Technical Officer (Peatlands)

Role description

Position title: Technical Officer-Peatlands

Programme specificities:

Peatlands are among Europe's most valuable yet most threatened ecosystems. They store more carbon than all other land-based ecosystems combined, regulate water systems, and support unique biodiversity. Their protection and restoration are central to achieving the EU's climate and nature restoration goals.
As EU policies such as the Nature Restoration Law and the Common Agricultural Policy move into implementation at national level, there is an increasing need for strong technical capacity to support delivery on the ground. Within this context, the Peatlands programme plays a key role in translating policy into practice by supporting partners, projects, and country-level initiatives.
The Technical Officer contributes to this effort by providing technical expertise on peatland restoration and management, supporting the implementation of projects, and facilitating knowledge exchange across countries and partners. The role also supports the development of sound methodologies, monitoring approaches, and practical guidance to ensure high-quality and impactful interventions.

Supervisor

Reporting to the Programme Manager- Peatlands

Key projects:

PEAT-GENIE

PEAT-GENIE will develop AI-based predictive models to produce robust impact assessments using advanced machine and deep learning algorithms. The scenario exploration interface translates the needs of non-technical users into assessments, enabling diverse stakeholders to ask natural language "what-if" questions and evaluate alternative management strategies. The explanation interface converts technical AI model outputs into narrative insights fostering accessibility and informed decision-making. PEAT-GENIE focuses on peatlands, which are ecosystems with high significance for climate regulation, water management, and biodiversity conservation. Within this case study, the project will extend DestinE digital twin components to support various applications including hydrology, GHG fluxes, biodiversity, and land cover. The PEAT-GENIE platform will be validated at real-world test sites in Denmark, Estonia, Finland, and Ireland, demonstrating transferability across diverse peatland types and management strategies, and ensuring broad European relevance.

This new project addresses critical challenges in terms of usability and accessibility, especially for non-technical users, due to technical barriers, fragmented toolchains, and the lack of intuitive interfaces by developing a user-friendly platform. The platform will integrate and fuse multi-source datasets, including in situ observations, national datasets, and data from DestinE ecosystem, an EU initiative for high-quality observational data of the Earth.

The main objective of the tasks for Wetlands International Europe lies in developing and demonstrating the tools in an operational environment with end-users drawn from policy makers and local authorities, land managers, NGOs and local communities in the case study regions. Wetlands International Europe will engage these stakeholders in scenario exploration and simulations using the previous developed tools. Using a participatory approach, we will involve end-users in the regions directly in scenario simulations to better tailor outputs to their (local) needs and expectations. The outcomes of these tasks will further strengthen policy for more effective and informed peatlands conservation.

Key responsibilities specific to the role

PEAT-GENIE:

- Act as the leading voice on wetlands within the project, ensuring that peatland-specific expertise and priorities are consistently reflected across activities and outputs.
- Lead WP8 on User-centric design and end-user engagement, coordinating activities to ensure that tools and solutions are tailored to the needs of diverse stakeholders.
- Contribute to the development and operationalisation of a user-friendly platform that improves accessibility and usability of peatland-related data and tools for non-technical users.
- Support the integration and use of multi-source datasets (e.g. in situ observations, national datasets, and DestinE data) to inform peatland management and restoration.
- Assist in the application and validation of AI-based environmental models and tools, ensuring their relevance and usability for real-world decision-making contexts.
- Engage with end-users (policy makers, local authorities, land managers, NGOs, and local communities) in the case study regions to test and refine tools through scenario exploration and simulations.
- Facilitate participatory processes to ensure that tools and outputs are aligned with user needs, expectations, and local contexts.
- Translate technical outputs (e.g. model results, scenario analyses) into accessible insights and communication materials to support informed decision-making.
- Support the validation of the platform and tools across test sites (Denmark, Estonia, Finland, and Ireland), ensuring their transferability across different peatland types and management approaches.
- Contribute to strengthening the uptake of project results into policy and practice, particularly in support of peatland conservation, climate, water, and biodiversity objectives.

Other projects:

- Ensure the project's activities, priorities, and expected outcomes are aligned with related projects and ongoing activities

Specific objectives or deliverables

- Defined yearly both at programmatic level and at individual level.

Key responsabilities

Wetlands International Europe ToR for Technical Officer are available upon request.

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