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Editorial

Ten years of innovation and the way ahead in scientific publishing in *One Ecosystem*

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Ten years of One Ecosystem

The *One Ecosystem - Ecology and Sustainability Data Journal* was launched in 2016 with the highly ambitious goal and mission to go beyond conventional research articles by sharing and recognising scientific outputs across the entire research cycle, including research ideas, model and method presentations, workflows, results, data papers, software papers, as well as policy recommendations related to all fields of ecology and sustainability sciences (Burkhard et al. 2016). The journal also welcomes publications addressing the complementary, interconnected and interdependent components of the natural world, including the manifold human activities of land and natural resource use. The many articles and topical collections related to the topic of *ecosystem services* (the multiple benefits people derive from nature) further demonstrate the breadth of this scope.

The main intention of *One Ecosystem* is to make a difference by promoting and supporting methods and data sharing, ideas exchange and dissemination of relevant

applications in the spheres of ecology and sustainability. The journal is actively supporting these ambitions by providing a wide set of article templates together with the intuitive, continuously evolving *ARPHA Writing Tool* that faciliates collobarative writing, reviewing and editing.

The journal follows a strict Open Access and Open Data policy: "Towards Open Ecology", which requires that information, data, methods and results are freely accessible all over the world and around the clock. The peer-review process for each publication is also designed to be as open and transparent as possible and to consider preferences by the involved authors, reviewers and editors. This incudes, for instance, community-restricted and public reviews, as well as nominated vs. panel reviewers (the latter format has actually hardly been used so far). Disclosing reviewer and editor names to the authors and to the public may or may not be advantageous for the people involved; therefore, it remains optional.

Over the past ten years, we have witnessed strong scientific progress, coupled with a growing push for immediate open access to knowledge and the ever-aggravating “publish or perish” culture in academia. Unsurprisingly, this has led to exponential growth in research publications, including within the field of ecology (Wang et al. 2025). As a result, the mounting demand for publication has led to the establishment of ever more new journals, including those aiming to fill niches in emerging domains, as was the case with *One Ecosystem* back in 2016. Ten years into the journal's existence, we continue to see *One Ecosystem* as a journal that occupies a niche in ecology by providing a scholarly communication platform for scientific results spanning a unique and versatile range of topics and formats.

However, from the perspective of an editorial team, launching a journal is only the beginning of the real challenge: developing it into a trusted and appealing scholarly title that attracts a steady and “healthy” volume of submissions, high quality publications and motivated readers on a global scale. While we recognise that there is still a long way to go before *One Ecosystem* can be confidently identified as a widely recognised name on the global ecological scene, we are proud that it has maintained a very positive trajectory during its critical early years, all while upholding the quality of the science we publish and avoiding any aggressive marketing.

While staying true to our principles, we are pleased to report that the journal has been attracting a growing number of authors, submissions, views and newsletter subscribers over the years, leading to steady growth in its annual publication output, readership and international reach. At the time of its tenth anniversary, *One Ecosystem* has published over 200 publications comprising nearly 5,000 pages. These publications span topics such as ecosystem services supply and demand, ecosystem disservices, plant and animal biodiversity, invasive species, soil sciences or environmental health. Studies have covered a wide range of ecosystem types, including aquatic, coastal, marine, terrestrial, urban, forest and agricultural ecosystems and have employed a broad variety of methods, such as process-based modelling, ecosystem accounting, Earth observation, field studies, AI/machine and deep learning, Geographic Information Systems,

participatory tools, genetics and systematic literature reviews. Many policy- and decision-making-relevant topics have also been addressed, including ecosystem restoration, decision-support tools, environmental planning, nature-based solutions and conceptual framework and indicator development. The articles published to date have been authored by more than 1,000 researchers across six continents (Figs 1, 2).

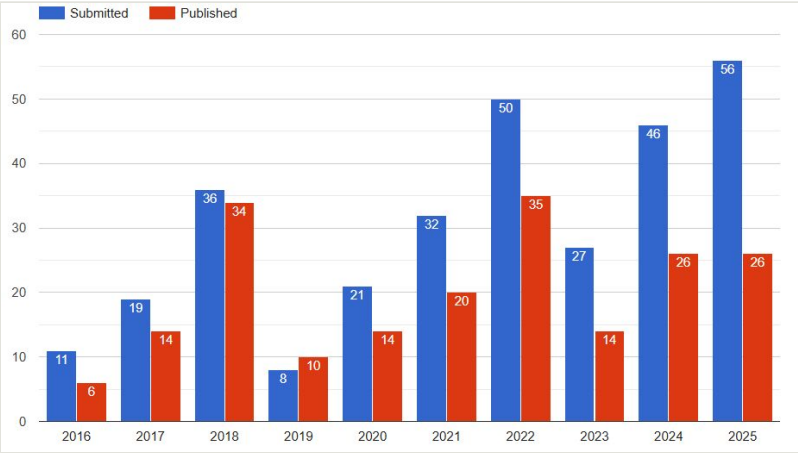

Figure 1.

Manuscript submissions (blue) and publications (red) in *One Ecosystem* over the first ten years of the journal's existence.

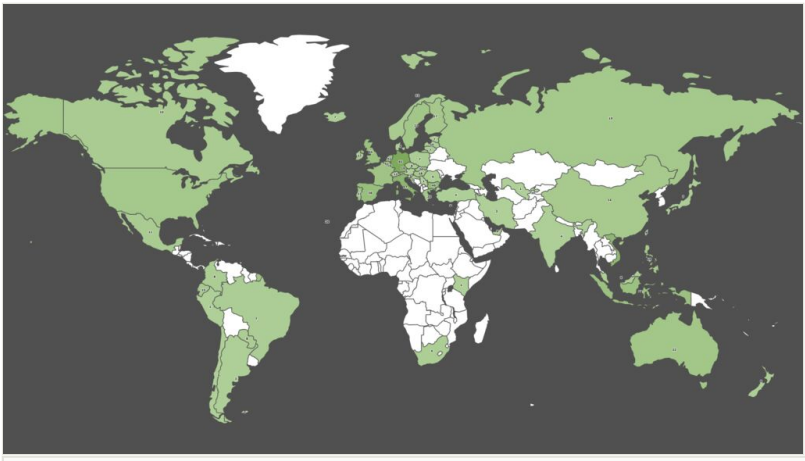

Figure 2.

Author nationalities in *One Ecosystem* over the first ten years of the journal's existence (in green: countries from which authors have submitted to *One Ecosystem*; in white: countries with no submissions yet).

The journal has gradually been improving its reach in terms of both volume and mediums. In 2025 alone, over 100,000 readers have seen publications in the journal,

making up nearly 300,000 article views in total (Fig. 3). Of these, at least 1,300 people engage regularly with new content and other news from *One Ecosystem* after signing up for the journal's email newsletter. Other channels sharing publications and journal updates include the specialised and popular social network channels of *One Ecosystem* (ResearchGate, BlueSky and Facebook) and Pensoft (BlueSky, Facebook, Instagram, Linkedin, TikTok and Weibo); as well as more than 60 scholarly literature database, including Web of Science, Scopus, ScienceDirect, DOAJ, CABI, EBSCO, ERIH+, FAO AGRIS, GALE Academic OneFile, ProQuest Central and SJR Scimago, amongst others. In some of them, full-text articles published in the journal are automatically exported in machine-readable XML format upon publication.

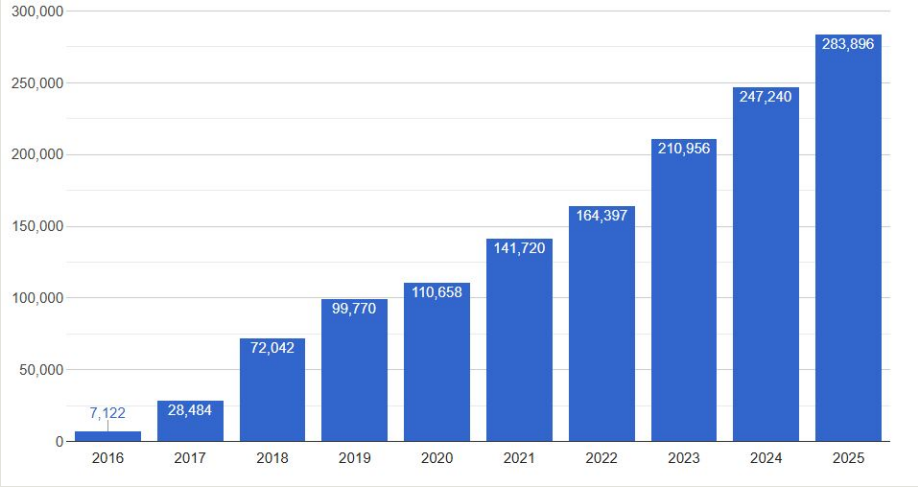

Figure 3.

Article views for *One Ecosystem* over the first ten years of the journal's existence.

Particularly captivating stories from the pages of the journal and other news relevant to the journal's community are regularly shared via the Blog Posts and News sections on the journal's website's homepage, as well as the Pensoft blog. As part of the extensive science communication support provided by the publisher, studies published in *One Ecosystem* are often shared with science news reporters from across the globe, in order to help bridge the gap between science and the public.

The number of citations of articles published in *One Ecosystem* in Scopus has increased progressively in recent years, reaching a total of 2,947 citations between 2017 and March 2026. In 2024 and 2025, the journal accumulated an average of about 550 citations per year. In Web of Science, the journal was cited 397 times in 2024, with the Journal Citation Indicator (JCI) increasing by 0.8 compared to 2023. The journal was accepted for indexing in Scopus in 2019, where it is currently classified in five categories: Agricultural and Biological Sciences (miscellaneous); Ecology, Evolution, Behaviour and Systematics; Ecology; Nature and Landscape Conservation; and Earth and Planetary Sciences. In 2021, its CiteScore reached 7.0. A normalisation trend has since been

observed and, as of 2024, the CiteScore stands at 4.0. Another major milestone in the development of *One Ecosystem* was its acceptance into Web of Science in April 2023. It is indexed there in two categories - Ecology and Environmental Sciences - and is currently ranked in the third quartiles of both (Q3). For 2024, the journal's Impact Factor is 1.9, representing an increase of 0.1 compared to the previous year.

Having started with 27 Subject Editors back in 2016, *One Ecosystem* today boasts a network of 50 Subject Editors from across the globe, representing a wide range of expertise within ecology and sustainability. Born within the European Commission–funded Horizon 2020 project ESMERALDA (short for Enhancing Ecosystem Services Mapping for Policy and Decision-Making, the project running between 2015 and 2018) and the Ecosystem Services Partnership (ESP), the journal has successfully carried its strong community spirit to this day. *One Ecosystem*-branded booths - often surrounded by the journal's loyal editors, authors and reviewers, along with informational materials - have become a common sight at project meetings of ESMERALDA's successor initiatives (most recently the Horizon Europe–funded project SELINA), as well as at every major ESP Conference. While these events often serve as venues for informal editorial gatherings, more formal editorial meetings convened by Pensoft have also taken place regularly online, in order to collect feedback, inspire discussion and to streamline further improvements to the journal. Information on the most active users (editors, reviewers and authors) are communicated transparently on the journal's website.

"Data journal" is not merely part of the journal's subtitle. On the contrary, the relatively new Data Paper format has been one of its key innovations. The inaugural editorial announced that "*Data Papers provide an incentive for scientists to invest in organizing and making their database accessible to the wider scientific community. All too often potentially valuable datasets remain buried in scientists' hard drives, once a specific research endeavour is completed. Data papers allow for these datasets to be further used and improved, ensuring that the authors will receive the appropriate credits*" (from Burkhard et al. (2016)). To further motivate researchers to publish data papers, the journal also provides automated import options for data-structured manuscripts generated in various platforms or from author's databases. However, as shown by Table 1, this article type has not received wide attention so far and calls for greater awareness and promotion in the future.

The ideas and visions outlined above have been developed and implemented during the first ten years of *One Ecosystem's* existence. However, the journal operates within the global scientific publishing system, which has faced significant challenges over the past decade.

Challenges of the current scientific publishing system

Along with the innovations introduced with the launch of *One Ecosystem*, the scientific publishing system has experienced substantial dynamics in the past decade. This concerns: i) the (generally) increasing number of scientific articles; ii) editor and reviewer

fatigue and iii) the increasing availaibility and use/abuse of Artificial Intelligence (AI) tools.

All major bibliographic databases (e.g. Web of Science, Scopus) report exponential growth in scientific publications over the last ten years (47% increase; Hanson et al. (2024)). Bornmann and Mutz (2015) demonstrate that similar trends have been emerging for centuries.

Table 1.
Publications in *One Ecosystem* per article type (2016-2025).

Article type	Number of publications
Research Article	122
Review Article	21
Methods	13
Case Study	9
Data Paper	8
Short Communication	8
Ecosystem Services Mapping	5
Ecosystem Accounting Table	3
Editorial	3
Ecosystem Inventory	2
Software Description	2
Commentary	1
Policy Brief	1
R Package	1

As this dramatic growth in publication volumes has not been accompanied by a respective increase of the number of active scientists, an increase in reviewing, editing and publishing tasks - called the "strain on scientific publishing" (Hanson et al. 2024) - has become the consequence. Editor and reviewer fatigue were already noted ten years ago (Breuning et al. 2015), making it increasingly difficult to find and motivate peers to carry out these typically voluntary tasks during the publication process. Yet, if every published author, for instance, reviewed at least one manuscript in return, the current shortage of willing peer reviewers could probably be effectively alleviated.

The advent of Generative AI (GAI) tools, especially Large Language Models (LLMs), such as ChatGPT, PaLM or BERT, is likely to revolutionise the scientific publishing system. AI is already beginning to affect the entire publishing cycle, including scientific writing

(Watson et al. 2025, Leong and Loh 2025), peer reviewing (Cheng et al. 2024, He and Bu 2025), publishing workflows (He and Bu 2025) and even reading (Kamińska 2025). Consequently, several journals have begun introducing guidelines and recommendations on GAI use (Wong 2023Yin et al. 2025, Wong 2023).

The increasing availability of AI tools offers numerous benefits for scientific publishing, including fast and straight-forward (big) data analyses, synthesis and pattern recognition, fast and tailored literature searches, writing and (foreign) language support, as well as quicker and more independent validation of methods (e.g. coding, modelling, statistical analyses) and results. These developments will likely accelerate production cycles and further increase publication output, reinforcing the trends noted above. However, faster and more accessible publication processes also carry the risk of prioritising quantity over quality in scientific publishing, a tendency further intensified by business models that rely on high Article Processing Charges (APCs) and subscription fees charged by scientific publishers (Haustein et al. 2024).

The challenges listed here demand a rapid and thoughtful adaptation of the existing scientific publishing system in order to embrace the emerging opportunities, while maintaining credibility, feasibility and sense of purpose. In the following section, we will present how these challenges are being treated in *One Ecosystem*.

Way ahead in scientific publishing

Current dynamics in the processes related to scientific publishing, particularly those arising from the new possibilities enabled by AI, are and will remain significant. With the ever-increasing number of scientific publications, the priority today, more than ever, must be to focus on publishing work that genuinely adds value to science and advances scientific progress.

As AI will certainly not disappear in the future, science should strive to harness its advantages, while simultaneously mitigating the inherent risks of AI use. AI use must therefore be transparently disclosed throughout the entire publishing process and follow ethical and scientific standards of transparency and reproducibility. AI should also become an integral part of scholarly and university education, equipping authors, reviewers, readers and publishers with the skills required for its responsible use, while helping to prevent misuse.

Ever since its inception, *One Ecosystem* has championed innovative publication formats, which will certainly become more relevant in the future. We remain committed to encouraging submissions of short and concise publication types, such as Data Papers, Software Descriptions, Methods, Single-media Publications and Short Communications.

Extensive research documentations and Review Articles with a strong descriptive character, which can nowadays be easily compiled with the assistance of AI, are likely to become less prominent in the near future.

In addition to the article types mentioned above, *One Ecosystem* already offers several specialised formats, such as Ecosystem Inventory, Monitoring Schema and (Ecosystem) Accounting Table. We anticipate that, as scientists increasingly struggle to find time to read, there will be growing interest in concise presentations of methods and results rather than lengthy publications with extensive introductory and discussion sections.

While neither journals nor publishers can fully monitor how their open-access content is used by AI-powered assistants, they do carry the responsibility to ensure that published research is not only easily discoverable and accessible, but also structured in a way that makes it interpretable and reusable by both humans and machines. Launched by Pensoft - the first scholarly publisher to introduce routine semantic tagging and enrichment of scientific articles in 2010 and amongst the first to adopt the Data Paper format in biodiversity science in 2011 - *One Ecosystem* is widely recognised for its technological and workflow innovations supporting FAIR and linked research data. Building on this legacy, the journal is well-positioned to set standards and guide best practices in the ecological and sustainability domain. By implementing and advancing best practices for machine readability and machine actionability, the journal seeks to further strengthen the meaningful discoverability, reusability and citability of its published content.

In *One Ecosystem*, we also manifest a strong commitment to scientific ethics and responsibility. The following checklist (Table 2) outlines the main criteria used to guide decisions regarding the publication of papers.

Table 2.

Checklist of the main criteria for publication in *One Ecosystem*.

Criteria
Adherence to ethical standards in scientific publishing, including the use of AI (see below)
Alignment to the journal's focus and scope
Originality and relevance of the research question(s) and hyphotheses
Clarity and soundness of the methodology, which is transparently laid-out and properly justified against current literature
For empirical research: application, test or case study in a new setting or location that allows us to challenge a scientific hypothesis or test the conclusions of previous research
For review studies: strong component of discussion and interpretation of the findings, which demonstrates awareness of the field and provides a contribution that goes beyond the mere description or bibliometric analysis of the literature
Use of clear and correct language and graphics

The potentials and risks of AI tools in scientific publishing, as identified above, demand a clear and consistent course of action for everyone involved. In *One Ecosystem*, an appropriate and responsible use of AI tools is encouraged, for instance, for literature

search and data handling. Text and image generation has to be approached with caution, while the use of AI for writing and reviewing articles must not be allowed (see Fig. 4 for details). In all cases, any use of AI tools must be fully disclosed to ensure maximum transparency.

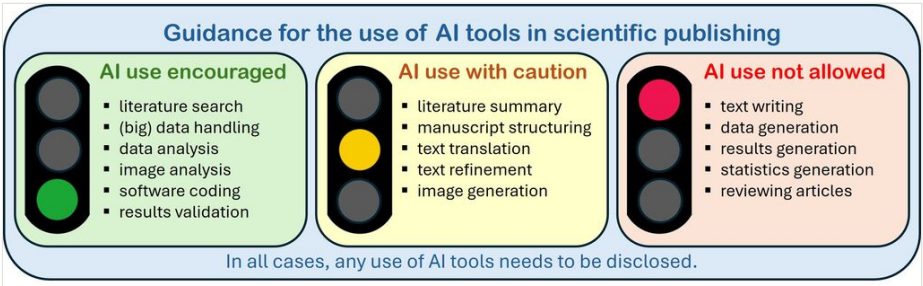

Figure 4.

Guidance for the use of AI tools in scientific publishing in *One Ecosystem*.

The publishing policies of *One Ecosystem* require authors to be transparent about any AI tools used in their submitted papers. Following the guidance provided above (Fig. 4), publishing in *One Ecosystem* includes a mandatory AI Use declaration. There, the submitting author can select from a predefined checklist to indicate any AI tools used in the work and specify the purpose of each usage. Authors are also invited to provide further explanation of AI use as appropriate.

To proceed with submission, the submitting author must explicitly confirm that any content generated with the assistance of AI has been reviewed and verified by the authors. If the paper is accepted and published, an AI use declaration is generated and included within the article, where it also becomes part of the article's metadata.

To futher promote responsible use of AI assistance, *One Ecosystem* has recently updated its public guidelines for editors and reviewers to clearly define their roles in safeguarding scientific quality and transparency in today's AI-powered academic landsscape, while also abiding by the journal's policies themselves.

Conclusions

Ten years after its launch, *One Ecosystem* has taken off and found its place within the scientific community. Built on a robust technological foundation and an innovative publication model powered by ARPHA Publishing Platform and supported by a rigorous editorial process, indexing in numerous databases (including Web of Science, Scopus, and DOAJ) and coverage of a broad spectrum of environmental topics and project activities, the journal holds enormous potential for future development.

Analysis of published content shows that most contributions still fall under the traditional Research Article type. The more innovative formats offered by the journal, such as Data

Papers and Software Papers have so far been less popular. In light of the ongoing increase in publication numbers and the opportunities presented by AI tools, we expect a growing relevance for short and concise formats that emphasise data, methods, results and the clear presentation of key findings. Article formats such as Ecosystem Accounting Table, Ecosystem Inventory, Ecosystem Service Mapping and Ecosystem Service Models have been introduced in *One Ecosystem* to guide authors and readers to specific studies that are presentend in a standardised and concise way.

The purposeful and responsible use of the manifold opportunites offered by emerging AI tools is a central component of *One Ecosystem*'s publishing policies. We remain confident that, as the journal continues to expand in content, visibility and global reach, so too will its appeal to readers and authors alike.

Conflicts of interest

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official position of the European Commission.

Disclaimer: This article is (co-)authored by any of the Editors-in-Chief, Managing Editors or their deputies in this journal.

References

- Bornmann L, Mutz R (2015) Growth rates of modern science: A bibliometric analysis based on the number of publications and cited references. Journal of the Association for Information Science and Technology 66 (11): 2215-2222. https://doi.org/10.1002/asi.23329
- Breuning M, Backstrom J, Brannon J, Gross BI, Widmeier M (2015) Reviewer Fatigue? Why Scholars Decline to Review their Peers' Work. Political Science and Politics 48 (4): 595-600. https://doi.org/10.1017/s1049096515000827
- Burkhard B, Maes J, Geneletti D, Stoev P, Penev L (2016) One Ecosystem: Innovation in ecology and sustainability research publishing. One Ecosystem 1 https://doi.org/10.3897/oneeco.1.e9255
- Cheng K, Sun Z, Liu X, Wu H, Li C (2024) Generative artificial intelligence is infiltrating peer review process. Critical Care 28 (1). https://doi.org/10.1186/s13054-024-04933-z
- Hanson M, Barreiro PG, Crosetto P, Brockington D (2024) The strain on scientific publishing. Quantitative Science Studies 5 (4): 823-843. https://doi.org/10.1162/qss_a_00327
- Haustein S, Schares E, Alperin JP, Hare M, Butler L, Schönfelder N (2024) Estimating global article processing charges paid to six publishers for open access between 2019 and 2023. arXiv https://doi.org/10.48550/arxiv.2407.16551
- He Y, Bu Y (2025) Academic journals' AI policies fail to curb the surge in AI-assisted academic writing. arXiv https://doi.org/10.48550/arxiv.2512.06705
- Kamińska AM (2025) Tailoring Scientific Knowledge: How Generative AI Personalizes Academic Reading Experiences. Publications 13 (2). https://doi.org/10.3390/publications13020018

- Leong SX, Loh ND (2025) Writing Scientific Review Articles in the Age of Generative Artificial Intelligence. ACS Applied Materials & Interfaces 17 (34): 47793-47794. https://doi.org/10.1021/acsami.5c15783
- Wang J, Tang H, Guo W, Yu W, Luo Y (2025) Global Hotspots and Trends of Ecological Network Research (1991–2024): Insights from Bibliometric Analysis. Sustainability 17 (10). https://doi.org/10.3390/su17104716
- Watson S, Brezovec E, Romic J (2025) The role of generative AI in academic and scientific authorship: an autopoietic perspective. AI & SOCIETY 40 (5): 3225-3235. https://doi.org/10.1007/s00146-024-02174-w
- Wong R (2023) Role of generative artificial intelligence in publishing. What is acceptable, what is not. The Journal of ExtraCorporeal Technology 55 (3): 103-104. https://doi.org/10.1051/ject/2023033
- Yin S, Huang S, Xue P, Xu Z, Lian Z, Ye C, Ma S, Liu M, Hu Y, Lu P, Li C (2025) Generative artificial intelligence (GAI) usage guidelines for scholarly publishing: a cross-sectional study of medical journals. BMC Medicine 23 (1). https://doi.org/10.1186/s12916-025-03899-1