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

BioReset

BiodivRestore-406

2020 - 2021 Joint Call
Joint COFUND Call on "Conservation and restoration of degraded ecosystems and their biodiversity, including a focus on aquatic systems"

Deliverable 4.6
Final Report on Dissemination activities

Lead Beneficiary	Work package	Delivery month
UNIOVI	**4**	**45**

1. Executive Summary

BioReset proposes to advance treatment processes (chemical, physical, biological and their combination) to promote ecosystem recovery and conservation and to develop assessment strategies. Diatoms will be used to model ecosystem conservation and restoration since their communities show high levels of biodiversity. The diatoms will provide an expeditious method to compare different recovery strategies and water treatment processes, allowing to address timescale and key conservation/restoration questions. The full environmental, economic, and social viability of the upgraded and innovative treatment technologies will be assessed. Based on this knowledge, scale-up studies in geographically different sites (Portugal and Spain) will be performed to ascertain the technical and economic feasibility at a larger scale and recommended action guidelines will be issued.

BioReset also envisages the creation of a representative space-time picture of the presence of emerging contaminants in inland waters and its correlation to effects on diatom communities. For this, powerful analytical techniques, such as gas- and liquid chromatography, will be used. Besides these methods, and to obtain real-time information, miniaturized analytical platforms that can perform fast and on-site monitoring will also be employed.

Deliverable 4.6 is intended to provide information about the activities performed to ensure that all relevant stakeholders and the general public are informed about the project's activities and results in order to benefit from its outcomes. The details of these activities are outlined in this report.

2. Task description

WP4 focused on the dissemination, communication, and exploitation of project activities and results to maximize scientific, societal, and economic impact. The aim of this WP was implementing a comprehensive communication and outreach strategy that included BioReset website, newsletters, a workshop, scientific publications, communications in conferences and training/educational activities.

3. WP4 - Team members

Although all the team members were involved in the dissemination activities, the members responsible for WP4 were:

Name	Organization	Role
Teresa Fernández-Abedul	UNIOVI	Task coordinator
Estefanía Costa Rama	UNIOVI	Researcher
Hendrikus Nouws	REQUIMTE	Researcher

4. Developed activities and results

Design, launch and regular update of the project website

A project website (https://www2.isep.ipp.pt/bioreset/) was launched at the beginning of the project. Before launching the website, a logo was created (Figure 1). The information posted on the website was regularly updated and will be even after the end date of the project. The website is hosted on the servers of ISEP (Instituto Superior de Engenharia do Porto), the coordinator of the activities related to the website is P1(PT).

Figure 1. Logo of the BioReset project.

The BioReset website (Figure 2) includes several sections:

- A welcome section where information about the Bioversa+ call is presented.
- "The project" section that includes information about the aims of the project and its importance, and mentions the partners involved, which are indicated also in "Consortium" section where access to the websites of the institution partners are included.

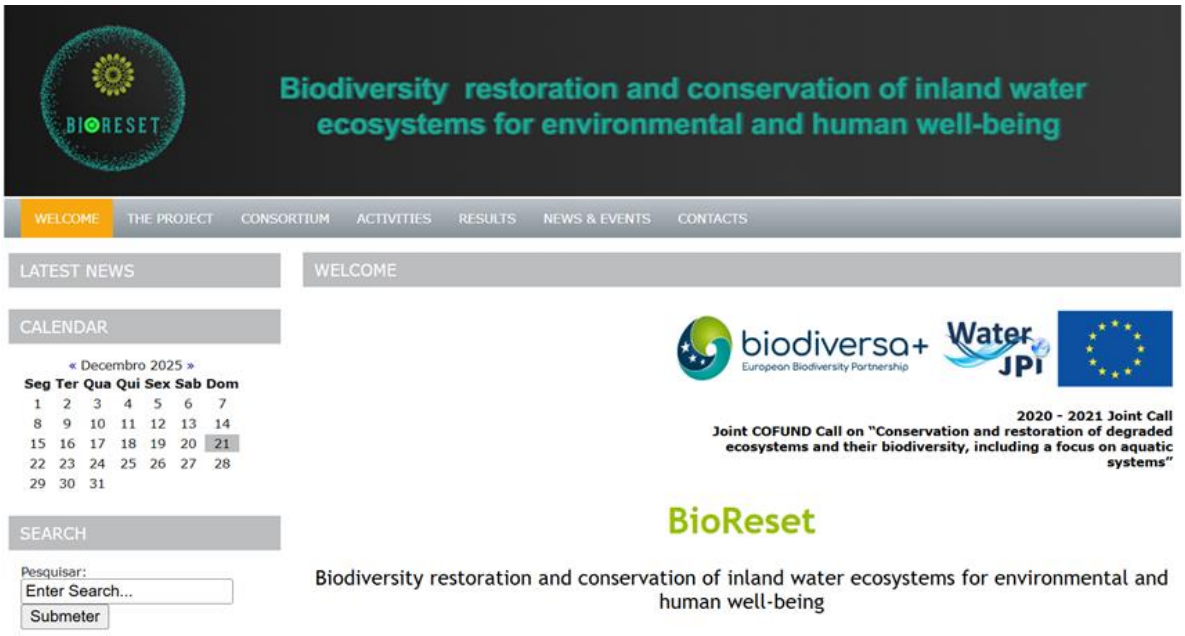

Figure 2. Screenshot of the homepage of the project's website.

- All the activities and outcomes of the project are listed in the sections "activities" and "results". The last one is divided in several subsections: Journal articles, Book chapters, Presentations in conferences, PhD Theses, Master Theses, Graduation reports and Exchange – research & students. In all cases, a link to the document or to additional information about the activity is included.
- The section "News & events" includes, apart from the 5 newsletters promoting the activities and results of the project, a chronological list (with images) of all the consortium meetings, and also pieces of news (mainly in newspapers) in which BioReset (and the derived activities and results) was disseminated.
- Finally, a "contacts" section is included providing the emails of the Project coordinator, and of the responsible for the "Communication & Dissemination" and "Data manager for open access & open data activities" activities.

Newsletters

In the initial proposal, four newsletters were planned. However, due to the significant volume of results generated throughout the project, a total of five newsletters were finally published. These newsletters can be read in the section "News & Events" of the website (ordered chronologically) with the following data: December 2023, January 2024, July 2024, December 2024, and June 2025.

BioReset Conference

The person meeting with the workpackage leaders, several team members, and leaders from other BiodivRestore funded projects was held in Porto, Portugal, on April 18 & 19, 2024. Over the two days the results of the BioReset project were presented and discussed and future work was planned.

The conference aimed to promote a space for reflection on the presented results from team members, thus constituting a forum for the dissemination of theoretical and applied knowledge in the water domain. Results obtained within the project by all the Partners were presented, and the leaders of 2 other BiodivRestore funded projects presented their projects and its' respective results (Teresa Amaro - COAST - Conservation of marine ecosystems around Santo Antão, Cabo Verde: implications for policy and society and Ester Serrao - RESTORESEAS - Marine Forests of animals, plants and algae: nature-based tools to protect and restore biodiversity). Besides these, the Water JPI funded "AQUAVAL - Valorisation of water use in aquaculture using multi trophic systems" project's results were present by its team leader (Paula Castro).

Scientific publications

In the initial proposal, as Key Performance Indicators (KPIs), five publications/year (starting from month 12) for the whole consortium were planned, which means 10 publications in total. Therefore, the initial expectations were largely exceeded, as a total of **57** scientific articles in Web of Science-indexed journals were derived from the project. Furthermore, two book chapters were published.
The complete list of these publications can be found in the "Results" section of BioReset's website.

Communications in conferences

Regarding the communication in conferences, the initial proposal was ten presentations in conferences/year (starting from month 12) for the whole consortium, which means 20 communications in total. As in the case of scientific publications, the expectations were largely exceeded as a total of **118** invited lectures/oral communications/poster communications were presented in national and international conferences. The list of these publications can be found in the "Results – Presentations in conferences" section of the project's website.

PhD Theses, Master Dissertations, Graduation reports

In the initial proposal, five training activities of early career researchers involving different consortium partners were planned as KPIs. The expectations were again largely exceeded since the following outcomes were achieved:

PhD Theses

A total of **7 PhD Theses were defended**, and another **7 are ongoing**, in the framework of the project. Those PhD Theses were/are developed under different Doctoral Programs of the University of Porto (Portugal) and Universities of Vigo and Oviedo (Spain):

- PhD in Advanced Oxidation Processes - University of Vigo (Spain) (2 students).
- PhD in Agri-Food Science and Technology - University of Vigo (Spain) (1 student).
- PhD in Biology, University of Porto (Portugal) (1 student).
- PhD in Chemical Engineering - University of Vigo (Spain) (3 students).
- PhD in Chemical, Environmental and Biofood Engineering, University of Oviedo (Spain) (1 student).
- PhD in Environmental Contamination and Toxicology - University of Porto (Portugal) (3 students).
- PhD in Sustainable Chemistry - University of Porto (Portugal) (3 students).

Master Dissertations

A total of **12 MSc Dissertations** were developed in the framework of this project:

- MSc in Bioresources - Instituto Superior de Engenharia do Porto, Instituto Politécnico do Porto (Portugal) (1 student).
- MSc in Chemical Engineering - Instituto Superior de Engenharia do Porto, Instituto Politécnico do Porto (Portugal) (4 students).
- MSc in Chemical Engineering - University of Oviedo (Spain) (1 student).
- MSc in Chemical Science and Technology - UNED (Spain) (1 student).
- MSc in Chemistry - Swedish University of Agricultural Sciences (Sweden) (1 student).
- MSc in Engineering - Technical Environmental Management and Ecotoxicology, FH University of Applied Sciences Technikum Wien (Austria) (1 student).
- MSc in Horticultural Science - Swedish University of Agricultural Sciences (Sweden) (1 student).
- MSc in Toxicology and Environmental Contamination - University of Porto (Portugal) (1 student).
- MSc of the University of Torino (Italy) (1 student).

Bachelor reports

A total of **14 BSc Reports** were developed in the framework of this project:

- BSc in Chemistry - Université Paris-Saclay - Institut Universitaire de Technologie d'Orsay (France) (1 student).
- BSC in Environmental Engineering - Czech University of Life Science (Czech Republic) (1 student).
- BSC in Horticultural Management and Production - Swedish University of Agricultural Sciences (Sweden) (1 student).
- BSc in Industrial Chemical Engineering - University of Oviedo (Spain) (1 student).
- BSc in Industrial Chemical Engineering - University of Vigo (Spain) (4 students).
- BSc in Industrial Technologies Engineering - University of Vigo (Spain) (6 students).

Exchange – research & students

Collaboration among all project partners was actively fostered throughout the entire duration of the project in order to enhance scientific progress and ensure efficient data sharing. This close interaction created synergies that, at certain stages, required direct and in-person cooperation to address specific scientific and technical challenges. As a result, several short-term research stays were carried out, during which students and/or researchers visited partner institutions:

- Sónia Figueiredo (Professor) & Virgínia Fernandes (postdoc researcher). From REQUIMTE to SLU. September 9 - 11, 2025.
- Bárbara Lomba Fernández (PhD student). From the University of Vigo to REQUIMTE. February - May, 2025.
- Irene García Fernández (PhD student). From the University of Oviedo to REQUIMTE. April - May, 2024.
- Patrícia Rebelo (postdoc researcher). FROM REQUIMTE to the University of Oviedo. March, 2023.
- Ángeles Sanromán & M. Pazos (senior researchers). From the University of Vigo to REQUIMTE. November 2022.
- Verónica Poza Nogueiras (postdoc researcher). From University of Vigo to REQUIMTE. October, 2022 - October, 2023, and February - December, 2024.

Dissemination in mass media (TV, radio and newspapers)

Dissemination of BIORESET objectives was also accomplished through non-scientific initiatives (e.g., daily newspapers, TV programmes) that are detailed that can be found detailed in BIORESET website (in the section “News & Events”). The following are some examples of the impact of the results of this project:

Public events

- The BioReset project was presented during the "Borgeby Fältdagar" (Borgeby Field days, Sweden). June 29 & 30, 2022.
- Raquel Pinto presented “Diatoms: From Science to Art” in a stand at the Open day of CIIMAR. September 18, 2022.
- The BioReset project was presented at the Department of Chemical Engineering - Instituto Superior de Engenharia do Porto (ISEP, Portugal). March 15, 2023.
- The green bioremediation with white-rot fungi technology was presented in Alnarp (Sweden) on November 24, 2023 during the "BranschDag Trädgård" (Industry Day Garden). November 24, 2023.

News in daily newspapers

- *Publico* (Portugal), August 4, 2022. “Para lutar contra a seca, projecto tenta remover poluentes das ETAR e reaproveitar água para rega”. (https://www.publico.pt/2022/08/04/azul/noticia/lutar-seca-projecto-tenta-remover-poluentes-etar-reaproveitar-agua-rega-2016173).
- *The Resident* (Portugal), Agosto 4, 2022. “BioReset: the brave new plan for countries living with drought”. (https://www.portugalresident.com/bioreset-the-brave-new-plan-for-a-countries-living-with-drought/?utm_source=rss&utm_medium=rss&utm_campaign=bioreset-the-brave-new-plan-for-a-countries-living-with-drought).
- *El Periódico* (España), March 18, 2025.” Una investigadora extremeña diseña una herramienta con minas de lápiz que detecta antidepresivos en aguas residuales”. (https://www.elperiodicoextremadura.com/extremadura/2025/03/18/investigadora-extremena-disena-herramienta-minas-lapiz-detecta-antidepresivos-aguas-residuales-115434308.html)

Other publications

- The BioReset project was the subject of a report in País Positivo ("Positive Country"): “*REQUIMTE - ISEP/BIORESET: projeto visa remover poluentes das águas residuais e reutilizar a água para rega*”. March 2023.