

## SESSION DESCRIPTION

ID: X7

**Participatory mapping and citizen science pathways for advancing ecosystem services and biodiversity stewardship**

### Hosts:

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### Abstract:

Inclusive, participatory, and data-driven approaches are increasingly central to understanding and sustaining the relationships between people and nature. As ecosystem service research and biodiversity policy evolve—driven by frameworks such as IPBES, the EU Biodiversity Strategy for 2030, and the Nature Restoration Law—there is growing recognition that communities and researchers must collaborate to generate actionable, place-based knowledge that supports sustainability transformations.

This session brings together two interlinked strands of participatory research that have matured significantly over the past decade: participatory ecosystem service mapping and citizen science approaches to biodiversity and ecosystem services. Together, these approaches provide pathways for integrating local knowledge, values, and practices into the broader science–policy interface. They also raise important questions about inclusivity, data quality, power relations, and how participatory approaches can be scaled up without losing their grounding in local realities.

### Goals and objectives of the session:

#### Block 1: Participatory Mapping of Ecosystem Services – Methods, Advances, and Future Directions

Over the past 20 years, participatory mapping has become a cornerstone of sociocultural ecosystem service assessment, contributing to a deeper understanding of human–nature relations. This block will take stock of methodological innovations, conceptual advances, and empirical insights since the last major review a decade ago. It invites contributions that:

- Present novel methods, datasets, or technologies advancing participatory ecosystem service mapping;
- Explore how participatory mapping aligns with new frameworks (e.g. nature's contributions to people, diverse values of nature, IPBES life frames);

- Examine how mapping can inform policy, planning, and practice for sustainability transitions.

The block aims to refine participatory mapping as a robust, recognized approach for understanding and guiding transformations toward people- and nature-positive futures.

## **Block 2: Citizen Science for Biodiversity and Ecosystem Services – knowledge, governance and justice implications**

Citizen science offers powerful tools to bridge the gap between local action, policy and planning schemes and global frameworks by co-generating biodiversity and ecosystem services data. This block focuses on participatory monitoring, co-designed technologies, and community-based initiatives that link scientific, local, and policy knowledge. By foregrounding both opportunities and limitations, this block will highlight how citizen science can enhance data collection, empower communities, and promote equitable participation in decision-making and planning processes.

We welcome contributions that:

- Present projects and initiatives showcasing the development/use of biodiversity apps, open-source mapping, low-cost and low-tech sensors, structured monitoring schemes;
- illustrate bottom-up and grassroots initiatives related with citizen science approaches for biodiversity and ecosystem services
- Critically assess inclusivity and justice implications of data gathered and knowledge generated in the different realms of justice (distributional, recognitional and procedural, for instance)
- Explore citizen science approaches in participatory governance, policy and planning interfaces for biodiversity and ecosystem services at various scale

Case studies, research projects, formal and informal practices taking place in both urban and non-urban (e.g. rural, inner, coastal and mountainous areas) are welcome.

### **Planned output / Deliverables:**

- A short report identifying participatory and citizen science initiatives and tools for monitoring biodiversity and broader ecosystem services in rural and mountain areas
- A joint synthesis paper may result from the session provided that sufficient new ideas and enthusiastic participants find together.

### **Session format:**

A standard session, starting with invited stock-taking presentations, standard papers, and a joint discussion.

### **Voluntary contributions accepted:**

Yes, I allow any abstract to be submitted to my session for review

### **Related to ESP Working Group:**

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