- ✓ **Some metrics** still need to be developed
- ✓ The need of **database** of barriers, of habitats
- ✓ All the **compartments of the ecosystem** have to be taken into account
- ✓ Difference between 2 concepts when removing obstacles: **prioritisation VS optimisation**

Regulation and funding

- ✓ Need to strengthen the link **from EU to regional and local level**
- ✓ Simplify the **administrative burden**
- ✓ Consider **land planning** and land use
- ✓ For the **financing**, many tools already exist. A lot of cross financing is leading sometimes to a **loss of efficiency between projects**



Europe-INBO
workshop