



Join us for a series of webinars led by the voices of young researchers from EU-funded projects REWET, RESTORE4Cs, WET HORIZONS, and ALFAwetlands. As we recognize the critical importance of safeguarding wetland ecosystems, these projects are placing the spotlight on the next generation of wetland researchers.

We will start on 8 May 2024 at 10 CET with two presentations from the REWET project and RESTORE4CS.

Get to know more about the speakers by reading the abstracts and personal presentations. The link for the connection is available [here](#).

**Fluxes along gradients: how water saturation regulates CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O fluxes in the terrestrial-aquatic continuum**

Sara Benelli & Marco Bartoli  
University of Parma (Italy)  
REWET

The study site of this research encompasses an oxbow lake situated along the Po River in northern Italy. This ancient meander of the Po River has undergone cycles of drought and rewetting due to variations in river discharge. Within the transitional zones of the oxbow lake's marginal areas, spanning terrestrial to aquatic habitats, we conducted measurements of the principal GHG fluxes using portable gas analyzers. These measurements targeted CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O emissions.

The findings revealed that drought conditions stimulate carbon mineralization processes, consequently enhancing CO<sub>2</sub> fluxes to the atmosphere. Conversely, CH<sub>4</sub> emissions exhibited an opposing pattern, increasing along with soil water content. Additionally, N<sub>2</sub>O emissions showed an increase from saturated to unsaturated soil conditions, indicating a greater contribution of nitrification relative to denitrification processes in driving N<sub>2</sub>O fluxes. The net global warming potential calculated along the terrestrial-aquatic continuum in the oxbow lake showed 100% emissions of CO<sub>2</sub> from dry and exposed sediments, while inundated and saturated soils emitted 100%





of the CH<sub>4</sub> produced along the transect. A small contribution was calculated from N<sub>2</sub>O emissions.

*Sara Benelli is a postdoctoral fellow at the University of Parma (Italy), actively engaged in the REWET research project focused on investigating greenhouse gas emissions from wetlands undergoing environmental restoration. Her primary research focus lies in understanding the dynamics of nutrient cycling in benthic freshwater and marine systems. One of the central themes of Sara's research revolves around exploring the ecological interactions between micro and macroorganisms inhabiting these aquatic ecosystems. In her investigations, Sara employs a multidisciplinary approach, integrating field observations, laboratory experiments, and advanced analytical techniques.*

### **How to measure social acceptability of alternative environmental management solutions in the context of restoration actions**

Nicola Pollo

Research Institute on Sustainable Economic Growth, Italian National Research Council (Italy)  
RESTORE4CS

The research activity has focused on a conceptual framework and guidance to analyse the social acceptability (SA) of environmental restoration and alternative management options, particularly in the case of wetlands.

Social acceptability is a key aspect to guarantee the success of environmental management projects, which should also consider stakeholders' perceptions and preferences to ensure the true effectiveness of restoration actions.

However, many restoration projects fail to integrate socio-economic analyses and bio-geo-physical research. Our research explored the most recent international literature to assess the state-of-the-art on SA assessment and to develop an original methodological framework to identify local stakeholders' perceptions and preferences for ecosystem restoration options.





# EMERGING VOICES

YOUNG RESEARCHERS' WEBINARS  
ON WETLANDS RESTORATION

Following the framework of contributions for nature studies, we proceeded to provide a list as comprehensive as possible of the natural, social, and economic factors that could affect the level of social acceptability of wetlands restoration processes. Finally, the focus was on the exhaustive mapping of stakeholders, management, and the various methodologies for measuring social acceptability judgments on different environmental management alternatives.

*Nicola Pollo is a junior researcher.*

*Graduated with a master's degree in Sociology from the University of Turin he began his research activity with an internship on nighttime tourism at the I.R.E.S. Institute of the Piedmont region.*

*Starting from 2024, is a research fellow at the Research Institute on Sustainable Economic Growth of the Italian National Research Council.*

*He holds a master's degree in sociology from the University of Turin and, in 2023, he began collaborating with the same institute thanks to a research grant on the topics of applied social research.*

The following table shows the programme of all the presentations. Join us!





# EMERGING VOICES

YOUNG RESEARCHERS' WEBINARS  
ON WETLANDS RESTORATION

| Name             | Project      | Title   | Date       | Link                       |
|------------------|--------------|---|------------|----------------------------|
| Sara Benelli     | REWET        | <b>Fluxes along gradients: how water saturation regulates CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O fluxes in the terrestrial-aquatic continuum</b> | 08/05/2024 | <a href="#">Click here</a> |
| Nicola Pollo     | RESTORE4CS   | <b>Social acceptability of wetland restoration</b>  | 08/05/2024 |                            |
| Atif Muhmood     | WET HORIZONS | <b>Phosphorus dynamics in drained peatlands upon rewetting: exploring the influence of land use and temperature</b>   | 05/06/2024 | <a href="#">Click here</a> |
| Ville Tuominen   | WET HORIZONS | <b>Ecosystem models under extreme weather: effect on emissions and the frequency of events in the past and future climate</b>                               | 05/06/2024 |                            |
| Camille Minaudo  | RESTORE4CS   | <b>In situ GHG fluxes in contrasted European coastal wetlands with different ecological and conservation status</b>   | 25/09/2024 | <a href="#">Click here</a> |
| Shihao Cui       | WET HORIZONS | <b>Effects of prescribed burning on methane emissions from peatlands</b>  | 25/09/2024 |                            |
| Carolin Seifert  | ALFAWetlands | <b>The Öland Project - co-producing knowledge and pathways for collective climate action</b>  | 24/10/2024 | <a href="#">Click here</a> |
| Benjamin Misteli | RESTORE4CS   | <b>Mass development of aquatic macrophytes and their removal: impact on ecosystem services with a focus on biodiversity</b>                                 | 24/10/2024 |                            |
| Ojaswi Sumbh     | WET HORIZONS | <b>Developing and validation species-level biodiversity assessment model for wetlands vegetation</b>  | 28/11/2024 | <a href="#">Click here</a> |
| Haonan Guo       | WET HORIZONS | <b>Response of GHG emissions to peatland rewetting: Influence of historical land use and rewetting water level</b>  | 28/11/2024 |                            |

See you on the 5 June 2024 with two talks from WET HORIZONS.



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