SESSION DESCRIPTION

ID: T14b | T17b

How to achieve "no net loss" and "net gain" targets for urban nature? The role of ecosystem accounting and other emerging tools at multiple scales | Advancing urban ecosystem accounting: co-developing a roadmap to bridge research, policy, and practice

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Abstract:

This merged session (T14b | T17b) brings together the discussion on how “no net loss” and “net gain” targets for urban nature can be operationalized (through multiple methods) with a dedicated focus on ongoing efforts to advance and standardize urban ecosystem accounting across research, policy, and practice.

Across Europe, a wide range of “no net loss” and “net gain” targets for urban nature are being advanced in international and national policies. Among the most prominent are the targets for tree canopy cover and green spaces in urban ecosystems defined in art. 8 of the EU Nature Restoration Regulation. Other well-known examples include England’s Biodiversity Net Gain requirement, mandatory since 2024 under the Environment Act 2021 (amending the Town and Country Planning Act 1990), as well as the “no net land take” objective set out in the Roadmap to a Resource Efficient Europe and the “no net soil sealing” ambition under the EU Soil Mission.

Achieving these targets requires robust methods and decision-support tools that can guide their integration into spatial planning processes and actions across multiple decision-making levels, from site-specific interventions to entire urban regions. Such tools must respond to the diversity of European urban contexts—characterized by varying socio-ecological-technological conditions, governance systems, and planning traditions—while enabling consistent and comparable outputs, such as datasets, maps, certificates, and reports.

Urban ecosystem accounting, framed as a thematic account under the System of Environmental-Economic Accounting – Ecosystem Accounting (SEEA-EA), offers a promising pathway to inform local decision-making while ensuring alignment with a standardized international statistical framework. Moving beyond ad-hoc ecosystem mapping and assessment, standardized urban ecosystem accounts could support the monitoring of "no net loss" and "net gain" targets, track progress over time, and enable benchmarking and aggregation from local to national and European scales. This is supported by the recent amendment to the EU environmental-economic accounting regulation that introduced mandatory ecosystem accounts for urban areas. However, their application still faces conceptual, methodological, and operational challenges. The absence of an agreed urban-specific framework, combined with the potentially divergent policy uses that ecosystem accounts may serve, risks generating fragmented implementations that hinder comparability, lesson learning, and mainstreaming.

Alongside ecosystem accounting, a variety of complementary methods and tools are being developed to support the implementation of "no net loss" and "net gain" policies in urban areas. Some, such as life cycle assessment and life cycle costing, are being innovatively extended to urban systems and combined with ecosystem services approaches. Others are explicitly designed for urban policy support, including Oslo's Blue-Green Factor tool and Flanders' BetonMeter, which respectively guide developers in meeting nature targets and help authorities monitor progress towards reducing soil sealing.

Focusing on urban applications, the session will examine:

- The operationalization of "no net loss" and "net gain" targets for urban nature across scales, with a focus on emergent methods and tools. It will discuss their strengths and limitations, explore opportunities for their integration, and reflect on how such tools can affect the feasibility and inform the implementation of ambitious targets in European cities.

- The advancing of a coherent and policy-relevant urban ecosystem accounting framework, reflecting on how it could inform targets for urban nature, but also discussing strengths and limitations of existing conceptual and methodological approaches being tested across European cities.

Goals and objectives of the session:

- This merged session combines a more general exploration of innovative tools for achieving "no net loss" and "net gain" targets for urban nature (T14b) with a dedicated focus on efforts to advance and standardize thematic urban ecosystem accounting across research, policy, and practice (T17b).

- The overall aim of this session is to present, discuss, and co-develop novel methods, tools, and frameworks that can support planning and policy actions to deliver "no net loss" and "net gain" targets in urban areas. The session is open to contributions addressing multiple spatial levels, from site-specific interventions to entire urban regions. It welcomes both research-oriented and practitioner-oriented studies, including work developed collaboratively among researchers, practitioners, and public institutions.

- The session also aims to foster a shared understanding of thematic urban ecosystem accounting under the SEEA-EA standard and its application in supporting policy-relevant urban nature targets, while addressing conceptual, methodological, and operational challenges.

In practical terms, the session aims to:

- Bring together researchers, public officers, and practitioners engaged in delivering "no net loss" and "net gain" targets, as well as those involved in developing and implementing urban ecosystem accounts, to exchange perspectives, experiences, and practical solutions.
- Explore opportunities for integrating multiple tools, approaches, and data sources to support monitoring, scenario analysis, and reporting of "no net loss" and "net gain" outcomes.
- Initiate dialogue and co-develop pathways for a coherent, standardized framework for urban ecosystem accounting that can inform local, regional, and national policy while remaining flexible to context-specific targets.

Of particular interest to this session are contributions focused on the following themes:

- Tools purposely developed to guide local actors in the implementation of "no net loss" and "net gain" targets within specific urban contexts, including approaches that factor-in the value of ecosystem services.

- Approaches for the prioritization of interventions and the identification of suitable compensation areas.
- Methods for monitoring the achievement of “not net loss” and “net gain” strategies at the city, regional, national, and international level.
- Applications of urban ecosystem accounts to support “no net loss” and “net gain” targets at multiple scales.
- Challenges and bottlenecks in applying urban ecosystem accounts, including diverse stakeholder needs, reporting requirements, and gaps in existing conceptual, methodological, or operational approaches.
- Innovative approaches to advance urban ecosystem accounting, including actionable recommendations for improving consistency, comparability, and usability across scales.
- Digital data pipelines and tools (GIS, remote sensing, IoT, digital twins, AI-assisted decision support) that scale urban nature monitoring and scenario analysis.

We are especially interested to hear from the speakers and to discuss:

- The role of ecosystem condition and ecosystem services assessments in the proposed tools and in existing applications.
- The integration of the results in cross-scale reporting mechanisms.
- Possible combinations of several tools to inform “not net loss” and “net gain” targets and to monitor trends in urban nature.
- Methods to address uncertainty, additionality, cumulative impacts, leakage, spillover and telecoupled effects, and permanence over long time horizons.
- Validation of the proposed approaches through local data.

Planned output / Deliverables:

The session is expected to generate the following outputs:

- A summary paper synthesizing key insights on tools to inform “not net loss” and “net gain” targets for urban nature, prepared for submission to a peer-reviewed journal.
- Identification of innovative methods, tools, and gaps, while bringing together ESP members from diverse sectors to support the prospective ESP urban ecosystem accounting sub-group.
- Identification of an initial list of opportunities for collaboration among attendees beyond the ESP working subgroup, such as pilot projects, joint publications, science-for-policy dialogues on urban ecosystem accounting. The long-term aim is to start building a strong science–policy–practice network on this topic.
- Contributions focused on urban ecosystem accounting are invited to contribute to the Special Issue of the journal Ecosystem Services titled “Urban ecosystem accounting under the SEEA-EA framework: advancing concepts and applications” (submission deadline: September 30, 2026)

Session format:

This Standard session with presentations followed by a discussion.

Voluntary contributions accepted:

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

Related to ESP Working Group:

TWG 14 – Application of ES in Planning & Management