

EDITORIAL

Tackling the complex web of sustainability challenges requires transformative, cross-cutting science: A new chapter for *PLOS Sustainability and Transformation*

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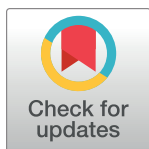
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Global society is increasingly confronted with multifaceted sustainability challenges that threaten environmental health, economic stability, and social equity. Climate change stands at the forefront, with rising global temperatures leading to severe weather events, sea-level rise, and biodiversity loss. Additionally, the rapid depletion of natural resources, such as water, minerals, and fossil fuels, underscores the urgent need for sustainable management practices. Urbanization further complicates these challenges, as more than half of the world's population now lives in cities, straining infrastructure and increasing pollution. Moreover, social issues such as inequality, poverty, and access to education and healthcare are deeply intertwined with environmental sustainability, creating a complex web of challenges that require holistic and integrated solutions.

The complexity of sustainability challenges is amplified by their interconnected nature, crossing national boundaries, industries, and academic disciplines. For instance, climate change not only affects global weather patterns but also has profound implications for agriculture, water resources, and public health. These challenges cannot be addressed in isolation; they require coordinated efforts across countries and sectors. The international nature of many sustainability issues, such as ocean pollution and carbon emissions, necessitates global cooperation and policy alignment. Furthermore, the multidisciplinary nature of sustainability science means that solutions must integrate knowledge from fields as diverse as environmental science, economics, sociology, and engineering. This interconnectedness makes it essential to adopt a systems-thinking approach, recognizing the interdependencies and feedback loops that characterize sustainability challenges.

It is in this context that *PLOS Sustainability and Transformation* emerges as a crucial platform for advancing sustainability science. The journal's timeliness is underscored by the accelerating pace of environmental degradation and the urgent need for innovative solutions. *PLOS Sustainability and Transformation* provides a valuable avenue for researchers from diverse disciplines to share their findings, fostering interdisciplinary collaboration that is essential for tackling complex sustainability issues. By offering an open-access platform, the journal ensures that cutting-edge research is freely available to a global audience, enhancing the dissemination of knowledge and facilitating the translation of research into practice.

Moreover, the journal's focus on transformative research aligns with the growing recognition that incremental changes are insufficient to address the scale of sustainability challenges. Transformative approaches, which seek to fundamentally alter systems and practices, are crucial for achieving long-term sustainability goals. *PLOS Sustainability and Transformation*

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highlights research that not only advances scientific understanding but also offers practical solutions with the potential for real-world impact. This focus on actionable science bridges the gap between academic research and policy-making, enabling evidence-based decisions that drive meaningful change.

I am tremendously grateful for the opportunity and privilege of playing a small role in this process by serving as the journal's inaugural Editor-in-Chief for the past 3 years. It has been an absolutely enriching and rewarding experience, working with the wonderful team of publishers, editorial board members, reviewers, and authors. I would especially like to express my sincerest appreciation to Hannah Harwood for her support and collaboration over the past year and a half.

The emerging sustainability challenges facing global society are complex and multifaceted, requiring coordinated efforts across national boundaries and disciplines. The increasing complexity of these challenges necessitates interdisciplinary collaboration and global cooperation. *PLOS Sustainability and Transformation* plays a pivotal role in this landscape by providing a timely and valuable platform for researchers to share innovative ideas and scale impactful sustainability work. Through its open-access model and focus on transformative research, the journal fosters the dissemination of knowledge and the development of solutions that address the pressing sustainability issues of our time. I have no doubt that the journal will continue to flourish, grow, and achieve its mission under the leadership of the next Editor-in-Chief, Professor Unai Pascual. I look forward to the future development of the journal.