

Call for Papers

Ecosystem services in spatial planning

Special issue of the journal 'Raumforschung und Raumordnung | Spatial Research and Planning'



Tim Caspary, pixelio.de

The **spatial planning system in Germany** offers a spectrum of formal and informal instruments for considering the protection and sustainable use of nature and landscape in decision-making processes. Nonetheless, the extent to which spatial planning has to date been able to minimise negative development trends and achieve comprehensive nature conservation goals is very limited.

The **concept of ecosystem services** has received much attention in both policy and scientific discussions and has the potential to evaluate and communicate the significance of nature for human-beings in a new way. It can thus help improve consideration of aspects related to nature conservation in land-use decision-making processes. Increases in related publications,

networks and research projects suggest that the concept will continue to be highly relevant in the future (e.g. von Haaren/Albert 2016). Three significant innovations that are linked to the concept of ecosystem services comprise:

- The evaluation of nature and landscape in relation to human well-being,
- A more quantitative approach to analysis with new possibilities to integrate trends, interrelations and synergies, and
- The multi-dimensional evaluation of nature and landscape, including economic and monetary aspects.

In addition, participative planning procedures can be promoted by the use of the ecosystem services concept.

With the **growing pressure on nature, land and biodiversity** there is increasing urgency to record and evaluate ecosystem services, improving the way in which they are considered in decision-making processes – particularly within spatial planning. In recent years international and national research on ecosystem services has made diverse conceptual advances and proposals about how the concept can be applied in planning (e.g. de Groot/Alkemade/Braat et al. 2010; Albert/Galler/Hermes et al. 2016). A series of projects have recently been initiated to investigate and test the application of the concept of ecosystem services in planning practice in Europe and Germany. Other current impulses to use the concept in planning include the green infrastructure notion (Kopperoinen/Itkonen/Niemelä 2014; Albert/von Haaren 2017) and the so-called nature-based solutions (Nesshöver/Assmuth/Irvine et al. 2017; Albert/Schröter/Haase et al. 2019), both of which explicitly draw on ecosystem services and, e.g., are promoted in European politics as building blocks of sustainable spatial development.

A working group of the Academy for Spatial Research and Planning – Leibniz-Forum for Spatial Sciences (ARL) is for the first time systematically compiling and assessing nascent experience with the use of the concept in spatial planning in Germany, also evaluating it with regard to research gaps and recommendations for its practical application.

The **aim of the special issue** is to present the findings of the working group and other relevant research projects with a view to collecting and comprehensively discussing prospects for the

application of the concept of ecosystem services in regional-level spatial planning in Germany. Of particular interest are papers that refer to the different states of knowledge about ecosystem services on different planning levels and that take into account the specifics of urban and rural planning.

Possible papers from practice and research can, for instance, focus on the following topics:

- Methods, results and impacts of operationalising the concept of ecosystem services using best-practice case studies on the informal instruments of spatial planning,
- Possibilities for and boundaries to the integration of the concept in formal instruments of spatial planning,
- Contributions of the concept of ecosystem services towards the support of decision-making processes for transformation towards more sustainable spatial development, and
- Options for and impacts of the use of the concept of ecosystem services in education on sustainable spatial development.

The special issue is highly relevant for the science and practice of spatial development and planning. It will bring together findings on the topics of methodological innovation, communicative advantages, and possibilities for improving consideration of nature and landscape, their need for protection and biodiversity in planning processes. Findings from Germany are of great international relevance as the local planning system is already characterised by comparatively good data sources and methodological experience in the recording, evaluation and consideration of nature and landscape in planning decisions (especially in the field of landscape planning).

Papers may be written in German or in English and may be submitted within the categories 'Articles' and 'Policy and practice perspective'. Interested authors are requested to first submit an abstract of between 150 and 250 words in length in order to ensure that the proposed paper is thematically appropriate for the special issue. All interested authors are asked to comply with the journal's Instructions for Authors (<https://content.sciendo.com/view/journals/rara/rara-overview.xml>). All submitted manuscripts will undergo the usual double-blind refereeing process.

The following timetable is envisaged:

- Deadline for submission of the abstracts: 15 January 2020. Please send your abstract to Dr. Barbara Warner (warner@arl-net.de).
- Authors receive feedback on their submitted abstracts: 15 February 2020.
- Deadline for submission of papers: 1 January 2021. Submission occurs via the website: <https://www.editorialmanager.com/rara/>
- The online first publication will occur about four weeks after the paper in question has been accepted.
- The print version of the special issue is planned for spring 2022.

For content-based queries please contact the guest editors: Jun.-Prof. Dr. Christian Albert (albert@umwelt.uni-hannover.de), Dr. Rieke Hansen (hansen@la.rwth-aachen.de), Dr. Barbara Warner (warner@arl-net.de). For organisational queries please contact the Editor-in-Chief: Prof. Dr. Andreas Klee (klee@arl-net.de).

Literature

Albert, C.; Galler, C.; Hermes, J.; Neuendorf, F., von Haaren, C.; Lovett, A. (2016): Applying ecosystem services indicators in landscape planning and management: The ES-in-Planning framework. In: Ecological Indicators 61, 1, 100-113. Doi: 10.1016/j.ecolind.2015.03.029

Albert, C.; Schröter, B.; Haase, D.; Brillinger, M.; Henze, J.; Herrmann, S.; Gottwald, S.; Guerrero, P.; Nicolas, C.; Matzdorf, B. (2019): Addressing societal challenges through nature-based solutions: How can landscape planning and governance research contribute? In: Landscape and Urban Planning 182, 12-21. doi: 10.1016/j.landurbplan.2018.10.003

Albert, C.; von Haaren, C. (2017): Implications of Applying the Green Infrastructure Concept in Landscape Planning for Ecosystem Services in Peri-Urban Areas: An Expert Survey and Case Study. In: Planning Practice and Research 32, 3, 227-242. doi: 10.1080/02697459.2014.973683

de Groot, R.S.; Alkemade, R.; Braat, L.; Hein, L.; Willemsen, L. (2010): Challenges in integrating the concept of ecosystem services and values in landscape planning, management and decision making. In: *Ecological Complexity* 7, 3, 260-272. doi: 10.1016/j.ecocom.2009.10.006

Kopperoinen, L.; Itonen, P.; Niemelä, J. (2014): Using expert knowledge in combining green infrastructure and ecosystem services in land use planning: an insight into a new place-based methodology. In: *Landscape Ecology* 29, 8, 1361-1375. doi: 10.1007/s10980-014-0014-2

Nesshöver, C.; Assmuth, T.; Irvine, K.N.; Rusch, G.M.; Waylen, K.A.; Delbaere, B.; Haase, D.; Jones-Walters, L.; Keune, H.; Kovacs, E.; Krauze, K.; Kylvik, M.; Rey, F.; van Dijk, J.; Vistad, O.I.; Wilkinson, M.E.; Wittmer, H. (2017): The science, policy and practice of nature-based solutions: An interdisciplinary perspective. In: *Science of the Total Environment* 579, 1215-1227. doi: 10.1016/j.scitotenv.2016.11.106

von Haaren, C., Albert, C. (Hrsg.) (2016): *Ökosystemleistungen in ländlichen Räumen. Grundlage für menschliches Wohlergehen und nachhaltige wirtschaftliche Entwicklung.* Hannover/Leipzig.