ESP 11 World Conference

"From global to local ecosystem services: pathways to Nature-based Solutions inspired from Down Under"

23-27 June 2025 | Darwin, Australia

SESSION DESCRIPTION

ID: T4

From outer space to local ecosystem service mapping – harnessing state-of-the-art data, methods and tools on various spatio-temporal scales

Hosts:

	Name	Organisation	E-mail
Host:	Benjamin Burkhard	Leibniz University Hannover	burkhard@phygeo.uni-hannover.de
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Abstract:

Much knowledge, data and methodological approaches for more detailed and efficient ecosystem service mapping have been created and are ready-for-use today. High accuracy Earth observation techniques, big data analysis algorithms, monitoring schemes as well as more sophisticated biophysical measurement and socio-cultural survey methods offer the human-environmental system sciences highly applicable new instruments, allowing very accurate studies at various spatio-temporal scales - from global to local and from decades to moments. Modern remote sensing sensors, for instance, do not only allow precise detection of prevailing land cover types, but enable more detailed analyses of environmental indicators like biomass, soil moisture, temperature or human activities that are highly relevant for ecosystem condition, functionality and services supply. In combination with state-of-the-art spatio-temporal approaches like GIS, geostatistics and machine-/deep-learning, large amounts of data can be processed and analysed, allowing the detection of patterns and processes, leading to a better understanding of human-environment interactions. Such information is highly needed for sustainable management of our limited land and natural resources. The session therefore welcomes contributions about above-mentioned data and tools on different spatio-temporal scales, updating the ecosystem services mapping community about their applicability.

Goals and objectives of the session:

To elaborate on newest data and innovative tools available for ES supply and/or demand mapping

Planned output / Deliverables:

joint publication or topic collection in an open access online journal

Session format:

Impulse presentations followed by a discussion on potential joint activities. Duration 1-2 blocks, depending on the number of submitted contributions.

Voluntary contributions accepted:

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

Related to ESP Working Group:

TWG 4 – Mapping ES