ID: T14

Title of session:

Ecosystem Services assessments and trade-offs. Methods and indicators for spatial planning.

Hosts:

	Title	Name	Organisation	E-mail
Host:	Prof. Dr.	Harald Zepp	Department of Geography, Ruhr-University Bochum	harald.zepp@rub.de
Host:	Dr.	Luis Inostroza	Department of Geography, Ruhr-University Bochum	Luis.inostroza@rub.de
Host:	Prof.	StefanoSalata	Department of Architecture and Urban Studies – Politecnico di Milano	stefano.salata@polimi.it
Co-Host:	Dr.	Silvia Ronchi	Department of Architecture and Urban Studies – Politecnico di Milano	silvia.ronchi@polimi.it
Co-Host	Prof.	Andrea Arcidiacono	Department of Architecture and Urban Studies – Politecnico di Milano	andrea.arcidiacono@polimi.it

Abstract:

The growing scientific knowledge generated around the Ecosystem Services (ES) concept is increasingly appreciated for enhancing policy making, land use planning and management (Koenig et al 2013; Fuerst et. al 2014; Hansen et al., 2015), and impact assessment (Geneletti & Zardo 2016). Indeed, once grounded into practice, the ES framework can be of great help for understanding the impacts of human activities on well being, and the distribution of benefits flowing to society from the use of ecosystems in a sustainable manner. The interlink between the specific supply of ES and its spatial configuration has been largely explored in terms of mapping (Burkhard 2013; Zepp et. al 2016) and land cover changes (Mukul et. al. 2017). Mapping of ES allows for a direct integration into spatial planning (Maes et al., 2012), supporting the decision-making process to better analyze and evaluate the interaction between different ecosystems and their respective human pressures. Moreover, the integration of ES into spatial planning can foster multifunctional land use management approaches by addressing the trade-offs between different land-use options in terms of the flow of ES towards society. The use of the ES in spatial planning as a tool for enhancing multifunctionality and assessing trade-offs looking towards compensating and enhancing environmental deficits is promising but still at its infancy. Spatial distribution of environmental amenities and ES can have a positive or negative role and thus affecting urban resilience. At the same time the ES concept offers a powerful platform for participatory land planning (Fuerst et. al. 2014). In this session, we aim at discussing the use of the ES concept and framework in spatial planning. Particularly, the session will explore and discuss different methods

and indicators to transfer ES assessment to spatial planning. We welcome theoretical approaches as well as case studies, especifically looking at i) Urban Green Infrastructure at different scales (Hansen et. Al, 2016)and; ii) urban development and nature based solutions.

Goals and objectives of the session:

The goal of the session is to open the debate around different methodological approaches focusing on multiple ES assessment to estimate the current and expected trends in ES supply to support spatial planning. We will focus around 3 main concepts and their specific interlinks: 1) mapping Ecosystem Services, 2) their use asspatial planning toolsand 3) how to address nature based solutions. To work out the goals of the session, we will use the set offollowing questions:
1) How can the ES framework be methodologically and operationally incorporated into spatial planning?
2) How can the results of scientifically sound assessment of ES be translated into urban design tools for the public, decision-makers and into land use regulation (e.g. Urban Green Infrastructures)?
3) How can the ES concept help integrating stakeholders information and participation into crucial definitions of context related ES that should be relevant in the spatial planning?
4) How can political decisions underlying spatial planning processes be better informed using the ES trade-offs scheme?
Two issues are mainly focused on how to fill the gap that separates analysis and spatial tools (issues 1 and 2); while issues 2 and 3 are focused on how the application of ES helps in the decision-making processes (e.g. stakeholders participation and information and their effects on political decisions).

Planned output / Deliverables:

The session will offer the possibility to publish in a special issue in a journal to be determined.

Voluntary contributions accepted:

Yes, we allow voluntary contributions to be submitted to our session for review.

Proposed Format (duration, methods) (internal comment):

The discussion will be systematized around the key questions to interlink the concepts into a comprehensive state of the art and to stimulate the scientific debate towards policy making. We will have a closing discussion around key concepts of every presentation. We will use to selected casestudies presented in the session as examples to start the discussion. We will open the floor to invited speakers to comment the case studies, then we use the guiding questions to ask the audience for contributions based on their own expertise/cases. We will collect the take home messages to communicate them on the conference web page and in the expected publication.

Related to WG or NN:

TWG 14 - Application of ES in Planning & Management