

**Kick-off meeting of the projects funded through the
Biodiversa and Water JPI 2020-2021 Joint Call on
“Conservation and restoration of degraded ecosystems and
their biodiversity, including a focus on aquatic systems”
(BiodivRestore)**

4 May 2022, 13:00-18:00 CEST



Welcome words

By Maja Kolar, AEI, Spain





Objectives

- ✓ Get to know the 22 funded projects
- ✓ Start interaction between funded projects and with the funding organisations
- ✓ Learn more about Biodiversa and the WaterJPI expectations in terms of reporting, acknowledgment, additional activities etc.

This meeting is complementary with the clustering workshop aiming at fostering collaborative activities among the funded projects which is organized tomorrow (closed event)

A FEW GENERAL GUIDELINES FOR THE MEETING

1

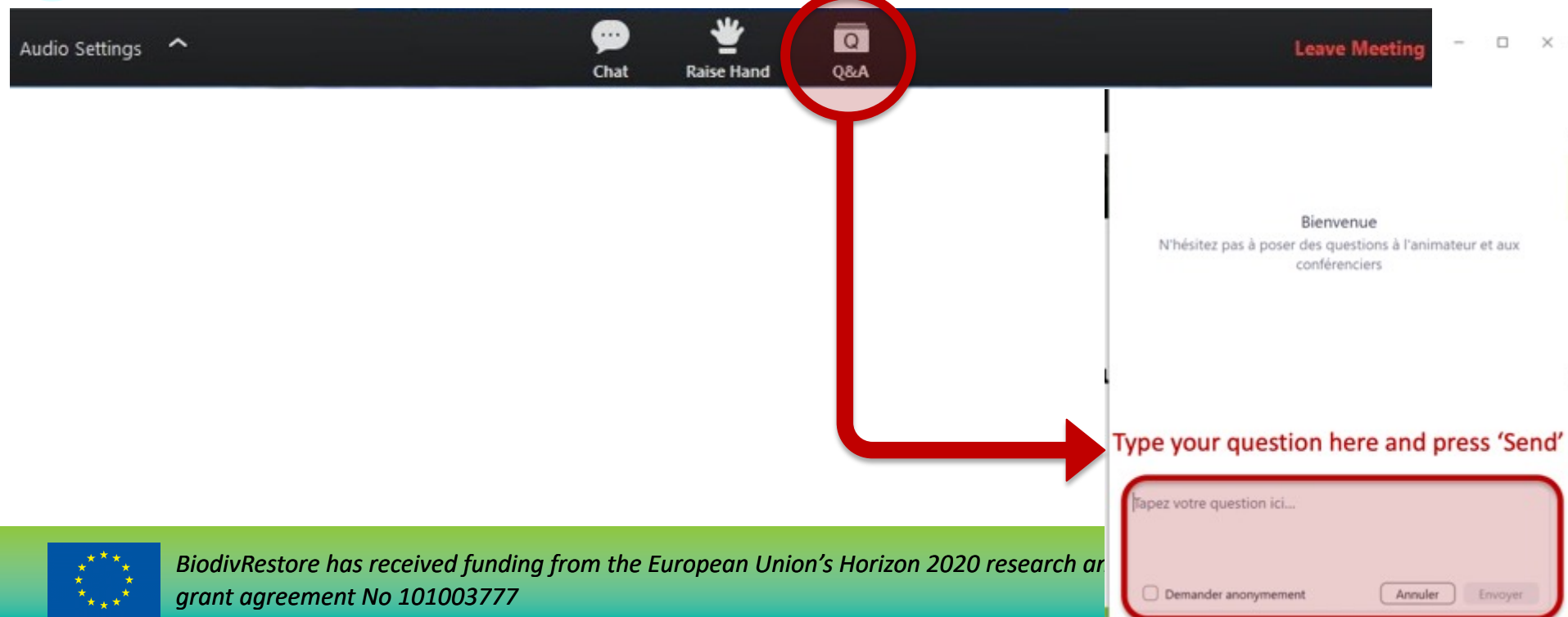
For your information: the webinar is recorded and will be broadcasted on the Biodiversa & Water JPI websites and Social Media

2

Audio available to the presenters only

3

For any question: **USE “Q&A” FUNCTION**



The screenshot shows the Zoom meeting interface. At the top, there is a dark bar with icons for 'Audio Settings', 'Chat', 'Raise Hand', and 'Q&A'. The 'Q&A' icon is circled in red, and a red arrow points from it to the question input field on the right. The input field is labeled 'Type your question here and press ‘Send’' and contains the placeholder text 'Tapez votre question ici...'. Below the input field, there are three buttons: 'Demander anonymement', 'Annuler', and 'Envoyer'.

Bienvenue
N'hésitez pas à poser des questions à l'animateur et aux conférenciers

Type your question here and press ‘Send’

Tapez votre question ici...

☐ Demander anonymement Annuler Envoyer

A FEW GENERAL GUIDELINES FOR SPEAKERS

When you are speaking, make sure to :

- **Switch on your camera**
- **Switch on your microphone**
- **Introduce yourself** (what's your name and organisation, and your funded projects if any)
- **Respect the time constraint**

Many thanks in advance!



Welcome words in the context of a co-funded Call

*By Laura Palomo-Rios, European Research Executive
Agency*



Overview of Biodiversa, the Water JPI & the BiodivRestore Action

by **Rainer Sodtke**, *Biodiversa+ Vice-Chair & BiodivRestore Coordinator*, and
Miguel Ángel Gilarranz, *WaterJPI Chair & Coordinator*





Biodiversa+

The European Biodiversity Partnership

By *Rainer Sodtke*, Biodiversa+ Vice-Chair &
BiodivRestore Coordinator



A well established network, building on Biodiversa

Annual joint calls to support transnational research on biodiversity, ecosystem services and Nature-based solutions

Since 2008



A specific type of research funded...



1.4M€

of funding on average
per project



5

Different countries per
project on average

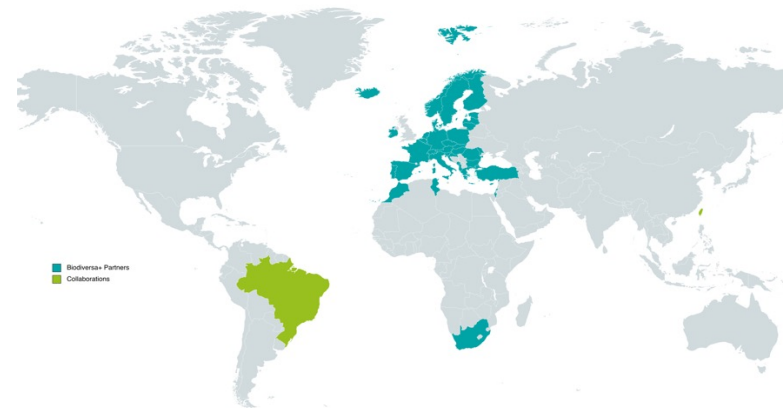
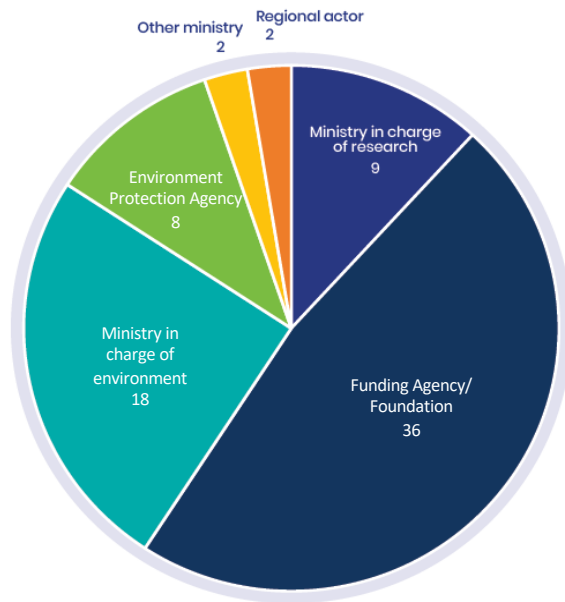
Medium-size projects that demonstrate

- **Scientific excellence**
- **High Policy and societal relevance**
- **High level of stakeholder engagement**



Biodiversa+ : the new European biodiversity partnership

Biodiversa+ : a network with a biodiversity focus and an increasing international dimension

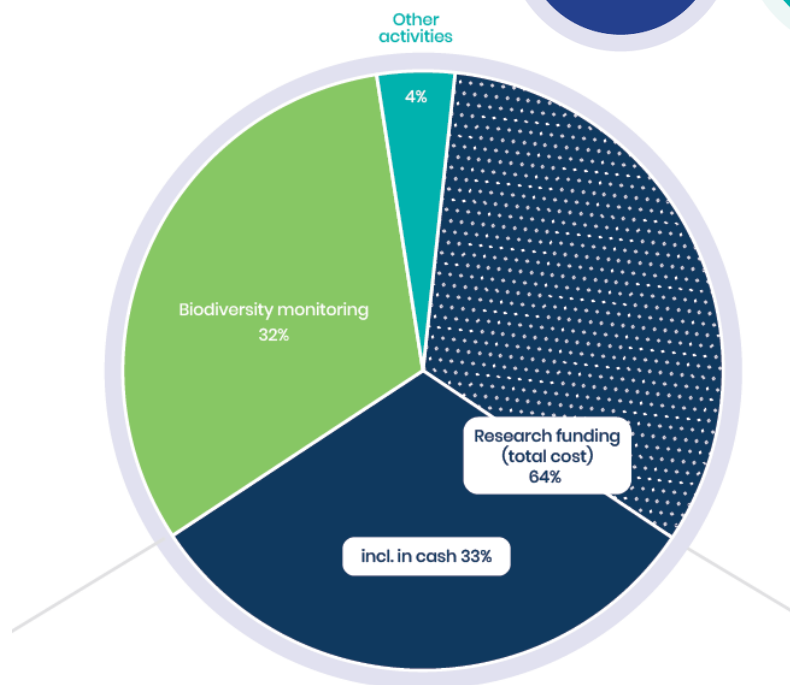


Portfolio of activities & budget amplitude...!



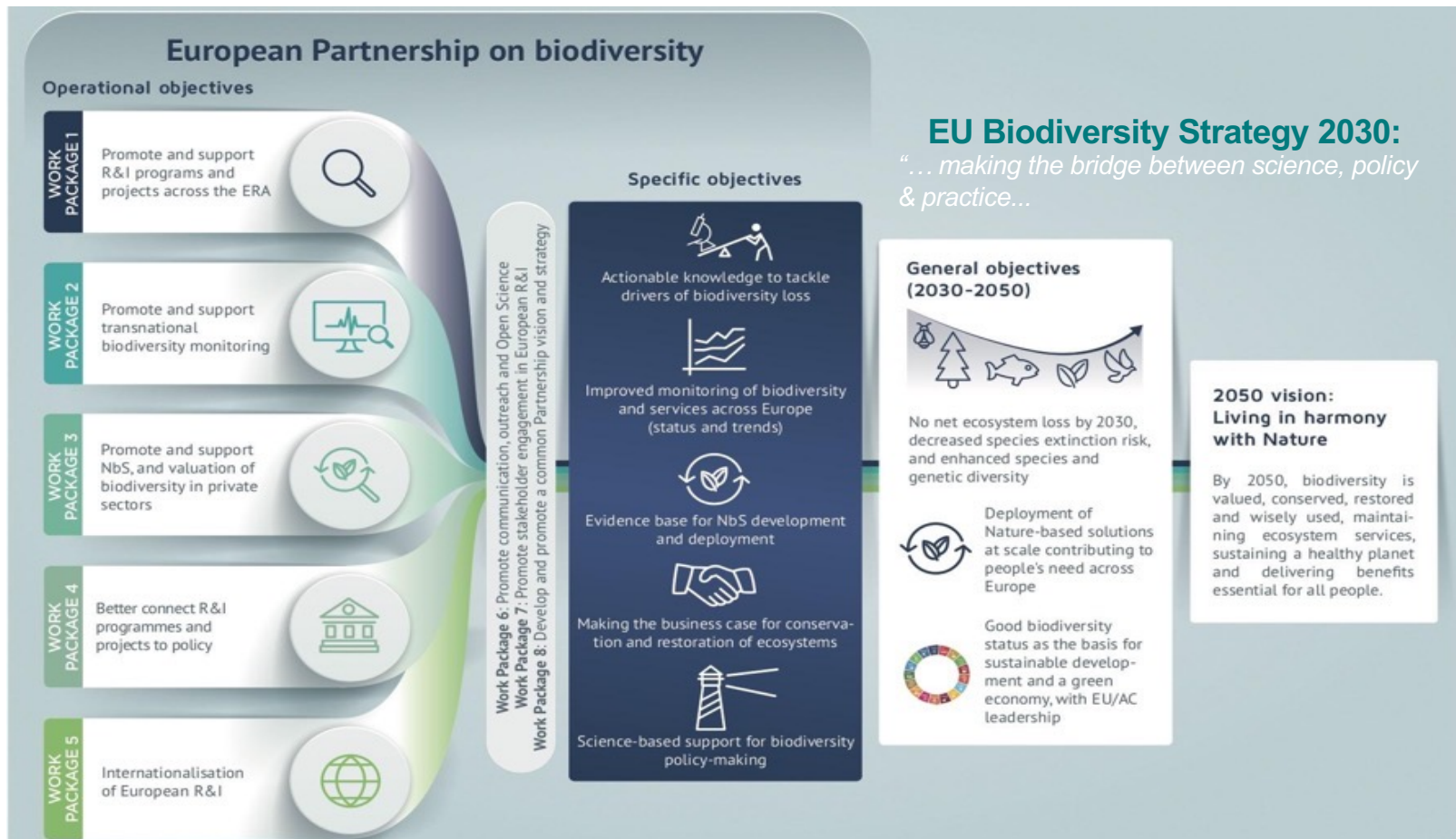
6
Calls planned

Typically
>42M€
(in cash) per call



Budget of >800 Mio € over 7 yrs, combining in-cash and in-kind resources from its Partners and including 165 Mio € by the European Commission

Aligned with the policy context..!



Learn more on Biodiversa main achievements



<https://www.biodiversa.org/1557/download>

Joint Programming Initiative Water challenges for a changing world (Water JPI)

*By Miguel Ángel Gilarranz, AEI, Spain
Water JPI Vice-Chair*

KICK-OFF MEETING – May 4, 2022 - BIODIVRESTORE 2020-2021 CALL

What are Joint Programming Initiatives – JPIs?

An initiative of **European Member States** and the **European Commission** for tackling Current Grand Challenges with European dimension and global outreach through:

- Identification of common research, development and innovation priorities.
- Launch of Joint multilateral activities e.g. calls for projects, networks of experts, technology transfer.
- Reinforcement of links to various international initiatives.

Ultimate aims

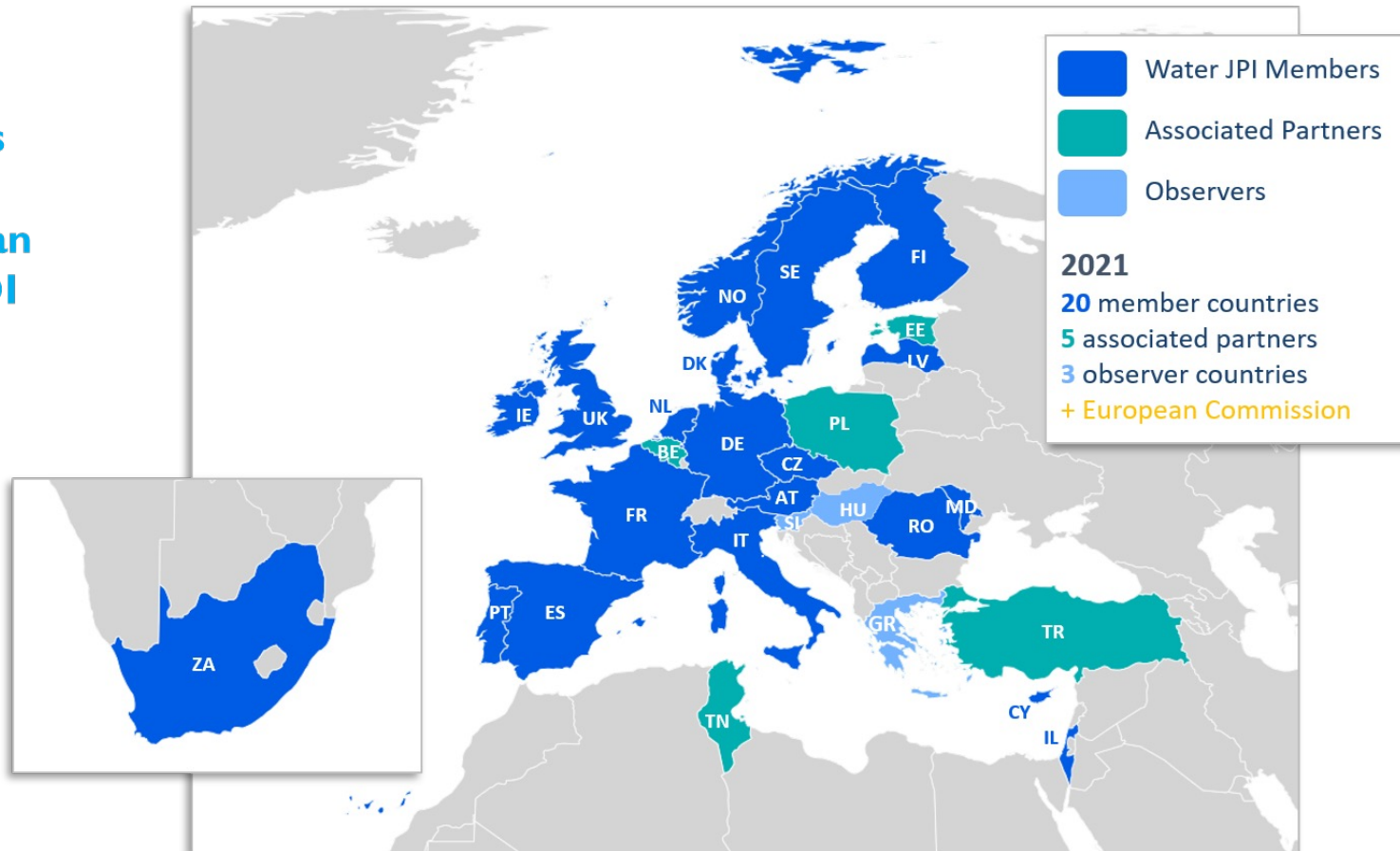
- To make better use of Europe's limited public RDI funding.
- To respond jointly to current challenges.

10 JPIs since 2008

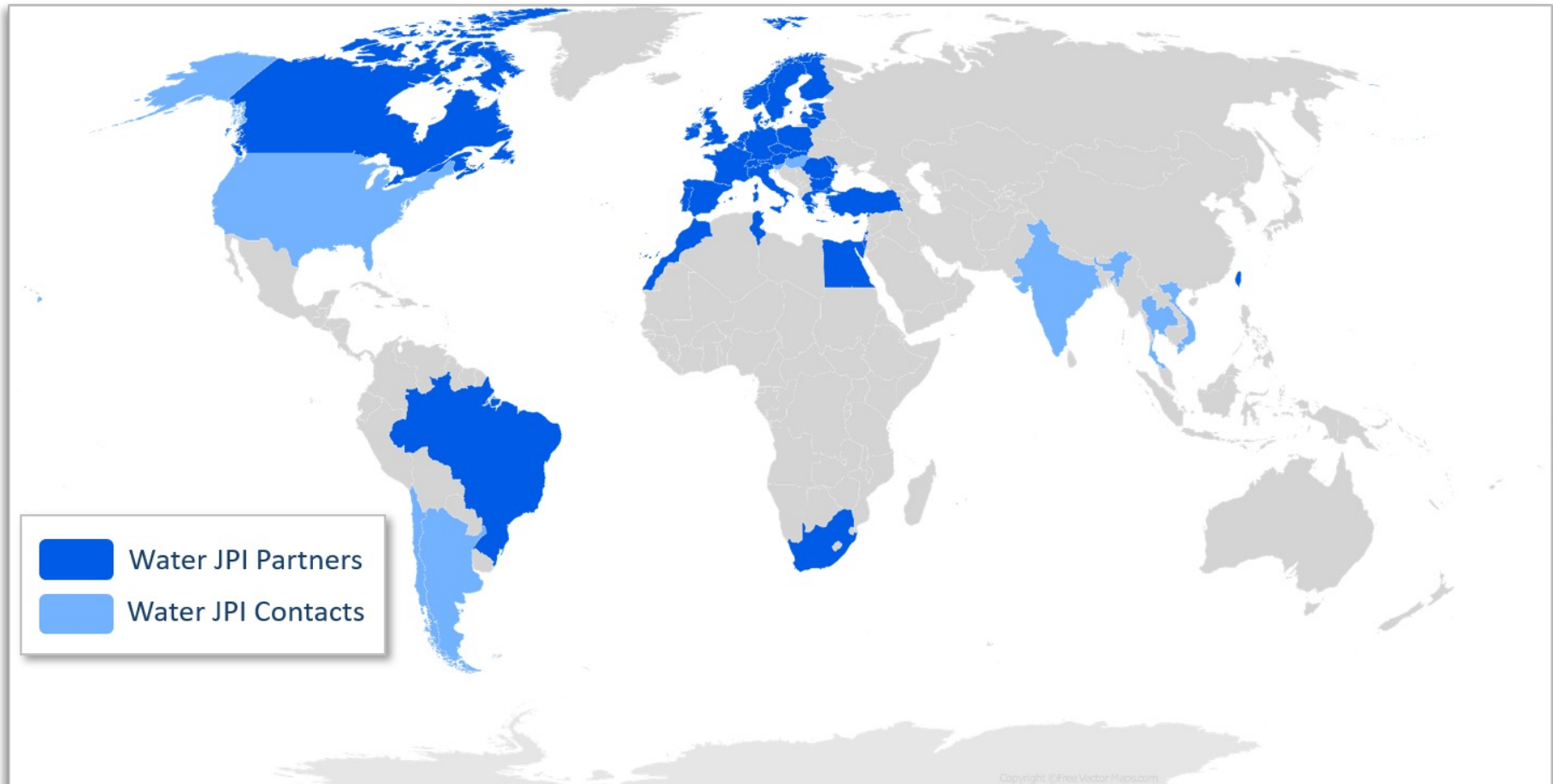
	Water Challenges for a Changing World		Global Urban Challenges, Joint European Solutions
	Healthy and Productive Seas and Oceans		Agriculture, Food Security and Climate Change
	More Years, Better Lives - The Potential and Challenges of Demographic Change		Cultural Heritage and Global Change: A New Challenge for Europe
	Antimicrobial Resistance- The Microbial Challenge - An Emerging Threat to Human Health		A Healthy Diet for a Healthy Life
	Connecting Climate Knowledge for Europe		Alzheimer and other Neurodegenerative Diseases

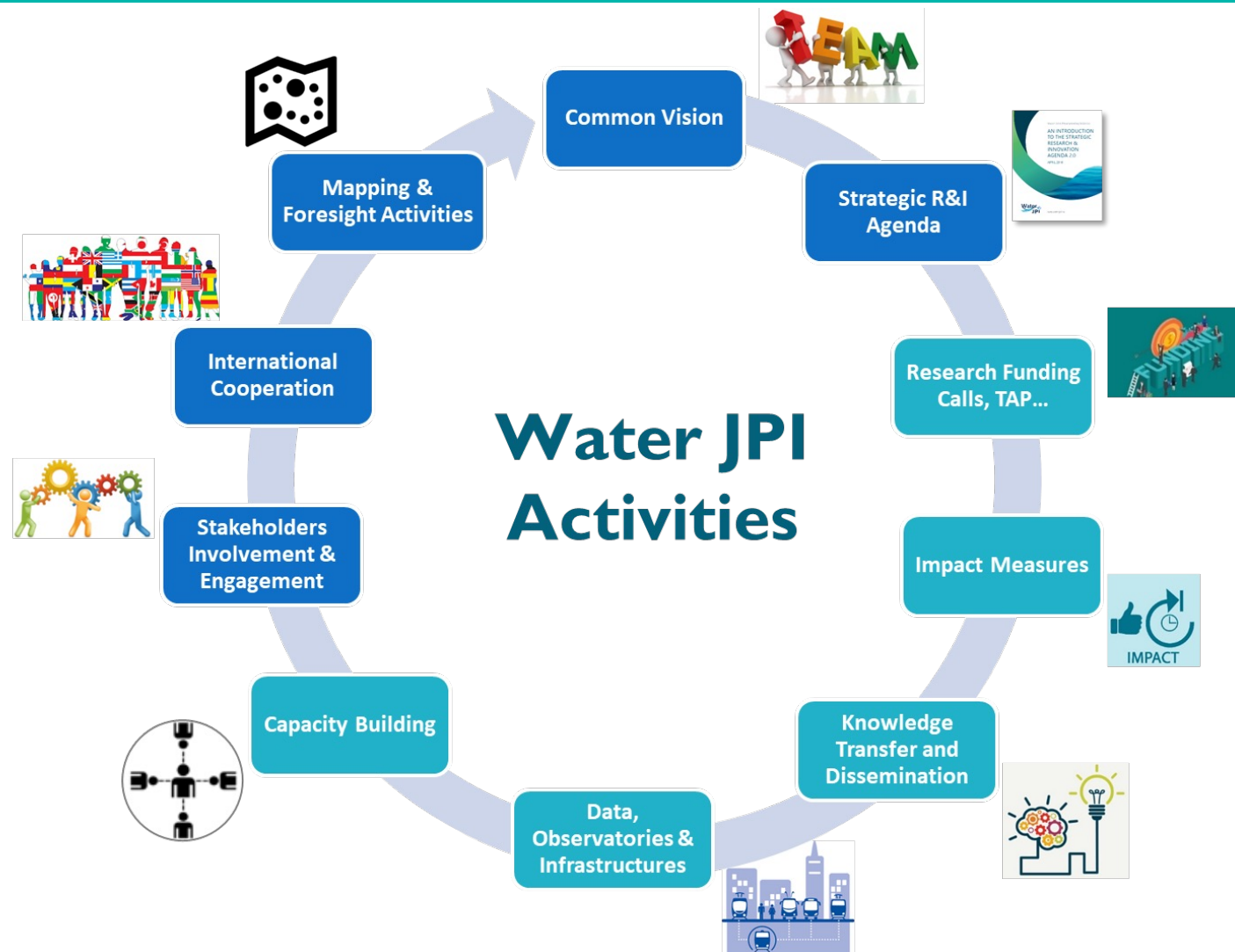
Water JPI Membership

Water JPI partners currently represent **88% of the European National Public RDI investment on Water**



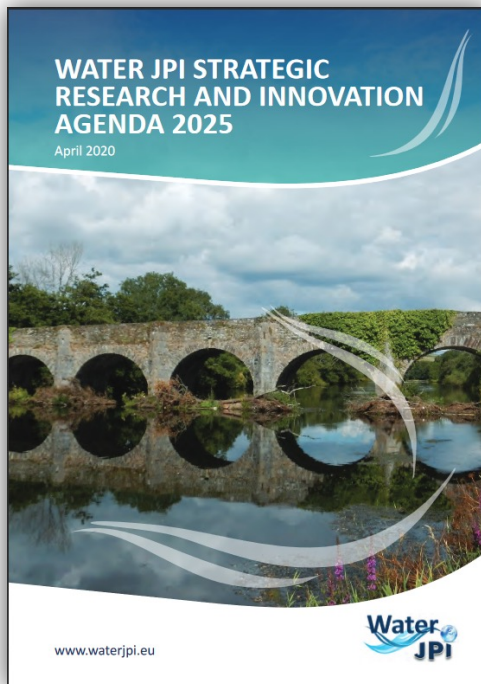
Water JPI Global Partnership





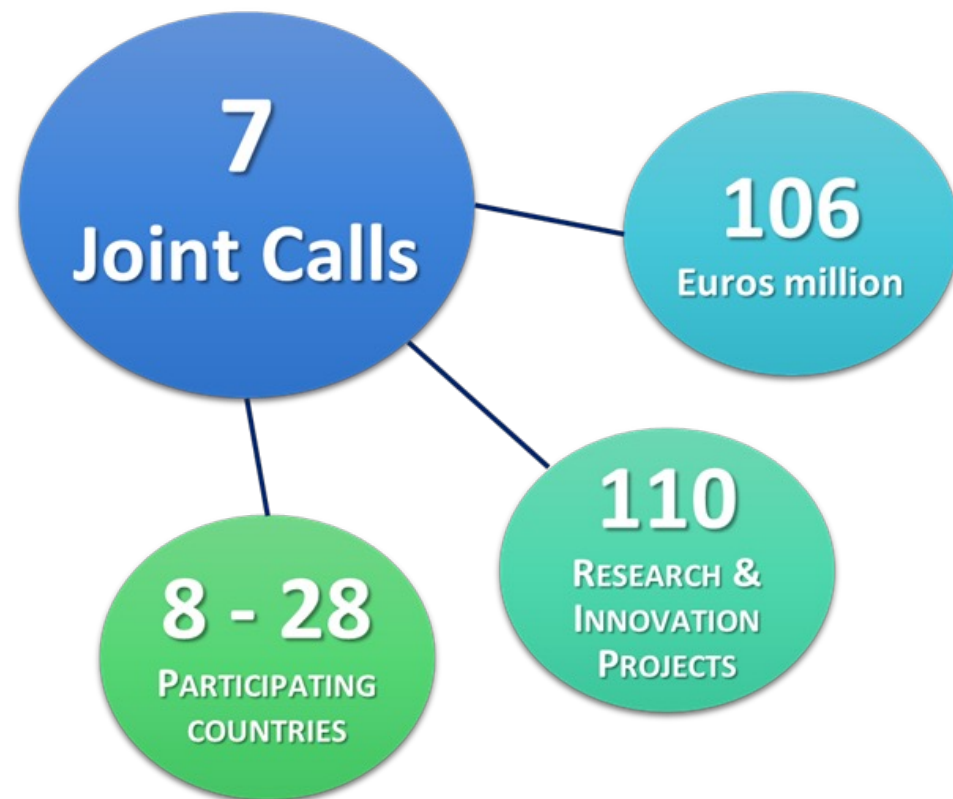
Vision 2030 and SRIA 2025

- Updated in April 2020
- available online



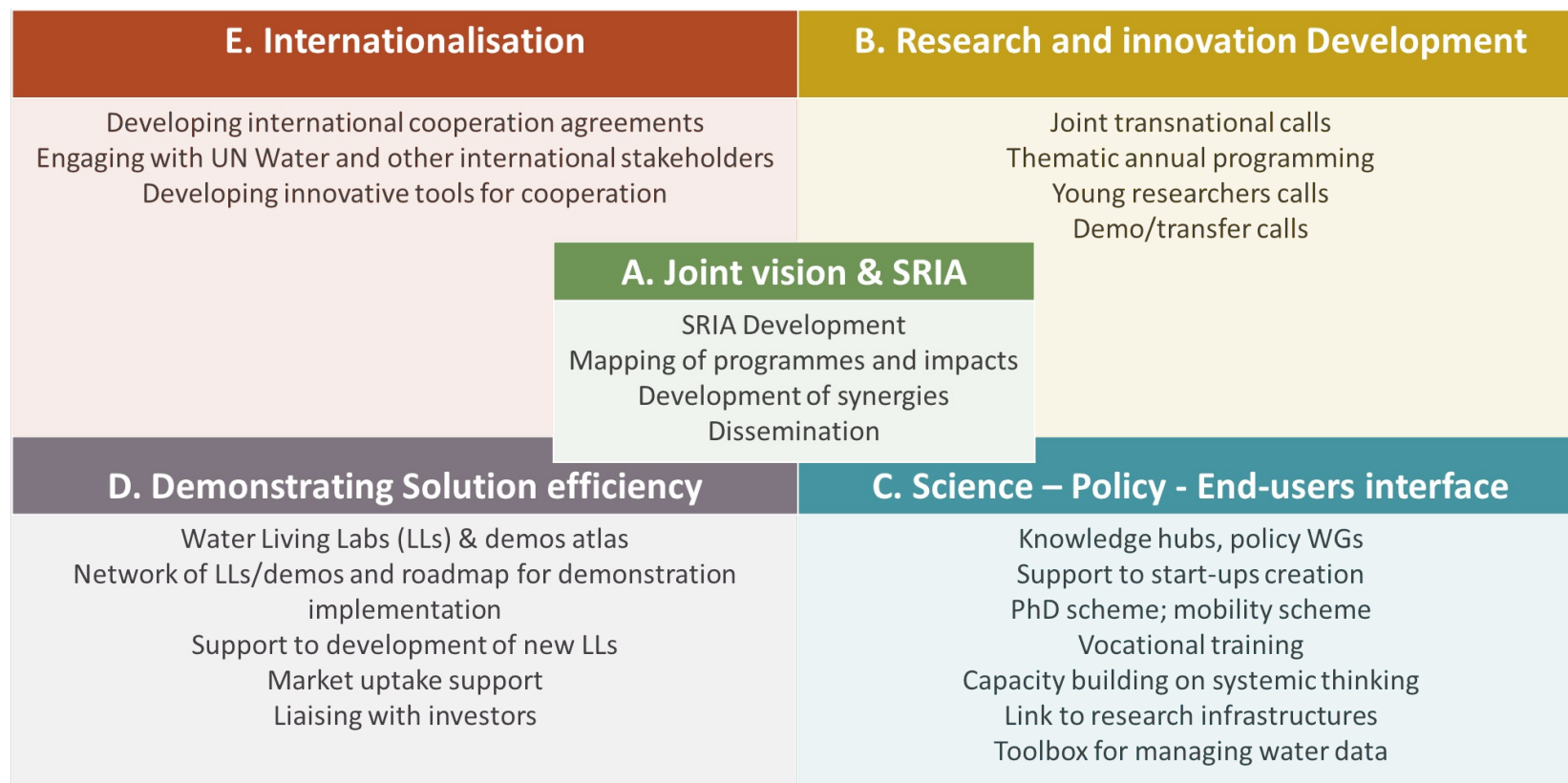
Water JPI Joint Calls:

- [2013 Pilot Call](#): Emerging Water Contaminants
- [2015 Joint Call](#): Developing technological solutions for services for water distribution and measurement, wastewater treatment and reuse, desalination, floods and droughts
- [2016 Joint Call](#): Improving water use efficiency and reducing soil and water pollution for a sustainable agriculture
- [2017 Joint Call](#): Water resource management in support of the United Nations Sustainable Development Goals (UN SDGs)
- [2018 Joint Call](#): Closing the water cycle gap - improving sustainable water resources management
- [2020 Joint Call](#): Risks posed to human health and the environment by pollutants and pathogens present in the water resources
- [2020-2021 Joint Call](#): Conservation and restoration of degraded ecosystems and their biodiversity, including a focus on aquatic systems



European Co-funded Partnership

Water4All – Water Security for the Planet



UPCOMING:



Water4All – Water Security for the Planet upcoming 2022 Joint Call on
“Management of water resources: resilience, adaptation and mitigation to hydroclimatic extreme events and management tools ”.

Themes:

- 1 - Resilience, adaptation and mitigation to hydroclimatic extreme events
- 2 - Tools for water management in the context of hydroclimatic extreme events
- 3 - Improved water governance in the context of hydroclimatic extreme events and international contexts

Over 30 Funding Agencies from Europe and abroad participating

Call secretariat: water4all2022_callsecretariat@mur.gov.it

More information: <http://www.waterjpi.eu/joint-calls/joint-call-2022-water4all>

For more information...



www.waterjpi.eu



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- LinkedIn - Water JPI researcher forum group
<https://www.linkedin.com/groups/8455262>
 - Joint Calls announcements & Networking
 - Announcement of events and activities
- A unique contact point
 - waterjpisecretariat@agencerecherche.fr
 - Phone + 33 | 78 09 81 20

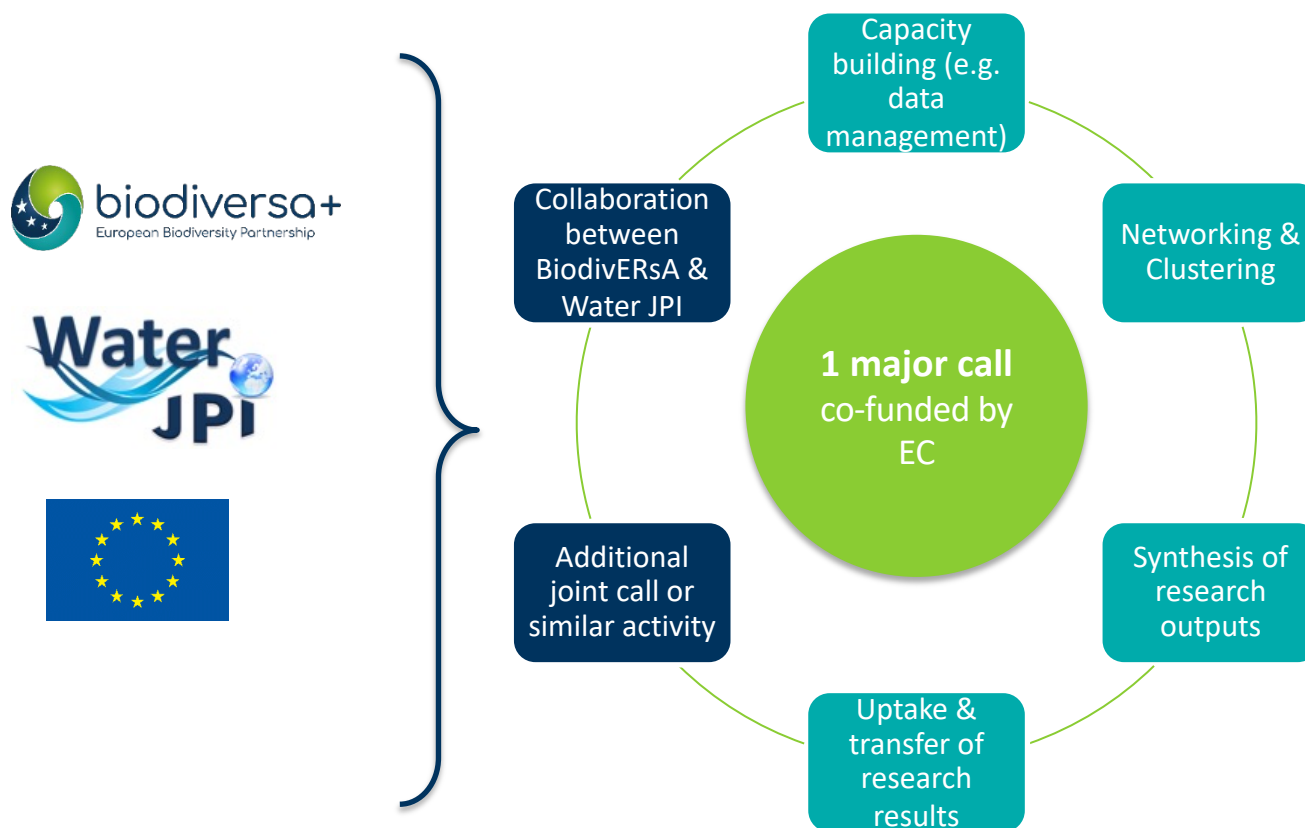


- Website: www.water4all-partnership.eu

The BiodivRestore Cofund Action



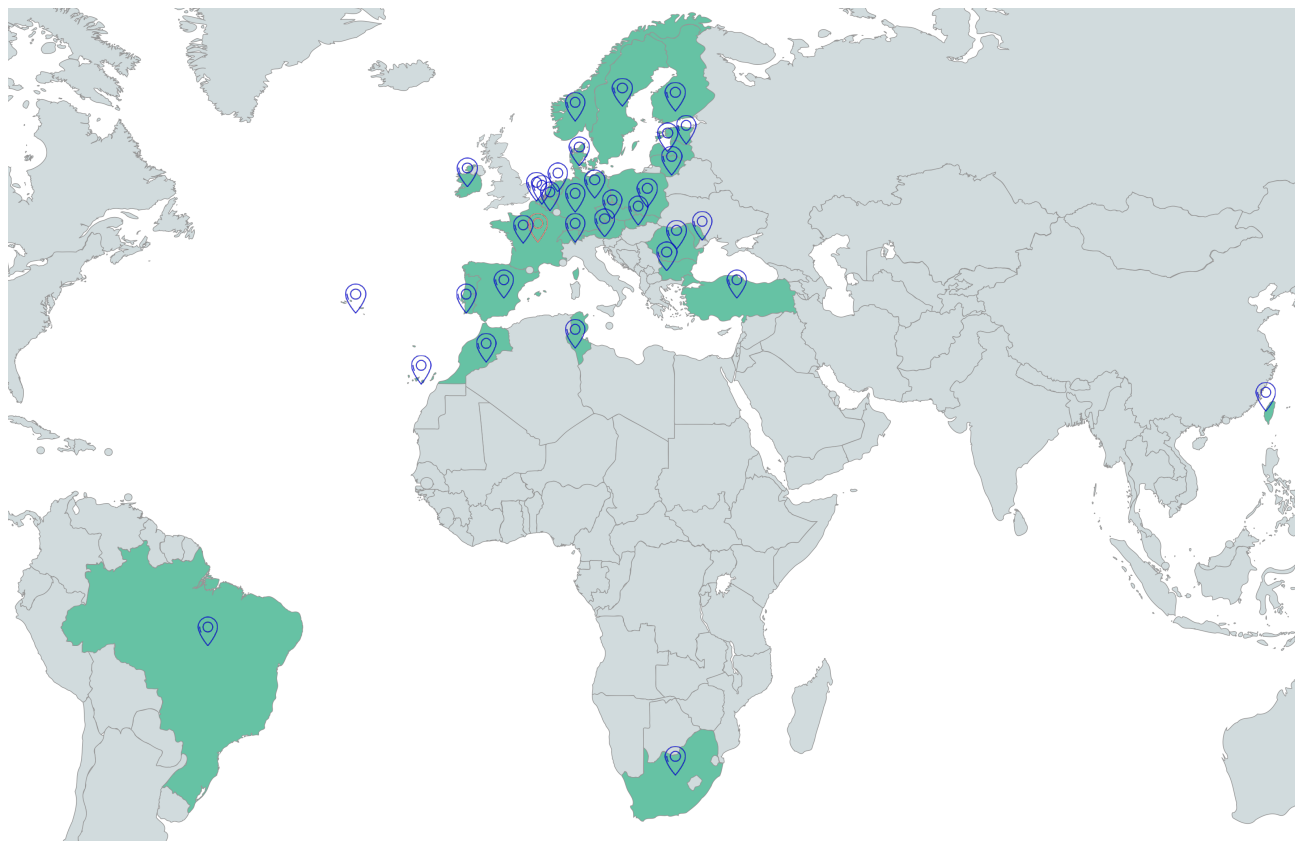
The BiodivRestore ERA Net-Cofund Action



Amplitude of the BiodivRestore research call

31 funding
organisations
from 27
countries

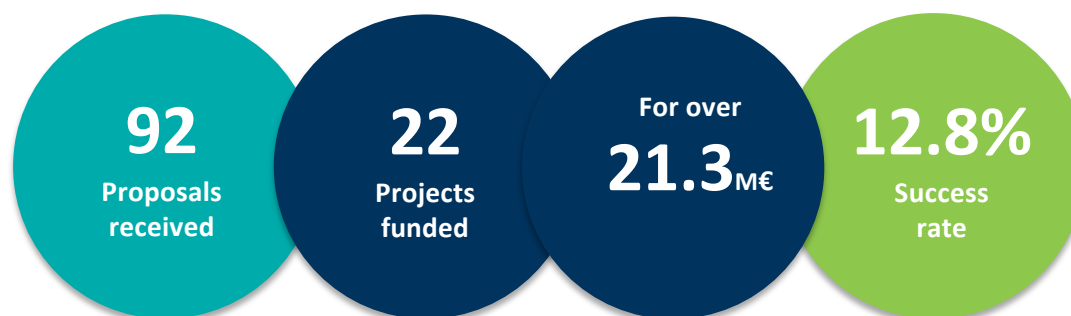
Total funding
for the Call:
> 21.3M€



Overview of the BiodivRestore call

Call on **conservation and restoration of degraded ecosystems and their biodiversity, including a focus on aquatic systems**

All ecosystems were eligible



The success of the call possible thanks to :

- ✓ The Call Secretariat (AEI, in Spain)
- ✓ The funders of the call
- ✓ The European Commission
- ✓ The Evaluation Committee
- ✓ External reviewers

A GREAT THANKS TO ALL!!

Introduction

General impression on the call and its outputs

Presented by Judith Fisher (Vice Chair), Director Fisher Research Pty Ltd, IPBES Multidisciplinary Expert Panel, IUCN CEM Theme Leader Ecosystems and Invasive Species

On behalf of the Chair and Vice Chair

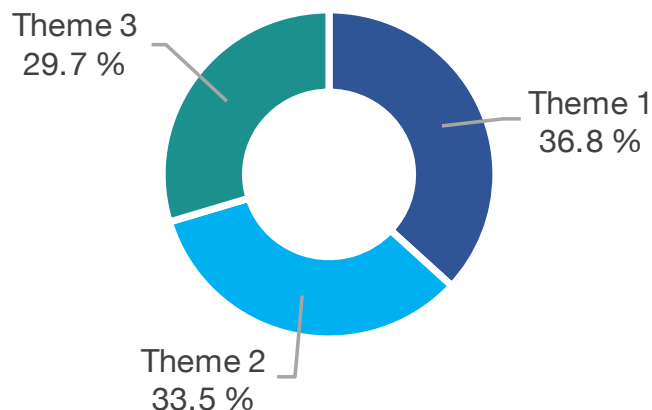
Cara Nelson (Chair), Professor of Restoration Ecology (University of Montana, USA); chair of the IUCN Ecosystem Restoration Thematic Group

OVERVIEW OF THE 2020-2021 BIODIVERSA AND WATERJPI JOINT CALL ON

**“Conservation and restoration of
degraded ecosystems and
their biodiversity, including a focus on
aquatic systems”**

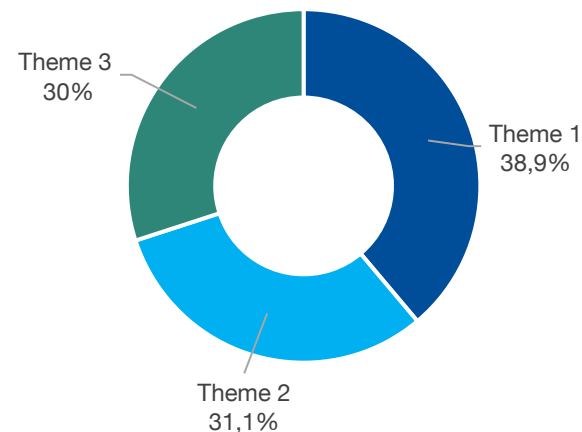
Studied themes

Submitted full proposals



Theme 1 : Studying the biological and biophysical processes at stake for conservation/restoration, and their interactions

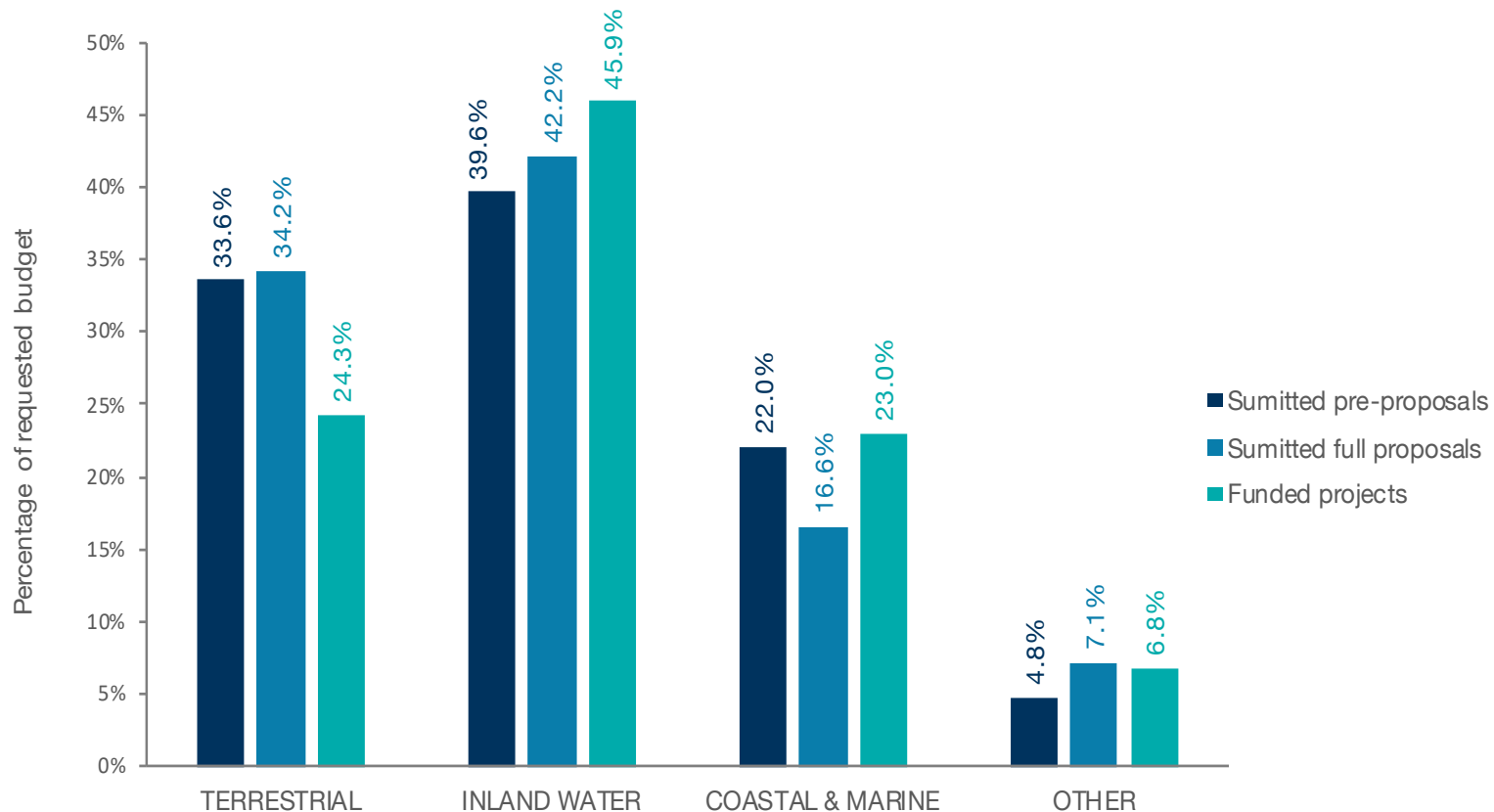
Funded projects



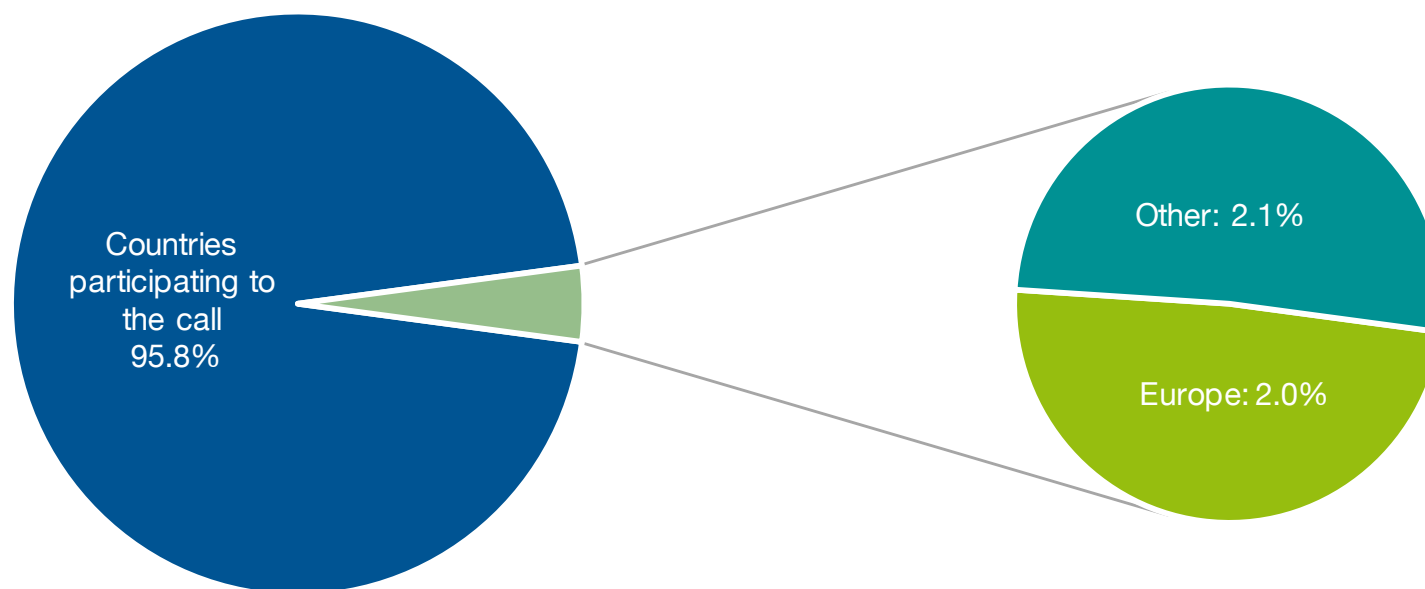
Theme 2 : assessing trade-offs and synergies between targets, benefits and policies for conservation and restoration

Theme 3 : knowledge for improving the effectiveness and upscaling of conservation and restoration actions

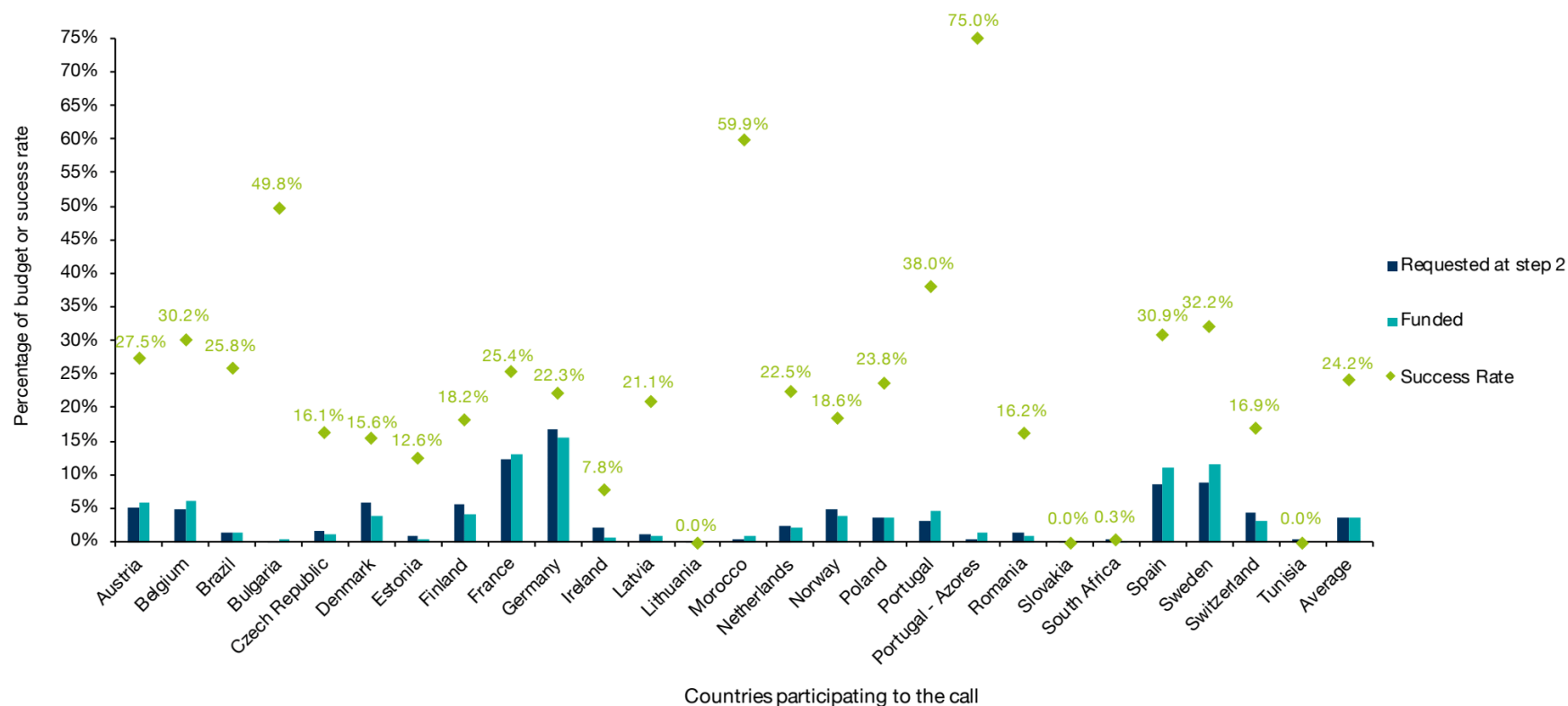
Studied environments



Origin of applicants

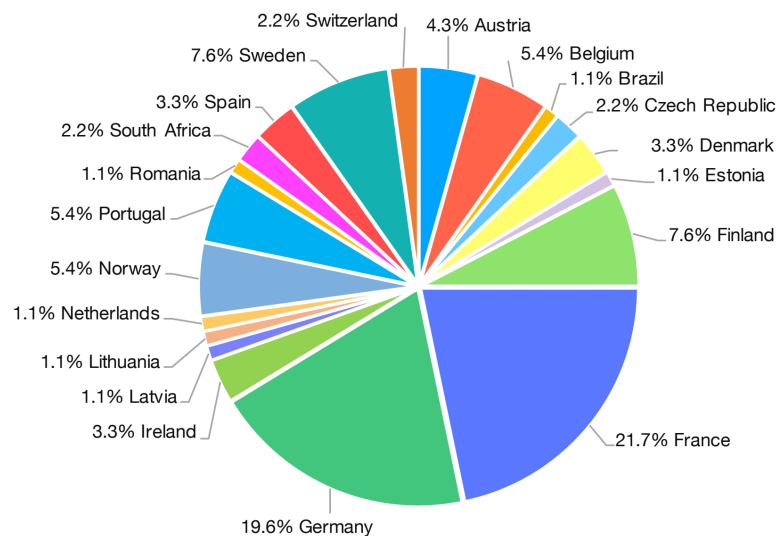


Origin of applicants

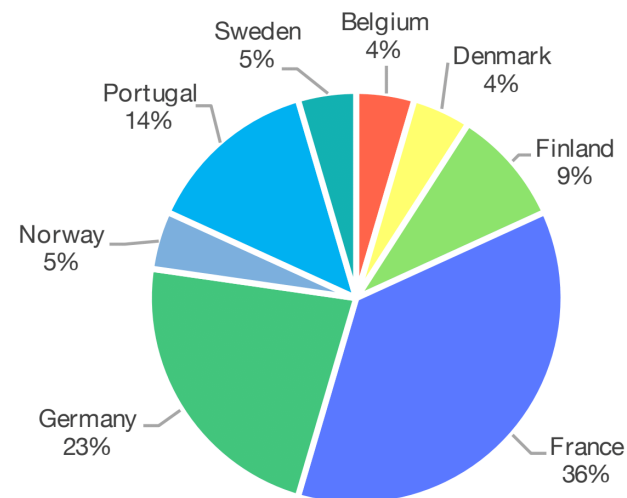


Origin of the coordinators

Geographical origin of the coordinators
(submitted full proposals)

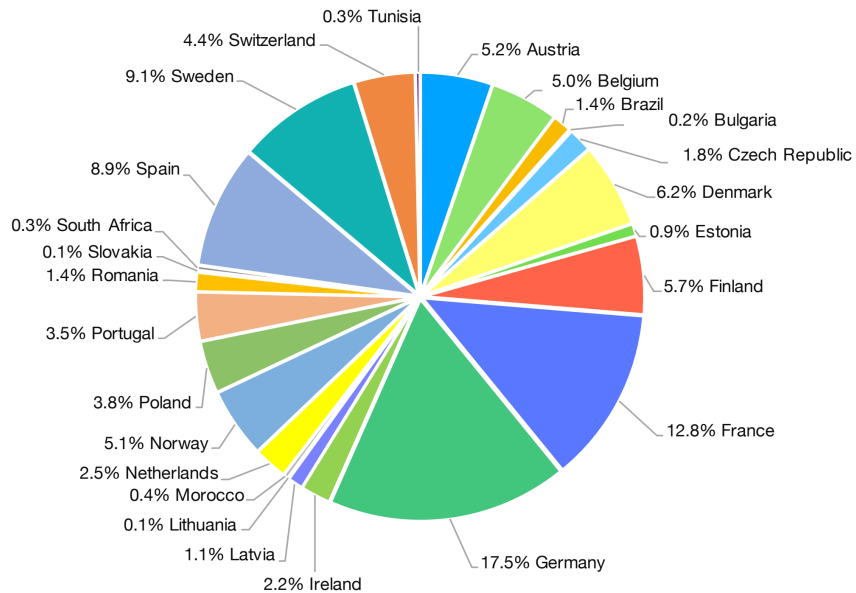


Geographical origin of the coordinators
(funded projects)

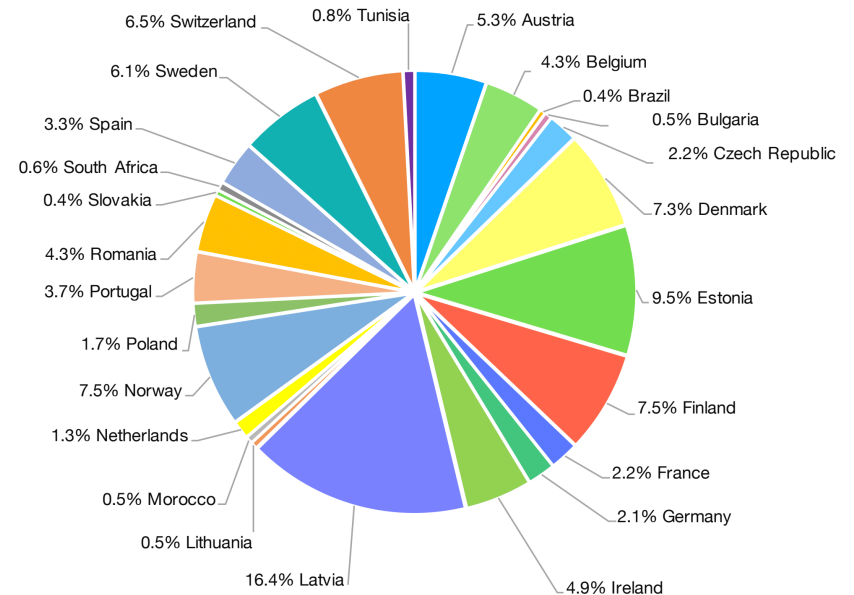


Requested Budget

**Requested budget by submitted full proposals
(absolute value)**

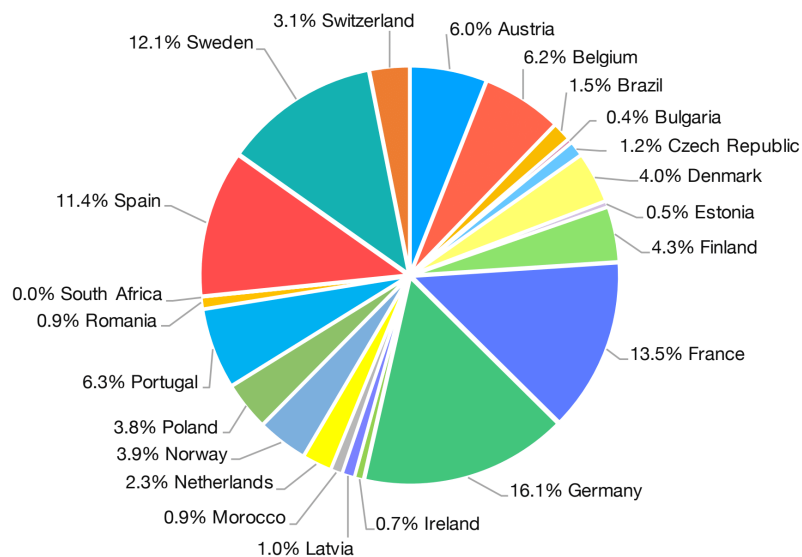


**Requested budget by submitted full proposals
(value normalised by community size)**

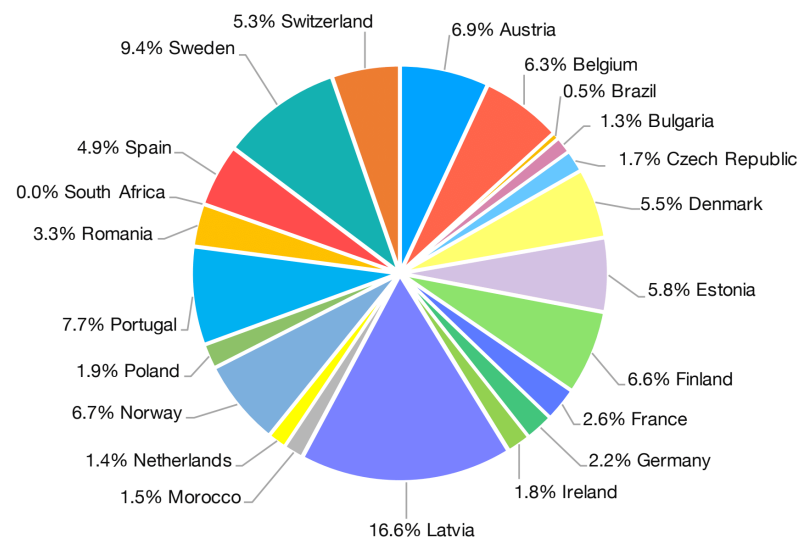


Awarded Budget

**Awarded budget to successful proposal
(absolute value)**



**Awarded budget to successful proposal
(values normalised by community size)**



OVERVIEW OF THE EVALUATION PROCESS

Composition of the EvC (Chair: Cara Nelson; Vice-Chair: Judith Fisher)

STEP 1

Scientific experts (21)

Cara Nelson
Asa Aradóttir
Susan Baker
Nana Bolashvili
James Bullock
Michael Brufford
Sarah Clement
Çiğdem Coşkun Hepcan
Carsten Dormann
Myra Finkelstein
Simonetta Fraschetti
Christopher Frissel
Michael Fullen
Jim Hallet
Steven Handel
Antonio Lo Porto
Guillermo Luna Jorquera
Matthew Potts
Bill Slee
Eric Wolanski
Joy Zedler

P/M experts (15)

Judith Fisher
Peter Cochrane
Simon Gardner
Floyd Homer
Colin Hindmarch
Katia Hueso Kortekaas
Manuel Lago
Fernando Magdaleno
Vinod Mathur
Angela Morgado
Ivone Pereira
Jan Plesnik
Sunandan Tiwari
Liette Vasseur
Julia Da Silva Vilela
Sanaa Zebakh

STEP 2

Scientific experts (17)

Cara Nelson
Asa Aradóttir
Susan Baker
Patrick Bohlen
Nana Bolashvili
James Bullock
Michael Brufford
Carsten Dormann
Myra Finkelstein
Adriana Ford
Simonetta Fraschetti
Jim Hallet
Steven Handel
George Kowalchuk
Guillermo Luna Jorquera
Matthew Potts
Bill Slee

P/M experts (11):

Judith Fisher
Peter Cochrane
Simon Gardner
Floyd Homer
Colin Hindmarch
Katia Hueso Kortekaas
Manuel Lago
Fernando Magdaleno
Vinod Mathur
Angela Morgado
Ivone Pereira
Jan Plesnik
Sunandan Tiwari

STEP 1 :Eligibility check and evaluation

EVALUATION COMMITTEE (EvC)

Each pre-proposal (5-page project description) to be evaluated by :

- **2* scientific members**
- **2* policy/management members**

* one as principal rapporteur and one as secondary rapporteur (reader)

STEP 2 : Eligibility check and evaluation

EVALUATION COMMITTEE (EvC)

Each proposal (16-page project description) to be evaluated by:

- **2* scientific members**
- **2* policy/management members**

* one as principal rapporteur and one as secondary rapporteur (reader)

EXTERNAL REVIEWERS

Each proposal will in parallel be evaluated by external reviewers:

- **2 scientific external reviewers**
- **1 policy/management external reviewer**

STEP 1: pre-proposal stage (equal weight)

For Scientific EvC members

- **Fit to the scope of the call (1-5; threshold: 3.5)**
- **Scientific excellence (incl. Novelty and Transnational Added Value) (1-5; threshold: 3)**

For Policy/Management EvC members:

- **Societal and policy impact (incl. contribution to society and/or policy and Transnational added value (1-5; threshold: 3)**

STEP 2: full-proposal stage

For Scientific EvC members and external reviewers

- **Scientific Excellence (1-5; threshold: 3.5) / weight 7**
- **Quality and efficiency of the implementation (1-5; threshold: 3) / weight 3**

For policy/management EvC members and external reviewers:

- **Impact (1-5; threshold: 3) / weight 6**

Step 1

172 eligible proposals were evaluated by the scientific and policy management evaluation committees

The **discussion was organised in two sub-groups:**

- The scientific EvC members evaluated and scored the proposals following the two criteria “excellence” and “quality and efficiency of the implementation” in one sub-group;
- In parallel the policy/management EvC members evaluated and scored the proposals following the criterion “Impact” in another sub-group

Proposals with high discrepancies of scores between the Rapporteur and the Reader were discussed to allow the appointment of a 3rd reader, where needed, to further discuss problematic proposals

92 proposals were invited to submit a full proposal to the Step 2.

Step 2 92 Full proposals

Along with the Evaluation Committee

External reviewers reviewed the full proposal with :

- at least 2 scientific external reviewers and
- at least 1 policy/management external reviewer

Each of the 92 proposals were evaluated by 2 scientific evaluation committee members and 2 policy/management evaluation committee members using the same process as Step 1.

On the last day the Evaluation Committee **met in plenary to discuss and agree on the final ranking of projects**

Outcomes

Reviewers brought a high level of expertise and did a thorough job.

There was a high degree of consistency between rapporteurs and readers in their proposal evaluations for both Scientific and Policy Management Committees.

The call resulted in a large number of exciting, high-quality proposals.

The funded projects have the potential to substantially advance restoration and conservation science and practice.

Keynote on “Upscaling effective ecological restoration in the EU - Challenges for the scientific community.”

By Kris Decleer, , Research Institute for Nature and Forest, Belgium



Upscaling effective ecological restoration in the EU Challenges for the scientific community

Kris Decleer

info@ser-europe.org · <http://ser-europe.org/>
Restoration Resource Center: <https://www.ser-rrc.org/>



Legal restoration framework in the EU

Binding restoration targets:

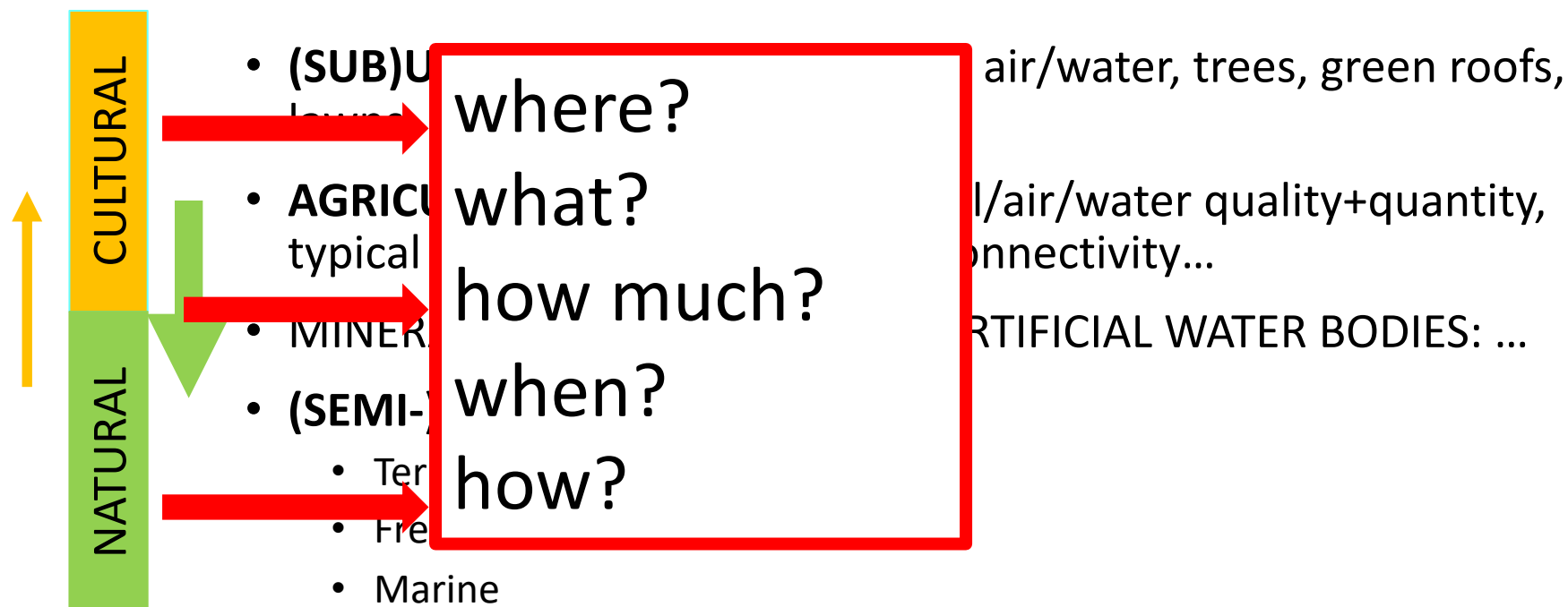
- Birds and Habitats Directive
- Water Framework Directive
- Marine Strategy Framework Directive
- Invasive Alien Species Regulation
- Upcoming: **Nature Restoration Regulation**
 - Deadlines
 - Area and quality targets for ecosystems
 - Bring nature back to agricultural and urban land
 - Reverse the decline of pollinators
 - Increase the quantity of forests and improve their health and resilience
 - Restore at least 25,000 km of rivers to a free-flowing state by 2030
 - Rewetting of drained peatlands
- Upcoming: **Soil Health Directive**

Non-binding restoration targets (Biodiversity Strategy 2030)

- Legally protect at least 30% of the EU's land area and 30% of its seas
- Effectively manage all protected areas, defining clear conservation objectives and measures + monitoring



What does it mean for:



Challenges for the scientific community

1. Quality of restoration
2. Quantity of restoration
3. Monitoring and reporting
4. Knowledge transfer, Training, Awareness

Challenge 1: Quality of restoration



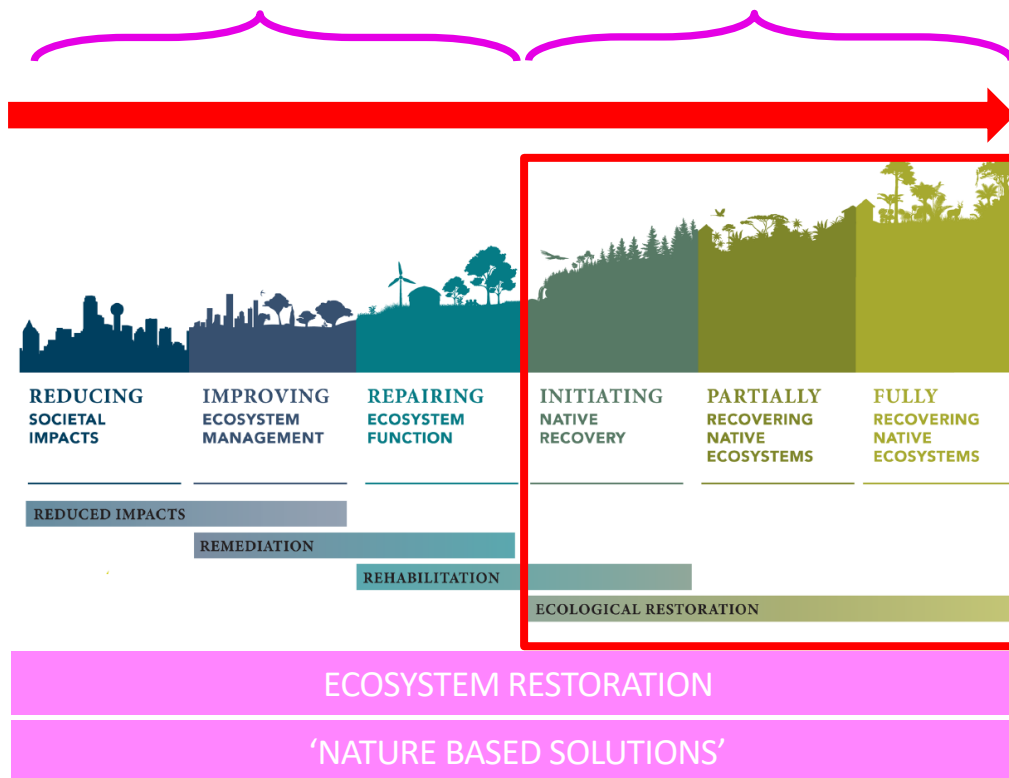
- Restoration is a continuum
 - Different baselines and ambition levels
 - Assessment of degradation: drivers, pressures, state, impact...
 - Targets: reference conditions (conflicting views!)
- Actions: cost-effective
- Results: sustainable (resilient to climate change + socio-economic context)
- Multidisciplinary approach: reducing barriers for successful ecological restoration



The restoration continuum concept

‘Sustainable land use management’

Ecological restoration



Ecological Restoration: the process of assisting the (full) recovery of a native ecosystem that has been degraded, damaged or destroyed.

Remediation: remove sources of degradation

Rehabilitation: reinstate a level of ecosystem functioning where the goal is renewed and ongoing provision of ecosystem services (rather than biodiversity and integrity of a native reference ecosystem)

Gann et al. 2019: SER principles and standards for ecological restoration <https://www.ser.org/page/SERStandards>

The case of degraded peatlands in the EU

EU is worldwide the 2nd largest emitter of greenhouse gasses due to peatland drainage.

In Germany peatland agriculture causes annually a climate damage of € 3.6 billion and gets € 300 million EU-grants



Remediation of arable fields on drained peat soil



Rehabilitation: Paludiculture / Carbon farming (wet agriculture/forestry)



Ecological restoration: full recovery of the reference ecosystem (raised bog)



THE IRISH TIMES

Wed, Nov 20, 2019

NEWS

SPORT

BUSINESS

OPINION

LIFE & STYLE

CULTURE

Environment > Climate Change | Heritage & Habitat

More than half a million trees to be planted on former boglands

The focus will be on native woodland trees such as Downy Birch, Scots Pine and Alder

Wed, Oct 2, 2019, 19:45

Shauna Bowers



Minister for Agriculture Michael Creed and Minister for Climate Action and Environment Richard Bruton announced Coillte and Bord na Móna are collaborating on a project which will see bogs no longer used for peat production transformed into rich native woodlands. Photograph: Julien Behal



More than half a million native woodland trees will be planted on former boglands over the next three years in a bid to tackle carbon emissions, the



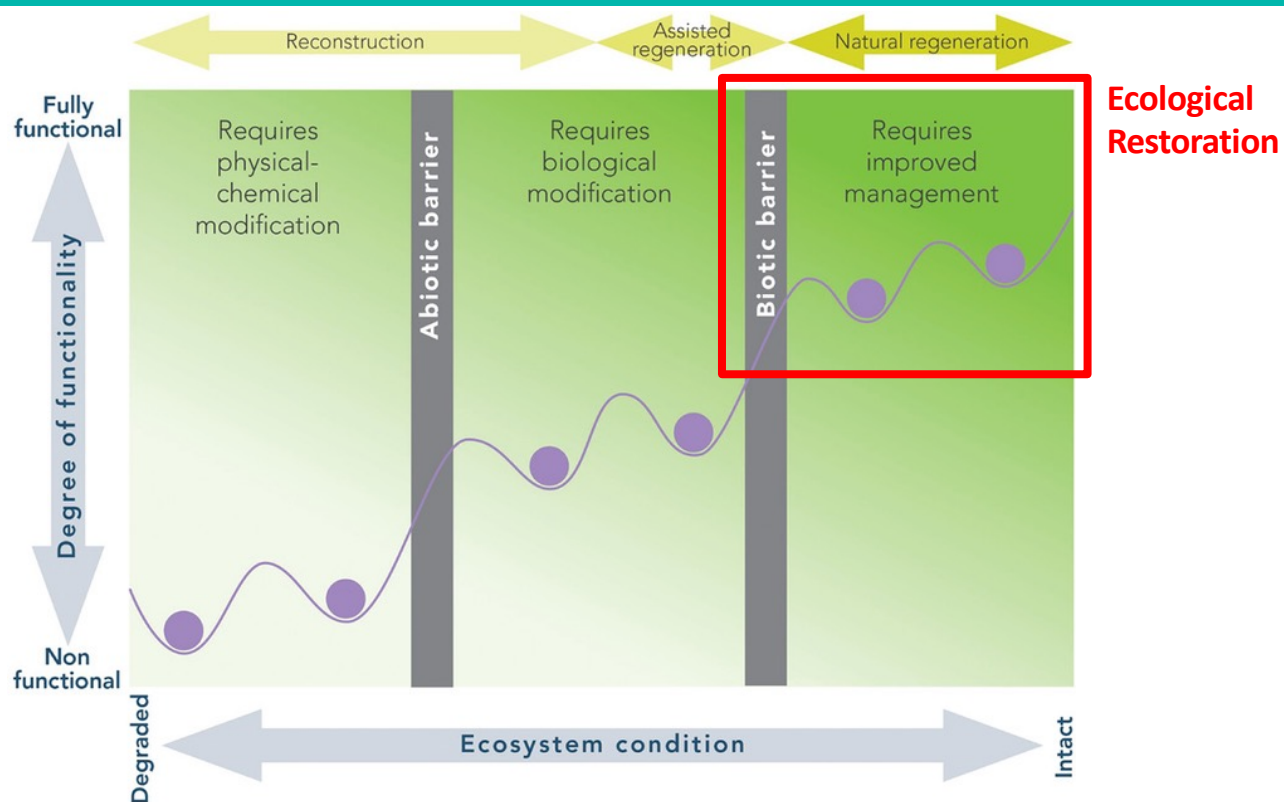
Department of Environment has announced.



BiodivRestore has received funding from the European Union's Horizon 2020 research and innovation programme under the grant agreement No 101003777

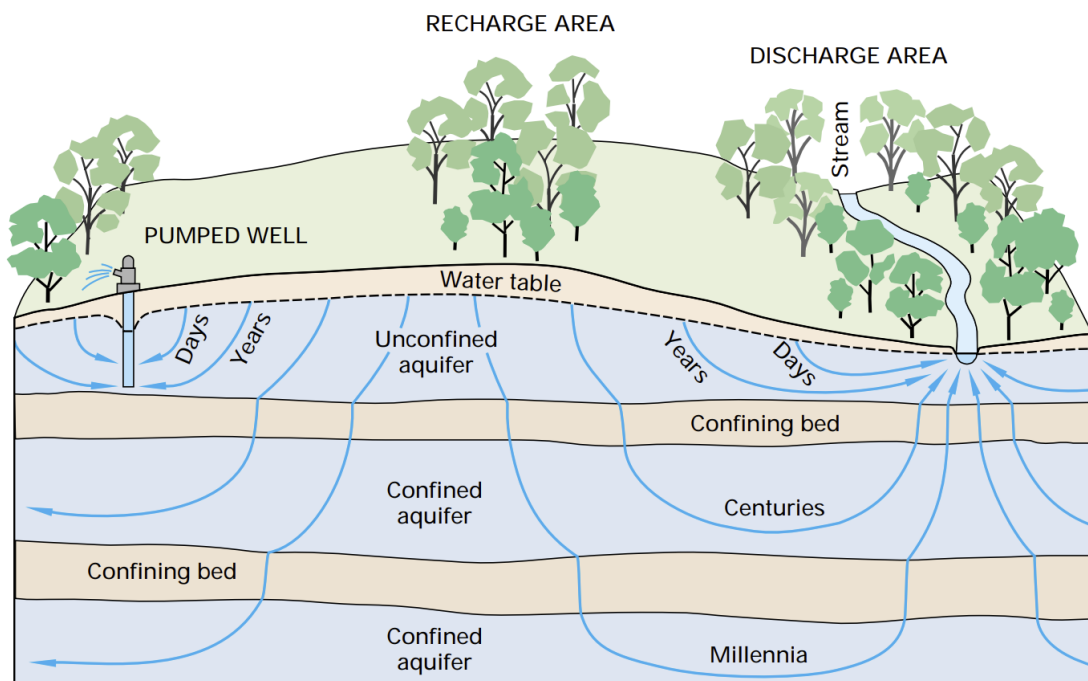
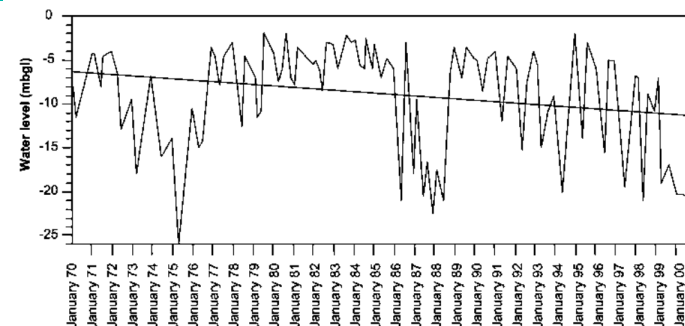
Alternative trajectory for Ecological Restoration: reference ecosystem = lake



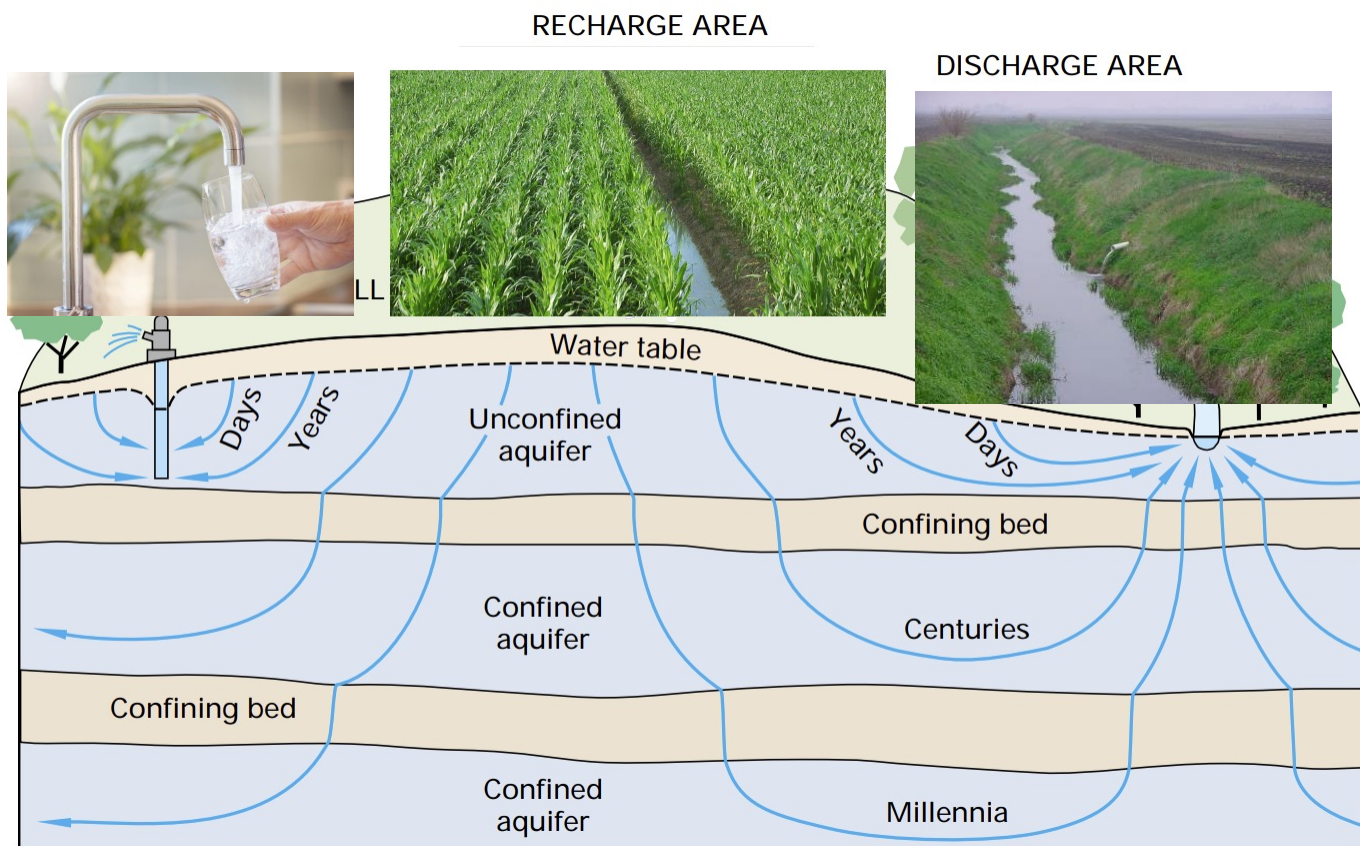


Conceptual model of ecosystem degradation and restoration (Adapted from Keenleyside et al. 2012, after Whisenant 1999, and Hobbs & Harris 2001). The troughs in the diagram represent basins of stability in which an ecosystem can remain in a steady state prior to being shifted by a restoration or a degradation event past a threshold (represented by peaks in the diagram) toward a higher functioning state or a lower functioning state. Note: Not all sites in need of physical/chemical amendment depend upon reintroduction for the return of biota - e.g. if colonization potential in that ecosystem is high.

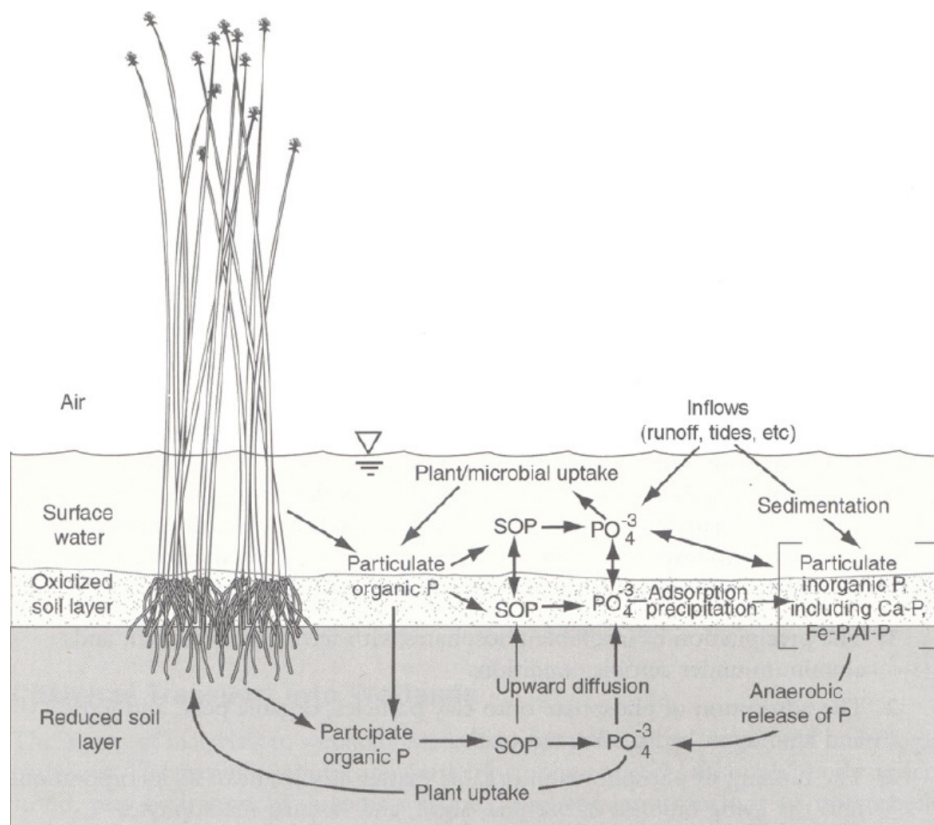
Understanding the landscape-ecological functioning in the PAST and PRESENT



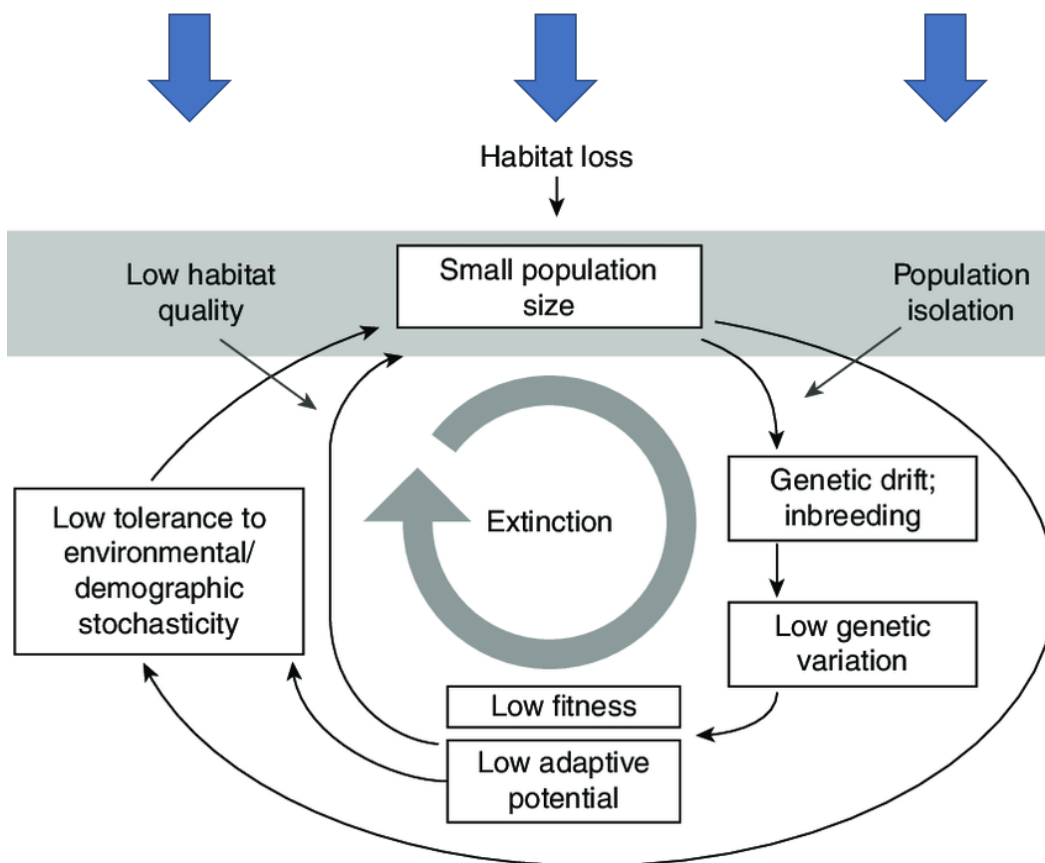
Present degraded state: restoration potential? Restoration measures?



Scientific guidance needed in the design phase of restoration projects



CLIMATE CHANGE



Precautionary measures to establish resilient ecosystems

- Extinction debt
- Ecological trap
- Dark diversity
- Large areas with landscape gradients
- Connectivity
- Maximal reduction of pressures
- Monitoring

33 reasons (not) to fail

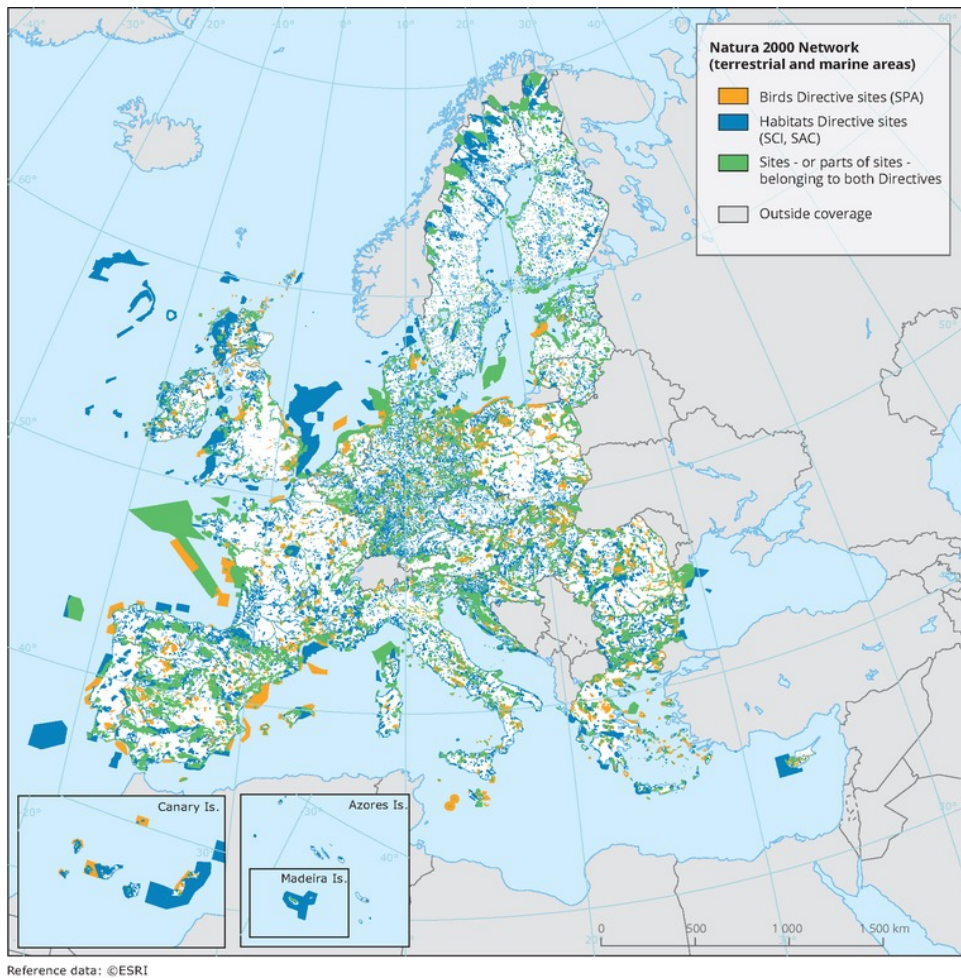
1	Insufficient funding	Financial
2	Conflicting interests of different stakeholders	Social-cultural
3	Low political priority for restoration	Policy and governance
4	Lack of integrated land use planning	Legal and ownership
5	Difficulty in obtaining legal or property rights over the area to implement restoration	Legal and ownership
6	Harmful subsidies favouring degradation	Financial
7	Lack of collaboration between different stakeholders	Social-cultural
8	Lack of evaluation, monitoring and documentation	Management planning, implementation
9	Lack of appropriate compensation and financial returns on restoration	Financial
10	Lack of coordination between decision-makers in different domains and administrative departments	Management planning, implementation
11	Complexity of the legal framework	Legal and ownership

1	Insufficient funding	Financial
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10	Lack of coordination between decision-makers in different domains and administrative departments	Management planning, implementation
11	Complexity of the legal framework	Legal and ownership
12	Unsuitable policies and lack of enabling policy instruments	Policy and governance
13	High level and rate of degradation	Environmental
14	Inadequate implementation of current policies	Policy and governance
15	The timing of restoration projects does not correspond to ecological and social timescales	Management planning, implementation
16	Lack of understanding and collaboration across different aspects of restoration, e.g., ecology, engineering, social sciences, etc.	Social-cultural
17	Constraints due to biotic challenges e.g. concerning species dispersal rates, interspecific interactions, etc.	Environmental
18	Lack of effective knowledge exchange	Social-cultural
19	Lack of motivation in decision-makers to incorporate innovation	Management planning, implementation
20	Lack of prior evaluation, assessment and design	Management planning, implementation
21	Lack of societal awareness and engagement	Social-cultural
22	Lack of involvement of the private sector	Management planning, implementation
23	Lack of relevant ecological knowledge and experience	Management planning, implementation
24	Perceived complexity of implementing restoration	Legal and ownership
25	Constraints due to abiotic characteristics of the area, e.g. climate, topography, water availability	Environmental
26	Unrealistic or unclear project goals	Management planning, implementation
27	Lack of standards against which progress can be measured	Management planning, implementation
28	Lack of quality plant material (including lack of suitable species and genotypes)	Environmental
29	Lack of skilled professionals to perform restoration	Management planning, implementation
30	Lack of knowledge about soils	Management planning, implementation
31	Conflicts between restoration goals, e.g. biodiversity, climate change mitigation, nutrient retention	Environmental
32	Lack of sense of identity, attachment to the landscape	Social-cultural
33	Lack of suitable technology	Management planning, implementation



Challenge 2: Quantity of restoration

- 30% protected area, 10% strictly protected area per biogeographical region + objectives + actions
- National Restoration Plan for ecosystem groups + Prioritization
- Mitigation and adaptation to climate change
- Connectivity + buffering + cross-border coordination
- ‘Forgotten’ habitats and species



Natura2000:

- 18% of the land
- 8% of marine waters

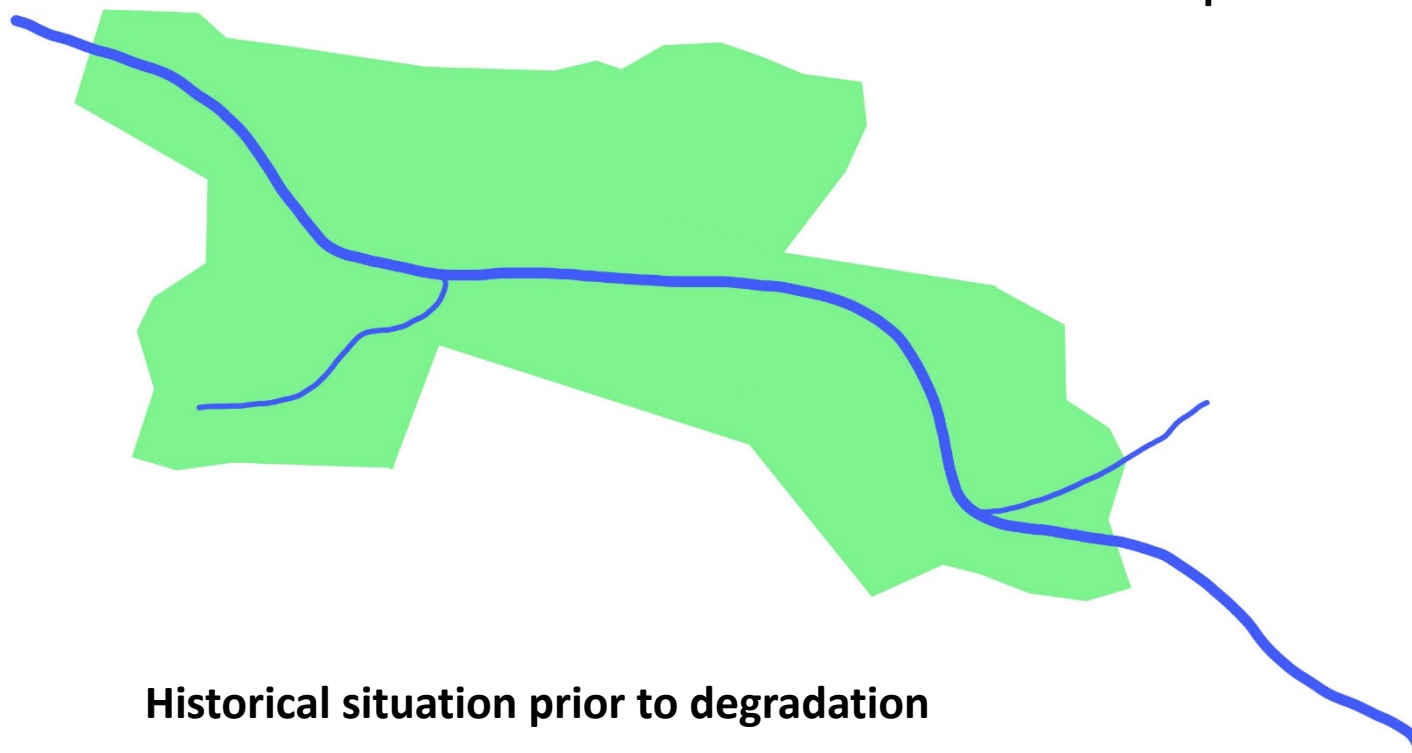
But:

Each biogeographical area: 30%



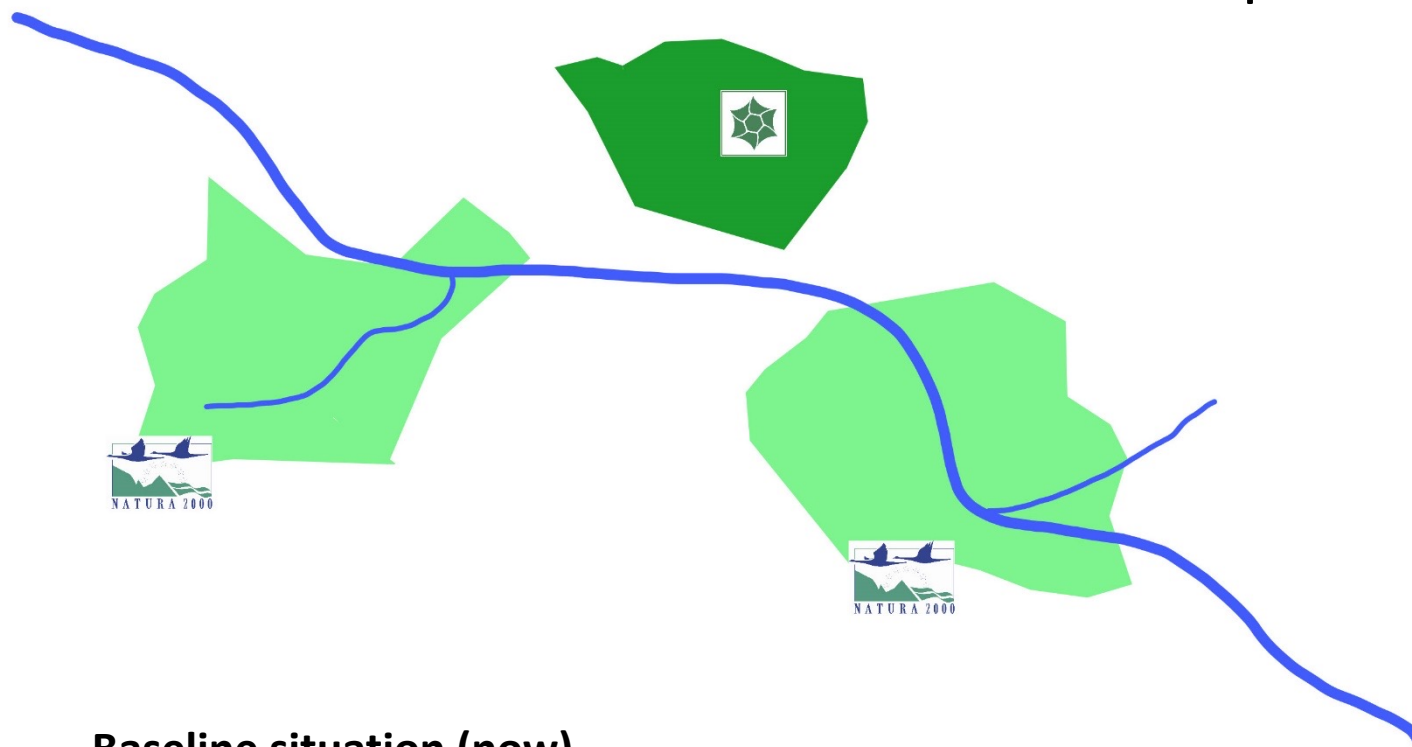
https://ec.europa.eu/environment/publications/criteria-and-guidance-protected-areas-designations-staff-working-document_en

30% PA process



Historical situation prior to degradation

30% PA process



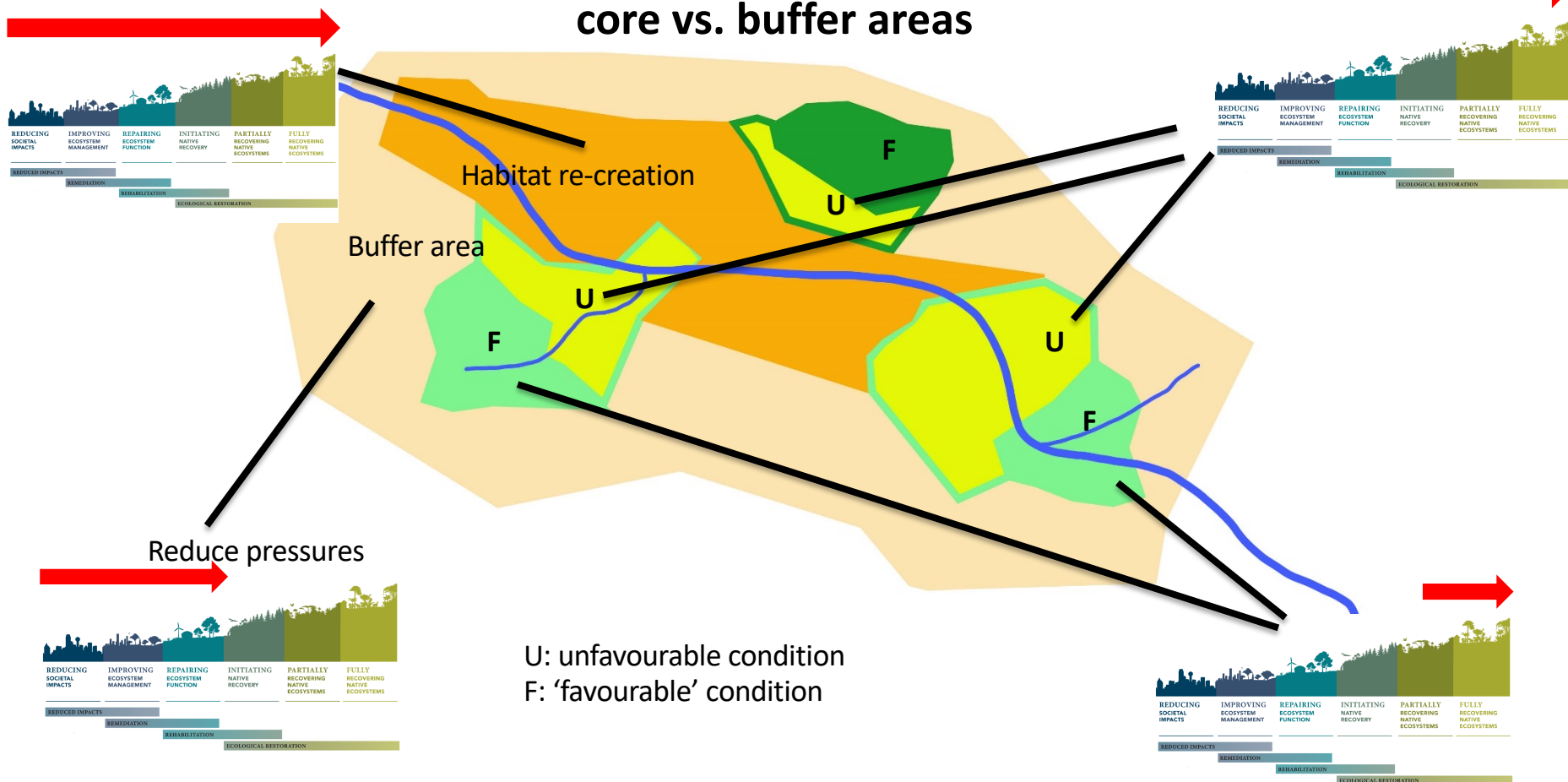
Baseline situation (now)

30% PA process



Pledge by end of 2022

National Restoration Plans: different site-specific objectives core vs. buffer areas



Case-study

Flanders lost 75% of its wetlands since the 1950-60's



-142.000 ha → agriculture



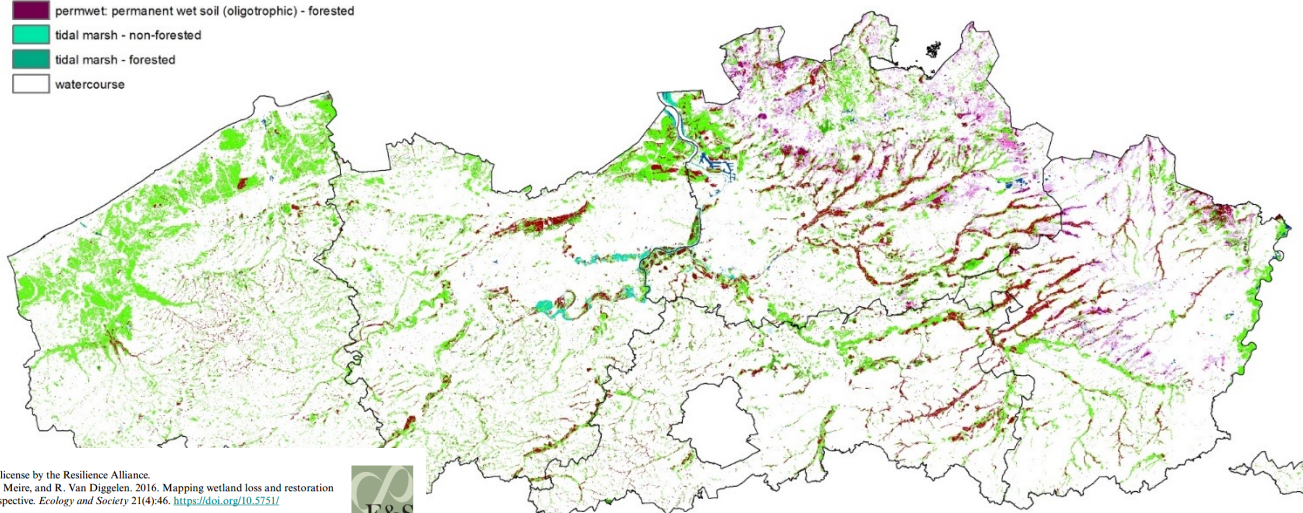
-37.000 ha → urbanisation

Decleer et al. 2016. Mapping wetland loss and restoration potential in Flanders (Belgium): an ecosystem service perspective. *Ecology and Society* 21(4):46.

Historical wetlands in Flanders (± 1950)

Historical wetlands in Flanders (± 1950)

19% of Flanders was wetland



Copyright © 2016 by the author(s). Published here under license by the Resilience Alliance.
 Decler, K., J. Wouters, S. Jacobs, J. Staes, T. Spanhove, P. Meire, and R. Van Diggelen. 2016. Mapping wetland loss and restoration potential in Flanders (Belgium): an ecosystem service perspective. *Ecology and Society* 21(4):46. <https://doi.org/10.5751/ES-108964-210446>

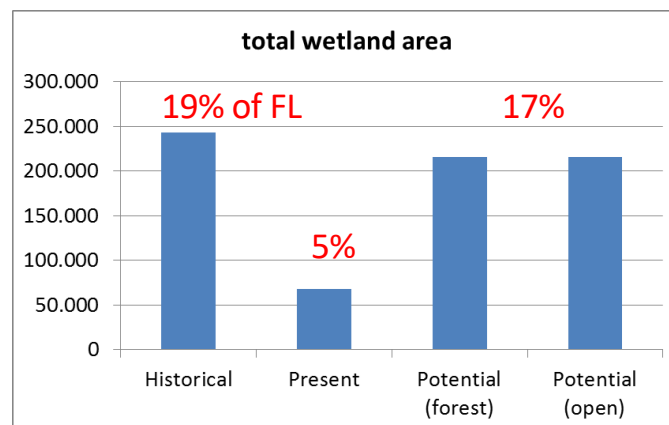


Research, part of a Special Feature on [Ecological Restoration, Ecosystem Services, and Land Use](#)

Mapping wetland loss and restoration potential in Flanders (Belgium): an ecosystem service perspective

Kris Decler¹, Jan Wouters¹, Sander Jacobs¹, Jan Staes², Toon Spanhove¹, Patrick Meire² and Rudy van Diggelen²

Total wetland area in Flanders



- **75% (179,000ha) lost since 1950's: 37,000ha (15%) by urbanisation; rest (85%) by agricultural intensification**
- **At present: still 5% of Flanders is 'wetland' (68,000 ha, but 24,000 ha has no spatial protection)**
- **147,000ha can be restored; 30% (49,000 ha) has appropriate spatial planning and protection status to justify wetland expansion**

Wetland expansion in Flanders by 2050 as part of Natura2000 policy

	Min-max expansion target (ha)	proportion of 'restoration opportunity' (%)
Temporary wet soil (meso-eutrophic)	3,490-6,275	4-8
Temporary wet soil (oligotrophic)	128	1
Permanently wet soil (meso-eutrophic)	551-775	2-3
Permanently wet soil (oligotrophic)	736-966	19-25
Tidal marsh	2,491	26
Shallow water (oligo-mesotrophic & eutrophic)	1,485-2,366	?
TOTAL	8,892-13,002	?
TOTAL excl. open waters	7,406-10,636 ha	5-7*

* but: **30% (49,000 ha) of 147,000 ha** potential wetland already has appropriate spatial planning and protection status to justify wetland expansion

Annual GtCO₂

Cumulative GtCO₂

20 years to Net Zero

392 GtCO₂
(2018-2037)

1.5°C (50%)

1.5°C (66%)

1.4°C (50%)

92 GtCO₂
(2018-2100)

175 GtCO₂
(2018-2075)

2050: 100% renewables

2030: Moratorium on land conversions

2030: 56% global renewable energy

2020: Peak anthropogenic emissions

Fossil fuel & cement

Land use change

Land sinks

Ocean sinks

Land restoration (-400 GtCO₂)

anthropogenic emissions

Cumulative emissions

Note: IPCC calls for a buffer of 100 GtCO₂ for Earth system feedbacks, lowering the 1.5°C (66%) budget to 175 Gt CO₂.

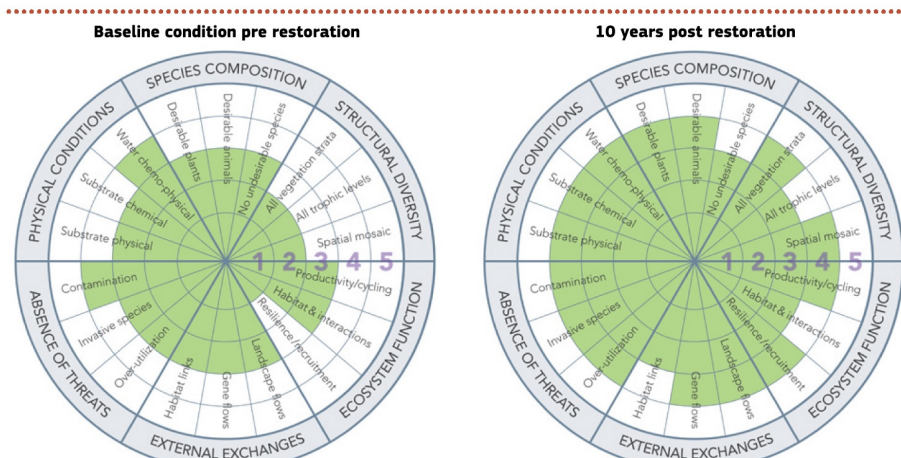
Teske, S. (2019) (ed.)

Challenge 3: Monitoring and reporting

- Indicator selection
- Thresholds (targets)
- Both project level and national monitoring network
- Baseline situation and distance-to-target
- Evaluation for adaptive management, reporting and communication

The recovery wheel

Qualitative recovery ranking system (e.g. scale 1 to 5), compared to baseline situation



* Paragraph 5.1 is largely based on Gann *et al.* (2019 section 2 principle 5)

Helpful for measuring progress at site level:

- objectives & indicator selection
- baseline & distance to target
- reporting
- communication

DOWNLOADS:

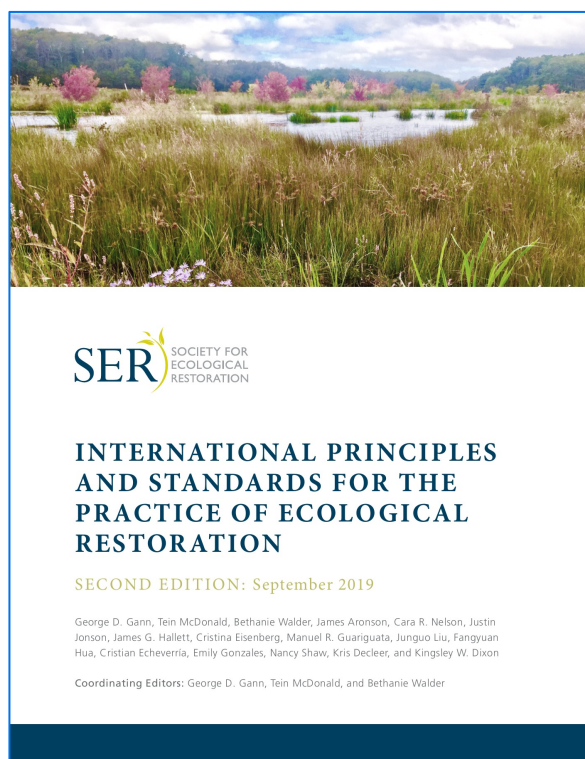
- PDF of the blank wheel and data sheet [here](#).
- interactive version [online](#).
- excel version [here](#).
- interactive app for [Android](#), [iPhone](#), and [iPad](#).

You can access a blank version of the Social Benefits Wheel and data sheet [here](#).

Challenge 4: Knowledge transfer and Training

- Structural collaboration science-policy-practice
- Best practices for restoration of different ecosystem types and habitats of species
- Adjustable over time
- Accessable and understandable for non-scientists in the national language and embedded in local culture
- Site level information (abiotic and biotic quality, landscape ecological functioning)
- Co-financing for scientists to engage in projects
- Networking and meta-analyses

Standards of good practice for planning and implementing ecological restoration



- Planning and design
- Implementation
- Monitoring, documentation, evaluation and reporting
- Post-implementation maintenance



<https://www.ser.org/page/SERStandards>

Some international knowledge-sharing platforms

- Endangered Landscapes Programme: <http://www.conservationevidence.com> and <http://www.restorationevidence.org>
- LIFE-Nature: <https://ec.europa.eu/environment/archives/life/publications/lifepublications/lifefocus/nat.htm>
- Natura2000 Communication Platform: https://ec.europa.eu/environment/nature/natura2000/platform/knowledge_exchange/
- European Nature Information System (EUNIS): <https://eunis.eea.europa.eu/>
- Biodiversity Information System for Europe (BISE): <https://biodiversity.europa.eu/>
- Eionet Portal: <https://www.eionet.europa.eu/etcs/etc-bd/>
- Ramsar Convention: <https://ramsar.org/resources/ramsar-sites-management-toolkit>
- Water Information System for Europe (WISE): <https://water.europa.eu/>
- Agreement on the Conservation of African-Eurasian Migratory Waterbirds: <https://www.unep-aewa.org/>

Not in the native language

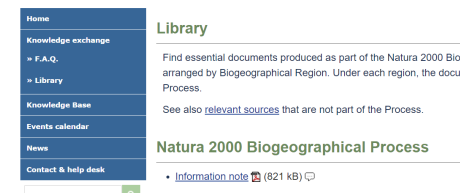
Lack of interaction (training, learning, discussion)

Lack of integration in the local context and culture

Lack of central coordination and outreach

Lack of sustainable expertise building capacity

Clarivate Web of Science™



Standards of good practice for planning and implementing ecological restoration

Kaisu Aapala, Maarit Similä ja Jouni Penttinen (toim.)

**Ojitettujen soiden
ennallistamisopas**



Metsähallituksen luonnonsuojelujulkaisuja. Sarja B 188

ontwikkeling+beheer **natuurkwaliteit**

o+bn

**Duurzaam herstel van
hoogveenlandschappen**



VBNE

**SŁOWIŃSKIE TORFOWISKA
W OCHRONIE KLIMATU**

JAK OCHRONA PRZYRODY
W SŁOWIŃSKIM PARKU NARODOWYM
MOŻE PRZYZYCZYŃ SIĘ DO ŁAGODZENIA
ZMIAN KLIMATYCZNYCH



BiodivRestore has received funding from the European Union's Horizon 2020 research and innovation programme under the grant agreement No 101003777

Towards sustainable science-practice collaboration networks at national and local level



National / Site-level:

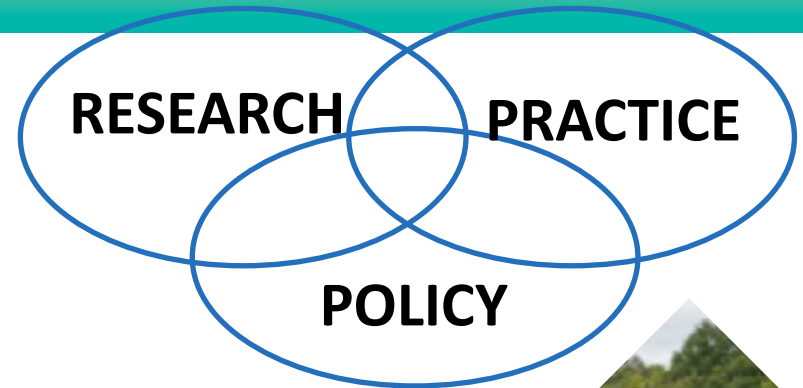
- Planning and design
- Implementation
- Monitoring, documentation, evaluation and reporting
- Post-implementation maintenance
- Species protection plans

The Dutch Knowledge Network 'OBN' for restoration and management



30 Years Linking scientists - policy makers - practitioners
to foster effective ecological restoration

- Platform with different expert teams (landscape types)
- 130 active members of more > 100 organisations
- Different expertise and strong motivation
- Teams: detect knowledge gaps and proposal of applied research/test/review projects
- Advisory committee prioritises research projects, aligned with other knowledge programs
- Steering group decides
 - Long term knowledge and monitoring agenda
 - Yearly program for research and outreach activities
 - Tenders, execution and guiding of research
 - Financial support c. € 2 million/y



ontwikkeling+beheer natuurkwaliteit

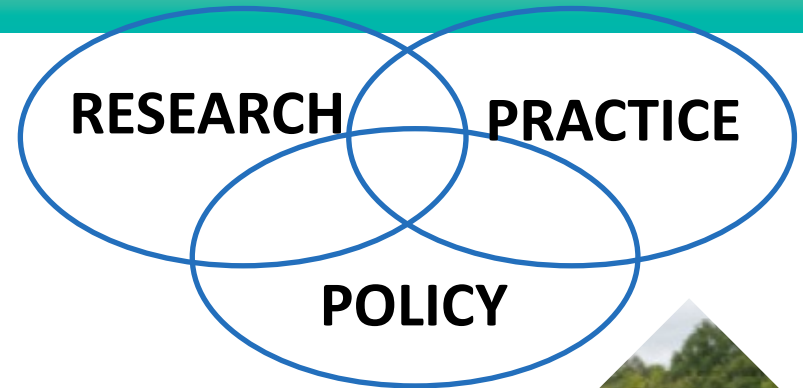
The Dutch Knowledge Network 'OBN' for restoration and management



30 Years Linking scientists - policy makers - practitioners
to foster effective ecological restoration

<https://www.natuurkennis.nl/>

- Easy-to-go online **Documentation Platform** with thematic state-of-the-art best-practice guidance (habitats, restoration measures, species) for both novice and expert practitioners
 - Factsheets, maps, decision support tools, reports, newsletters, brochures, popularizing articles, ppt-presentations, video...
 - Expert policy advice and recommendations
 - PhD's, scientific papers
- Field training events ('train the trainer')
- Workshops and Symposia





13th SERE CONFERENCE

5th – 9th SEP 2022

ALICANTE, SPAIN



Universitat d'Alacant
Universidad de Alicante

[HOME](#) [COMMITTEES](#) [PROGRAMME & SPEAKERS](#) [REGISTRATION](#) [PARTICIPATE](#) [VENUE](#) [SUPPORTERS](#)

Welcome

RESTORING NATURE, RECONNECTING PEOPLE

Welcome to the 13th European Conference on Ecological Restoration! Welcome to SER Europe 2022!

The Society for Ecological Restoration (SER) is the professional Society of reference in the field of ecological restoration. It promotes the science, practice, and policy of ecological restoration to protect biodiversity, improve adaptation to climate change, mitigate its effects, and restore a healthy relationship between nature and society. For three decades, SER has given voice to this discipline and provided leadership in all aspects of its development. The European Chapter of the Society, acquaints hundreds of experts and organizational members in 37 countries, and has affiliated organizations in 6 of them.

These are crucial times for ecological restoration in Europe and globally. Ecological restoration is essential to combat climate

Key dates

SYMPOSIA, WORKSHOPS AND COURSES

March 22, 2022

Deadline for proposal submission

Upon receipt and until March 29, 2022

Accepted proposal notification to coordinators

<https://www.sere2022.org/>



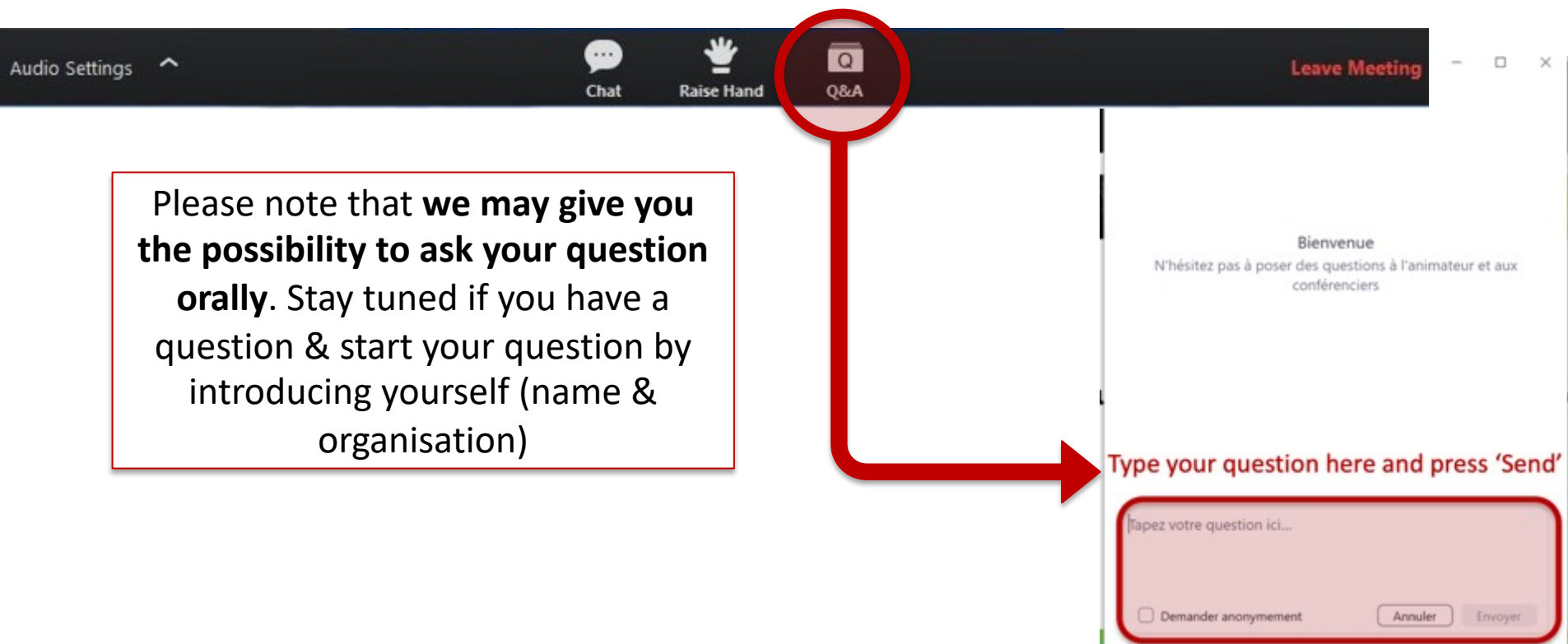
BiodivRestore has received funding from the European Union's Horizon 2020 research and innovation programme under the grant agreement No 101003777

No time to waste... let's work together
...and engage in the challenges



Q&A Session

For any question: **USE “Q&A” FUNCTION**



Audio Settings ^

Chat Raise Hand Q&A Leave Meeting

Please note that **we may give you the possibility to ask your question orally**. Stay tuned if you have a question & start your question by introducing yourself (name & organisation)

Bienvenue
N'hésitez pas à poser des questions à l'animateur et aux conférenciers

Type your question here and press 'Send'

Écrivez votre question ici...

☐ Demander anonymement Annuler Envoyer

PRESENTATION OF THE FUNDED PROJECTS

(session 1/5)

FIRST: COAST - COnservation of mARine ecosystems around Santo AnTão, Cabo Verde: implications for policy and society, by *Teresa Amaro*

COSAR - Context-dependence of the societal and ecological outcomes from river ecosystem restoration, by *Jeremy Piffady*

FishME - Social and ecological effects of Fish removal in Mountain Ecosystems, by *Dirk Schmeller*

ForestFisher - Priority areas for conservation and restoration of Amazonian forestfrugivorous fish interactions and associated fisheries, by *Pablo Tedesco*

PRESENTATION OF THE FUNDED PROJECTS

(session 1/5)

EMYS-R - A socio-ecological evaluation of wetlands restoration and reintroduction programs in favor of the emblematic European pond turtle and associated biodiversity: a pan-European approach, by *Jean-Yves Georges*

Transloc - Translocations of flora and fauna for conservation and restoration: ecological, evolutionary, and socio-economic impacts at multiple scales, by *Francois Sarrazin*



COnservation of mARine ecosystems around Santo AnTão, Cabo Verde: implications for policy and society

COAST

10 partners, 4 countries, € 1.008.85

Teresa Amaro (coordinator, UAVR, Portugal)

2022-2025



Objectives and project description

Cabo Verde is a country where **Blue Growth** can help to contribute with solutions for high poverty rates, while building on the long tradition of local economical use of the marine environment. However, no valuable baseline knowledge on the environmental status of their marine ecosystems is available, hampering the development of measures, ensuring their sustainable use, management, conservation and restoration.

COAST will provide multidisciplinary understanding about the **biodiversity** and **ecosystem functioning**, as well as **suitable indicators of recovery**, which is the crucial basis to establish sound conservation or restoration measures. This will allow the implementation of **integrated environmental management** actions based on the best scientific knowledge.



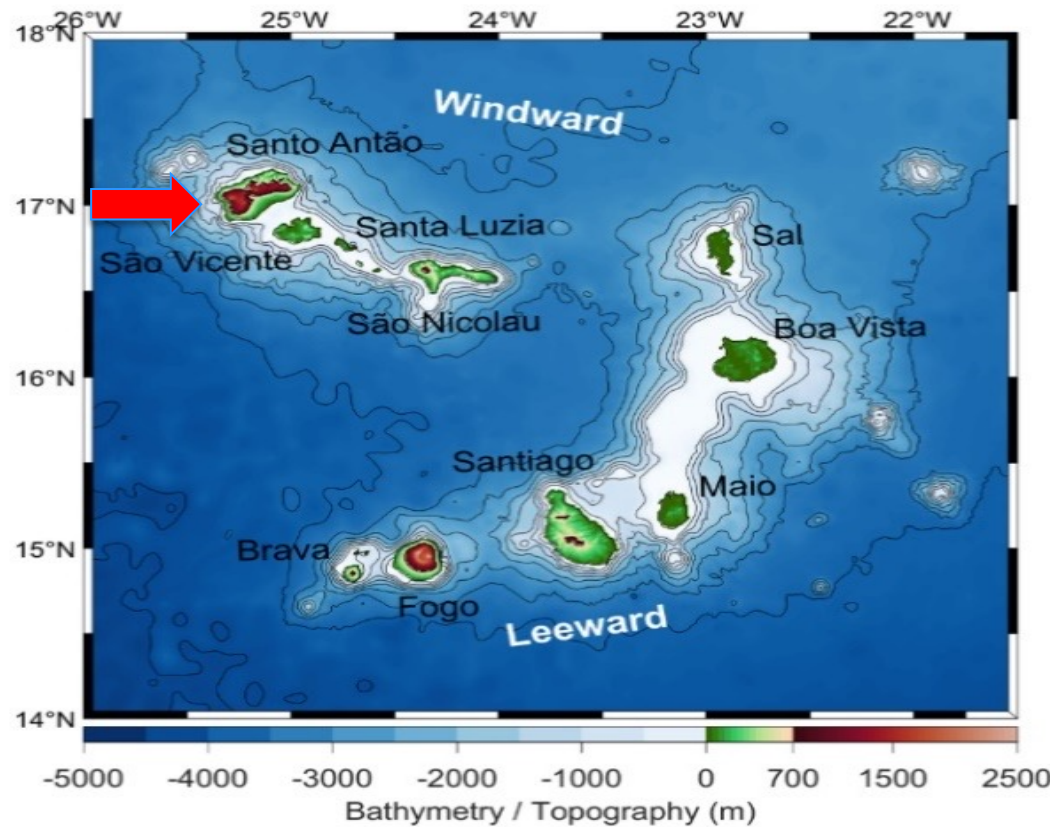
Objectives and project description

- Evaluate the vulnerability of marine communities (habitat mapping, survey of anthropogenic measures, patterns of biodiversity, risk models),
- implement pilot conservation/restoration actions for selected degraded ecosystems based on the previous assessments,
- provide baseline data to inform policymakers, authorities, institutions and practitioners towards effective marine conservation and restoration in these habitats and demonstrate the repeatability of the approach in other regions,
- increase ecosystem resilience to climate change around Santo Antão island.



Study area

Santo Antão, Cabo Verde



Objectives and project description

Project structure **COAST**

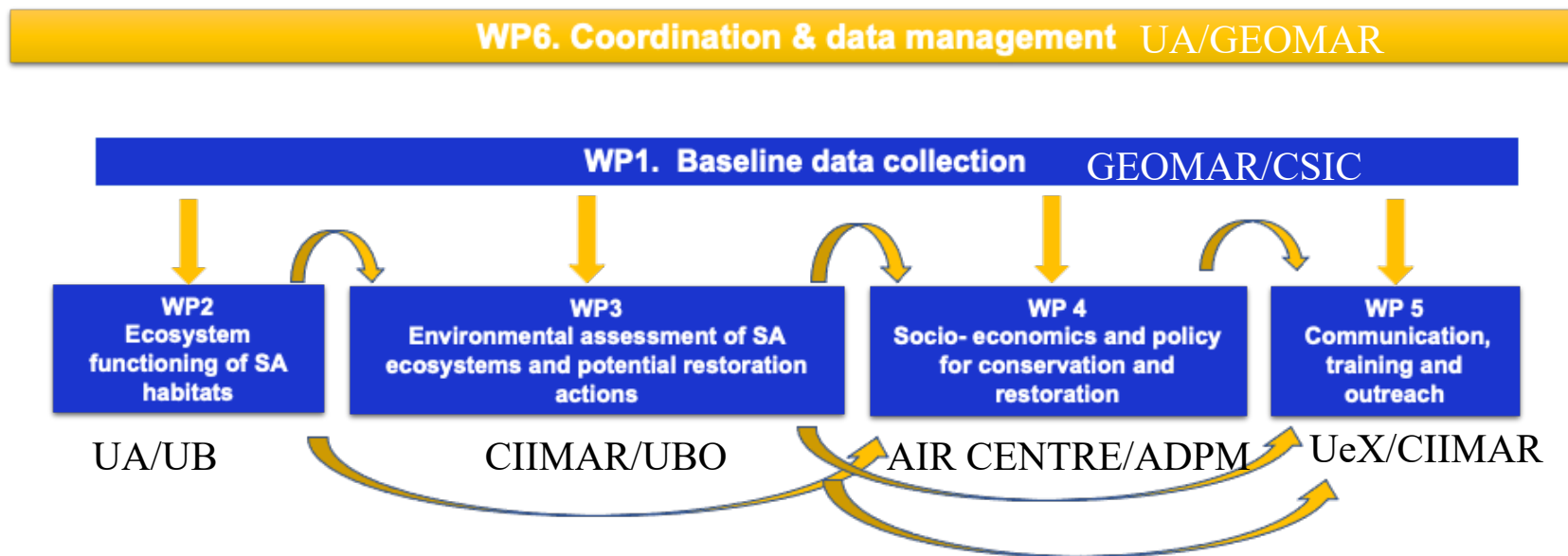


Figure 1 – Structure and flow of the Work Packages.



Expected Scientific Impact

Improved knowledge on marine Santo Antão habitats.

Provide efficient management recommendations for their sustainable development, along with **mitigation plans for the effects of global changes**, in line with the needs of stakeholders and local communities.

Improve research capacity to collect data and to define baselines for marine ecosystems.

Develop training on new instrumentation operation and maintenance (i.e. underwater remotely operated vehicles - ROVs).

Establish a collaborative environment for the integrated analysis of local data.

Advanced innovative technology and the vulnerability analysis of marine ecosystems in Santo Antão.



Expected Societal & Policy Impact

COAST aims at contributing to create guidelines and priority conservation strategies to affected ecosystems and to achieve efficient management recommendations, locally and in other islands and coastal African countries.

Key stakeholders involved:

Local environmental authorities (i.e. Port Maritime Agency, Porto Novo City hall) and public agencies (ADPM, Biosfera),

Local community members (fishermen), NGOs (Biosfera),

Universities and research institutions.

COAST will support **translation of science into policy interventions** and contribute to **reducing economic and social disparities, linking the needs of the marine ecosystems and the communities.**



Acknowledgement

Funders

- Fundação para a Ciência e a Tecnologia (FCT), Portugal
- Fundo Regional para a Ciência e Tecnologia (FRCT), Portugal
- Agencia Estatal de Investigación (AEI), Spain
- German Research Foundation (DFG), Germany
- Agence Nationale de la Recherche (ANR), France



BiodivRestore has received funding from the European Union under grant agreement No 101003777



biodiversa



innovation programme under the

Context-dependence of the societal and ecological outcomes from river ecosystem restoration

COSAR

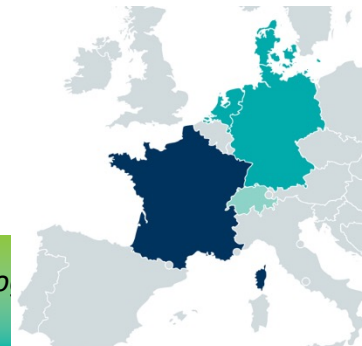
Jérémy Piffady (Coord. – INRAE Riverly Unit / FR)

E. Tales, A. Jeliaskov, C. Le Pichon, J. Belliard, M. Floury – INRAE Hycar Unit / FR

S. Stoll, N. Kaiser, M. Palt – UCB Environmental Campus Birkenfeld / GER

P. Verdonschot, R. Verdonschot – WEnR Wareningen Environmental Research / NL

C. Weber – EAWAG / SZ



Objectives and project description

COSAR aims to produce an operational framework to identify the environmental context features mostly determining both ecological and societal outcomes from physical restoration projects of streams.

Based on an existing 200 restored sites database, COSAR is designed as a 3 step process

- Quantifying restoration ecological and societal outcomes, and the potential synergies
 - Define a set of relevant metrics to assess the ecological (INRAE / WEnR) and the societal (UCB) outcomes
 - Integrate ecological and societal outcomes to assess their interrelationships (INRAE / WEnR / UCB)
- Explaining how these sets of restoration outcomes are influenced by geographical, societal and environmental contexts, considered at different scales
 - Spatial context (INRAE / UCB / WEnR)
 - Legacies effects (INRAE / UCB)
- Predicting expected outcomes of possible restoration projects
 - Co-constructing with stakeholders an operational analysis framework to assess restoration outcomes (UCB / EAWAG / INRAE)
 - Provide guidelines to integrate the context-dependencies in planning future restoration projects, optimising the chances to achieve positive results (All partners)



Expected Scientific Impact

Introducing a scale-dependent multiple stressor framework in the restoration topic

- *How do drivers and pressures assessed at different spatial scales (from local site to watershed scale) influence both the societal and ecological outcomes of restoration projects ? What are the potential major limiting factors for restoration positive outcomes?*
- *BACI monitoring framework*

Considering the legacies effects, so far rather neglected in large-scale analyses

- *Historical databases at the European scale (Ecological atlas, demographical evolution,...)*
- *Stakeholders expert knowledge on the watersheds context*

Coupling both the ecological and societal assessments of restoration outcomes in a common causal framework

- *Identifying the synergies and trade-offs between these different outcomes*
- *What environmental factors do enhance such synergies?*



Expected Societal & Policy Impact

Societal (population and stakeholders) acceptance of costly ecological restoration projects is of primary importance to reach WFD goals, UN SDGs

- Stakeholders need objective criteria to communicate on positive outcomes of restoration projects*
- Stakeholders need integrative frameworks and tools to optimize the designs of future restoration projects to enhance more positive outcomes, considering the overall watershed context*

To meet the stakeholders' expectations, a dedicated WP involves an international board of stakeholders groups through regular meetings to present and discuss goals, criteria, challenges.

- national/regional/local environmental legislation and administrations responsible for restoration planning and funding; institutions responsible for implementation of restorations; consulting companies specialised in restoration; fishing, agricultural and tourism organisations; hydropower producers; environmental NGOs*

Information will be spread through a website, social media posts, and a final fact sheets compendium, some of which written by stakeholders.



Acknowledgement

COSAR is funded by

- French National Research Agency (ANR), France



- German Research Foundation (DFG), Germany



- Ministry of Agriculture, Nature and Food Quality (LNV), Netherlands



Ministry of Agriculture,
Nature and Food Quality



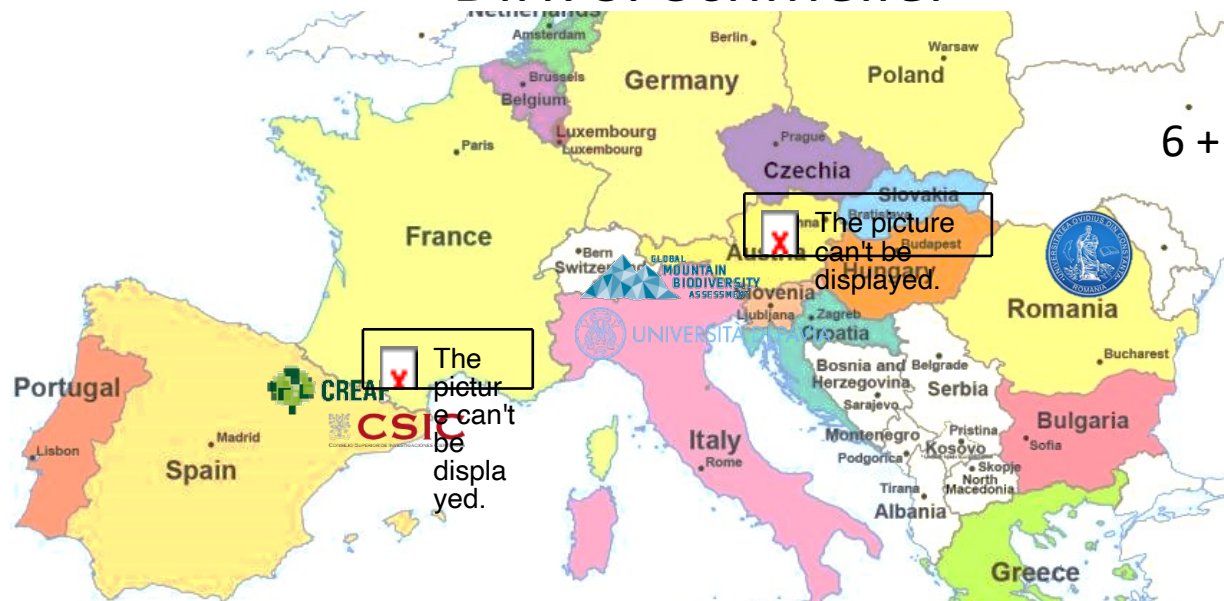
BiodivRestore has received funding from the European Union under the grant agreement No 101003777



innovation programme under the

Social and ecological effects of **Fish** removal in **Mountain Ecosystems**

Dirk S. Schmeller



6 + 1 associated partner

Objectives and project description

WP4: FishME Management ToolBox – e-learning platform (Months 6 – 36)

WP1: Impacts (Months 1 – 24)

- Biodiversity analyses
- Land use and climate changes
- Foodweb analyses
- Ecosystem functioning and health



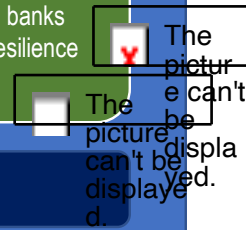
WP2: Pollution (Months 3 – 34)

- Pollution fingerprints
- Impact on communities
- Foodweb impacts



WP3: Recovery (Months 5 – 36)

- Manipulative studies
- Monitoring recovery
- Plankton egg banks
- Ecosystem resilience



FishME database

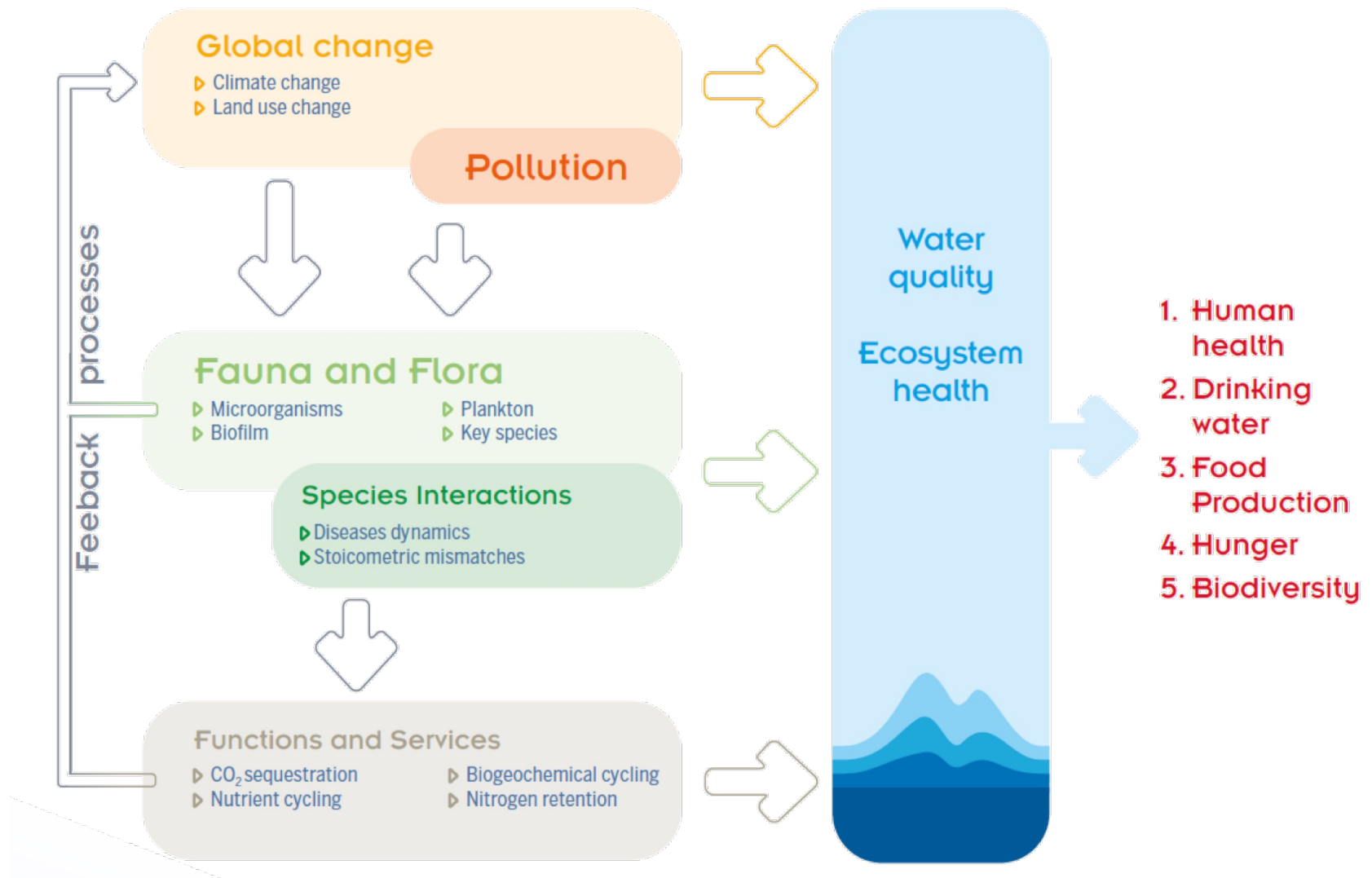


Evidence-based conservation

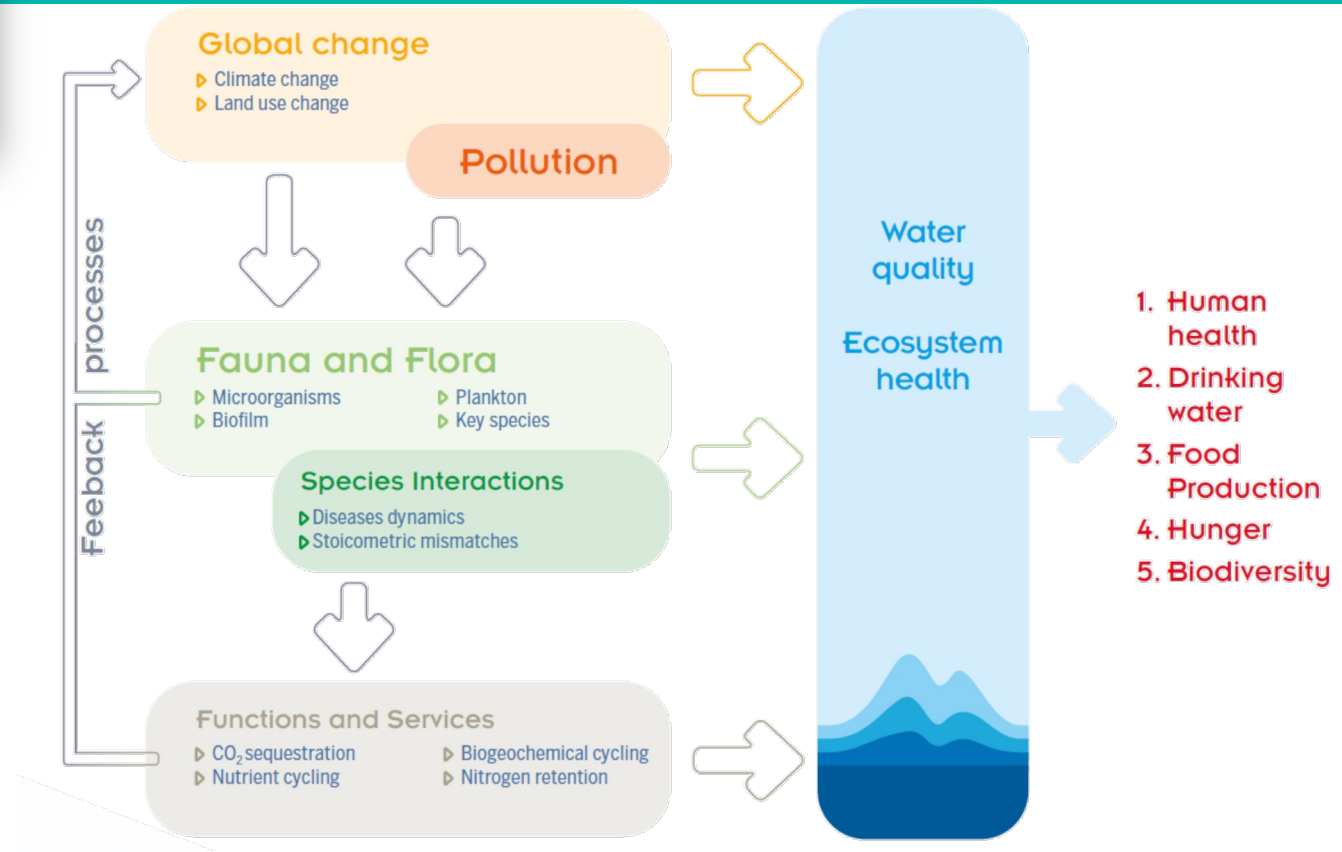
 **Conservation Evidence**
Providing Evidence to Improve Practice



Expected Scientific Impact



Expected Societal & Policy Impact



NGOs, National and Regional Parcs, CNPN, Forest offices, Fishery Associations, Tourist Associations, Mountain Guides

FishME toolbox, YouTube, The Conversation etc.

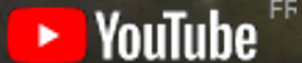


BiodivRestore has received funding from the European Union's Horizon 2020 research and innovation programme under the grant agreement No 101003777

Acknowledgement



Der Wissenschaftsfonds.



MOUNTAINS
A FRAGILE SOURCE OF LIFE



Mountain Research



BiodivRestore has received funding from the European Union under the grant agreement No 101003777



biodiversa



Water JPI

innovation programme under the

Priority areas for conservation and restoration of Amazonian forest-frugivorous fish interactions and associated fisheries

FORESTFISHER

Pablo Tedesco (Partner 1, Toulouse, France)

Consortium

Financed

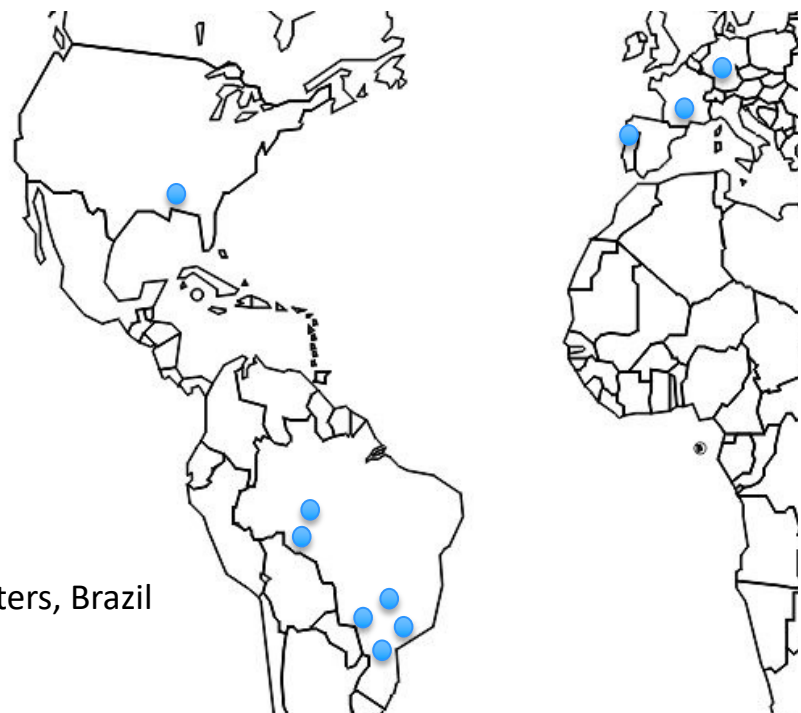
1. Institut de Recherche pour le Développement, France
2. Instituto Politécnico de Bragança, Portugal
3. Technical University of Munich, Germany
4. Federal University of Amazonas, Brazil
5. Universidade Estadual de Mato Grosso do Sul, Brazil

Self-financed

- A. Mississippi State University, USA
- B. Federal University of Rondônia, Brazil
- C. State University of Maringá, Brazil
- D. Universidade Federal de Goiás, Brazil
- E. National Center for Monitoring and Early Warning of Natural Disasters, Brazil

Subcontracted

- 1ª. NGO - AÇÃO ECOLÓGICA GUAPORÉ, Brazil



Objectives and project description

Rationale

Frugivorous fishes directly depend on the forest and play a crucial role in **maintaining forest diversity** as seed dispersers and constitute a **key source of food** and income for traditional, local human populations.

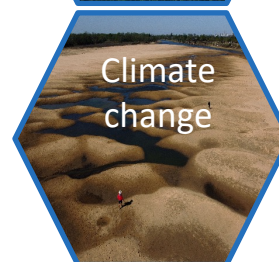
Objective

ForestFisher propose to integrate these diverse components to define **priority areas** for conservation and restoration that should ensure the **resilience of the socio-ecological system**

Activities

1. Analyse **recent and ongoing impacts** of land-use change on frugivorous fish diversity (France, USA, Brazil)
2. Build regional **informed scenarios** of the future Amazon land-use change (Germany, Portugal, Brazil)
3. **Forecast** the frugivorous **fish distribution shifts** (Portugal, Brazil, France)
4. Set **participatory land use planning** involving stakeholders (Brazil, Germany, Portugal)

A socio-ecological system
under pressure



Expected Scientific Impact

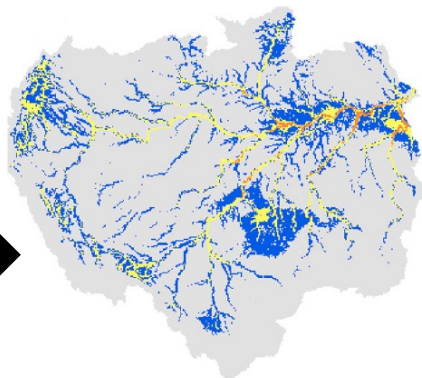
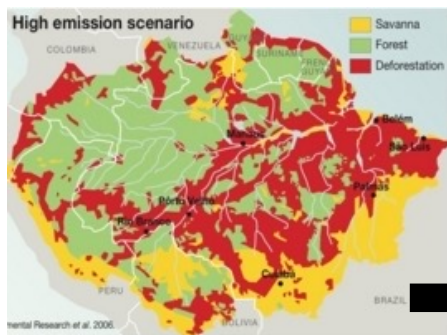


The Amazon is at the centre of an ongoing intense international debate. ForestFisher offers a timely and interdisciplinary approach to assess the combined effects of multiple threats on fish species that are essential to the functioning of a socio-economic system and to the ecological processes needed for forest sustainability.



Research questions addressed

1. How recent land-use changes have affected the frugivorous fish diversity? (WP1)
2. Will future climate, land-use, and river fragmentation changes in the Amazon affect the availability of suitable areas for frugivorous fish species? (WP2 & WP3)
3. How these expected shifts in the distribution of frugivorous fish species will affect fishing communities and their traditional fishing grounds? (WP4)



Expected Societal & Policy Impact

Main societal challenge

Contribute to a successful mitigation of the current and future changes in the fishing resource

...and policy issue

Build a protocol that guides public policy and decision makers to design **Fishery agreements and land use planning**

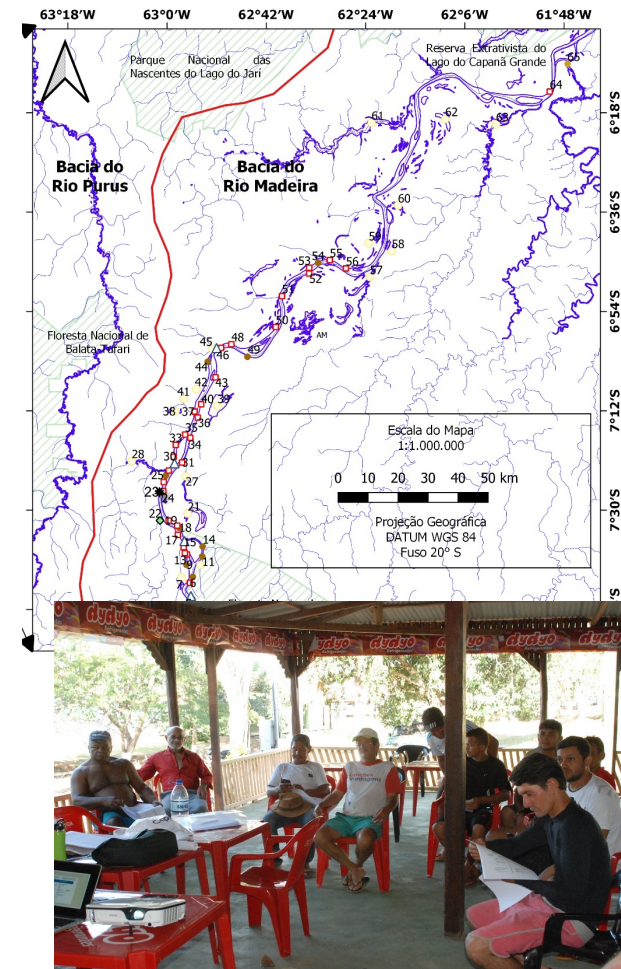


a participatory instrument that associates fisheries and land use in communal rules, based on scientific and traditional knowledge

Participatory workshops with identified stakeholders:

- Two Brazilian Partners as stakeholders (CEMADEN & NGO Ecoporé)
- Representatives and leaders of local communities
- State and Federal agencies, local associations and schools

A focus on The Madeira / Purus interfluvial region



Acknowledgement

Funding agencies



Self-financed partners



BiodivRestore has received funding from the European Union under grant agreement No 101003777



biodiversa

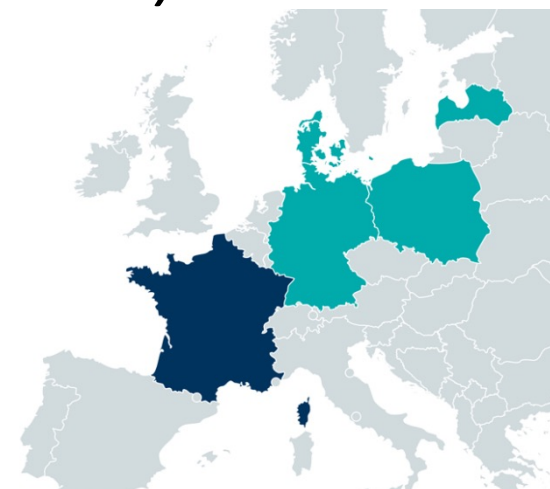


innovation programme under the

A socio-ecological evaluation of wetlands restoration and reintroduction programs in favour of the emblematic European pond turtle and associated biodiversity: a pan-European approach

Emys-R

Jean-Yves Georges PD, PhD (Partner 1)

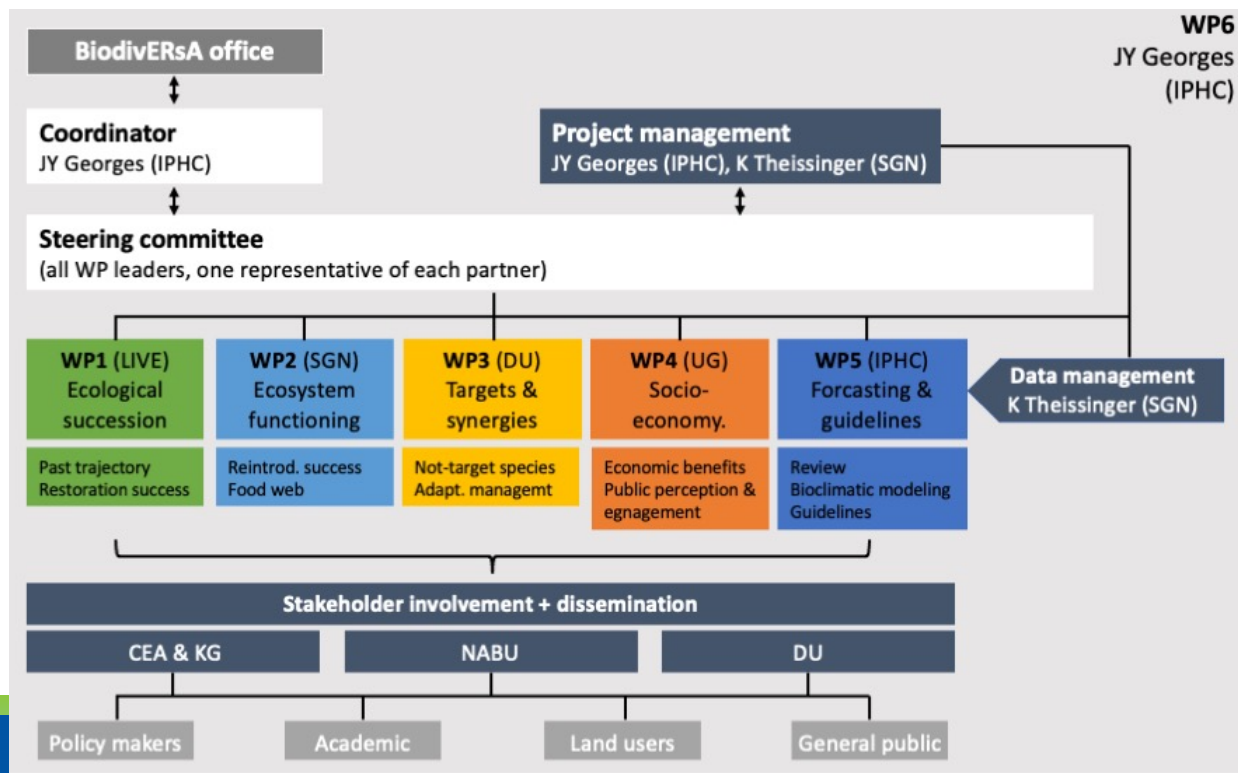


Objectives and project description

The EU Biodiversity Strategy for 2030 emphasises that “*we need nature in our lives*”.

Species reintroductions are considered as operational strategies to counter biodiversity loss. Yet the outcomes of such reintroductions need to be promoted.

Emys-R is a 3-year participatory action-oriented research project aiming at defining the most **ecologically & economically efficient** and **socially supported methods of wetland restoration** suitable for sustainable maintenance of Emys and associated biodiversity throughout Europe.



Expected Scientific Impact

- Science

- **Transdisciplinary research:** humanities, social and natural sciences
- **Multiscale and multi-site approach for an integrated socio-ecological assessment:** literature review, experimental approaches, environmental genomics, long term monitoring, forecast modelling
- **Hypotheses**
 - i) higher degree of wetland restoration can compensate for limited capabilities of captive bred Emys to settle in the wild
 - ii) conservation actions can benefit society by bringing together people and nature

- Innovation

- **Adapt existing biocenotic indices** to small continental hydrosystems
- **Implement an adaptive management** by co-creating ponds promoting turtle-and-natural-patrimony while preventing invasive species to settle in restored wetlands

- Breakthrough

→ **guidelines of best practices** for homologous projects: wetland restoration and/or European pond turtle reintroduction/reinforcement throughout Europe



Expected Societal & Policy Impact

- **Societal challenges**

- Identify societally-supported, cost-efficient methods of wetland restoration for effective species reintroduction
- Assess values of nature given by citizens and authorities that motivate people and politicians to engage in conservation actions
- Identify levers to bring back together people and nature

- **Stakeholder involvement**

- Internal: local councils, land managers and NGO as partners
- External: inhabitants, local actors and local-to-national authorities throughout Europe

- **Knowledge dissemination**

- Public seminars and participatory workshops for improving transfer knowledge between academic experts, non-expert (citizen science) leading to decision making in environmental policies
- Guidelines of best practices for national and EU policy makers

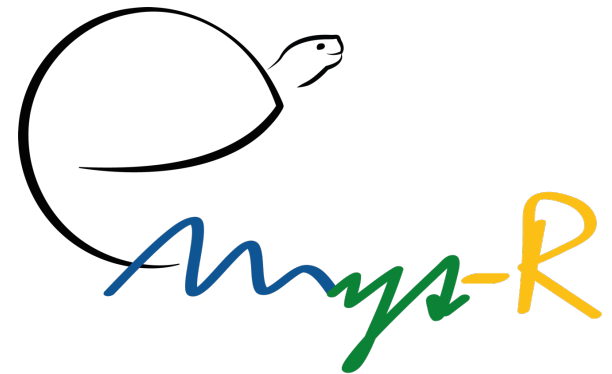


Acknowledgement

- National Agency for Research (ANR), France
- Federal Ministry of Education and Research (BMBF), Germany
- State Education Development Agency (VIAA), Latvia
- National Science Center (NCN), Poland



Latvian Council
of Science



www.emysr.cnrs.fr



BiodivRestore has received funding from the European Union's Horizon 2020 research and innovation programme under the grant agreement No 101003777



innovation programme under the

Translocations of flora and fauna for conservation and restoration: ecological, evolutionary, and socio-economic impacts at multiple scales.

Transloc

François SARRAZIN
Coordinator

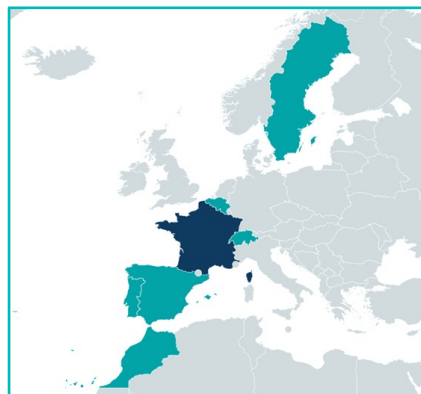
Coordinator - Partner 1 *France*
Muséum National d'Histoire Naturelle (MNHN) – CESCO
Res. François Sarrazin

Partner 2 *France*
Biotope
Res. Fabien Quetier, Anna Deffner

Partner 3 *Spain*
Universidad Rey Juan Carlos
Res. Alfredo Garcia

Partner 4 *Portugal*
FCiências.ID-- Associação para a Investigação e Desenvolvimento de Ciências
Res Fernando Ascensão

Partner 5 *France*
Université Paris-Saclay, Laboratoire Ecologie, Systématique et Evolution
Res. Bruno Colas



Partner 6 *Belgium*
Uliège
Res. Marc Dufrene

Partner 7 *Morocco*
Sultan Moulay Sliman University
Res. Sidi Imad Cherkaoui & El Hassan Abba

Partner 8 *Sweden*
Swedish University of Agricultural Sciences
Res. Guillaume Chapron

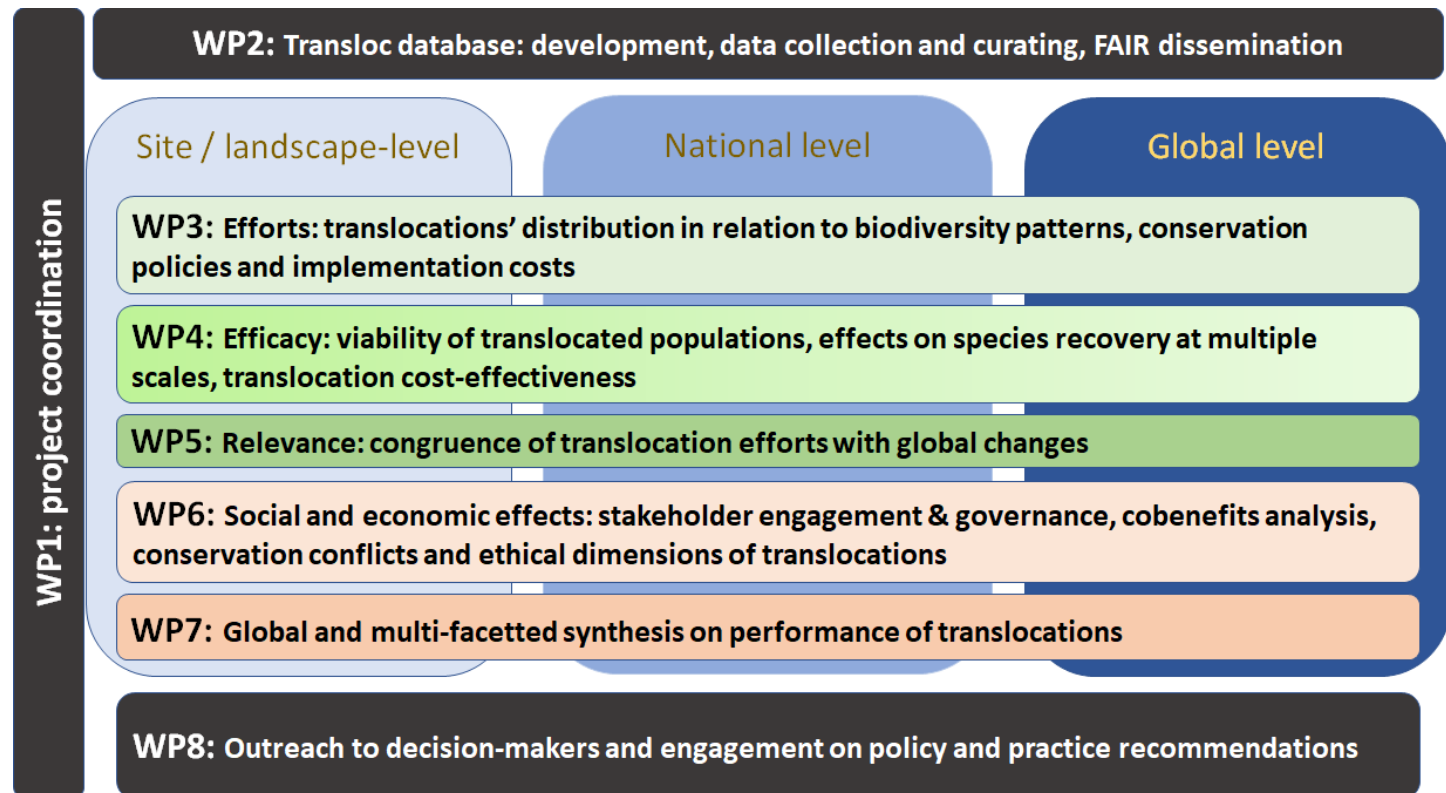
Partner 9 *Switzerland*
University of Bern
Res. Markus Fischer

Partner 10 *France*
Muséum national d'Histoire naturelle – BBES
Res. Cécile Callou

Objectives and project description

- Investigate and quantify how conservation translocations impact restoration
- Ecological, evolutionary and sociological dimensions from local to global scales.
- Mix of large databases and accurate case studies

WP	Partners in charge
1	1
2	5 & 10
3	1 & 5
4	1 & 9
5	4 & 6
6	1 & 5
7	6 & 9
8	2 & 8



Expected Scientific Impact

Expected impact from the scientific and innovation point of view

- i) Documentation (WP2) and definition of standards for translocation preparation, monitoring and reporting
- ii) Understanding of translocation efforts (WP3):
 - Contribution to the conservation of phylogenetic and functional diversity in Europe
 - Effects of EU policies on translocation initiatives
 - Assess the influence of economic costs and legal and administrative constraints on translocation initiatives
- iii) Understanding of translocation efficacy (WP4)
 - Define demographic translocation success criteria beyond the diversity of generation times
 - Consider cost-effectiveness dimensions of success and efficacy
- iv) Assessing the relevance of translocations (WP5)
 - Measuring the congruence of reintroductions with global changes
 - Assess how translocated species disperse to better environments given the anthropogenic barriers
- v) Define global and multi-faceted synthesis on performance of translocation (WP7)
 - Combine efforts efficacy, relevance and social (WP6) dimensions

Potential breakthroughs

- Identify proxies of the restoration of evolutionary potential
- Mixing functional and evolutionary dimensions of populations translocations
- Define “united” short and long terms translocation success criteria relevant for a wide range of life forms, environments, local practices and target
- Contribute to the developments of standards of translocated population monitoring from ecological and sociological point of views



Expected Societal & Policy Impact

Main societal challenges and/or policy issues.

- i) Assess the diversity of the “human dimensions” of translocation projects (WP6).
 - Examine actor’s awareness and use of different measures to influence satisfaction, conflicts, and socio-ecological outcomes
 - Assess the socio-economic consequences (even non monetary) of translocations
- ii) Assess shift in actor’s satisfaction, perceptions, or values over the course of translocations (WP6)
 - Case studies including large mammals (e.g. bison) and birds (e.g. vultures) as well as plants (e.g. bristly bellflower or wild tulips)
 - Various methods (unstructured and semi-structured interviews in the field, questionnaires, document analysis, companion modelling ,serious games *in situ*)

Stakeholders engagement.

- WP2 (database) to identify stakeholders, and WP 3 (efforts) to prioritise them (following Biodiversa stakeholder engagement handbook)
- Interviews and stakeholder workshops to develop in a participatory manner conceptual models
- Use a subset of translocations involving large animal species such as the European bison and vultures e.g. Parc national des Cevennes and LPO, local farmers

Expected impact from the societal and policy point of view.

- Assessing and valuing the contribution of translocation to the restoration of biodiversity within socio ecosystems from local to global scales
- Feedback of translocation on values and behaviours in translocation sites and at larger scales
- Embrace short and long-time scales and be anchored to regional, national and European policies and financing mechanisms
- Potential renewal of 2013 IUCN guidelines, and new guidelines on rewilding
- Contact EU stakeholders about the drafting process of the proposed Nature Restoration Directive announced by the European Commission based on WP2.

Dissemination of the information

- High number of interactions with local, national and European stakeholders (WP2)
- Outreach through a dedicated work package (WP 8), for selected stakeholders and key decision makers
- Press releases and communication to a wide audience through a dedicated website linked to the TransLoc database (WP2)
- Final symposium for a broader public, stakeholders, decision-makers and a more scientific audience, recorded to be a deliverable



Acknowledgement

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Royaume du Maroc

Ministère de l'Éducation Nationale, de la Formation

Professionnelle, de l'Enseignement Supérieur et de la Recherche Scientifique

Département de l'Enseignement Supérieur et de la Recherche Scientifique

Funding Agencies

Portugal / FCT



Spain / AEI



Sweden / SEPA



Switzerland / SNSF



Private Partner

Biotope



BiodivRestore has received funding from the European Union under the grant agreement No 101003777



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PRESENTATION OF THE FUNDED PROJECTS

(session 2/5)

FIRST: BioReset - Biodiversity restoration and conservation of inland water ecosystems for environmental and human well-being, by *Cristina Delerue-Matos*

FreshRestore - Holistic evaluation and restoration measures of human impacts on freshwater ecosystems across biogeographical gradients, by *Kim Magnus Bærum*

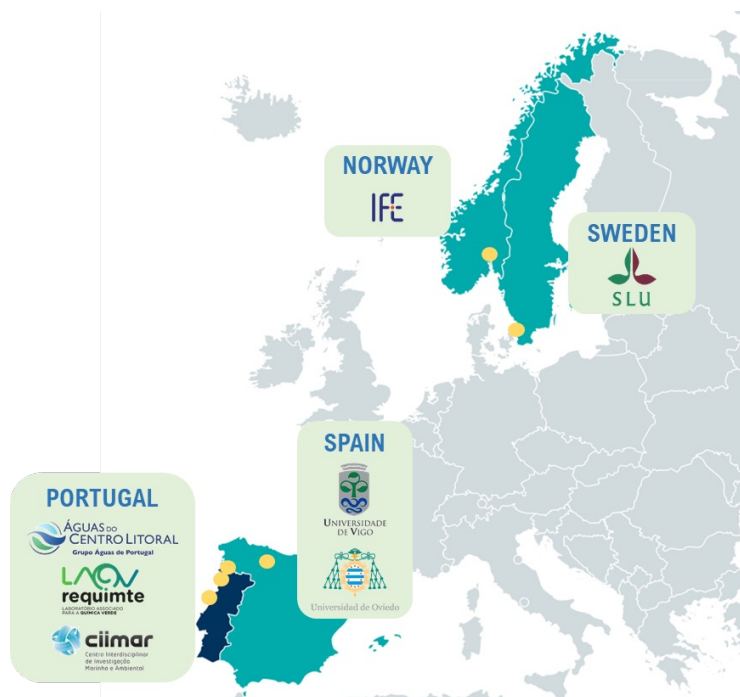
RESTOLINK - Quantifying restoration success across biomes by linking biodiversity, multifunctionality and hydromorphological heterogeneity, by *Mario Brauns*

RESPOND - Restoring and Managing Biodiversity and Ecosystem Services of Temporary Pond Landscapes, by *Bram Vanschoenwinkel*



Biodiversity restoration and conservation of inland water ecosystems for environmental and human well-being - BioReset

Cristina Delerue-Matos (REQUIMTE; cmm@isep.ipp.pt)



Partners	Country
REQUIMTE – Rede de Química e Tecnologia	Portugal
CIIMAR - Centro Interdisciplinar de Investigação Marinha e Ambiental	Portugal
AdCL – Águas do Centro Litoral	Portugal
IFE - Institute for Energy Technology	Norway
UVigo - Universidad de Vigo	Spain
UNIOVI – Universidad de Oviedo	Spain
SLU - Swedish University of Agricultural Sciences	Sweden

Objectives and project description

BioReset will directly contribute to European policies, namely by tackling two main environmental objectives of the European Union's promoting Biodiversity and attending Water Quality.

WP1 - Analytical methods to analyze emerging contaminants in inland waters

Task 1.1 LC-MS/MS (pharmaceuticals) and GC-Pyr-MS/MS (microplastics) monitoring

Task 1.2 Development of innovative analytical devices for pharmaceuticals and plastic-related chemicals screening



BIORESET

WP2 - Improving the effectiveness and upscaling of wastewater treatments

Task 2.1 Advanced oxidation processes with simultaneous adsorption

Task 2.2 Green bioremediation with white-rot fungi

Task 2.3 Technological approaches for the removal of microplastics

Task 2.4 Environmental, Economic and Biodiversity Life Cycle Assessments



WP3 - Evaluation of ecosystem conservation and restoration: diatom biofilms

Task 3.1 Development and stabilization of diatom biofilms

Task 3.2 System degradation by pharmaceuticals and microplastics

Task 3.3 System conservation and restoration

Task 3.4 Field studies for ecosystem restoration

WP4 - Dissemination

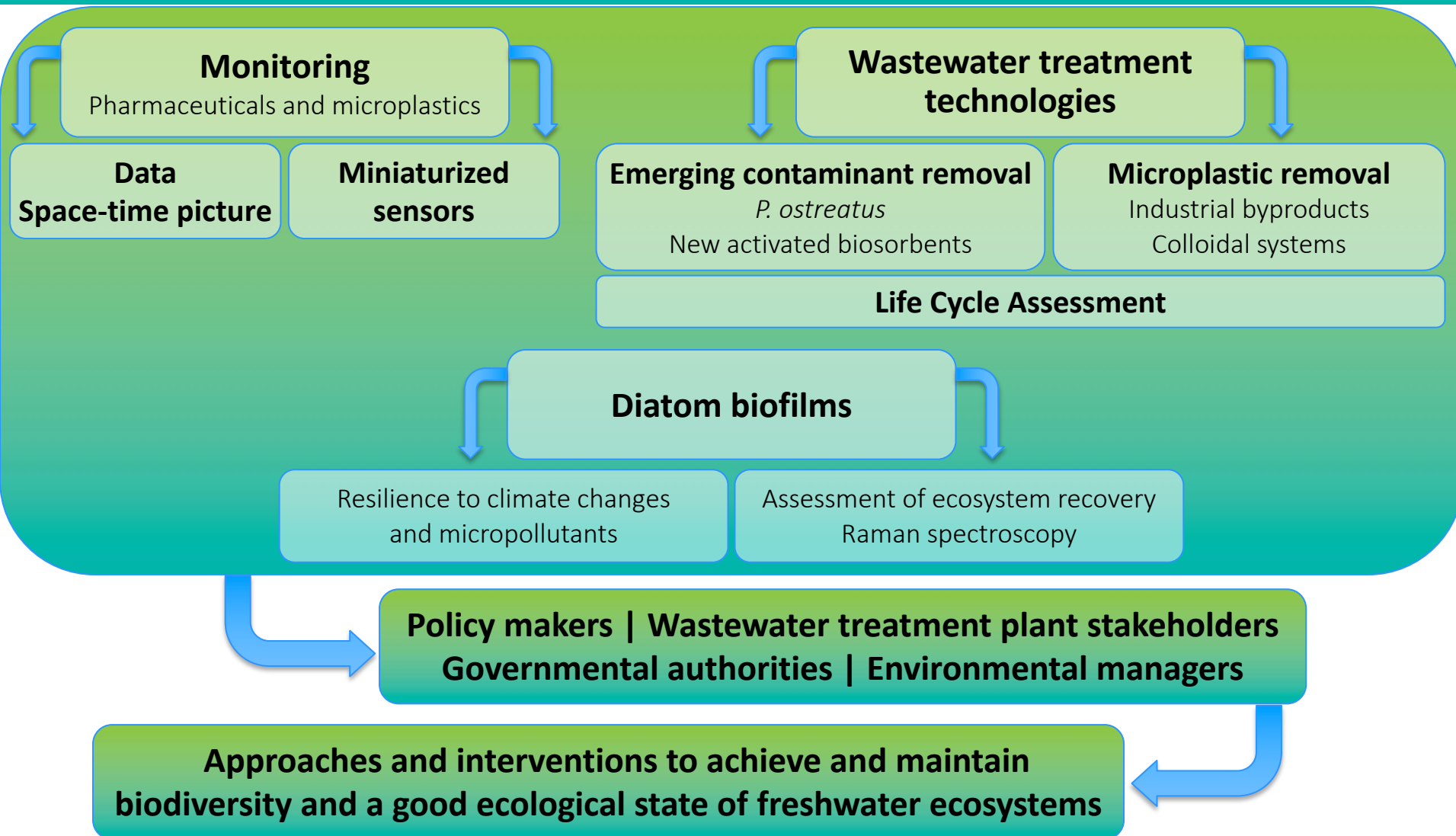
WP5 - Management

WP	Title (leader, partners involved)	Start	End
1	Analytical methods to analyze emerging contaminants in inland waters (REQUIMTE , UNIOVI, IFE, AdCL)	2	35
	Validation and application of analytical methods to monitor EC		
2	Improving the effectiveness and upscaling of wastewater treatments (UVIGO , UNIOVI, REQUIMTE , SLU, IFE, AdCL)	2	35
	Development and testing of remediation processes for EC removal		
3	Evaluation of ecosystem conservation and restoration: diatom biofilms (CIIMAR , all partners)	2	35
	Development of diatom Raman spectroscopy to assess ecosystem resilience and recovery		
4	Dissemination (UNIOVI , all partners)	1	36
5	Management (REQUIMTE , all partners)	1	36



BiodivRestore has received funding from the European Union's Horizon 2020 research and innovation programme under the grant agreement No 101003777

Expected Scientific Impact



Expected Societal & Policy Impact

European Green Deal and several UN's Sustainable Development Goals (SDG)

SDG 6 - Clean water and sanitation | SDG 15 - Life on land | SDG 17 - Partnerships for the goals
2030 targets of the post-2020 Global Biodiversity Framework

Communication and outreach

Immediate stakeholders (*industry & academia*)

- ✓ Publication in scientific journals
- ✓ Presentations in conferences
- ✓ International workshop at the end of the project
- ✓ 4 newsletters
- ✓ Promotional material in digital format

Secondary stakeholders (*media, policymakers, public authorities, society*)

- ✓ Opportunities, risks, and practical recommendations for policymakers related to WWTP
- ✓ Press releases
- ✓ Promotional material in digital format

Students

- ✓ Seminars and/or short courses
- ✓ Integration of the project's results in courses
- ✓ Open Days
- ✓ Science Week
- ✓ "Ocupação Científica de Jovens nas Férias"
- ✓ PhD & MSc theses

www2.isep.ipp.pt/bioreset



Acknowledgement



Agencia Estatal de Investigación (AEI), Spain



Fundação para a Ciência e a Tecnologia (FCT), Portugal



Swedish Environmental Protection Agency (SEPA), Sweden



The Research Council of Norway (RCN), Norway



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innovation programme under the

Holistic evaluation and restoration measures of human impacts on freshwater ecosystems across biogeographical gradients

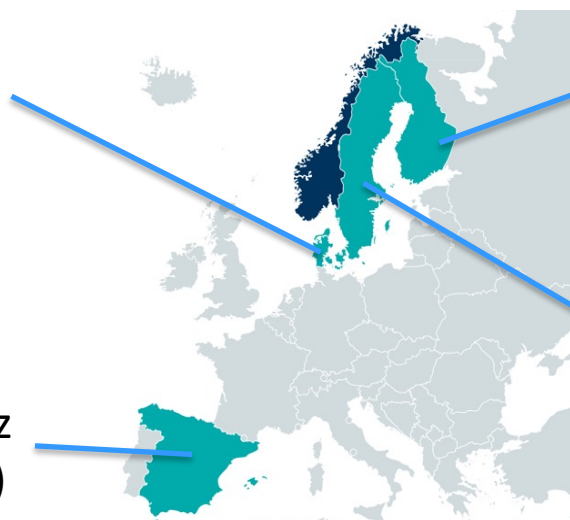
FreshRestore



Kim Magnus Bærum (PI, Norwegian partner)



Berit Hasler
(DK)



Antti Eloranta (FI)



Pär Byström (SE)



Javier Sánchez
Hernández (S)



Objectives and project description

Connecting global and local stressors to ecological drivers (N)



Cost efficient nature-based solutions targeting local stressors (DK, all)

Population dynamics and functional diversity (SE,N)

Community dynamics and functional diversity (S, FI)



Expected Scientific Impact

**Functional diversity x
anthropogenic drivers**

**Integrated socio-
ecological tools for
the future**

**Size-dependent responses
to environmental changes**



**Impacts on, and
interaction of, different
biodiversity dimensions**



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Expected Societal & Policy Impact

**Resilience and adaptive
capacity to climate-
related hazards**



**The value of
ecosystem services**

**Facilitates effective
revision of current
policies and approaches**

**Knowledge transfer and
exploitation of results**



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Acknowledgement



Forskningsrådet
The Research Council of Norway

Innovation Fund Denmark



The Swedish Environmental
Protection Agency



State Research Agency
(Spain)



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Water
JPI

Innovation programme under the

Quantifying restoration success across biomes by linking biodiversity, multifunctionality and hydromorphological heterogeneity (RESTOLINK)

Mario Brauns (Helmholtz Centre for Environmental Research - UFZ)



@RestolinkP

<https://restolink.weebly.com/>

Quantifying restoration success across biomes by linking biodiversity, multifunctionality and hydromorphological heterogeneity (RESTOLINK)

Ryan Sponseller, Lina Polvi Sjöberg (*Umeå University-UMU*)

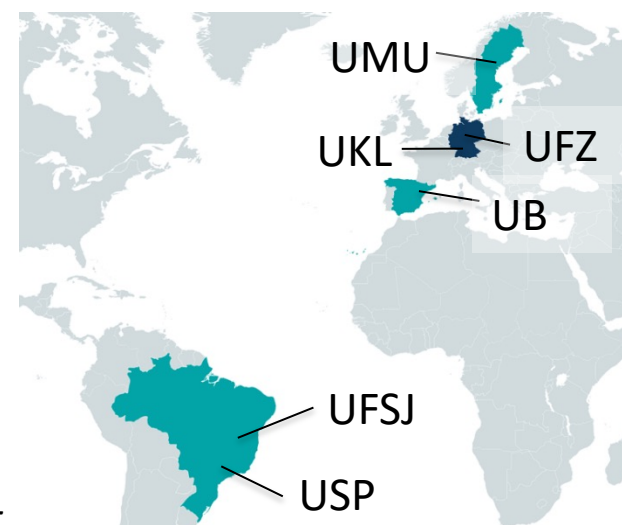
Mario Brauns, Patrick Fink, Markus Weitere (*Helmholtz Centre for Environmental Research-UFZ*)

Christine Anlanger, Andreas Lorke (*University of Koblenz-Landau-UKL*)

Daniel von Schiller, Andrea Butturini, Biel Obrador, Francesc Sabater, Margarita Mendez Lopez, Maria Isabel Muñoz Gracia (*University of Barcelona-UB*)

Björn Gücker, Iola G. Boëchat (*Federal University of São João del-Rei-UFSJ*)

Davi Gasparini Fernandes Cunha, Juliano Corbi (*University of São Paulo-USP*)

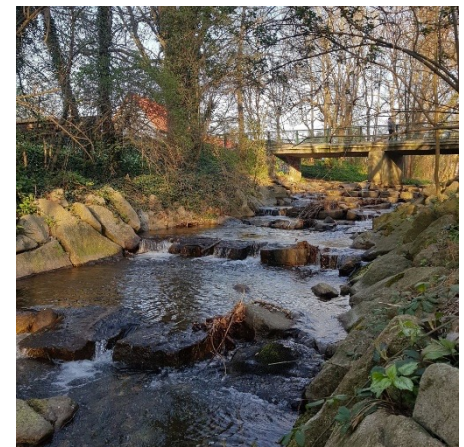
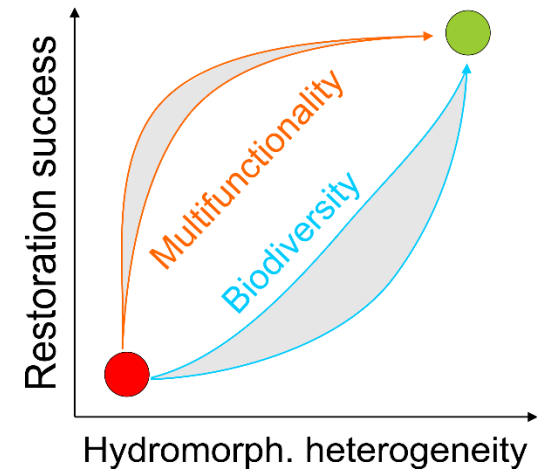


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Objectives and project description

Novel framework for quantifying restoration success that connects hydromorphology with biodiversity and essential ecosystem functions

- Hydromorphological scales that need to be restored to induce recovery of microbial and macrobial biodiversity
- Uncertainties of biodiversity and (multi)functional restoration targets associated with Biomes
- Deciphering the role of biodiversity for ecosystem functioning
- Ecosystem functions as new indicators of restoration success



Expected scientific impact

- Novel understanding of the functional role of biodiversity (Biodiversity-ecosystem function relationship)
- Application of the concept of ecosystem multifunctionality to streams
- Quantify the role of hydromorphology on biodiversity and ecosystem functioning
- Operationalise the concept of ecosystem services



Expected societal & policy impact

Policy relevance

- **EU Biodiversity strategy 2030:** Guide how stream hydromorphology must be restoration to return biodiversity and functioning to sustainable levels
- **Aichi aims of Convention on Biological Diversity and EU Water Framework Directive:** Functions as indicators of early restoration success and ecosystem status

Stakeholder panel

- Catalan Water Agency (ES), County Board of Västerbotten (SE), German Environment Agency (DE), Federal Agency for Nature Conservation (DE), Environmental Agency of the State of São Paulo (BR)
- To be engaged in biannual online workshops



Acknowledgement

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ENVIRONMENTAL
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AGENCY

Agencia Estatal de Investigación (Spain) (funding decision pending)

Federal Ministry of Education and Research (Germany)

São Paulo Research Foundation (Brazil)

Swedish Environmental Protection Agency (Sweden)



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innovation programme under the



ResPond

**Restoring and Managing Biodiversity and
Ecosystem Services in Temporary Pond Landscapes**



Bram Vanschoenwinkel (P1, coordinator, VUB, Belgium)

Luc Brendonck (P2, KULeuven, Belgium)

Bartłomiej Gołdyn (P3, Adam Mickiewicz University)

Margarita Florencio (P4, Universidad Autónoma de Madrid)

Laila Rhazi (P5, University Mohammed V Rabat)

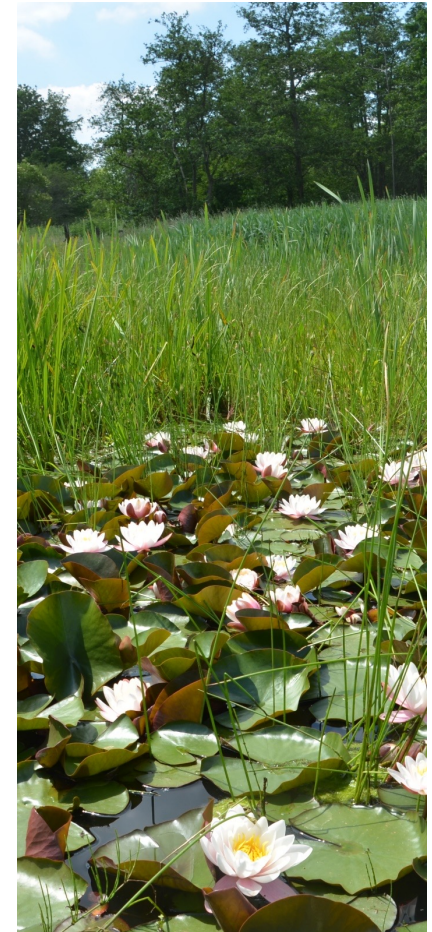


Temporary ponds



Challenges

- 1. Most temporary ponds in Europe are unprotected.**
- 2. Most temporary ponds in Europe are degraded.**
- 3. Temporary pond restoration and creation projects have had variable success.**
- 4. Ecosystem services delivered by temporary ponds are poorly understood**
- 5. Temporary ponds are poorly known and have a bad reputation**

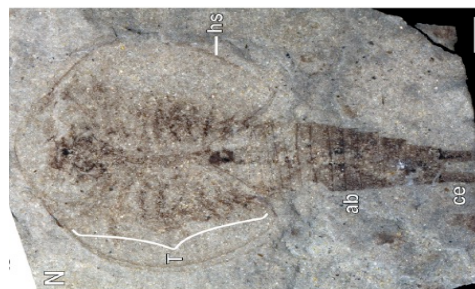
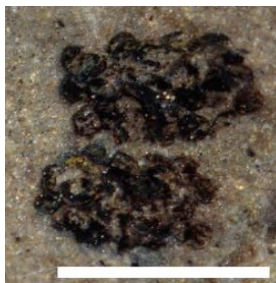
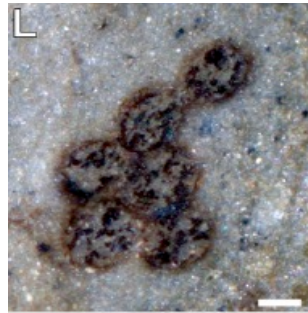
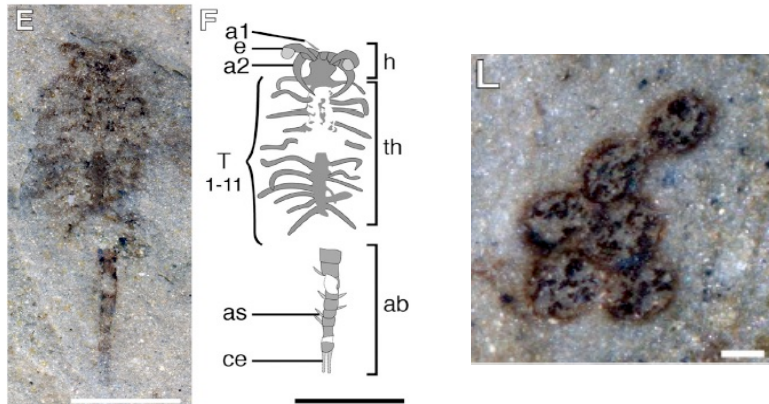


Deliverables

1. Most temporary ponds in Europe are unprotected.
→ Develop an **effective conservation framework**
2. Most temporary ponds in Europe are degraded.
→ Develop **guidelines to reduce degradation**
3. Temporary pond restoration and creation projects have had variable success.
→ Develop **guidelines to improve creation and restoration**
4. Ecosystem services delivered by temporary ponds are poorly understood
→ **Quantifying ecosystem services and disservices**
5. Temporary ponds are poorly known and have a bad reputation
→ **Raising awareness** about temporary pond ecosystems and the strategies needed to preserve them

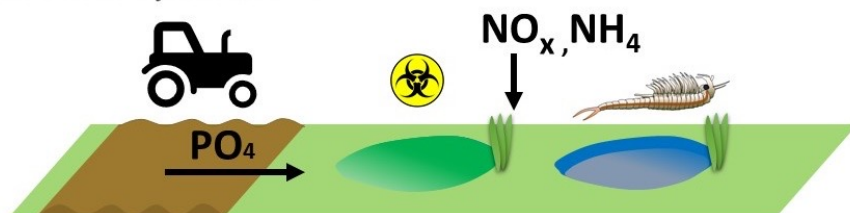


The role of ancient ecosystem engineers

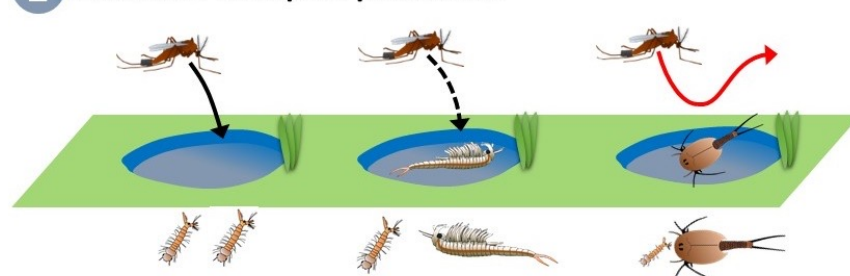


The role of ancient ecosystem engineers

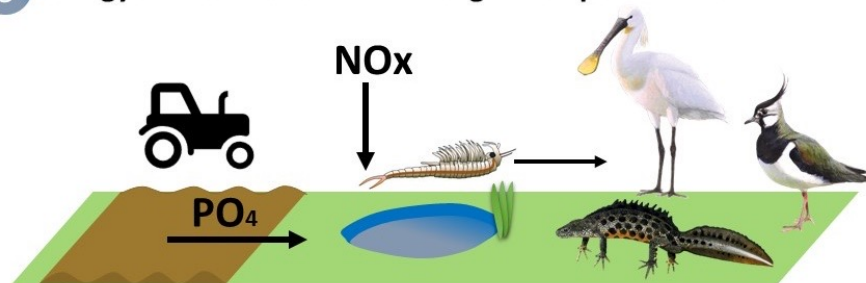
1 Control of cyanobacteria



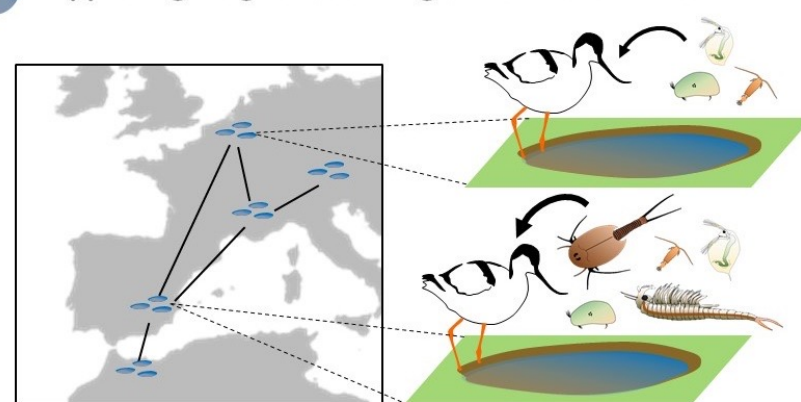
2 Reduction mosquito production



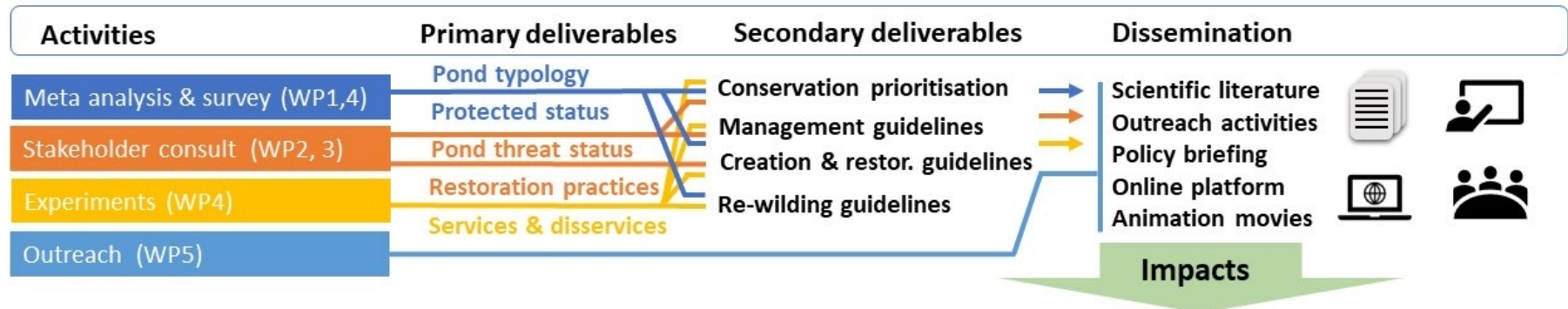
3 Energy & nutrient transfer to higher trophic levels



4 Supporting long distance migration of water birds

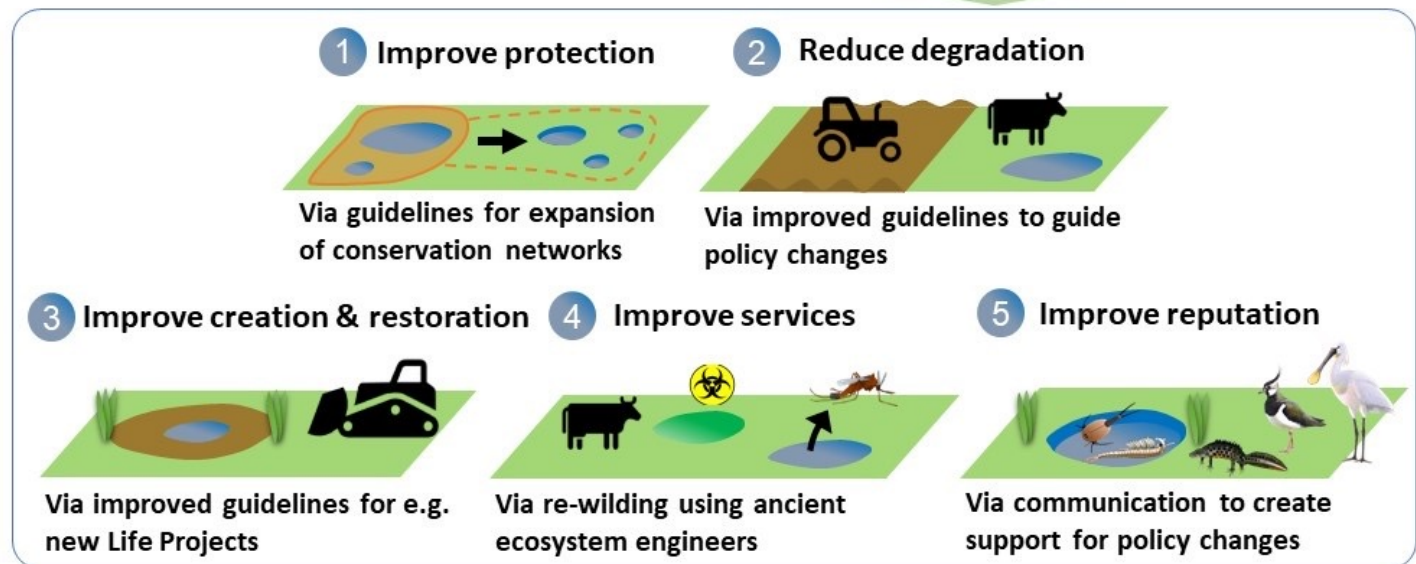


Link between activities, deliverables and impact



ResPond

Restoring and Managing
Biodiversity and Ecosystem
Services of Temporary Pond
Landscapes



Stakeholders

Group	Stakeholders	Engagement	Stage	Int.	Inf.	Means of communication
Gov. policy makers	EU organs ⁺	(Involve)	WP3-5	Int	High	pol. brief, directly, symp.
	Nat. and reg. organs*	Involve	C, WP3-5	High	High	directly, pol. brief
European pond scientists	EPCN	Collaborate	C, WP5	High	High	directly, symposium, SI papers
	Freshwater Habitat Trust	Collaborate	C, WP5	High	High	directly, symposium
Land owners & managers	LIFE project coordinators	Involve	WP3	High	Int	symposium, directly
	National parks**	Involve	WP2,3, 5	Int	High	directly, pol. brief
	Nature managers***	Involve	WP 3, 5	Int	High	vulg. articles, lectures
	Farmers organizations****	(Consult)	WP5	Low	Int	pol. briefing
NGOs	WWF	(Consult)	WP5	Int	Int	pol. briefing
	Birdlife international	(Consult)	WP5	Int	Int	pol. brief, vulg. articles
Public	General public	Inform	WP5	Low	Low	media, online movies, signs
	Local communities	Inform	WP2,5	Low	Int	Directly, media, signs, folders

Int = interest, Inf = influence, () engagement is not yet initiated , C = conception project, + Rural development committee, European Environmental Agency, * regional gov. of Madrid, Andalusia (Sp), Institute of Nature and Forestry (B), Agency for Restructuring and Modernisation of Agriculture (PI), State Forests (PI), Haut-Commissariat aux Eaux et Forêts et à la Lutte contre la Désertification (M), Direction régionale de l'agriculture (M) , ** Zwin (B), Doñana national park (Sp), Warta River-Mouth National Park (PI), ***Natuurpunt (B), Naturalist Club (PI), Association des Sciences de la Vie et de la Terre (M) **** Boerenbond (B), Assoc. Sustainable Agriculture in Poland (PI) pol. brief = Policy briefing



Acknowledgements



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**National
Science
Centre**
Poland



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INVESTIGACIÓN**



Royaume du Maroc
Ministère de l'Éducation Nationale,
de la Formation Professionnelle,
de l'enseignement supérieur
et de la Recherche Scientifique

Research Foundation Flanders – Belgium

State Research Agency – Spain

National Science Center – Poland

**Ministry of National Education, Vocational Training, Higher Education
and Scientific Research – Morocco (MENFPESRS)**



BiodivRestore has received funding from the European Union's Horizon 2020 research and innovation programme under the grant agreement No 101003777

PRESENTATION OF THE FUNDED PROJECTS

(session 3/5)

FIRST: BIOCONSENT - Decision-making Support for Forest Biodiversity Conservation and Restoration Policy and Management in Europe: Trade-offs and Synergies at the Forest-BiodiversityClimate-Water Nexus, by *Metodi Sotirov*

FRESHH - Farmer acceptable REstoration of Semi-natural Habitat to limit Herbicides, by *David Bohan*

InterRest - Interactive effects of local and landscape scale restoration of semi-natural grasslands and agricultural fields on species interactions and ecosystem functions in different social-ecological systems, by *Catrin Westphal*

NARROW - NARRatives On restored Water, by *Håkan Tunon*

ReVersal - Restoring peatlands of the nemoral zone under conditions of varying water supply and quality, by *Klaus-Holger Knorr*





Decision-making Support for Forest Biodiversity Conservation and Restoration
Policy and Management in Europe: Trade-offs and Synergies at the Forest-
Biodiversity-Climate-Water Nexus
BIOCONSENT

Metodi Sotirov (University of Freiburg, Germany)

Project consortium:

University of Freiburg (ALU-FR) Germany (*coordinator*)

Luleå Technical University (LTU SE) Sweden

Swedish University of Agricultural Sciences (SLU) Umeå Sweden

European Forest Institute (EFI FI) Bioeconomy Programme Joensuu Finland

European Forest Institute (EFI DE) Resilience Programme Bonn Germany

University of Forestry (LTU BG) Sofia Bulgaria

International Institute for Applied Systems Analysis (IIASA) Laxenburg Austria

Forest Sciences and Technology Center of Catalonia (CTFC) Spain



Objectives and project description

Main objective: to provide novel scientific knowledge and decision-making support to help achieve forest biodiversity conservation and restoration regarding ambitious policy targets.

Main tasks and activities

- **WP1 Policy analysis** (lead LTU SE, CTFC; all partners)
 - Map policy targets and instruments, and assess the cross-sectoral policy integration and actor coordination at the biodiversity-forestry-climate-water nexus
- **WP2 Scenarios and behavioural responses** (lead: ALU-FR, EFI DE; all partners)
 - Explore forest owners' and conservation managers' behavioral changes under different scenarios towards sustainable socio-ecological systems with improved forest biodiversity status
- **WP3: Improved socio-ecological forest systems modelling** (lead EFI FI, IIASA; all partners)
 - Integrate biophysical, socio-economic and policy drivers of forest conservation in modelling tools
 - Quantify and assess the outcomes of alternative conservation and restoration measures on forest biodiversity and ecosystem service provision across spatial and temporal scales
- **WP4: Synthesis and dissemination** (lead: ALU-FR, LTU SE)
 - Upscale and communicate project findings and co-design policy and management recommendations



Expected Scientific Impact

- **Integrated socioecological system approach**
 - Policy analysis, scenario development, behavioural experiments and forest modelling in six case studies (EU and sub-national level)
 - Novel scientific articles and popular publications
- Innovative ways to explore **pathways of change** through linking **policy drivers and forest managers' behavioural responses**
 - Innovative action research and participatory methods
 - Online exchange, on-site training and IT-support
- Novel techniques to integrate **human behaviour in forest models** to bridge across spatial scales from stand to EU level
 - New forest simulation models enhanced with human agent-based drivers

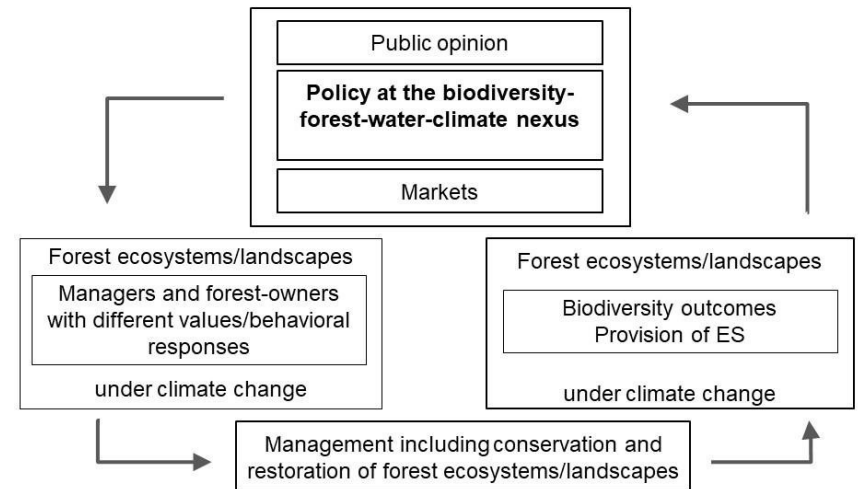


Figure 1: BIOCONSENT integrated socio-ecological system approach



Expected Societal & Policy Impact

- **Main societal challenges and policy issues**
 - Despite ambitious global and EU **policy targets**, forest biodiversity is under increasing **threat**
 - Effective restoration and conservation needs cross-sectoral and multi-level **policy coherence** and supportive forest **managers' behaviour**
 - Managers have to respond to multiple policy and socio-economic drivers making **trade-offs** under complexity, uncertainty and climate change
- **Main societal and policy contribution**
 - **EU policy framework:** European Green Deal, the EU Biodiversity Strategy to 2030, the EU Forest Strategy to 2030, the EU Habitats Directive and the EU Water Framework Directive
 - **National policy framework:** forest biodiversity conservation and restoration related policies
 - Enhanced **decision support tools** enabling decision makers to make informed choices, explore synergies, and balance trade-offs
 - Scientific papers, practitioners' publications; new maps, tablet software, **EU policy paper**, **practitioners' recommendations**.

Table 1: Stakeholder engagement and dissemination

Dissemination tools	Target audiences			Project year	
	Practitioners	Scientific community	Policy makers	1 and 2	3
Project website (1 x)	X	X	X	X	X
Social media networks	X	X	X	X	X
EU Policy paper (x1) and Project briefs (2x)	X	X	X		X
Hands-On-Manual for Practitioners (1x)	X				X
Scientific conferences		X		X	X
Scientific publications (x 10)	(X)	X	(X)		X
Workshops / EU conference	X	X	X	X	X



Acknowledgement

Funders:

- *Austrian Science Fund (FWF), Austria*
- *Bulgarian National Science Fund (BNSF), Bulgaria*
- *Academy of Finland (AKA), Finland*
- *German Federal Ministry of Education and Research (BMBF), through VDI/VDE-IT, Germany*
- *Agencia Estatal de Investigación (AEI), Spain*
- *The Swedish Environmental Protection Agency (SEPA), Sweden*



BiodivRestore has received funding from the European Union under the grant agreement No 101003777



innovation programme under the

Farmer acceptable REstoration of Semi-natural Habitat to limit Herbicides FRESHH

David A. Bohan (Partner 1)

*INRAE (France), CRI (Czech Republic),
Uni of Innsbruck (Austria), SLU (Sweden)
and
Wageningen (the Netherlands)*



Objectives and project description

We know that carabid beetles could replace herbicide applications, improving the flora and freshwaters of agricultural landscapes.

These (agroecological) agents are not acceptable to farmers – the question is why?

We are interested in farmer decision-making and whether we can improve the acceptability of agroecological approaches with appropriate information at the appropriate scale for greater adoption and better landscape restoration

Working with farmers, FRESHH will co-develop acceptable practices to conserve carabid beetles, reducing herbicide use and run-off, and thereby restoring flora and benefiting aquatic biodiversity at EU scales. FRESHH will attempt to show whether the effects of this approach would 'rewild' the system.

France (Project Lead, Socio-economics and Ecology); Czech Republic (Ecology & Socio-economics); Austria (eDNA metabarcoding of freshwater biodiversity); Sweden (Ecology); and, the Netherlands (Ecological analysis)



Expected Scientific Impact

Expected impact

FRESHH will work to understand the costs and benefits, and opportunities and constraints of supporting weed seed feeding carabids to reduce reliance on herbicides and restore terrestrial and aquatic habitats. Improved farmer knowledge and stakeholder cooperation, will lead to greater (acceptable) adoption and restoration.

Potential breakthroughs

Our socio-economic work with farmers will test whether including agronomic, socio-economic and ecological information from different landscape scales will leverage greater adoption of agroecological management to conserve carabid beetles, off-set herbicide use, restore semi-natural flora and benefit aquatic biodiversity (across the EU), and serve as a model for more sustainable, landscape-scale practices.



Expected Societal & Policy Impact

Societal Impact

Communicating the benefits and costs of agroecological management to farmers and stakeholders will lead to greater (acceptability) adoption and restoration, and serve as a model for more sustainable, landscape-scale practices.

Policy Impact

Rewilding and agricultural landscape conservation, for better environmental health, are core requirements of several leading visions and policies for the future of farming, including the UN SDGs, the Common Agricultural Policy, the Green Deal, the EU Nature Restoration and Biodiversity Strategies, and the Water Framework Directive.

Dissemination

FRESHH is explicitly bottom-up, working directly with farmer networks, nationally, and stakeholders, from water companies to the public living in agricultural landscapes. This is our primary mode of dissemination.



Acknowledgements

Agence Nationale de la Recherche (ANR), France



Technology Agency of the Czech Republic (TAČR), Czech Republic



Austrian Science Fund (FWF), Austria



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The Swedish Environmental Protection Agency (SEPA), Sweden



SWEDISH ENVIRONMENTAL
PROTECTION AGENCY

Ministry of Agriculture, Nature and Food Quality (LNV), Netherlands



Ministry of Agriculture, Nature and
Food Quality of the Netherlands



BiodivRestore has received funding from the European Union under grant agreement No 101003777



innovation programme under the

Interactive effects of local and landscape scale restoration of semi-natural grasslands and agricultural fields on species interactions and ecosystem functions in different social-ecological systems

InterRest

Annika Hass & Catrin Westphal (University of Göttingen, Germany)

University of Tartu, Estonia

Centro de Ciencia y Tecnología Forestal de Cataluña (CTFC), Spain

Universidad Autónoma de Madrid, Spain

Stockholm University, Sweden

KU Leuven, Belgium

Wageningen University, Netherlands

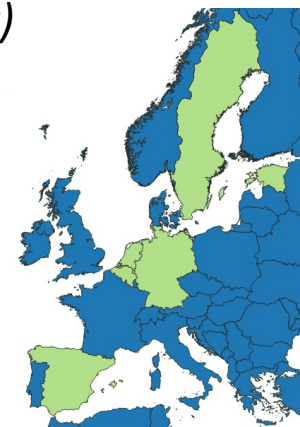


Photo: Gerard Bota



Photo: Aveliina Helm



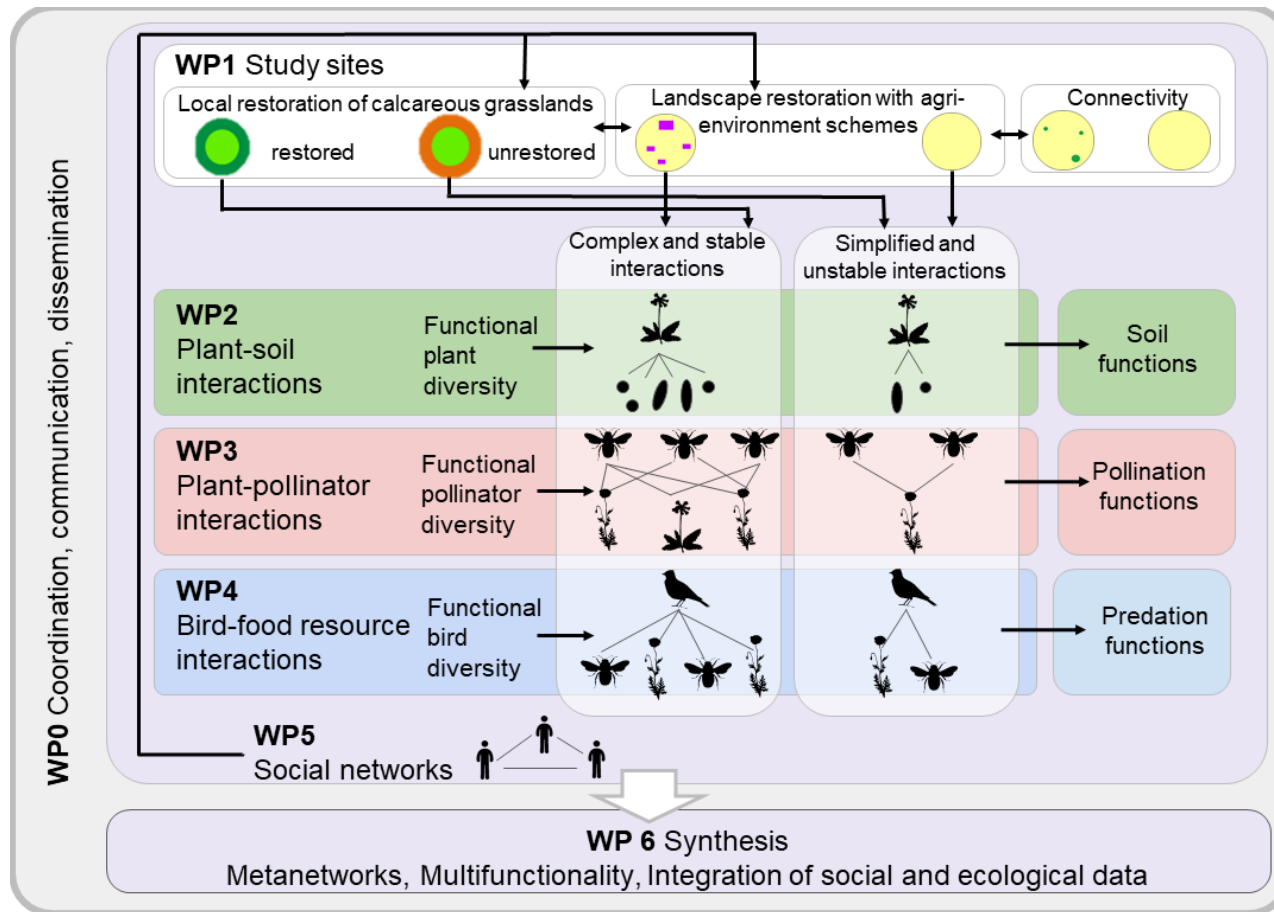
Photo: Birgit Jauker



Photo: Frank Jauker

Objectives and project description

- **Local and landscape restoration effects on biotic interactions in calcareous grasslands**
- **Effects of social interactions on restoration success**



96 grasslands in 3 countries

WP0 University of Göttingen

WP1 University of Göttingen,
University of Tartu, CTFC

WP2 University of Tartu

WP3 University of Göttingen,
KU Leuven

WP4 CTFC, Universidad
Autónoma de Madrid

WP5 Stockholm University

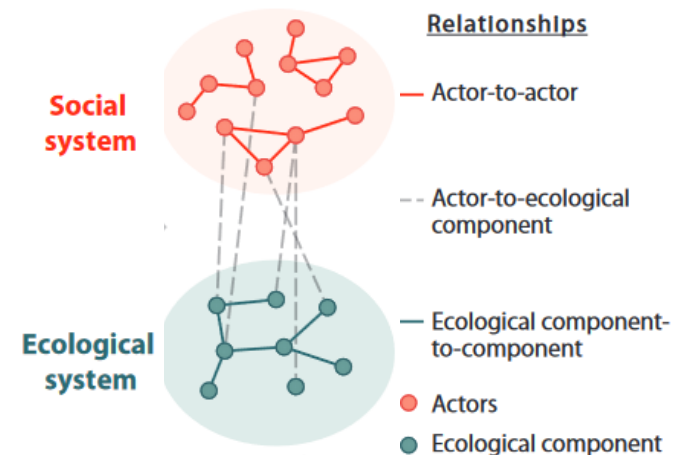
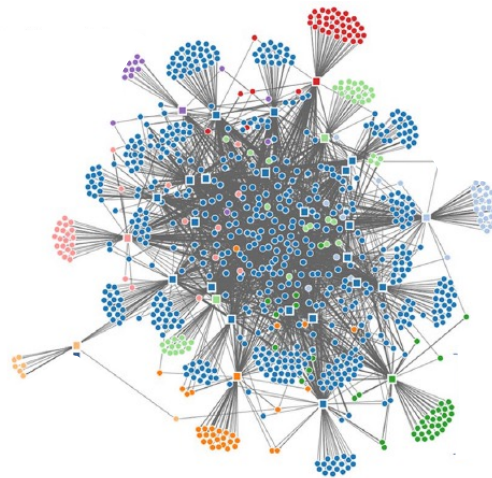
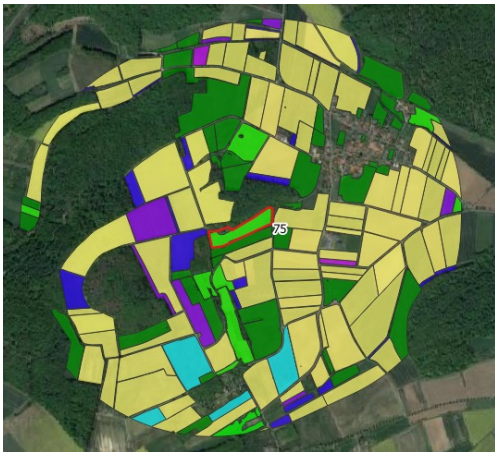
WP6 University of Göttingen,
Wageningen University



BiodivRestore has received funding from the European Union's Horizon 2020 research and innovation programme under the grant agreement No 101003777

Expected Scientific Impact

- *Restoration effects on different biodiversity components: **functional diversity, species interactions** and **ecosystem functions***
- *Relations between biodiversity components*
- *Upscaling of restoration to **landscape scale***
 - *Consideration of agri-environment schemes at the landscape scale*
 - *Meta-networks*
- *Combining **species interaction networks** with **social networks***



Expected Societal & Policy Impact

- **Recommendations** for restoration of semi-natural calcareous grasslands
- Identify possible **trade-offs** and **priority sites/interactions** (metanetworks)
- **Upscaling** to other regions
- Identification of **social requirements** for successful restoration
- Inform EU Biodiversity Strategy, Habitat Directive, Common Agricultural Policy

	Level of engagement	Inform						Consult	Involve	Collaborate	
	Method of engagement	Web-site	Social media	Public talks	Press releases	Policy briefs	Scientific publications	Scientific conferences	Questionnaires	Workshop	One-to-one meetings
	Months of the project	1-36	1-36	18+36	1+18-36	36	18-36	12-36	1-18	36	1-36
Stakeholder group	Authorities										
	NGOs										
	Farmers and landowners										
	Local businesses										
	Policy makers										
	Scientific community										
	Citizens and general public										



Acknowledgement

The InterRest Team



Funded by



SWEDISH ENVIRONMENTAL
PROTECTION AGENCY



Deutsche
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Estonian
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Ministry of Agriculture, Nature and
Food Quality of the Netherlands



BiodivRestore has received funding from the European Union's Horizon
grant agreement No 101003777



innovation programme under the

Narratives on restored water **NARROW**

Håkan Tunón

Swedish University of Agricultural Sciences

Finland: Snowchange Cooperative

*Switzerland: University of Lausanne and
International Union for Conservation of Nature*

Photo: Håkan Tunón

Objectives and project description

NARROW will examine nature conservation and climate change mitigation led by local communities

Evaluate governance contexts of five different water restoration sites in Finland and Sweden taking the concept of OECM:s (Other Effective Area-Based Conservation Measures) into account.

What are the main tasks and activities of your project?

- *All partners have planned and organize the work in order to find out:*
 - *How are the restoration projects organized?*
 - *What was the purpose of the restoration efforts?*
 - *What were the main achievements?*
 - *Have the local perceptions of the area changed as a result of the restoration?*
- *Finnish and Swedish partners will be main responsibility of the field work, and the Swiss partners will have a strong focus on the international policy survey*
- *All partners will analyze the results and disseminate the results*



Expected Scientific Impact



Expected impact from scientific point of view?

- better understanding of success factors in local initiatives and the value of local community involvement*
- reflections over how authorities and NGOs can contribute to good results*

What potential breakthroughs can you foresee?

- Possible understanding among local and national authorities how to understand and enable inclusion of local capacities (ways to collaborate in context specific ways)*

Photo: Mika Honkalinna



BiodivRestore has received funding from the European Union's Horizon 2020 research and innovation programme under the grant agreement No 101003777

Expected Societal & Policy Impact

Societal challenges and/or policy issues?

There is a need to evaluate the possible contribution of OECMs to reach a future '30 by 30-goal' (i.e., 30 % protected areas by 2030)

Stakeholders:

- local communities*
- local and regional actors in restoration*
- international nature conservation actors*

Impact from societal and policy point of view

Visualize the effect of restored areas on local communities and other stakeholders

Improved policy guidance on inclusion of local actors and devolving agency and capacity to local level in restoration projects

Dissemination of information?

Local meetings (formal/informal), local/regional press, national and international conferences, international policy discussions within the IUCN and CBD, and scientific papers



Photo: Chris McNeave



Acknowledgement



SWEDISH
BIODIVERSITY
CENTRE



Snowchange
COOPERATIVE



UNIL | Université de Lausanne

Institut de géographie
et durabilité



**Swiss National
Science Foundation**



SUOMALAINEN TIEDEAKATEMIA
FINNISH ACADEMY OF SCIENCE AND LETTERS | ACADEMIA SCIENTIARUM FENNICA



BiodivRestore has received funding from the European Union's Horizon
grant agreement No 101003777



biodiversa



innovation programme under the

Restoring peatlands of the nemoral zone under conditions of varying water supply and quality

ReVersal

Coord.: Klaus-Holger Knorr, University of Münster, GER

Partners: Hanna Meyer (Münster, GER), Bjorn Robroek (Nijmegen, NLD), Stephan Glatzel (Vienna, AUS), Mariusz Lamentowicz (Poznan, POL)



Photo: Peter Raabe

Objectives and project description

***ReVersal** addresses difficulties and limitations in restoration of ombrotrophic peatlands, using a **combined approach** of:*

palaeoecology, hydrology, biogeochemistry, greenhouse gas exchange, carbon budgets, vegetation ecology, and remote sensing

*Knorr (GER; coord.): investigating peat quality, stoichiometry, potential degradability, carbon stocks, GHG fluxes, and vegetation to quantify **stocks, fluxes and current status***

*Lamentowicz (POL): palaeoecological reconstruction of vegetation, water table levels, pollen records, etc. to set **past reference conditions** and understand **past resilience***

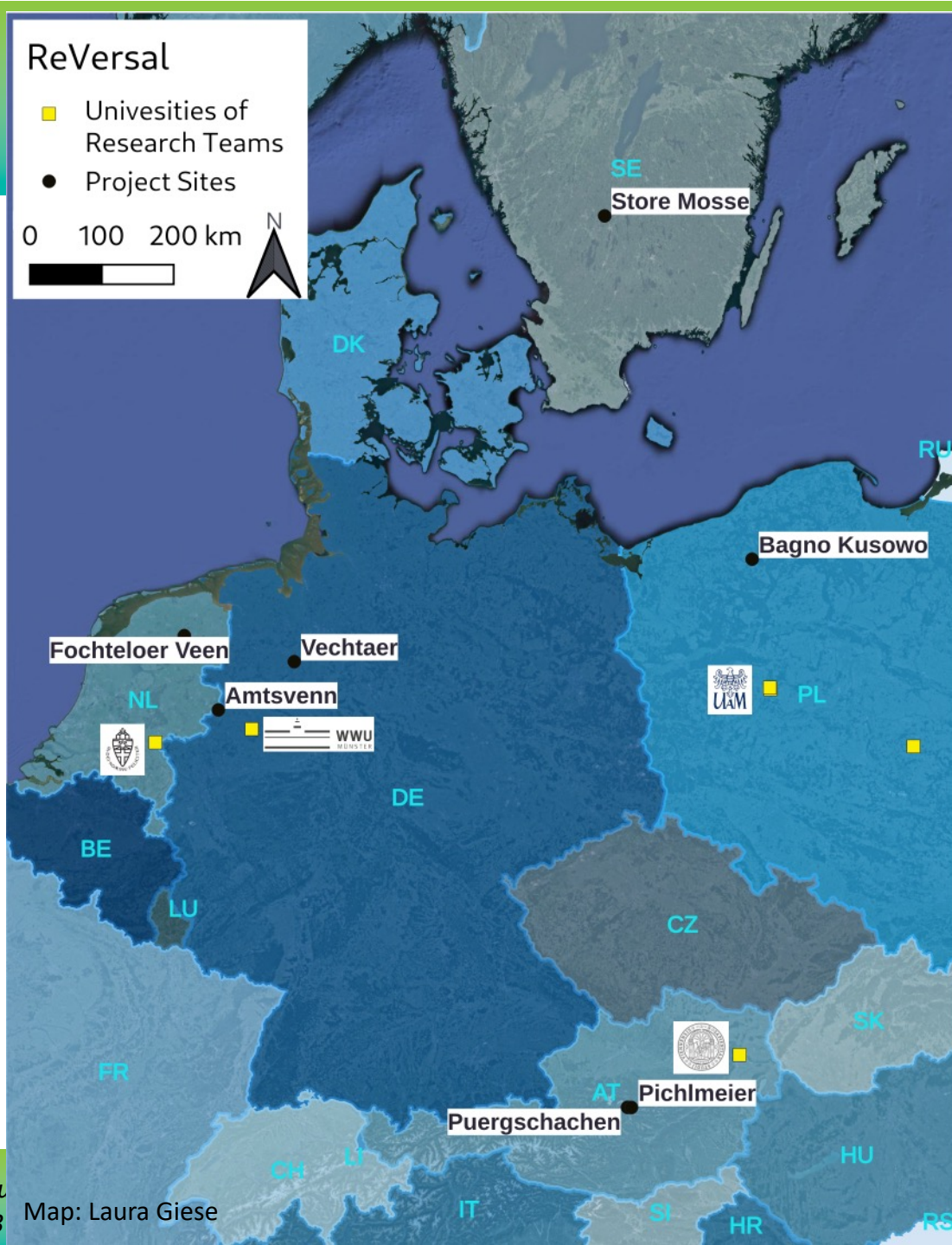
*Robroek (NLD): assessing diversity in microbial and vegetation communities, characterizing present hydrological conditions to understand **current functioning***

*Glatzel (AUS): developing a **decision support system**, leading **stakeholder dialogue and outreach**, contribution to GHG measurements*

*Meyer (GER): Assessment and monitoring of sites using **remote sensing** techniques and developing a data-driven approach to derive **models for long-term monitoring** that can be applied across sites and beyond ReVersal*



Location of project partners and study sites



Map: Laura Giese

Expected Scientific Impact

Scientific impact and innovation:

*While peatland restoration so far focuses mostly on individual aspects such as hydrology, or vegetation, ReVersal provides a holistic view of the sites to derive a truly **interdisciplinary approach***

***ReVersal** includes **present and past** aspects of biodiversity, carbon budgets, and hydrology to derive reference states for restoration sites and to better assess potentials and trajectories of restoration efforts*

Breakthroughs:

*Novel **remote sensing based tools and models** will enable assessment of peatlands beyond ReVersal study sites; these data-driven models will be based on and include process knowledge, aspects of biodiversity, and carbon budgets and thus go **beyond individual aspects of restoration***

Photo: Simon Drollinger



BiodivRestore has received funding from the European Union's Horizon 2020 research and innovation programme under the grant agreement No 101003777

Expected Societal & Policy Impact

*The majority of **peatlands** in Europe is **strongly affected by drainage and anthropogenic disturbance and climate change** further adds to existing difficulties and limitations in restoration.*

*Yet the **importance of peatlands in national and global GHG budgets** is widely accepted and restoration efforts are undertaken*

***ReVersal** wants to provide an **indicator framework beyond individual aspects of restoration** to balance trade-offs between restoration goals*

*We expect that this framework and remote sensing based tools and models will provide **multi-disciplinary, cost effective, and reliable long-term monitoring tools** on a scientific basis*

*The indicator framework and models will be discussed at **workshops** with farmers, the peat industry, nature conservationists, water managers, and administrative bodies to ensure a **co-development of research outputs***

Photo: Peter Raabe



Acknowledgement

Funding in the individual countries:

- *Germany: Deutsche Forschungsgemeinschaft (DFG)*
- *Austria: Der Wissenschaftsfonds (FWF)*
- *The Netherlands: Ministerie van Landbouw, Natuur en Voedselkwaliteit (LNV)*
- *Poland: Narodowe Centrum Nauki (NCN)*

FWF

Der Wissenschaftsfonds.



Ministerie van Landbouw,
Natuur en Voedselkwaliteit

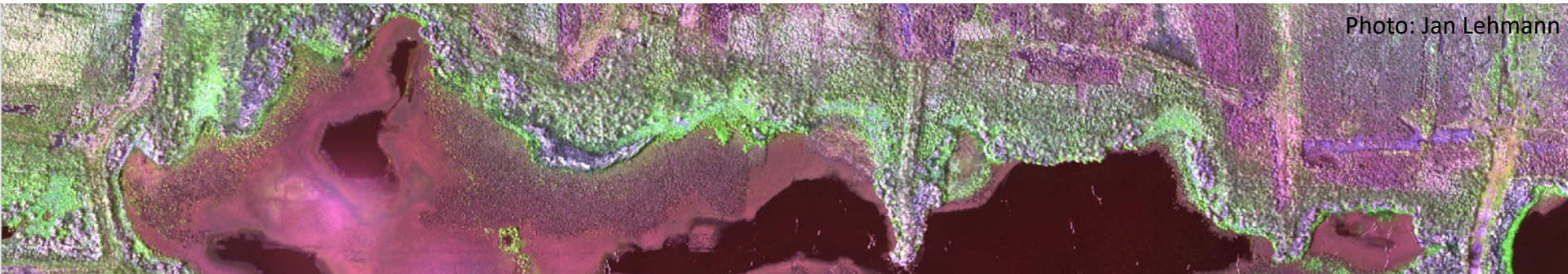
DFG

Deutsche
Forschungsgemeinschaft



NATIONAL SCIENCE CENTRE
POLAND

Photo: Jan Lehmann



BiodivRestore has received funding from the European Union under the grant agreement No 101003777



biodiversa



innovation programme under the

Q&A

FIRST: BIOCONSENT - Decision-making Support for Forest Biodiversity Conservation and Restoration Policy and Management in Europe: Trade-offs and Synergies at the Forest-BiodiversityClimate-Water Nexus, by *Metodi Sotirov*

FRESHH - Farmer acceptable REstoration of Semi-natural Habitat to limit Herbicides, by *David Bohan*

InterRest - Interactive effects of local and landscape scale restoration of semi-natural grasslands and agricultural fields on species interactions and ecosystem functions in different social-ecological systems, by *Catrin Westphal*

NARROW - NARRatives On restored Water, by *Håkan Tunon*

ReVersal - Restoring peatlands of the nemoral zone under conditions of varying water supply and quality, by *Klaus-Holger Knorr*



PRESENTATION OF THE FUNDED PROJECTS

(session 4/5)

FIRST: DEEP REST- Conservation & restoration of deep-sea ecosystems in the context of deep-sea mining, by *Jozee Sarrazin*

MPA4sustainability - Enhancing the role of MPAs in restoring biodiversity while maintaining access to ecosystem services, by *David Lusseau*

RESTORESEAS - Marine Forests of animals, plants and algae: nature-based tools to protect and restore biodiversity, by *Ester A Serrao*

REMOVE_DISEASE - Conservation and restoration of degraded insular biodiversity: impacts of the removal of introduced mammals on the dynamics of infectious diseases in seabirds across islands of the Southern Ocean, by *Thierry Boulinier*





Conservation and restoration of marine ecosystems in the context of deep-sea mining

Jozée Sarrazin (coordinator, Ifremer, France)

15 partners from 8 countries, 1.27 millions euros

Duration : 01.04.2022 – 01.04.2025

DEEP-REST project partners (8 countries)

Coordinator: UMR BEEP, IFREMER, Plouzané, France

Brest University/CNRS/IFREMER, Plouzané, France

CNRS/Sorbonne University, Roscoff, France

Ghent University, Ghent, Belgium

Alfred Wegener Institute, Bremerhaven, Germany

GEOMAR, Kiel, Germany

Senckenberg Institute, Wilhelmshaven, Germany

National University of Ireland Galway, Galway, Ireland

Royal Institute for Sea Research, Den Burg, Netherlands

University Center, Svalbard, Norway

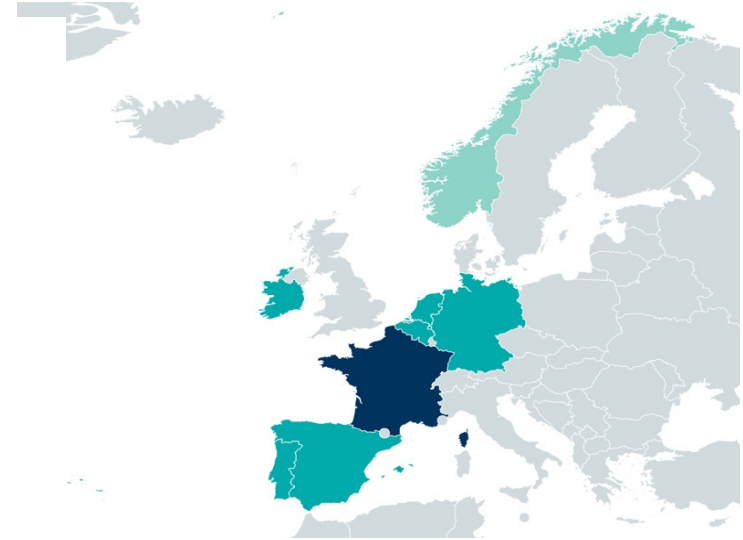
University of Bergen, Bergen, Norway

University of Aveiro, Aveiro, Portugal

University of Algarve, Faro, Portugal

University of the Azores, Horta, Portugal

University of Seville, Sevilla, Spain



**Connection between most active
deep-sea scientists to experienced
economists & jurists.**



Context

Increasing demand for **mineral resources** worldwide for the car & nuclear industries, new technologies but also for renewable energies.

Strategic mineral resources found in deep-sea ecosystems including manganese crust, **polymetallic nodules** and **seafloor massive sulfides**.

Lack of **fundamental knowledge** about the biodiversity associated with these ecosystems, their functioning and the services they provide.

Clock is ticking : The International Seabed Authority (ISA) is currently drafting the mining code that will regulate mining operations in the Area (2023) and is working on the development of Regional Environmental Management Plans.

Information on **how to mitigate the impacts** of future mining activities are of utmost importance : **conservation, restoration, mitigation**.



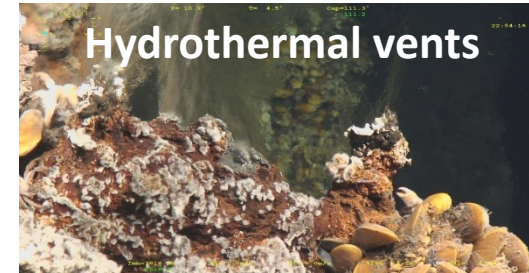
Objectives and project description

DEEP REST will develop a **novel approach** to improve our **conservation/restoration capacities** in two deep-ocean ecosystems threatened by mining.

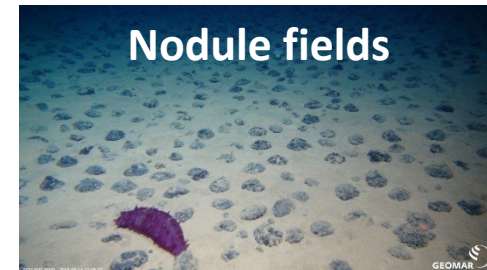
- (1) investigate and compare the **biodiversity, functioning & connectivity** of biological communities within and across ecosystems, linking to environmental conditions;
- (2) evaluate the **recovery potential** and **resilience** of deep-sea communities at different degrees of disturbance, identify indicators of change and characterize tipping points;
- (3) test, through experimentation, the **effectiveness of different restoration actions** on the recovery of communities;
- (4) evaluate **conservation/restoration outcomes** in terms of **ecosystem services** and identify the **governance arrangements** needed for efficient actions in concertation with stakeholders;
- (5) provide **scientific guidance** to **stakeholders and policy-makers** and **recommendations to support deep-sea governance**, ensuring a sustainable management of resources and conservation of ecosystems;
- (6) communicate with **stakeholders** on **issues linked to the exploitation** of deep mineral resources.



Study areas



Active & inactive hydrothermal vents
Northern Mid-Atlantic Ridge
Arctic Mid-Ocean Ridge



Nodule fields
Clarion-Clipperton Zone (CCZ)
DISCOL Experimental Area (DEA)
Pacific Ocean



Expected scientific, societal + policy impacts

- Acquisition + integration of **fundamental knowledge** on biodiversity, functioning & connectivity in link with environmental conditions in two ecosystems threatened by deep-sea mining;
- Evaluation of socio-economic dimensions **in concertation with stakeholders** including identification of ecosystem services + potential costs & benefits.
- Assessment of **conservation and restoration scenarios** to integrate **knowledge** and **concerns** from **scientists** and **stakeholders**
- Development of **improved management strategies** + **identification of areas** to set aside for **conservation** + of **reference areas**. **Recommendations** for the design of “marine protected areas”.
- **Policy briefs** that will feed into the public debate + **actions/interactions** with the general public + with students/classrooms.

Acknowledgements

Agence Nationale de la Recherche (ANR), France

Ministry of Agriculture, Nature and Food Quality (LNV), Netherlands

The Research Foundation – Flanders (FWO), Belgium

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Environmental Protection Agency (EPA), Ireland

Fundação para a Ciência e a Tecnologia (FCT), Portugal

Fundo Regional para a Ciência e Tecnologia (FRCT), Portugal-Azores

State Research Agency (AEI), Spain

Web site : <https://deep-rest.ifremer.fr/>

Enhancing MPAs' role in restoring biodiversity while maintaining access to ecosystem services

mpa4sustainability

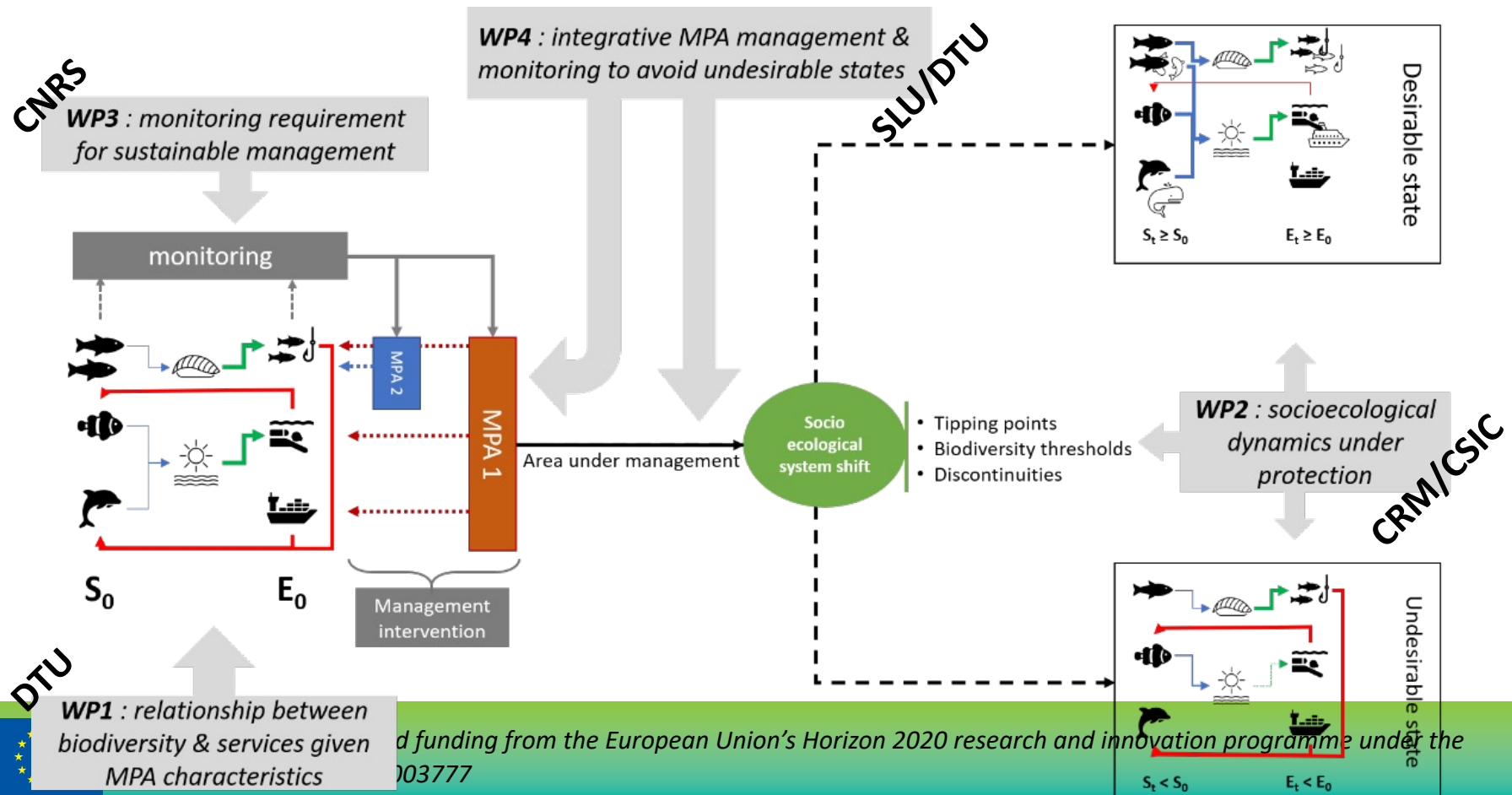
David Lusseau (DTU, DK)

DTU Aqua (DK), SLU Aqua (SE), Museu da Baleia (Madeira, PT), CRM (ES), CSIC (ES), CNRS-EPHE-CRIOBE (FR)

mpa4sustainability 

Objectives & Project description

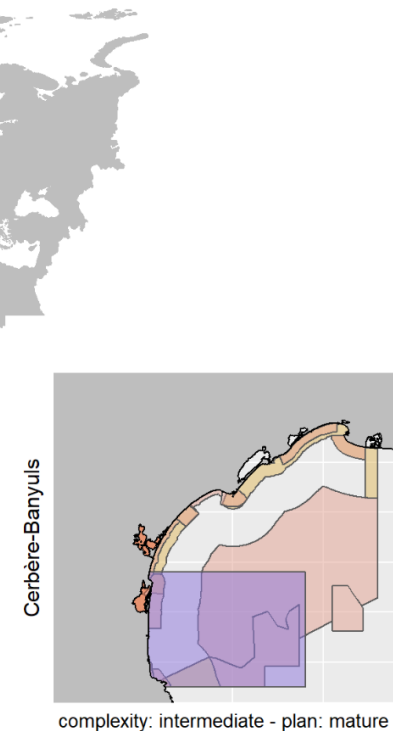
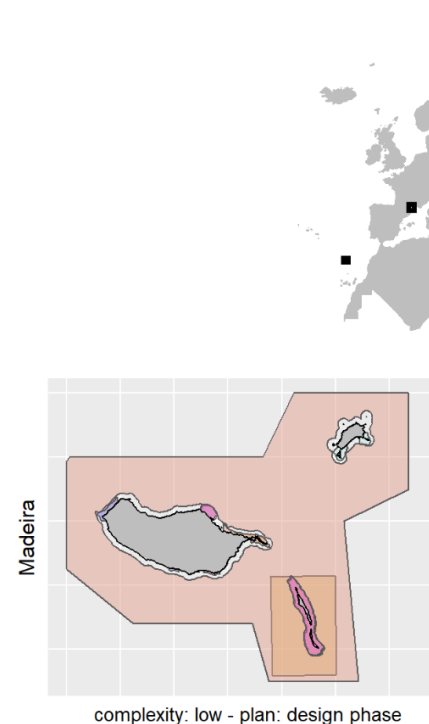
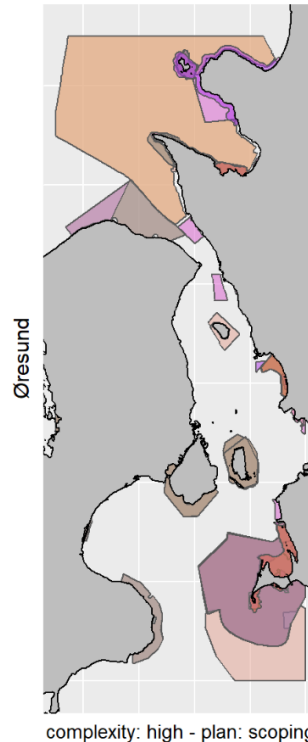
- **Challenge:** >17,000 MPAs globally
 - Clear management plan: ~23% & Management effectiveness evaluations: ~1%
- **Objective:** How can we more effectively use existing MPAs
 - achieve biodiversity targets & maximise their contributions to the blue economy



Expected Scientific Impact

- **Sustainability Science:** Form & function of coupled human-nature marine systems and how they can be exploited sustainably and efficiently monitored and managed.

- Multiple scale insight derived from global retrospective analyses, new fundamental dynamical models, and three regional scale case studies



Expected Societal & Policy Impact

- **Policy:** integrative governance & management of multiple neighbouring disparate MPAs to maximise biodiversity outcomes and ecosystem services delivery.
- **Management:** develop management and cost-effective monitoring & management guidelines
 - to maximize opportunities for a biodiversity-rich & sustainable marine exploitations
- **Tool:** user-friendly simulation platform to develop integrative management plan
 - to consider the socioecological trade-offs,
 - identify management actions,
 - develop a monitoring programme,
 - recognise how adjacent existing MPAs can be used synergistically.
- **Beta-testing:** Practical guidelines to implement the Decision Support System in three European case studies.



Acknowledgement

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 - Innovation Fund Denmark,
 - The French National Research Agency,
 - The Spanish State Research Agency,
 - the Swedish Environmental Protection Agency,
 - The Portuguese The Foundation for Science and Technology
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 - Região Autónoma da Madeira,
 - Øresundsvandssamarbejdet,
 - Conseil Départemental des Pyrénées Orientales
 - Conseil de gestion du Parc Naturel Marin du Golfe du Lion
 - IUCN Marine & Polar and Protected Areas Programmes
- **We are eager to explore collaborations with**
 - BiNatUr, BIOCONSENT, COAST, COSAR, DEEP REST, EMYS-R, NARROW, RESTORESEAS



RESTORESEAS

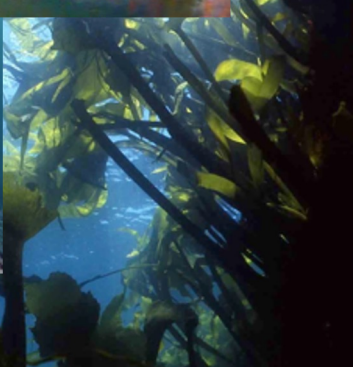
Marine Forests of animals, plants and algae: nature-based tools to protect and restore biodiversity

Ester Serrao



BiodivRestore has received funding from the European Union's Horizon 2020 research and innovation programme under the grant agreement No 101003777

Marine habitat restoration that targets the recovery of ecosystem functions



high productivity, C fixation, shelter, nursery, coastal protection, reduction of nutrients and turbidity, commercial applications, aesthetic beauty, intrinsic evolutionary value.



BiodivRestore has received funding from the European Union's Horizon 2020 research and innovation programme under the grant agreement No 101003777

RESTORESEAS

Marine Forests of animals, plants and algae: nature-based tools to protect and restore biodiversity

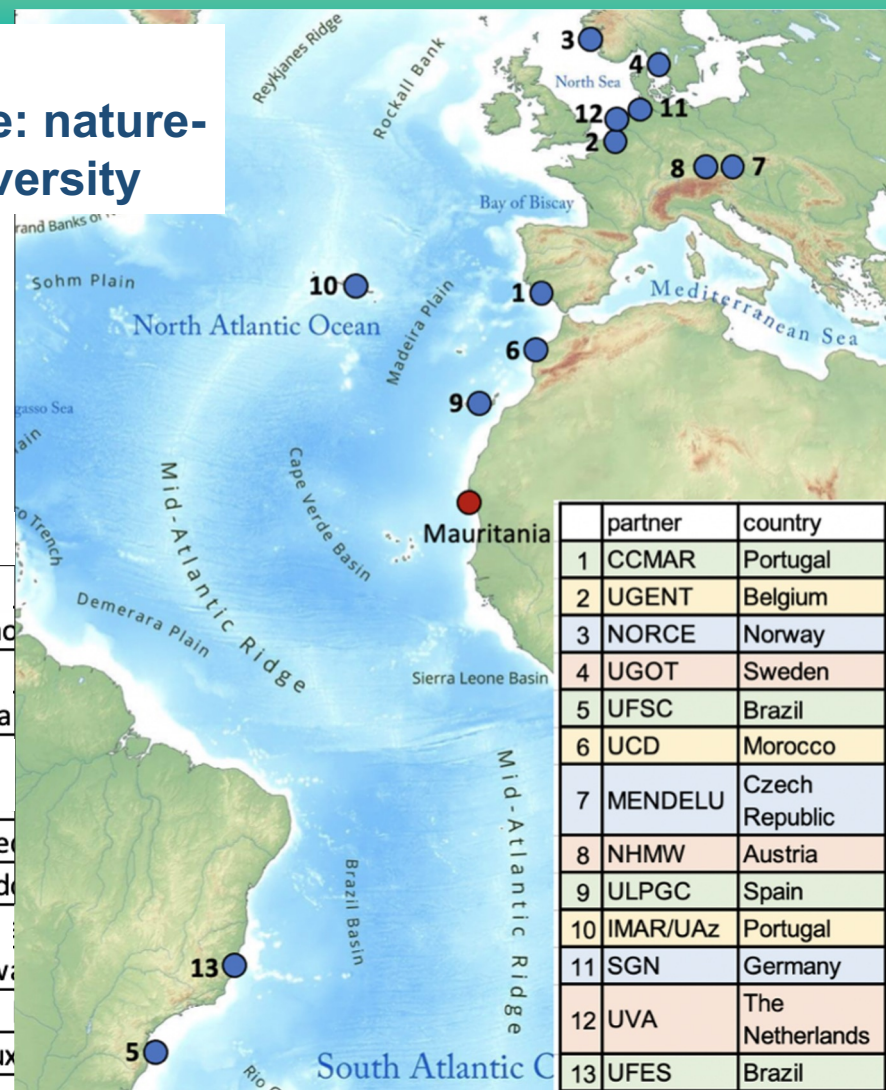


Target ecosystems to restore:

marine forests of macroalgae, seagrasses and corals

Partner

- Partner 1 - CCMAR (Centre Mar. Sci. Univ. Algarve, Portugal) - Ester Serrao
- Partner 2 - UGENT (Univ. Gent, Belgium) - Olivier De Clerck
- Partner 3 - NORCE (Norwegian Res. Inst.)- Thomas Gunnar Dahlgren <thda@no
- Partner 4 - UGOT (Univ. Goteborg) - Ann Larsson
- Partner 5 - UFSC (Universidade Federal de Santa Catarina, Brazil) - Paulo Horta
- Partner 6 - CDU(Chouaib Doukkali University, Morocco) - SABOUR BRAHIM
- Partner 7 - MUB (Mendel University in Brno, Cze Republic) - Thomas Jung
- Partner 8 - NHMV (Natural History Museum Vienna, Austria) - Frade Pedro <pe
- Partner 9 - ULPGC (Universidad de Las Palmas de Gran Canaria, Spain) - Ricardo
- Partner 10 - IMAR-UA (University of Azores) - Pedro Afonso
- Partner 11 - SGN (Senckenberg Gesellschaft für Naturforschung) - André Freiwa
- Partner 12: UvA (University of Amsterdam) - Gerard Muyzer
- Partner 13: UFES (Federal University of Espírito Santo) - Jean Christophe Joyeux



RESTORESEAS

Marine Forests of animals, plants and algae: nature-based tools to protect and restore biodiversity



Funders

Portuguese Foundation for Science and Technology (FCT), Portugal

Austrian Science Fund (FWF), Austria

Research Foundation of Flanders (FWO), Belgium

Brazilian National Council of State Funding Agencies (CONFAP), Brazil

Technology Agency of the Czech Republic (TA CR), Czech Republic

German Research Foundation (DFG), Germany

Ministry of Agriculture, Nature and Food Quality (LNV), Netherlands

Research Council of Norway (RCN), Norway

Ministry of National Education, Vocational Training, Higher Education and Scientific Research (MENFPRESRS), Morocco

Regional Fund for Science and Technology (FRCT), Portugal - Azores

State Research Agency (AEI), Spain

The Swedish Environmental Protection Agency (SEPA), Sweden



Milestones and Deliverables numbers are listed in the proposal forms		1
WP/Task	Task Denomination	1
WP1	CROSS-SYSTEMS APPROACHES	
Task 1.1	Scientific and public communication, participation and outreach	
Task 1.2	Mapping vulnerable/degraded marine forests along the Atlantic coastlines	
Task 1.3	Role of habitat restoration and conservation on biodiversity	
Task 1.4	Roles of the microbiome in restoration	
Task 1.5	Diversity and role of pathogens in restoration	
WP2	DEEPER MARINE FORESTS - CO	
Task 2.1	Restoration of cold-water coral habitat	
WP3	MARINE FORESTS OF PLANTS A	
Task 3.1	Marine restoration for a future climate - phenotyping for adaptive restoration of macroalgal forests	
Task 3.2	Tipping points in seagrass and macroalgal restoration success - contrasting restoration approaches across multiple models	

integrates local actors in participatory actions of management and restoration of marine forest-dominated environments undergoing disturbance

spatio/temporal biodiversity trends - past and future
 climate-threatened marine forests where restoration needs climate-adapted strategies.

- Biodiversity in the seawater surrounding marine forests
- Biodiversity over geological time on sediments surrounding marine forests

investigate if restoration success of selected seagrass, seaweed and coral, can be monitored using microbial traits (e.g., indicator species or functions) and improved by microbiome manipulation

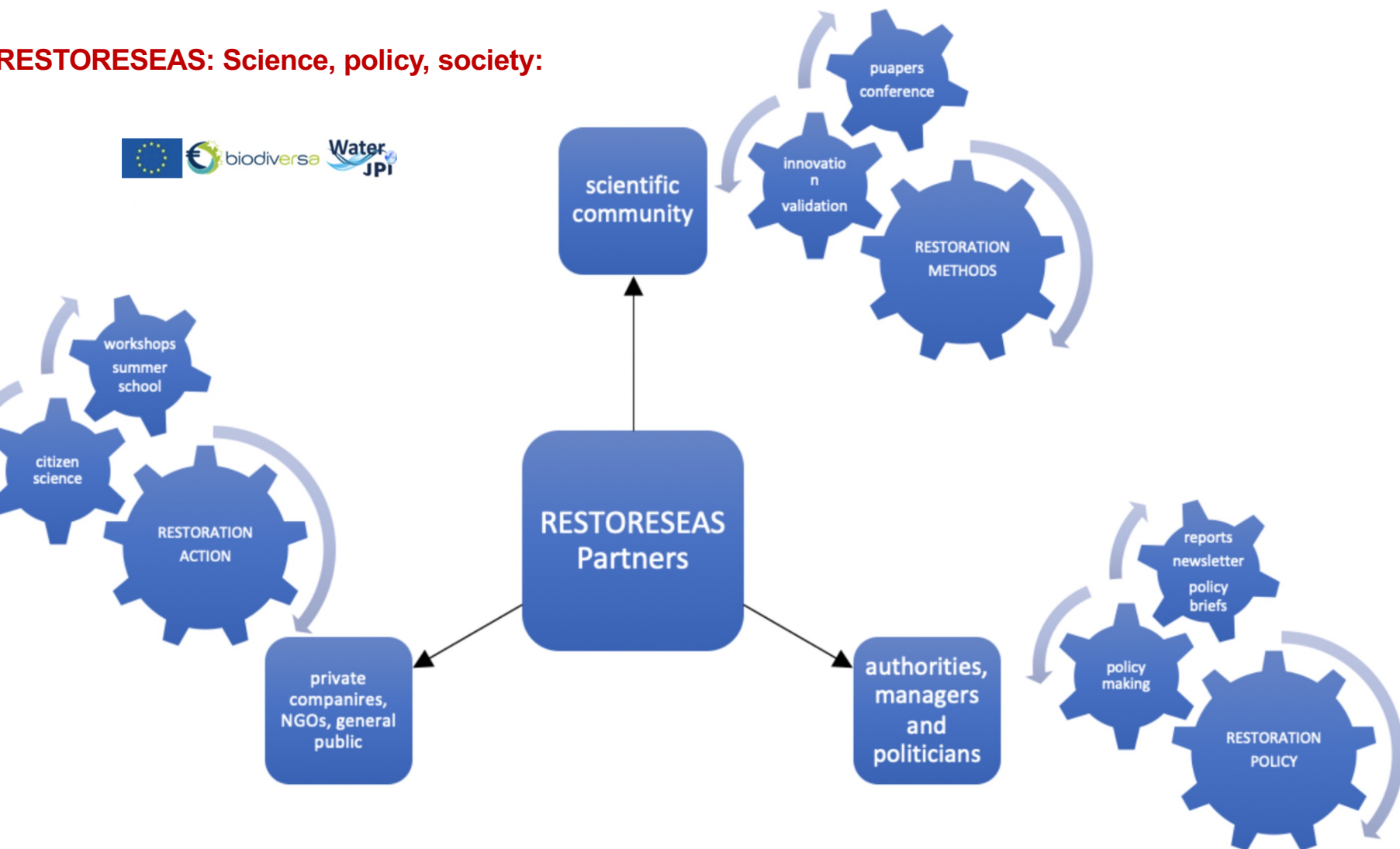
discover the diversity, distribution, potential origin role of pathogens in marine forests
 predict environmental factors affecting pathosystems

plant corals with local stakeholders (fishermen) in community-based restoration actions.
 Compare efficiency of sexually derived larvae and micro fragments for survival , growth, time

Use adaptive variation and local adaptation to temperature in restoration and management planning.

Estimate critical minimum planting size for restoration - Minimum Conservation Units

RESTORESEAS: Science, policy, society:





biodiversa+
European Biodiversity Partnership



CORAL restoration

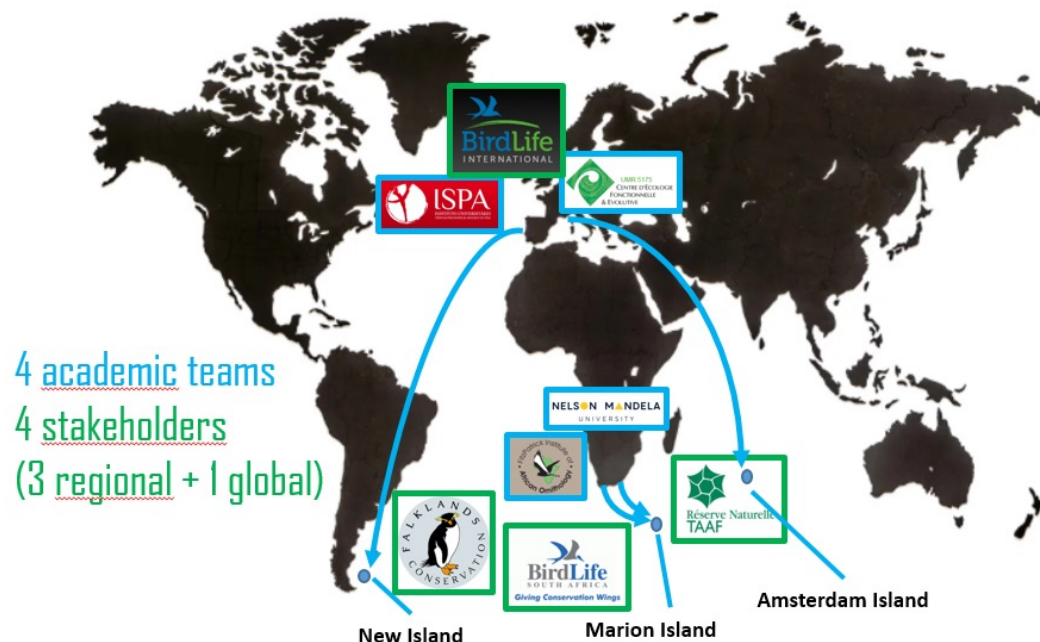


BiodivRestore has received funding from the European Union's Horizon 2020 research and innovation programme under the grant agreement No 101003777

Conservation and restoration of degraded insular biodiversity: impacts of the removal of introduced mammals on the dynamics of infectious diseases in seabirds across islands of the Southern Ocean

REMOVE_DISEASE

Thierry Boulinier (Coordinator)



- CEFE CNRS – Université Montpellier, France
- MARE - Marine and Environmental Sciences Center, ISPA Instituto Universitário, Lisboa, Portugal (Paulo Catry)
- FitzPatrick Institute of African Ornithology - University of Cape Town, South Africa (Peter Ryan)
- Nelson Mandela University (Maëlle Connan)
- Bird Life South Africa, South Africa
- National Nature Reserve of the French Southern Lands, France
- Falkland Conservation, Falkland Islands
- Birdlife International, Cambridge, UK

Context & project aim

Context:

- *Introduced mammal species = major threats to biodiversity/seabirds on islands*
- *Restoration efforts via removal of introduced mammal species*



Restoration plans:

- Amsterdam Island (FR)
- Marion Island (SA)



- *Infectious diseases = neglected threat to densely breeding species*

E.g., Avian cholera killing each year thousands of nestling albatrosses on Amsterdam Island



- *Introduced species and infectious disease dynamics?*
- *Removing introduced mammals → extra benefit to biodiversity conservation via effects on disease dynamics ?*

→ **Project aim:** *determine if removing introduced mammal species from islands provide indirect benefits via effects on the dynamics of infectious diseases*



Objectives and project description

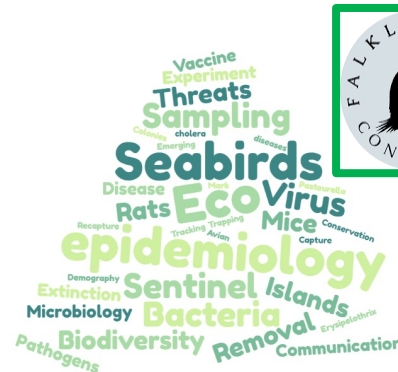


Main tasks:

- Document the effects of introduced species in eco-epidemiological dynamics involving seabirds on islands and the indirect effects of restoration efforts

To achieve this,

- 3 sets of sub-Antarctic islands
- Academic partners involved in long-term seabird population ecology
- Stakeholders involved in seabird conservation
- Field work, laboratory analyses, modelling, communication

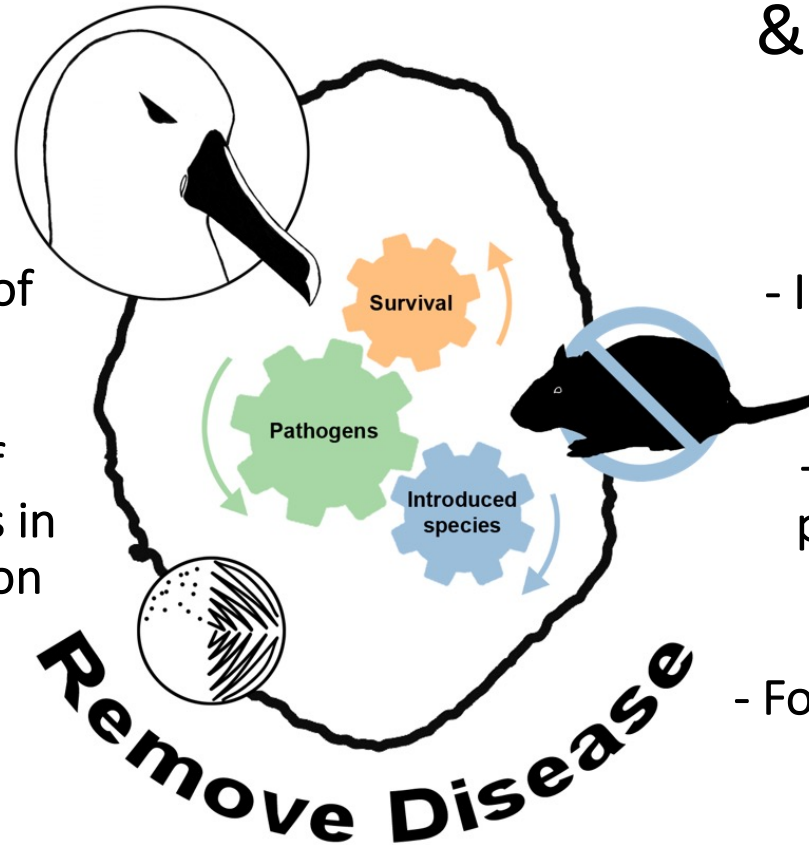


BiodivRestore has received funding from the European Union's Horizon 2020 research and innovation programme under the grant agreement No 101003777

Expected Impacts

Scientific impact

- Quasi-experimental test of cascading effects
- Better understanding of infectious disease dynamics in polar/island/metapopulation systems
- Foster inter-disciplinary approach and training



Societal & policy impact

- Increased awareness
- Consideration in planning of future removal efforts
- Foster evidence-based conservation



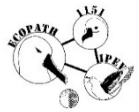
BiodivRestore has received funding from the European Union under the grant agreement No 101003777



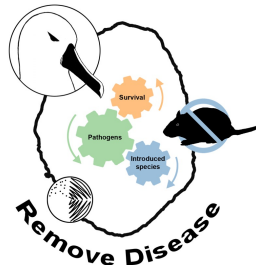
innovation programme under the

Acknowledgement

Funders of the project:



For more information:



<http://removedisease.fr>



BiodivRestore has received funding from the European Union under grant agreement No 101003777



innovation programme under the

Q&A

FIRST: DEEP REST- Conservation & restoration of deep-sea ecosystems in the context of deep-sea mining, by *Jozee Sarrazin*

MPA4sustainability - Enhancing the role of MPAs in restoring biodiversity while maintaining access to ecosystem services, by *David Lusseau*

RESTORESEAS - Marine Forests of animals, plants and algae: nature-based tools to protect and restore biodiversity, by *Ester A Serrao*

REMOVE_DISEASE - Conservation and restoration of degraded insular biodiversity: impacts of the removal of introduced mammals on the dynamics of infectious diseases in seabirds across islands of the Southern Ocean, by *Thierry Boulinier*



PRESENTATION OF THE FUNDED PROJECTS

(session 5/5)

FIRST: BIO-TRADE - Protecting Biodiversity through Regulating Trade and International Business, by *Anu Lähteenmäki-Uutela*

NICHES - Nature's Integration in Cities' Hydrologies, Ecologies and Societies, by *McKenna Davis*

BiNatUr - Bringing nature back – biodiversity friendly nature-based solutions in cities, by *Kati Vierikko*





Protecting biodiversity through regulating trade and business relations

BIO-TRADE

Anu Lähteenmäki-Uutela (Finnish Environment Institute)

Finnish Environment Institute, Finland

Raoul Wallenberg Institute for Human Rights and Humanitarian Law, Sweden

Centre for Private Governance, University of Copenhagen, Denmark

Centre for Development and Environment, University of Bern, Switzerland



Objectives and project description

*The main objective of BIO-TRADE: to understand **how the EU and European countries should regulate trade and business relations to protect biodiversity outside Europe***

*The main **tasks and activities**:*

- WP1 Coordination, SYKE
- WP2 Trade law, University of Bern
- WP3 Due diligence in supply chains, University of Copenhagen
- WP4 No net loss, mitigation hierarchy and offsets, SYKE
- WP5 Human rights perspectives, Raoul Wallenberg Institute
- **Outputs:** scientific articles, policy briefs, Practical Guide, workshops and events



Expected scientific and societal impacts

*The expected **impacts** of BIO-TRADE:*

- improved understanding on the impacts of law*

 - more efficient, fairer, and more coherent law, e.g., EU Deforestation Regulation, EU Corporate Sustainability Due Diligence Directive*

 - enhanced biodiversity footprint of European companies and European consumption*



Stakeholder engagement and dissemination

Stakeholder engagement at BIO-TRADE events:

youth event, business managers event, national business and policy workshops, Brussels policy workshop, scientific seminar, Practical Guide launch event

Dissemination of information: *conferences, business organizations' events, web page, social media, Advisory Committee*



Acknowledgements



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NICHES

Nature's integration
in cities' hydrologies,
ecologies and societies



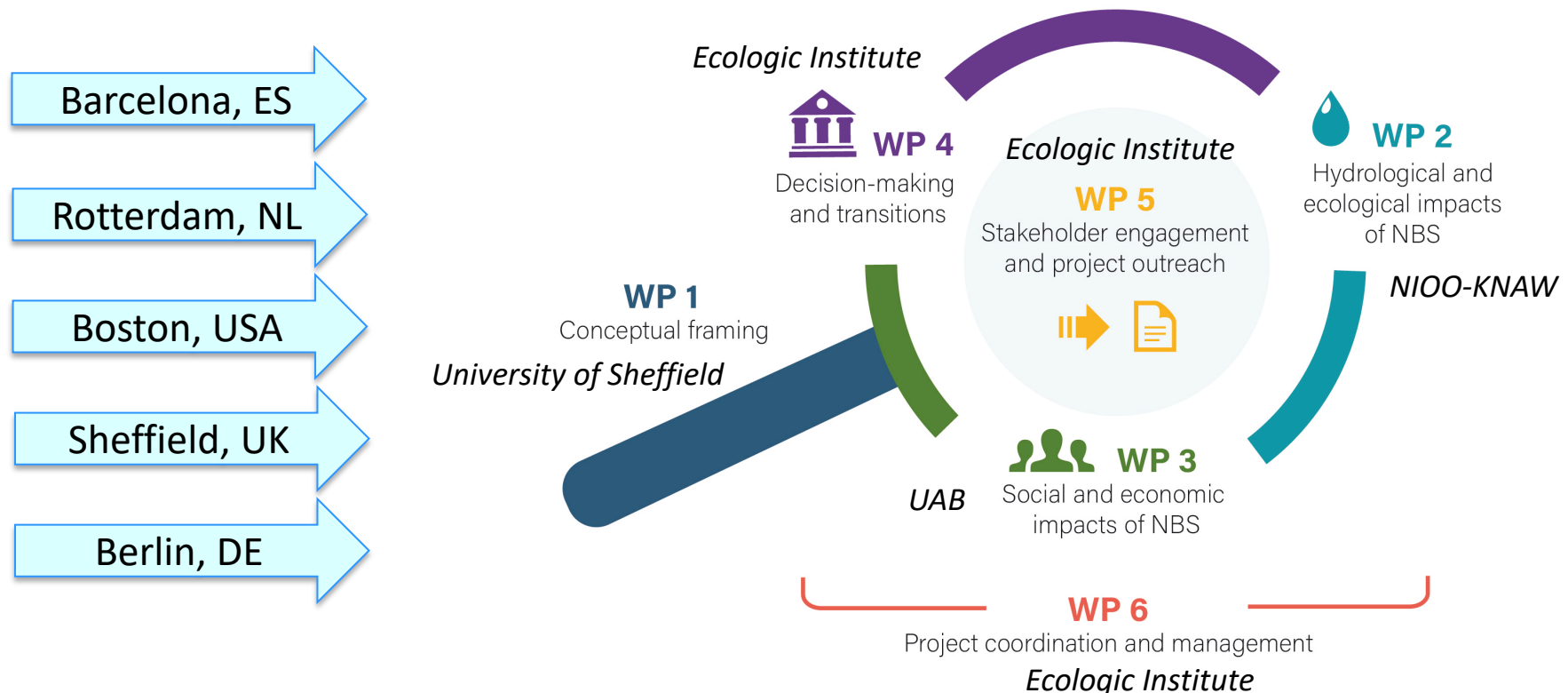
McKenna Davis, Ecologic Institute
(Coordinator)

Partners:

- Universitat Autònoma de Barcelona (UAB), Spain
- Netherlands Institute of Ecology (NIOO-KNAW)
- University of Sheffield, UK
- Northeastern University, USA
- Pensoft Publishers, Bulgaria

Objectives and project description

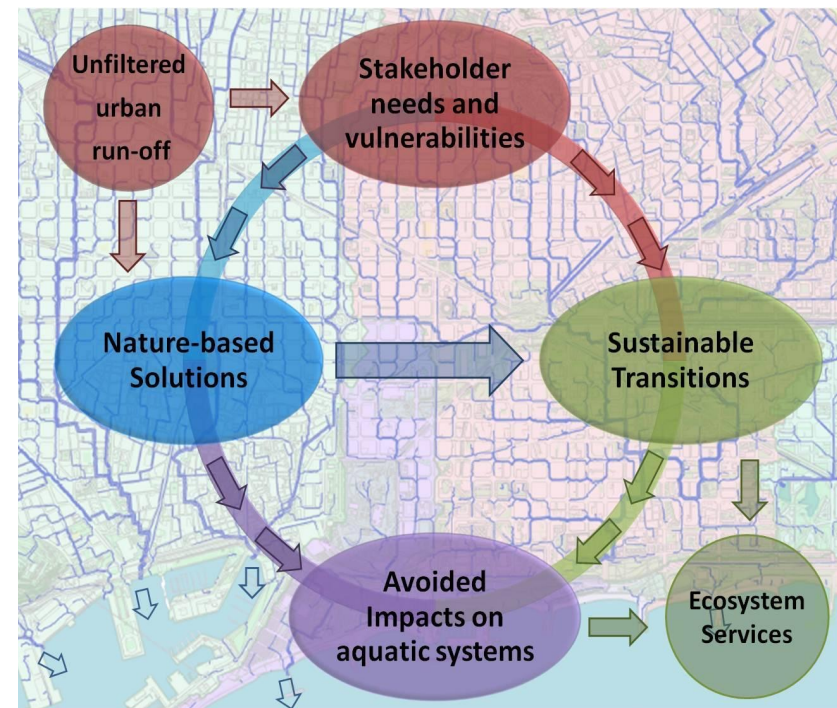
NICHES will utilise five global cities as co-design arenas to explore the potential for **mitigating combined sewage overflow (CSO) through nature-based solutions** to reduce negative impacts on aquatic ecosystems



Expected Scientific Impact

By adopting a **holistic SETS approach** (socio-ecological-technical systems approach)...

- Co-create **shared understanding of restorative NBS** to avoid storm-water runoff
- Develop a novel **ecosystem provisioning module** illustrating CSO consequences on ecosystem service provisioning
- Generate **NBS scenario maps** to increase consideration of hydrological impacts in planning and decision-making
- Produce an **integrated water assessment framework** for restorative NBS, considering trade-offs and synergies



Expected Societal & Policy Impact

- **Improve NBS effectiveness** and upscaling for (aquatic) restoration
- **Mitigate societal, ecological and economic impacts** of CSO
- **Co-create transition pathways** for increased policy integration of NBS and more integrated governance approaches to overcome policy / planning silos
- **Support sectoral policy goals** through biodiversity protection, increased NBS uptake and improvements to human health and water quality
- Strong **stakeholder involvement** through co-design arenas, targeted outreach and exploitation activities



Acknowledgements

- *VDI/VDE-IT, Germany*
- *Agencia Estatal de Investigación (AEI), Spain*
- *Ministry of Agriculture, Nature and Food Quality (LNV), Netherlands*

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Food Quality of the Netherlands



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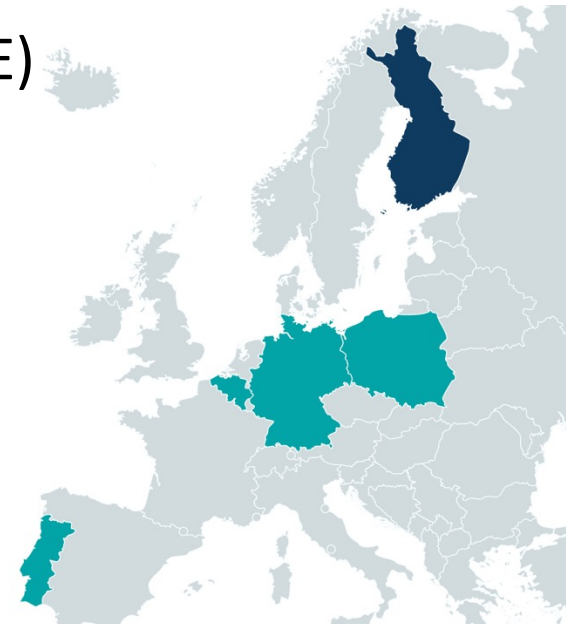


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Bringing nature back – biodiversity-friendly nature-based solutions in cities (BiNatUr)

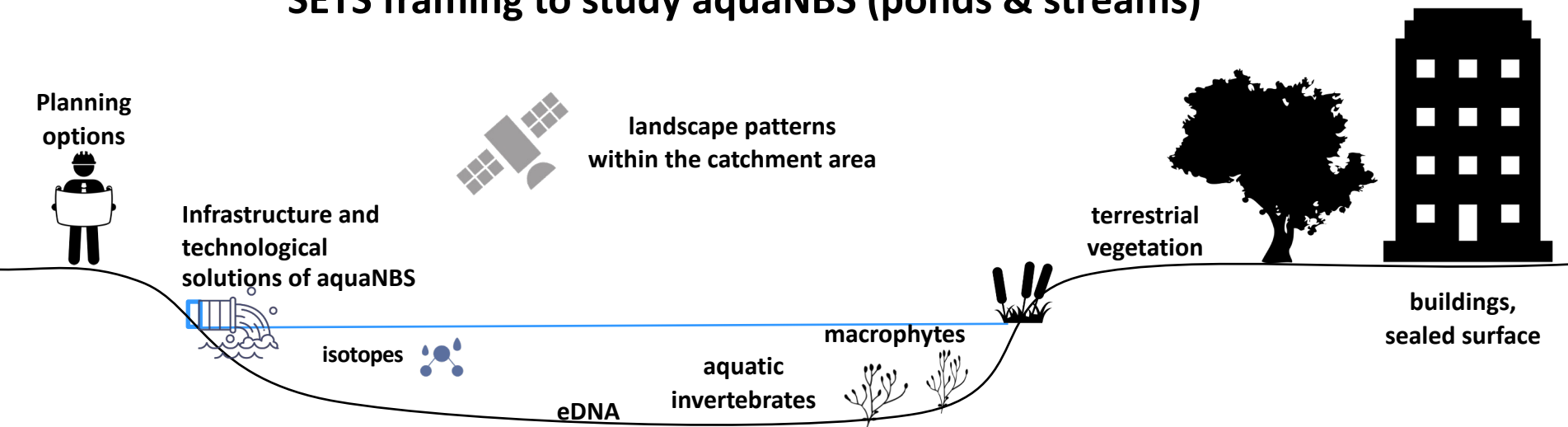
Kati Vierikko
project coordinator
Finnish Environment Institute (SYKE)

1. Humboldt University of Berlin (HU Berlin)
2. FVB e.V. for the Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB)
3. Poznań University of Life Sciences (PULS)
4. Universiteit Antwerpen (UAntwerp)
5. Centre for Ecology, Evolution and Environmental Changes, University of Lisbon (FCiências.ID)



Objectives and project description

SETS framing to study aquaNBS (ponds & streams)



Social	Ecological	Technological
How is BD valued among planners and practitioners? What is the role of biodiversity in planning NBS? How it can be enhanced?	What is biodiversity in aquaNBS? Is there linkages between BD and regulating ES? How does surrounding vegetation influence BD and ES of aquaNBS?	How ESs and BD of aquaNBS are affected by local infrastructure and surrounding land-uses? How technology used in NBS influence BD and ESs?
Key social components for aquaNBS (WP1), expert interviews (WP2), document analyses (WP2), workshops and meetings (WP2) WP1: SYKE and HU Berlin WP2: SYKE and HU Berlin	Key ecological components for aquaNBS (WP1), analyzing landscape patterns (WP3), water stable isotope and eDNA analyzes (WP4), standardized inventories of biological diversity and habitat quality (WP5) WP4: IGB and FCIências.ID WP5: FCIências.ID and PULS	Key technological components for aquaNBS (WP1), expert interviews (WP2), document analysis (WP2), analyzing built environment (WP3), gray infra and technological solutions of aquaNBS (WP5) WP3: HU Berlin and Uantwerp

Expected Scientific Impact

BiNatUr brings new scientific evidence on the role of biodiversity and its linkage with regulating ES in urban water-based NBS (“aquaNBS”)

The SETS framework has been proposed as a holistic approach for the study of complex and strongly interactive systems, but has not yet been used to empirically study urban green spaces, small water bodies or aquaNBS

BiNatUr will test and further develop the SETS concept for empirical research to guide the methodological design, data collection and analyses.



Expected Societal & Policy Impact of BiNatUr project:

- Support **the urban greening objectives** of European Biodiversity Strategy for 2030 by shifting current planning and management activities of aquaNBS to become more BD-supportive.
- Support **EU Nature Restoration Targets** by providing guidelines for biodiversity-friendly planning and restoration of aquaNBS.
- Produce recommendations on how urban planning can effectively co-design, monitor, and enhance the biodiversity and ES of aquaNBS.
- By studying cities in representative climatic regions, BiNatUr provide solutions that may become important in the future under climate change
- Closely engage with local urban planners and practitioners during the project through meetings, consultations and fields trips
- Publish recommendations (e.g. technical case cards) in project partners' official languages
- Publish blog writings about methods used and main outcomes during the project
- Actively communicate in social media
- Project website: www.bringingnatureback.com will open soon!



Acknowledgement

BiNatUr project is funded by:

Academy of Finland, Finland

Bundesministerium für Bildung und Forschung (BMBF), Germany

Federal Ministry of Education and Research, Germany

National Science Center Poland, Poland

Research Foundation Flanders (fwo), Belgium

Fundação para a Ciência e Tecnologia, Portugal



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innovation programme under the

Q&A

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BiNatUr - Bringing nature back – biodiversity friendly nature-based solutions in cities, by *Kati Vierikko*



Expectations towards funded projects & follow-up activities

***By Céline Billiere, ANR, Follow up Team
& Frédéric Lemaitre, FRB, Biodiversa+ SSI-SPI officer***



Follow-up of the funded projects

Follow-up team contact

- **Follow-up Team** is in charge of the follow-up of the projects
- It is based at **ANR**, France:

Céline Billiere: celine.billiere@agencerecherche.fr

Sophie Germann: Sophie.germann@agencerecherche.fr



Follow-up

Changes in a project (incl. cost-neutral extension):

Any change in the project (e.g. changes in the consortium) **has to be requested by the coordinator** to the Follow-up Team by sending **a note justifying and explaining** the requested change.

The request then has to be assessed & agreed by the Call Steering Committee (CSC), i.e. funding organisations.

After CSC decision, each research partner should contact her/his respective funding organisation to finalize the process at the national/regional level.

IMPORTANT **No extension of project is possible** as the BiodivRestore programme is a COFUND action – and projects have to be terminated by the end date of the BiodivRestore Action (it's a matter of eligibility of costs).

➤ Please inform the Follow-up Team in case your consortium faces any major difficulties.



Reporting

MID-TERM REPORT: ~1 ½ year after the start dates of the projects

➤ These mid-term reports will be assessed by a Follow-up group. A summary of the review will be sent to the coordinators, with recommendations or requests for clarifications, when needed.

~ Sept. 2023

FINAL REPORTING: At the end of all the projects

➤ These final reports will be assessed by a Follow-up group. A summary of the review will be sent to the coordinators, with recommendations or requests for clarifications when needed.

~ Sept. 2025

The Follow-up Team will circulate the report templates to the coordinators in the next couple of months. We will remind you that you have to submit your reports ca. two months before each deadline.



Communication Tools and Dissemination requirements



Open Data/Open Access Platform

In line with the H2020 guidelines, Biodiversa and the Water JPI are implementing an Open Access policy, which refers to:

- ✓ **Peer-reviewed scientific research articles**
(published in scholarly journals), or
- ✓ **Research data**
(data underlying publications, curated data and/or raw data)

Open Data Open Access Water JPI platform is available through:

<http://opendata.waterjpi.eu/>

- ⇒ The aim of the Open Access Open Data platform is to stimulate Open Data for all scientific publications produced within the projects funded by BiodivRestore ERA-NET. The Open Data & Open Access JPI tool is open and available for public consultation without password.
The researchers can insert new data using the assigned password.
- ⇒ More information will be provided during the data management WS on 19 May



Dissemination by RD projects: Acknowledgement

To acknowledge Biodiversa, the Water JPI and the funding organisations that funded your research project through the BiodivRestore programme, please follow the following guidelines:

- ⇒ FOR ALL TYPE OF SUPPORT, IN PARTICULAR PAPERS PUBLISHED IN SCIENTIFIC JOURNALS, indicate the following sentence: **“This research was funded through the join 2019-2020 Biodiversa & Water JPI joint call for research proposals, under the BiodivRestore ERA-Net COFUND programme, and with the funding organisations XXX, XXX, XXX and XXX.”**
- ⇒ **Important:** please check with the relevant funding organisations if you need to indicate further details (e.g. ID number, full legal name, acronym etc.)



Dissemination by RD projects: Acknowledgement

In addition, in any PowerPoint presentation or poster etc., **use the Biodiversa, Water JPI and European Commission logos**, as well as the **logos of the relevant funding organisations**.

!! Important: As you should act as an international project, please note that you have to **acknowledge the funding organisations of all the research partners involved in this work** (and e.g. not only the funding organisation of the team who is leading the publication)

Reminder: A real collaboration between research teams and integration of research carried out is expected, and this should lead to co-publications between the different research teams, and more particularly between the different countries, involved in the project. **!!**



Our communication tools

Biodiversa and the Water JPI are happy to relay your news (e.g. publications, events, news) through our communication channels

Make sure to contact us early enough (e.g. before the lift of the embargo of a new publication so that we can coordinate communication at the publication of the article, etc.)

Our communication channels are:

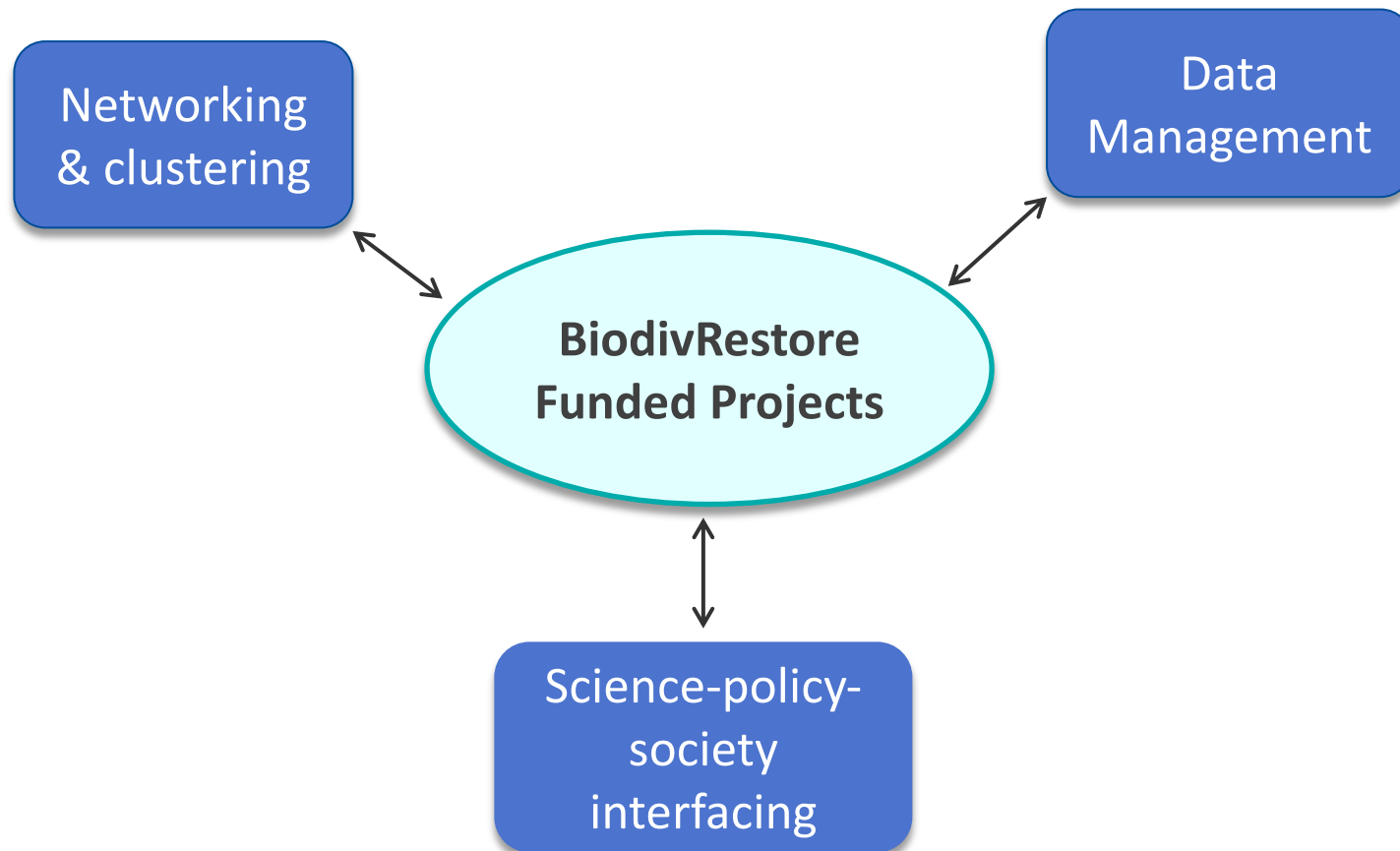
- Biodiversa and Water JPI newsletters / newsflashes
- Social networks
 - ✓ LinkedIn
 - Biodiversa+ – <https://www.linkedin.com/company/biodiversaplus/>
 - Water JPI researchers forum - <https://www.linkedin.com/groups/8455262/>
 - ✓ Twitter
 - @BiodiversaPlus
 - @WaterJPI
- Biodiversa & Water JPI websites

For any news you would like to share, contact us:

- **Biodiversa:** contact@biodiversa.org
- **Water JPI:** waterjpiconmunication@agencerecherche.fr

Additional activities

Advancing skills and opportunities for Biodiverstore projects



NETWORKING & CLUSTERING

OBJECTIVE

Allow funded researchers from different world regions and disciplines to **exchange on practices and results** and **work together on scientific publications and other activities**; think about the **research priorities**; provide **guidance** for future actions to meet research needs.

PLANNED ACTIVITIES

Several events planned :

- **4 MAY - Kick-Off Meeting**
- **5 MAY - Clustering workshop**
- **Ca. Sept. 2023 - Networking event between researchers and stakeholders**
- **Ca. March 2025 - Final Conference**



DATA MANAGEMENT

- Invitation to the **data management workshop** on **19 MAY**.
This workshop will aim to provide you with the necessary tools to further improve and implement your Data Management Plans (DMPs).

- Check **Guidance document on data management, open data, and the production of Data Management Plans:**

<http://www.biodiversa.org/1830>



science-policy- society interfacing

Networking and capacity building

- ✓ Tools for stakeholder engagement
- ✓ Ad hoc and networking events
- ✓ Opportunities to get involved in science-policy fora
- ✓ NetworkNature/Oppla communities & dialogue events



science-policy- society interfacing

Networking and capacity building

- ✓ Tools for stakeholder engagement
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- ✓ Opportunities to get involved in science-policy fora
- ✓ NetworkNature/Oppla communities & dialogue events



Opportunities in NetworkNature:

networknature.eu/

- **Getting your project and results on NBS known** (project pages and case studies, public database of EU NBS R&I projects, database of evidence on NBS...)
- **Getting to meet peers and other stakeholders working on NBS** (online and in person events, EU and national fora and events on NBS, calendar of NBS events, Network of SMEs on NBS...)
- **Relating and contributing to NBS R&I policy and knowledge gaps** (review and database of EU NBS knowledge gaps, opportunities to contribute to the development of an EU R&I roadmap on NBS)
- **Getting involved with H2020/HEurope NBS Task Forces**



Dissemination and uptake

- ✓ Opportunities for policy briefs (see www.biodiversa.org/policybriefs)
- ✓ Prize for excellence and impact (see www.biodiversa.org/1550)
- ✓ Valorization of project outcomes (e.g. www.biodiversa.org/943)
- ✓ Online knowledge marketplaces and case-study repositories (see e.g. oppla.eu/)



Q&A session



Concluding words

By Maja Kolar, AEI, Spain



Thank you very much for your participation

For the funded projects

*Do not forget the clustering WS tomorrow (05/05) from
9:00 to 13:00*

