

EDITORIAL

Landscape Online | Volume 97 | 2022 | Article 1106

Submitted: 29 November 2022 | Accepted in revised version: 23 December 2022 | Published: 30 December 2022

Fifteen years of Landscape Online: Looking back at the development of an e-journal

Werner Rolf1* and Uta Schirpke2

- 1) Chair for Strategic Landscape Planning and Management, Technical University of Munich, Germany.
- 2) Department of Ecology, University of Innsbruck, Austria; Institute for Alpine Environment, Eurac Research, Italy.
- *Correspondence Author: Chair for Strategic Landscape Planning and Management, Technical University of Munich, TUM School of Life Sciences, Emil-Ramann-Str. 6, D-85354 Freising, Germany. Email: werner.rolf@tum.de





It has been 15 years by now that the International Association for Landscape Ecology – Chapter Germany (IALE-D) launched Landscape Online. At the time of its first publication in 2007, to the best of our knowledge, it was one of the first open access peer-reviewed scientific e-journals in the field of Landscape Ecology. Over the last 15 years, it evolved from an idea driven by the German-speaking IALE community in Germany, Austria and Switzerland to a wider established journal linked to the international IALE community supported by partners across the world. In this Editorial, we (1) present the journal's development and the regional distribution of authorships, (2) reflect on the topics addressed by the articles published, and (3) outline the latest developments in the light of continuities and changes.

1 The making of this journal

From the beginning, Jörg Löffler took care of the journal as Editor-in-Chief together with Managing Editor Ole Rössler. The initial idea of the IALE chapter Germany was to offer an international peer-reviewed journal that is open access and subscription free to

everyone. The thematic focus was set on landscape research, scientific, educational or applied aspect of processes, dynamics, indicators, controllers and visions related to landscapes. It also aimed to emphasise the coupling of societal and natural systems, not only the involvement of human impact on landscape systems but also human perceptions and values as well as the evaluation of landscapes. Furthermore, articles with interdisciplinary or transdisciplinary appeal were invited that deal with landscape theories, system approaches and conceptual models of landscape. In addition, one initial idea of this journal was to support doctoral students, offering them an opportunity for timely publishing research as part of their thesis. In total, 106 articles have been published in Landscape Online since 2007 by 236 authors and co-authors from 33 countries (Figure 1).

After the first call for contributions was opened in 2006, two articles were published in 2007. The first article addressed driving processes and adverse factors of treeline advance (Holtmeier and Broll, 2007), has been cited by more than 200 publications so far (95th percentile) and got a field-weighted citation impact of 3.88 according to Scopus. Within the next five years, 31 articles were published (on av-

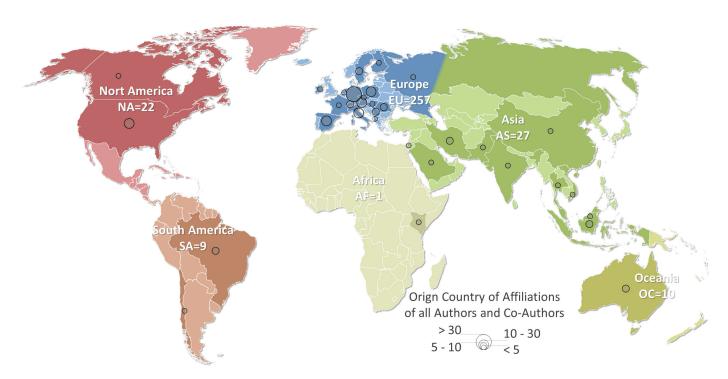


Figure 1. Spatial distribution of authorship based on affiliations contributing to publications in Landscape Online from 2007-2022 (n=326).

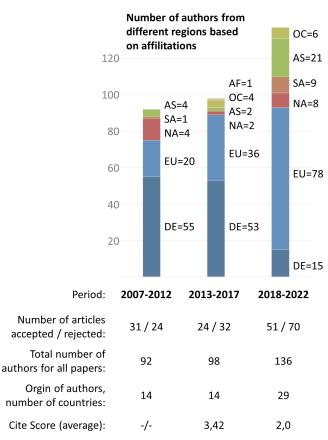


Figure 2. Overview of articles, authorship and cite score of Landscape Online across three periods. (AF= Africa, AS=Asia; EU=Europe; NA=North America; OC=Oceania; SA=South America).

erage around six articles per year), with an acceptance rate of 56% (Figure 2). Ninety-two authors and co-authors from 14 different countries were involved in these publications, almost two-thirds from Germany. In 2012, Landscape Online reached a first milestone highlighting the achievements of these pioneering years: The journal became listed in Scopus by Elsevier - the largest abstract and citation database of peer-reviewed literature. By that time, Jörg Löffler handed the journal responsibility over to Roman Lenz who became the new Editor-in-Chief.

With the change in the Editorial, a number of changes went along during 2013, including a relaunch of the journal platform in 2014. The publishing agreements with authors were clarified, establishing open access policy under the terms of the Creative Commons Attribution License CC BY 4.0, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. Another development was the introduction of 'Living Special Issues' (LSI) as a new category that enables ongoing publication possibilities with specific thematic orientations in collected editions. The first LSI entitled 'Concepts and Methods for Ecosystem Service Assessments', was initiated in 2014 by Felix Müller as a joined collaboration by IALE-D and the ESP (Ecosystem Partnership) working group on 'Ecosystem Service Indicators'. Another innovation was that of the introduction of what has been called 'review tandems'. Here, doctoral students are given the opportunity to function as reviewers, under supervision of experienced reviewers, e.g. by their doctoral supervisors. This perspective change enables the young scholars to learn about quality criteria of good scientific publications while gaining first experience as reviewers. This, in turn helps to improve own publication skills. While the number of publications in the journal dropped significantly during the transition year 2013, its number increased again to an average of six articles per year in the following period. Between 2013 and 2017, 24 articles were published with a significantly lower acceptance rate of about 43%. Despite the fact that 98 authors and co-authors came again from 14 different countries, a trend towards a more international authorship started to appear (Figure 2). Although the number of published articles remained at a very manageable level compared to other journals, its scientific impact in the field of 'Nature and Landscape Conservation' increased significantly. According to Scopus database, the journal reached the highest CiteScore 6.7 in 2017 (95th percentile) and was ranked within the top ten of all scholarly journals in this field (7 out of 124). After Angela Lausch permanently took charge of the journal as Editor-in-Chief during 2017, Roman Lenz handed over the editorial responsibility to Werner Rolf in 2019, who already supported the Editorial Management in the last years.

Since 2020, Werner Rolf builds a tandem together with Uta Schirpke as Co-Editors-in-Chief. During this time, the journal took another major transition. First, a new journal platform was implemented. From now on, Open Journal Systems (OJS) from Public Knowledge Project (PKP) facilitates the entire editorial management work flow and allows to better deal with the increasing number of manuscripts. OJS also supports a number of tools to professionalise the journal, such as the management of the whole review process, indexing processes with a number of databases for scientific literature, long-term archiving of all articles, as well as automated plagiarism check. Due to these developments, Landscape Online has been awarded the DOAJ Seal in 2022. The

DOAJ - Directory of Open Access Journals awards the Seal as recognition to journals that adhere to an exceptionally high level of publishing standards and best practice open access. Besides these advances, the journal reached out to different international IALE chapters. In the meanwhile, several chapters support the journal, such as the regional chapters IALE-Europe and IALE North-America, besides national chapters from UK, Italy, Denmark, and Chile. With this, additional members were included in the editorial board. This led to a new and restructured editorial board and significantly increased its members, broaden the expertise and now represents the international IALE community and further experts in Landscape Ecology - from well-established scientists to early career scholars. Moreover, a recent study conducted by Mohammadi Hamidi et al. (2022) indicated the editorial board from Landscape Online as highly inclusive. In the field of land sciences, it ranked under the top three of all peer-reviewed journals and was even identified as the highest ranked peer-reviewed open-access journal with regard to gender equality. From 2019 until 2022, the number of articles increased significantly, averaging around ten articles per year. An increasing diversification and internationalisation is also reflected by the authorship, as 136 authors from 29 different countries elaborated the 51 articles with an acceptance rate of about 42% (Figure 2). Just about 10% of the authors were from Germany, while almost two-thirds originated from other European countries and 30% were from other parts of the world.

Although there is an increasing internationalisation of authorship, it is still a long way to go to promote exchange among authors of all parts of the world to strengthen the scientific discourse about global ecological challenges.

2 The development of topics

In agreement with the aims and scope of the journal, the articles published during the last 15 years addressed the major topic 'landscape' from different perspectives (Figure 3). On the one side, values and preferences mostly connected to the environmental features and specific places have been analysed

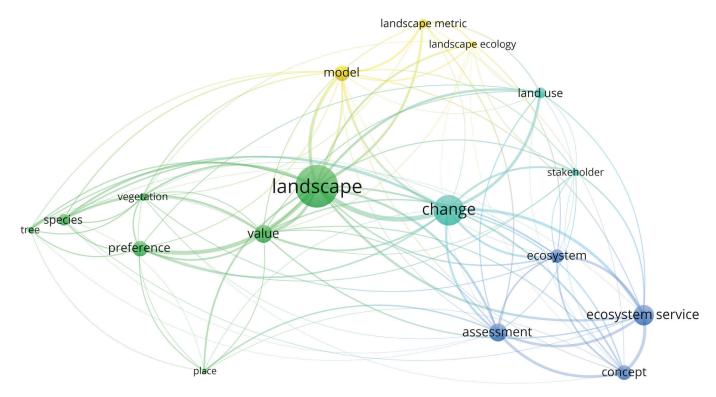


Figure 3. Topical relations of all articles published 2007-2022 based on title, abstract and keywords.

across different landscapes. Landscapes have also been studied through the lens of models including landscape metrics and landscape ecology concepts. On the other hand, changes in land use or ecosystems are an important topic that also relates to the broad field of ecosystem services. Looking more specifically at three main periods, several shifts in the most addressed topics indicate their high dynamics (Figure 4).

From 2007 until 2012, the topics were often related to geographical landscape research, topological ecological approaches and natural sciences. Articles addressed factors that affect ecosystems and species, e.g., change of treelines (Holtmeier, 2012; Holtmeier and Broll, 2007; Kullman, 2010; Öberg and Kullman, 2012; Szerencsits, 2012), diversity and compositions of vegetation (Mehmeti et al., 2009; Richter et al., 2009) abundance and distribution of avifauna (Riffell et al., 2012, 2008), and insects (Foley and Holland, 2010). Articles also focused on landscape metrics analysis (Bianchin et al., 2011; Herbst et al., 2009; Hoechstetter et al., 2008), including multiple dimensions and 3D-metrics (Drăguţ et al., 2010; Stupariu et al., 2010), as well as further geostatistical approaches for landscape classifications (Schröder et al., 2007). In addition, articles discussed socio-ecological systems in different biomes and landscapes, e.g., in forests (Riitters et al., 2009), agricultural areas (Deumlich, 2012; Müller et al., 2008; Papendiek et al., 2012; Wiggering et al., 2008), coastal landscapes (Nunneri et al., 2008), mountainous regions (Nautiyal et al., 2010), and urban sites (Priego et al., 2008). These studies often aim to conclude management implications for sustainable landscape development. Furthermore, several articles discussed rather conceptual considerations in landscape ecology (Albert and Vargas-Moreno, 2010; Ferrari and Ferrarini, 2008; Naveh, 2009; Pauleit et al., 2010), introduced landscape functions (Bolliger and Kienast, 2010) and ecosystem services (Burkhard et al., 2009; Müller et al., 2010). The article 'Landscapes' capacities to provide ecosystem services - A concept for land-cover based assessments' (Burkhard et al., 2009) has been evolved as the journals long-time citation 'champion', cited more than 550 times by now, with number of cites per year still increasing.

A topical shift appears in the period from 2013 to 2017. An increasing number of articles integrated approaches from social sciences, including socio-cultural valuation of landscapes and ecosystems, which is often related to agricultural landscapes and/or traditional land uses. Many of these articles are

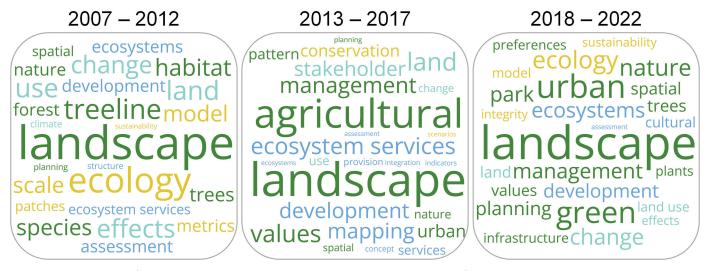


Figure 4. Word clouds of the most used 100 terms in titles, abstracts and keywords of all articles published during the three indicated periods.

clearly linked to the newly established Living Special Issue (LSI) on 'Concepts and Methods for Ecosystem Service Assessments'. This LSI also contains the journal's second long-time citation 'champion' addressing 'Ecosystem service potentials, flows and demands-concepts for spatial localisation, indication and quantification' (Burkhard et al., 2014) with currently around 450 citations. Articles published during this period cover a broad thematic spectrum, including the assessment and analysis of ecosystem services in agricultural landscapes (Bastian et al., 2015; Kandziora et al., 2014; Wiggering et al., 2016) and urban areas (Beichler et al., 2017; Hou et al., 2015). Other studies in the field of ecosystem services explicitly address cultural dimensions (Wangai et al., 2017), participatory approaches (Koschke et al., 2014), scenarios (Rosenberg et al., 2014) and monetary valuation (Bastian et al., 2015). There were several articles related to cultural valuations of landscape, including sacred sites in Morocco (Jäckle et al., 2013), meanings and symbolism of Persian gardens (Farahani et al., 2016), preferences of European mountain regions (Bacher et al., 2016), or about the traditional Umbrian landscape in Italy (Torquati et al., 2017). In addition, Zurlini et al. (2015) published a theoretical reflection on sustainable landscape development and value rigidity, demanding to reappraise values like in the case of 'the Pirsig's monkey trap'. However, comparatively few articles were published that had a rather direct natural scientific perspective, e.g., about the variability of vegetation due to climate change (Kullman, 2015), invasive pests (Schimmenti et al., 2017), aquatic Macrophytes (Brummer et al., 2017), and ecological assessments of biodiversity (Räsänen et al., 2015; Veselaj and Mustafa, 2015). Furthermore, several articles examined transition and landscape change with implications for sustainable landscape planning and development (Artmann and Breuste, 2014; Cabrera, 2015; Carlsson et al., 2017; Leibenath and Otto, 2014; Lüker-Jans et al., 2016; Schimmenti et al., 2017).

Some thematic shifts can also be noticed after 2018. An increasing number of articles focused on urban issues, such as accessibility of urban green space (Farahani et al., 2018), their perception and preferences (Farahani and Maller, 2018; Hami and Maruthaveeran, 2018; Yazdani, 2019), safety of urban parks (Lis et al., 2021), blue-green infrastructure (Pochodyła et al., 2021), urban trees (Al-Sulbi, 2019), and urban biodiversity (Moszkowicz et al., 2021). Furthermore, two new topics emerged that were also promoted by two new LSI's launched during the IALE 2019 World Congress in Milan. The first LSI, 'Implementing the Green Infrastructure (GI) Approach in Central Europe and beyond' contains articles that present the breadth of the topic, ranging from GI in agricultural landscapes (Skokanová and Slach, 2020), protected areas (Drius et al., 2020), urban areas (Pochodyła et al., 2021) to mapping approaches using Pan-European high resolution layers (Danzinger et al., 2021). The other LSI initiated by the IALE-Europe working group 'Education in Landscape Ecology' present studies about innovative learning and teaching approaches. First articles present lessons learned from the first worldwide accessible e-learning in Landscape Ecology (Kienast et al., 2020), insights about the integration of multiple perspectives in an urban ecology course (Hane and Korfmacher, 2020), and experiences with interdisciplinary and intercultural students (Zerbe, 2020).

In contrast to these new topics, the topic around ecosystem services becomes less significant, although a number of publications are regularly published in the LSI (Augstburger et al., 2018; Kokthi et al., 2021; Scolozzi et al., 2019; Wübbelmann et al., 2021; Zelený et al., 2020). Furthermore, a range of articles continues to focus on landscape structure and dynamics (Belda-Carrasco et al., 2019; Cieślak and Biłozor, 2022; Dekaraja and Mahanta, 2022; Flores et al., 2019; Giné, 2018; Istanbuly et al., 2022; Khoroshev, 2019; Oppermann et al., 2021; Schmalz and Kruse, 2019; Silva et al., 2020; Stoicescu et al., 2019), landscape vegetation and ecosystems (Botti, 2019; Carlier and Moran, 2019; Mustafa et al., 2018; Ojeda, 2018), landscape management (Buendía et al., 2021; Hanberry, 2022; MacDonald et al., 2020; Raatikainen, 2018; Siagian et al., 2022), and conceptual ideas in the field of landscape ecology (Helm and Buchroithner, 2018). In addition, articles address archaeological and sacred landscapes (Długozima, 2020; Puzdrakiewicz, 2020; Żemła-Siesicka, 2022), and landscape perception (Khaledi et al., 2022; Mazzocchi et al., 2019; Rodríguez Romero et al., 2019; Serrano-Montes et al., 2019).

3 Current and future developments

In 2021, a new LSI entitled 'Syntheses from landscape-ecological research' was launched, offering the opportunity to publish research results in a summarized way and to make the most important outcomes of the work accessible to researchers and practitioners. Hence, the summary of a thesis (PhD, habilitation, and master candidates and graduates) as well as project and research synthesis from research consortia and working groups are welcome for submissions. This LSI already includes three syntheses. The first one is about transformation pathways towards sustainable urban development by peri-urban farmland (Rolf, 2021). Another publication investigates the application of instrumental and deliberative approaches for a systematic integration of sense of place into spatial and landscape planning (Gottwald, 2022). The latest article presents spatial relationships and impacts of global change on ecosystem services in the European Alps (Schirpke, 2022). In addition, two further LSI's have been launched recently. The first LSI 'Assessment of intangible landscape values for landscape planning and design' has been initiated as an outcome of the IALE 2022 European Landscape Ecology Congress in Warsaw, with currently eight manuscripts proposed for publication. In addition, the LSI 'Italian landscapes towards 2030: Identity, Care and Perspectives' has been just been launched by the Italian IALE Chapter SIEP.

Concluding the reflection of the last 15 years, the articles published in Landscape Online cover the breadth in the field of landscape ecology while roughly following general trends. In the future, we would like to promote more strongly socio-cultural aspects in the assessment and analysis of landscapes to foster on the one side the relevance of landscape ecology for society, on the other side the consideration of people's perceptions and values in landscape assessment and planning. This includes a stronger focus on human-nature relationships, the consideration of landscapes as social-ecological systems and the application of interdisciplinary, transdisciplinary and participatory approaches. We encourage authors from all over the world to publish in Landscape Online to further widen the perspective. In this sense, we consider Landscape Online in first place for exchanging research findings and connecting the IALE community, while also linking theory and practice by presenting current research to a broad international readership.

In addition to the topical considerations, we envision the journal as an independent publication medium linked to the IALE community. Although we already received several requests from publishing houses to join, after careful consideration, we decided to remain independent and to maintain creativity to further develop the journal as a peer-reviewed open-access journal for non-profit. We believe that this broadens the opportunity for publication within the field of Landscape Ecology and the IALE community, while having the freedom to introduce innovative publication formats. We further want to promote young scholars as a journals 'DNA'. This idea goes beyond the invitation of young landscape ecologists to present their work, by promoting activities such as review tandems or offering the opportunity to gain first experience as editorial board members. One big remaining challenge is how to reach authors across the globe. A strong global landscape ecologists community can provide valuable contributions to the discussion on how to face global ecological challenges of humanity. Hence, we will need to critically reflect on how to strengthen scientific discourse between the Global North and Global South within this journal. We learned from some interested authors that submission fees in open-access journals can be a barrier. Thus, we also need to enhance journal policies that are more inclusive and link even stronger to the IALE community in these countries and with other chapters. We will set many efforts in further developing Landscape Online and we look very much forward to upcoming contributions.

Closing this Editorial, we take the opportunity to thank all the people and groups making this journal happened. We thank the International Association for Landscape Ecology - IALE and its community for its commitment and support in particular our journal partners, the IALE regional chapters IALE-Europe and IALE North America, as well as the national chapters of UK, Italy, and Chile. We owe many thanks to IALE-D taking the leading role as publisher of Landscape Online and we would like to thank all members of IALE-D for funding Landscape Online. We express our gratitude and appreciation to all the editors and reviewers as well as copy editors who bring the manuscripts in their final form but are rarely acknowledged. Finally, we are grateful to all authors and co-authors for their interesting contributions and hard work.

References

- Al-Sulbi, A.O., 2019. Deformation of the Date Palm tree trunk in Dammam Metropolitan Area: Causes and consequences. Landscape Online 65, 1-12. https://doi.org/10.3097/LO.201965
- Albert, C., Vargas-Moreno, J.C., 2010. Planning-based approaches for supporting sustainable landscape development. Landscape Online 19, 1-9. https://doi.org/10.3097/LO.201019
- Artmann, M., Breuste, J., 2014. Sustainable noise abatement along motorways in Germany - an empirical study in the municipality Frasdorf (Bavaria). Landscape Online 36, 1–23. https://doi.org/10.3097/LO.201436
- Augstburger, H., Jacobi, J., Schwilch, G., Rist, S., 2018. Agroecosystem service capacity index - A methodological approach. Landscape Online 64, 1-48. https://doi.org/10.3097/LO.201864
- Bacher, M., Walde, J., Pecher, C., Tasser, E., Tappeiner, U., 2016. Are interest groups different in the factors determining landscape preferences? Landscape Online 47, 1–18. https://doi.org/10.3097/LO.201647
- Bastian, O., Stein, C., Lupp, G., Behrens, J., Renner, C., Grunewald, K., 2015. The appreciation of nature and landscape by tourism service providers and visitors in the Ore Mountains (Germany). Landscape Online 41, 1-23. https://doi.org/10.3097/LO.201541
- Beichler, S.A., Bastian, O., Haase, D., Heiland, S., Kabisch, N., Müller, F., 2017. Does the ecosystem service concept reach its limits in Urban environments? Landscape Online 50, 1–21. https://doi.org/10.3097/LO.201751
- Belda-Carrasco, R., Iranzo-García, E., Pascual-Aguilar, J.A., 2019. Landscape dynamics in mediterranean coastal areas: Castelló de la Plana in the last hundred years. Landscape Online 69, 1-15. https://doi.org/10.3097/lo.201969
- Bianchin, S., Richert, E., Heilmeier, H., Merta, M., Seidler, C., 2011. Landscape metrics as a tool for evaluating scenarios for flood prevention and nature conservation. Landscape Online 25, 1–15. https://doi.org/10.3097/LO.201125
- Bolliger, J., Kienast, F., 2010. Landscape functions in a changing environment. Landscape Online 21, 1-5. https://doi.org/10.3097/LO.201021
- Botti, D., 2019. Phytoclimatic stages and vegetation in Baden -Württemberg and Emilia - Romagna. Landscape Online 67, 1-30. https://doi.org/10.3097/LO.201967
- Brummer, V., Roth, S., Röhl, M., Herbes, C., 2017. Nature conservation against all? Aquatic macrophyte de-weeding -Cut or conserve? A stakeholder analysis. Landscape Online 54, 1-14. https://doi.org/10.3097/LO.201754
- Buendía, A.V.P., Pérez-Albert, Y., Giné, D.S., 2021. Online Public Participation Geographic Information System (PPGIS) as a landscape and public use management tool: a case study from the Ebro Delta Natural Park (Spain). Landscape Online 93, 1-18. https://doi.org/10.3097/LO.202193

- Burkhard, B., Kandziora, M., Hou, Y., Müller, F., 2014. Ecosystem service potentials, flows and demands-concepts for spatial localisation, indication and quantification. Landscape Online 34, 1-32. https://doi.org/10.3097/LO.201434
- Burkhard, B., Kroll, F., Müller, F., Windhorst, W., 2009. Landscapes' capacities to provide ecosystem services - A concept for land-cover based assessments. Landscape Online 15, 1–22. https://doi.org/10.3097/LO.200915
- Cabrera, A.P., 2015. The landscape of the dehesa in the Sierra Morena of Jaén (Spain) - the transition from traditional to new land uses. Landscape Online 43, 1–15. https://doi.org/10.3097/LO.201543
- Carlier, J., Moran, J., 2019. Rapid assessment and ground truthing of habitat composition and analysis of semi-natural habitat diversity of proposed greenway developments. Landscape Online 77, 1–18. https://doi.org/10.3097/LO.201977
- Carlsson, J., Lidestav, G., Bjärstig, T., Svensson, J., Nordström, E.-M., 2017. Opportunities for integrated landscape planning the broker, the arena, the tool. Landscape Online 55, 1–20. https://doi.org/10.3097/LO.201755
- Cieślak, I., Biłozor, A., 2022. A dynamic evaluation of landscape transformations based on land cover data. Landscape Online 97, 1097. https://doi.org/10.3097/LO.2022.1097
- Danzinger, F., Fuchs, S., Wrbka, T., 2021. Going local Providing a highly detailed Green Infrastructure geodata set for assessing connectivity and functionality. Landscape Online 89, 1-16. https://doi.org/10.3097/LO.202189
- Dekaraja, D., Mahanta, R., 2022. Exploring the Socioeconomic Impact of Riverbank Erosion in the Brahmaputra Valley of Assam, India: A Case Study of Two Districts. Landscape Online 97, 1105. https://doi.org/10.3097/LO.2022.1105
- Deumlich, D., 2012. Structure and process influence of historical agriculture of linear flow paths by extreme rainfall in Brandenburg (D). Landscape Online 31, 1-19. https://doi.org/10.3097/LO.201231
- Długozima, A., 2020. How might landscapes be better designed to accommodate increasing cremation practices in Europe? Landscape Online 87, 1–31. https://doi.org/10.3097/LO.202087
- Drăgut, L., Walz, U., Blaschke, T., 2010. The third and fourth dimensions of landscape: Towards conceptual models of topographically complex landscapes. Landscape Online 22, 1-10. https://doi.org/10.3097/LO.201022
- Drius, M., Sams, K.T., Knopper, F., Hainz-Renetzeder, C., Brandenburg, C., Wrbka, T., 2020. Assessing landscape services as foundation for Green Infrastructure functionality: the case of the Wienerwald Biosphere Reserve. Landscape Online 84, 1-39. https://doi.org/10.3097/LO.202084
- Farahani, L.M., Maller, C., 2018. Perceptions and preferences of Urban Greenspaces: A literature review and framework for policy and practice. Landscape Online 61, 1-22. https://doi.org/10.3097/LO.201861

- Farahani, L.M., Maller, C., Phelan, K., 2018. Private Gardens as Urban Greenspaces: Can they compensate for Poor Greenspace Access in lower socioeconomic neighbourhoods? Landscape Online 59, 1–18. https://doi.org/10.3097/LO.201859
- Farahani, L.M., Motamed, B., Jamei, E., 2016. Persian gardens: Meanings, symbolism, and design. Landscape Online 46, 1–19. https://doi.org/10.3097/LO.201646
- Ferrari, I., Ferrarini, A., 2008. From ecosystem ecology to landscape ecology: A progression calling for a well-founded research and appropriate disillusions. Landscape Online 6, 1-13. https://doi.org/10.3097/LO.200806
- Flores, L.M.A., Zanette, L.R.S., Boscolo, D., Araújo, F.S., 2019. Landscape structure effects on bee and wasp assemblages in a semiarid buffer zone. Landscape Online 76, 1–17. https://doi.org/10.3097/LO.201976
- Foley, C.J., Holland, J.D., 2010. Do flying beetles respond to human-dominated landscapes as complex mosaics or binary patterns. Landscape Online 16, 1–18. https://doi.org/10.3097/LO.201016
- Giné, D.S., 2018. A renewed approach to the ABC landscape assessment method: An application to Muntanyes d'Ordal, Barcelona Metropolitan area. Landscape Online 56, 1-13. https://doi.org/10.3097/LO.201856
- Gottwald, S., 2022. Sense of Place in Spatial Planning: Applying Instrumental and Deliberative Approaches at the River Lahn. Landscape Online 97, 1100. https://doi.org/10.3097/LO.2022.1100
- Hami, A., Maruthaveeran, S., 2018. Public perception and perceived landscape function of urban park trees in Tabriz, Iran. Landscape Online 62, 1-16. https://doi.org/10.3097/LO.201862
- Hanberry, B.B., 2022. Non-native plant associations with wildfire, tree removals, and deer in the eastern United States. Landscape Online 97, 1104. https://doi.org/10.3097/lo.2022.1104
- Hane, E., Korfmacher, K., 2020. Integrating multiple perspectives in an urban ecology course. Landscape Online 82, 1-14. https://doi.org/10.3097/LO.202082
- Helm, H., Buchroithner, M.F., 2018. Johannes Gabriel Granö and his Cartography- Oriented landscape research. A reviewing appreciation. Landscape Online 60, 1-22. https://doi.org/10.3097/LO.201860
- Herbst, H., Förster, M., Kleinschmit, B., 2009. Contribution of landscape metrics to the assessment of scenic quality - the example of the landscape structure plan Havelland/ Germany. Landscape Online 10, 1-17. https://doi.org/10.3097/LO.200910
- Hoechstetter, S., Walz, U., Dang, L.H., Thinh, N.X., 2008. Effects of topography and surface roughness in analyses of landscape structure - A proposal to modify the existing set of landscape metrics. Landscape Online 3, 1-14. https://doi.org/10.3097/LO.200803

- Holtmeier, F.-K., 2012. Impact of wild herbivorous mammals and birds on the altitudinal and northern treeline ecotones. Landscape Online 30, 1–28. https://doi.org/10.3097/LO.201230
- Holtmeier, F.-K., Broll, G., 2007. Treeline advance driving processes and adverse factors. Landscape Online 1, 1-33. https://doi.org/10.3097/LO.200701
- Hou, Y., Mller, F., Li, B., Kroll, F., 2015. Urban-rural gradients of ecosystem services and the linkages with socioeconomics. Landscape Online 39, 1-31. https://doi.org/10.3097/LO.201539
- Istanbuly, M.N., Kaboli, M., Ahmadi, S., Tian, G., Michalak, M., Amiri, B.J., 2022. Landscape Metrics Explain the Ecological Susceptibility of Terrestrial Ecosystems. Landscape Online 97, 1101. https://doi.org/10.3097/lo.2022.1101
- Jäckle, H., Rudner, M., Deil, U., 2013. Density, spatial pattern and relief features of sacred sites in Northern Morocco. Landscape Online 32, 1–16. https://doi.org/10.3097/LO.201332
- Kandziora, M., Dörnhöfer, K., Oppelt, N., Müller, F., 2014. Detecting land use and land cover changes in Northern German agricultural landscapes to assess ecosystem service dynamics. Landscape Online 35, 1-24. https://doi.org/10.3097/LO.201435
- Khaledi, H.J., Khakzand, M., Faizi, M., 2022. Landscape and Perception: A systematic review. Landscape Online 97, 1098. https://doi.org/10.3097/LO.2022.1098
- Khoroshev, A. V, 2019. Multiscale organization of landscape structure in the middle taiga of European Russia. Landscape Online 66, 1-19. https://doi.org/10.3097/LO.201966
- Kienast, F., Gosteli, S., Edwards Jr., T.C., Martius, G., 2020. Lessons learned from the first worldwide accessible e-learning in Landscape Ecology. Landscape Online 83, 1-14. https://doi.org/10.3097/LO.202083
- Kokthi, E., Muço, E., Requier-Desjardins, M., Guri, F., 2021. Social capital as a determinant for raising ecosystem services awareness - an application to an Albanian pastoral ecosystem. Landscape Online 95, 1-17. https://doi.org/10.3097/LO.202195
- Koschke, L., Van der Meulen, S., Frank, S., Schneidergruber, A., Kruse, M., Fürst, C., Neubert, E., Ohnesorge, B., Schröder, C., Müller, F., Bastian, O., 2014. Do you have 5 minutes to spare? -The challenges of stakeholder processes in ecosystem services studies. Landscape Online 37, 1-25. https://doi.org/10.3097/LO.201437
- Kullman, L., 2015. Higher-than-present medieval pine (pinus sylvestris) treeline along the swedish scandes. Landscape Online 42, 1-14. https://doi.org/10.3097/LO.201542
- Kullman, L., 2010. One century of treeline change and stability - experiences from the Swedish scandes. Landscape Online 17, 1–31. https://doi.org/10.3097/LO.201017
- Leibenath, M., Otto, A., 2014. Competing Wind Energy Discourses, Contested Landscapes. Landscape Online 38, 1-18. https://doi.org/10.3097/LO.201438

- Lis, A., Pardela, Ł., Iwankowski, P., Haans, A., 2021. The impact of plants offering cover on female students' perception of danger in urban green spaces in crime hot spots. Landscape Online 91, 1-14. https://doi.org/10.3097/LO.202191
- Lüker-Jans, N., Simmering, D., Otte, A., 2016. Analysing data of the integrated administration and control system (IACS) to detect patterns of agricultural land-use change at municipality level. Landscape Online 48, 1–24. https://doi.org/10.3097/LO.201648
- MacDonald, H., McKenney, D., McLaven, K., Perry, S., 2020. Realizing expectations from planting trees on private land in Ontario, Canada. Landscape Online 78, 1-9. https://doi.org/10.3097/LO.202078
- Mazzocchi, C., Sali, G., Ruggeri, G., 2019. Tourists' preferences for alpine pastures maintenance. Landscape Online 68, 1-18. https://doi.org/10.3097/lo.201968
- Mehmeti, A., Demaj, A., Waldhardt, R., 2009. Plant species richness and composition in the arable land of Kosovo. Landscape Online 11, 1-29. https://doi.org/10.3097/LO.200911
- Mohammadi Hamidi, S., Rezaei-Pandari, M., Fakheran, S., Fürst, C., 2022. The Gender Gap in Land Sciences: A Review of Women's Presence on the Editorial Boards of Peer-Reviewed Journals. Land. https://doi.org/10.3390/land11111876
- Moszkowicz, Ł., Krzeptowska-Moszkowicz, I., Porada, K., 2021. Relationship between parameters of public parks and their surroundings and the richness, diversity and species composition of vascular herbaceous plants on the example of Krakow in Central Europe. Landscape Online 94, 1-16. https://doi.org/10.3097/LO.202194
- Müller, F., de Groot, R., Willemen, L., 2010. Ecosystem services at the landscape scale: The need for integrative approaches. Landscape Online 23, 1-11. https://doi.org/10.3097/LO.201023
- Müller, K., Artner, A., Knierim, A., 2008. Demographic changes and the demands on agricultural landscapes: Refl ections on a new research topic. Landscape Online 9, 1–16. https://doi.org/10.3097/LO.200809
- Mustafa, B., Hajdari, A., Mustafa, V., Pulaj, B., 2018. Natural heritage in the republic of Kosovo: Looking for potential UNESCO sites. Landscape Online 63, 1-16. https://doi.org/10.3097/LO.201863
- Nautiyal, S., Rao, K.S., Kaechele, H., Zander, P., 2010. Conceptual model development for landscape management in the mountains of the indian himalayan region: An approach for sustainable socio-ecological development. Landscape Online 18, 1–19. https://doi.org/10.3097/LO.201018
- Naveh, Z., 2009. Transdisciplinary challenges for sustainable management of mediterranean landscapes in the global information society. Landscape Online 14, 1–14. https://doi.org/10.3097/LO.200914
- Nunneri, C., Lenhart, H.-J., Burkhard, B., Colijn, F., Müller, F., Windhorst, W., 2008. The use of "ecological risk" for assessing effects of human activities: An example including

- eutrophication and offshore wind farm construction in the north sea. Landscape Online 5, 1–20. https://doi.org/10.3097/LO.200805
- Öberg, L., Kullman, L., 2012. Recent glacier recession A new source of postglacial treeline and climate history in the Swedish Scandes. Landscape Online 26, 1–38. https://doi.org/10.3097/LO.201126
- Ojeda, C.G., 2018. Visual scale and Naturalness of Roadside Vegetation Landscape. An exploratory study at Pargua Highway, Puerto Montt Chile. Landscape Online 58, 1–12. https://doi.org/10.3097/LO.201858
- Oppermann, R., Aguirre, E., Bleil, R., Calabuig, J.D., Šálek, M., Schmotzer, A., Schraml, A., 2021. A Rapid Method for Monitoring Landscape Structure and Ecological Value in European Farmlands: the LISA approach. Landscape Online 90, 1–24. https://doi.org/10.3097/LO.202190
- Papendiek, F., Ende, H.-P., Steinhardt, U., Wiggering, H., 2012. Biorefineries: Relocating biomass refineries to the rural area. Landscape Online 27, 1–9. https://doi.org/10.3097/LO.201227
- Pauleit, S., Breuste, J., Qureshi, S., Sauerwein, M., 2010. Transformation of rural-urban cultural landscapes in Europe: Integrating approaches from ecological, socioeconomic and planning perspectives. Landscape Online 20, 1–10. https://doi.org/10.3097/LO.201020
- Pochodyła, E., Glińska-Lewczuk, K., Jaszczak, A., 2021. Bluegreen infrastructure as a new trend and an effective tool for water management in urban areas. Landscape Online 92, 1–20. https://doi.org/10.3097/LO.202192
- Priego, C., Breuste, J.-H., Rojas, J., 2008. Perception and value of nature in urban landscapes: A comparative analysis of cities in Germany, Chile and Spain. Landscape Online 7, 1–22. https://doi.org/10.3097/LO.200807
- Puzdrakiewicz, K., 2020. Cemeteries as (un)wanted heritage of previous communities. An example of changes in the management of cemeteries and their social perception in Gdańsk, Poland. Landscape Online 86, 1–26. https://doi.org/10.3097/LO.202086
- Raatikainen, K.J., 2018. The importance of engaging local people in landscape management Experiences from an EU-project. Landscape Online 57, 1–22. https://doi.org/10.3097/LO.201857
- Räsänen, A., Lensu, A., Tomppo, E., Kuitunen, M., 2015. Comparing conservation value maps and mapping methods in a rural landscape in southern Finland. Landscape Online 44, 1–19. https://doi.org/10.3097/LO.201544
- Richter, M., Diertl, K.-H., Emck, P., Peters, T., Beck, E., 2009. Reasons for an outstanding plant diversity in the tropical Andes of Southern Ecuador. Landscape Online 12, 1–35. https://doi.org/10.3097/LO.200912
- Riffell, S., Keas, B., Burton, T., 2012. Peninsula effects on birds in a coastal landscape: Are coves more species rich than lobes? Landscape Online 29, 1–15. https://doi.org/10.3097/LO.201229

- Riffell, S., McIntyre, N., Hayes, R., 2008. Agricultural set-aside programs and grassland birds: Insights from broad-scale population trends. Landscape Online 8, 1–20. https://doi.org/10.3097/LO.200808
- Riitters, K., Wickham, J., Wade, T., 2009. Evaluating anthropogenic risk of grassland and forest habitat degradation using land-cover data. Landscape Online 13, 1–14. https://doi.org/10.3097/LO.200913
- Rodríguez Romero, E.J., Granados, C.S.T., Santo-Tomas Muro, R., 2019. Landscape perception in Peri-Urban Areas: An expert-based methodological approach. Landscape Online 75, 1–22. https://doi.org/10.3097/LO.201975
- Rolf, W., 2021. Transformation pathways towards sustainable urban development by the inclusion of peri-urban farmland in green infrastructure strategies. Landscape Online 96, 1–15. https://doi.org/10.3097/LO.202196
- Rosenberg, M., Syrbe, R.-U., Vowinckel, J., Walz, U., 2014. Scenario methodology for modelling of future landscape developments as basis for assessing ecosystem services. Landscape Online 33, 1–20. https://doi.org/10.3097/LO.201433
- Schimmenti, E., Borsellino, V., Ingrassia, G., Peri, E., Farina, V., Guarino, S., 2017. Urban landscape evolution as a consequence of an invasive pest: The case of a small sicilian town. Landscape Online 52, 1–16. https://doi.org/10.3097/LO.201752
- Schirpke, U., 2022. Spatial relationships and impacts of global change on ecosystem services in the European Alps. Landscape Online 97, 1102. https://doi.org/10.3097/lo.2022.1102
- Schmalz, B., Kruse, M., 2019. Impact of land use on stream water quality in the German low mountain range basin Gersprenz. Landscape Online 72, 1–17. https://doi.org/10.3097/LO.201972
- Schröder, W., Pesch, R., Schmidt, G., 2007. Statistical classification of terrestrial and marine ecosystems for environmental planning. Landscape Online 2, 1–22. https://doi.org/10.3097/LO.200702
- Scolozzi, R., Schirpke, U., Geneletti, D., 2019. Enhancing ecosystem services management in protected areas through participatory system dynamics modelling. Landscape Online 73, 1–17. https://doi.org/10.3097/LO.201973
- Serrano-Montes, J.L., Martínez-Ibarra, E., Arias-García, J., 2019. How does the presence of livestock influence landscape preferences? An image-based approach. Landscape Online 71, 1–18. https://doi.org/10.3097/LO.201971
- Siagian, D.R., Shrestha, R.P., Marpaung, I., Napitupulu, D., Haloho, L., Simatupang, S., Ramija, K. EL, Girsang, S.S., 2022. Assessing Rice Production Sustainability under Future Landuse and Population in Deli Serdang Regency, Indonesia. Landscape Online 97, 1103. https://doi.org/10.3097/lo.2022.1103
- Silva, R., Zagallo, S., Laques, A.E., Saito, C., 2020. Landscape Signature as an Integrative View of Landscape Metrics:

- A Case Study in Brazil-French Guiana Border. Landscape Online 85, 1–18. https://doi.org/10.3097/LO.202085
- Skokanová, H., Slach, T., 2020. Territorial system of ecological stability as a regional example for green infrastructure planning in the Czech Republic. Landscape Online 80, 1–13. https://doi.org/10.3097/LO.202080
- Stoicescu, I., Pătru-Stupariu, I.I., Hossu, C.-A., Peringer, A., 2019. Land use guidelines to maintain habitat diversity of woodpastures in the Southern Carpathians under projected climate change. Landscape Online 74, 1–24. https://doi.org/10.3097/LO.201974
- Stupariu, M.-S., Pătru-Stupariu, I., Cuculici, R., 2010. Geometric approaches to computing 3D-landscape metrics. Landscape Online 24, 1–12. https://doi.org/10.3097/LO.201024
- Szerencsits, E., 2012. Swiss tree lines a GIS-based Approximation. Landscape Online 28, 1–18. https://doi.org/10.3097/LO.201228
- Torquati, B., Tempesta, T., Vecchiato, D., Venanzi, S., Paffarini, C., 2017. The value of traditional rural landscape and nature protected areas in tourism demand: A study on agritourists' preferences. Landscape Online 53, 1–18. https://doi.org/10.3097/LO.201753
- Veselaj, Z., Mustafa, B., 2015. Overview of nature protection progress in Kosovo. Landscape Online 45, 1–10. https://doi.org/10.3097/LO.201545
- Wangai, P.W., Burkhard, B., Kruse, M., Müller, F., 2017. Contributing to the cultural ecosystem services and human wellbeing debate: A case study application on indicators and linkages. Landscape Online 50, 1–27. https://doi.org/10.3097/LO.201750
- Wiggering, H., Eulenstein, F., Mirschel, W., Willms, M., Dalchow, C., Augustin, J., 2008. The environmental effects of global changes on northeast central Europe in the case of non-modified agricultural management. Landscape Online 4, 1–17. https://doi.org/10.3097/LO.200804
- Wiggering, H., Weißhuhn, P., Burkhard, B., 2016. Agrosystem services: An additional terminology to better understand ecosystem services delivered by agriculture. Landscape Online 49, 1–15. https://doi.org/10.3097/LO.201649
- Wübbelmann, T., Bender, S., Burkhard, B., 2021. The importance of regional climate and land use information for flood regulation ecosystem services modelling. Landscape Online 88, 1–16. https://doi.org/10.3097/LO.202188
- Yazdani, N., 2019. The effects of cultural background and past usage on Iranian- Australians' appreciation of urban parks and aesthetic preferences. Landscape Online 70, 1–17. https://doi.org/10.3097/LO.201970
- Zelený, J., Zelený, J., Bicking, S., Dang, K.B., Müller, F., Dang, K.B., 2020. Combining Methods to Estimate Ecosystem Integrity and Ecosystem Service Potentials and Flows for Crop Production in Schleswig-Holstein, Germany. Landscape Online 2020, 1–36. https://doi.org/10.3097/lo.202079
- Żemła-Siesicka, A., 2022. Archaeological landscape the past and the present. A case study of the megalithic landscape

- of Wietrzychowice, Poland. Landscape Online 97, 1099. https://doi.org/10.3097/LO.2022.1099
- Zerbe, S., 2020. Teaching applied landscape ecology in interdisciplinary and intercultural student groups. Experiences from a 10-years study abroad program. Landscape Online 81, 1–15. https://doi.org/10.3097/LO.202081
- Zurlini, G., Petrosillo, I., Bozsik, A., Cloud, J., Aretano, R., Lincoln, N.K., 2015. Sustainable landscape development and value rigidity: The pirsig's monkey trap. Landscape Online 40, 1–19. https://doi.org/10.3097/LO.201540

Landscape Online

www.landscape-online.org ISSN-L / ISSN (online): 1865-1542

Publisher: IALE-D – International Association for Landscape Ecology, Chapter Germany

All articles published in Landscape Online are published under the terms of the Creative Commons Attribution (CC BY) license (http://creativecommons.org/licenses/by/4.0).

Co-Editors-in-Chief

Uta Schirpke

Department of Ecology, Research Group: Ecosystem and Landscape Ecology, University of Innsbruck, Austria

Werner Rolf

Chair for Strategic Landscape Planning and Management, Technical University of Munich, Germany

Email: management@landscape-online.org

Copy Editor

Martina van Lierop

Chair for Strategic Landscape Planning and Management, Technical University of Munich, Germany

Publishing Editorial Board

Angela Lausch

Department of Landscape Ecology, Helmholtz Centre for Environmental Research – UFZ, Germany

Christian Albert

Planning Metropolitan Landscapes (PLACES), Institute of Geography, Ruhr University Bochum, Germany

Jenny Schmidt

Institute for Ecology, Leuphana University Lüneburg, Germany

Roman Lenz

School of Landscape Architecture, Environmental and Urban Planning, Nuertingen-Geislingen University, Germany

Ulrich Walz

Faculty of Agriculture / Landscape Management, Dresden University of Applied Sciences, Germany

Uta Steinhardt

Faculty of Landscape Management and Nature Conservation, Eberswalde University, Germany

Editorial Board

Andreas Aagaard Christensen

Department of Geosciences and Natural Resource Management, University of Copenhagen, Denmark

Audrey L. Mayer

School of Forest Resources and Environmental Science, Michigan Technological University, Michigan, US

Cristian Echeverria

Landscape Ecology Lab (LEP), Faculty of Forest Sciences, Universidad de Concepcion, Chile

Christoph Merz

Department of Earth Sciences, Free University of Berlin, Germany

Claus Dalchow

Central Library plus, Leibniz Centre for Agricultural Landscape Research, Müncheberg, Germany

Dagmar Haase

Department of Geography, Humboldt Universität Berlin, Germany

Dolors Amenteras

Departamento de Biología Bogotá, Universidad Nacional de Colombia, Colombia

Emilio Padoa-Schioppa

RULE - Research Unit of Landscape Ecology, University di Milano-Bicocca, Italy

Hannes Palang

School of Humanities, Tallinn University, Estonia

Irene Petrosillo

Department of Biological and Environmental Sciences and Technologies, University of Salento, Italy

Janez Pirnat

Chair of Landscape Science and Geoinformatics, Department of Forestry and Renewable Forest Resources, University of Ljubljana, Slovenija

Jessica Price

The Nature Conservancy, New York, US

Jochen A. G. Jaeger

Concordia University Montreal, Canada

Leila Mahmoudi Farahani

Centre for Urban Research, RMIT University, Melbourne, Australia

Olaf Schroth

Faculty of Landscape Architecture, Hochschule Weihenstephan-Triesdorf (HSWT), Germany

Simona R. Grădinaru

Centre for Environmental Research and Impact Studies, University of Bucharest, Romania

Stefan Heiland

Institute of Landscape Architecture and Environmental Planning; Technical University of Berlin, Germany

Veerle Van Eetvelde

Department of Geography, Research Unit Landscape Research, Ghent University, Belgium

Peter Weißhuhn

Research Area Landscape Research Synthesis, Leibniz Centre for Agricultural Landscape Research (ZALF), Germany