

# Editorial: Bridging Disciplines for the Sustainable Development Goals: Interdisciplinary Evidence, Methods, and Practice-Relevant Insights

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**Abstract:** Based on the six papers selected for the special issue from the 2025 Interdisciplinary Symposium on the Sustainable Development Goals (ISSDGs) (Auckland), this editorial paper reviews the interdisciplinary research findings and proposes a future research agenda. Although SDGs research is booming, existing literature still faces challenges such as disciplinary fragmentation and limited practical application. The interdisciplinary dialogue aims to promote substantive integration among fields such as economics, engineering, management, education, and digital technology. By summarizing the themes and comparing the methods of the selected papers, this paper recaps three aspects, including the measurement and governance mechanisms of sustainable performance, the trade-offs between environmental risks, industrial development, and infrastructure resilience, and human-centered digital transformation and innovation in sustainable education. Then, this paper proposes five research directions, including the causal pathways between SDG targets and policy integration design, a framework for the institutionalized measurement of governance capacity, data ethics and cross-scale comparability issues, the scaling and contextualized implementation of sustainable innovation, and the expansion and refinement of social sustainability indicator systems. Overall, this paper summarizes the findings of the Special Issue and provides insights into further theoretical development and practical application.

**Keywords:** Sustainable Development Goals; Interdisciplinary Integration; Sustainability Governance; Policy Implementation; Research Agenda

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## 1.Introduction

The Sustainable Development Goals (SDGS) offer a comprehensive and integrated approach to addressing the world's most pressing challenges, such as climate change, environmental deterioration, social inequality, digital transformation, and sustainable economic development (Falk & Nemon, 2023). In contrast to the previous development agendas, the SDGs highlight the relationships between policy fields and sectors, thus pointing to the systemic character of sustainability challenges (Nilsson et al., 2018).

Although academic research related to the Sustainable Development Goals has grown significantly in recent years, a

considerable portion of the existing literature remains confined to a single disciplinary tradition or subject area (Kanie et al., 2019; Sianes et al., 2022). Many studies focus on specific goals, departments, or technical levels, with limited attention paid to cross-goal interactions, institutional interdependence, or governance mechanisms (Bennich et al., 2020). Furthermore, although many contributions have helped to illuminate important empirical discoveries or conceptual advances, relatively few have focused on the issue of transforming research results into the implications and implementation strategies necessary for practice (Berrone et al., 2023; Norström et al., 2020). Therefore, the integration of economic, technological, social, and institutional perspectives that are crucial for the effective implementation of the Sustainable Development Goals remains unevenly developed (Leal Filho et al., 2022).

This Special Issue is closely related to the 2025 Interdisciplinary Symposium on Sustainable Development Goals (ISSDGs) held at the University of Auckland on September 26, 2025. The symposium brought together researchers from economics, management, engineering, arts, and social sciences to discuss evidence-based and technology-driven approaches to sustainable development. The symposium provides a forum for interdisciplinary discussions, encouraging researchers to consider the potential of various analytical methods and perspectives and work together to achieve the Sustainable Development Goals in different institutional Settings. The ISSDGs Special Issue aims to consolidate selected research contributions that reflect both the diversity and the coherence of SDG-oriented interdisciplinary research. The six papers included address sustainability challenges at different levels, ranging from macro-level measurement frameworks and environmental governance to firm behavior, infrastructure resilience, education, and digital inclusion. Rather than focusing on a single goal or methodology, the Special Issue highlights how sustainability challenges can be better understood when economic, technological, social, and institutional dimensions are considered together.

## **2.Motivations and Objectives of the Special Issue**

Although the introduction section outlines the broader academic and institutional background of this special issue, its motivation is more specifically oriented towards strengthening the analytical and practical basis of academic research on the Sustainable Development Goals. The interdisciplinary exchanges during the symposium highlighted a common understanding that although disciplinary specialization is indispensable, it is still insufficient to address the systematic and multi-scale nature of sustainable development challenges. What we need is well-designed research to integrate different viewpoints while focusing on governance conditions and implementation feasibility. Therefore, this special issue is guided by two closely related goals.

Firstly, it seeks to take interdisciplinary integration as a specific analytical direction rather than a rhetorical label. Here, interdisciplinarity refers to the structured combination of theoretical frameworks, empirical methods, and evaluation criteria in interdisciplinary fields to capture the interdependent relationships among economic, social, technological, and institutional processes.

Secondly, it emphasizes the relevance of governance and the transformation of practice. The outcome of sustainable development depends not only on analytical insights, but also on institutional capabilities, regulatory design and organizational incentives. This special issue aims to strengthen the connection between theory and practice, encouraging contributors to place their analysis in the context of actual decision-making and consider implementation methods.

In conclusion, these goals make this special issue not only a compilation of topics but also a well-considered effort aimed at promoting the methodological and practical maturity of interdisciplinary academic research on sustainable development goals.

## **3.Review and Selection Process**

This Special Issue was planned in parallel with the Interdisciplinary Symposium on Achieving the Sustainable Development Goals in June 2025 and was launched through an open call for papers. Authors were invited to submit their full manuscripts during the paper solicitation stage rather than after the symposium to ensure there is sufficient time for rigorous peer review and revision before publication.

The review and selection process followed a multi-stage procedure, aiming to ensure academic quality, interdisciplinary

relevance, and consistency with the goals of the special issue.

First, all submitted manuscripts had undergone an initial editorial screening. At this stage, the invited editors evaluated the thematic relevance of the submissions to the interdisciplinary scope of the Sustainable Development Goals of this special issue and conducted originality checks to ensure compliance with academic integrity standards.

Second, submissions that passed the initial screening were evaluated according to a set of predefined review criteria outlined in the Special Issue's full-paper review guidelines. Relevance to the symposium topic and special issues, originality and contribution, methodological rationality, clarity and organization, analytical quality, utilization of pertinent literature, and academic writing standards are some of these requirements. These guidelines are always applicable to all materials that are submitted to facilitate an impartial and open evaluation procedure.

Third, manuscripts were subject to a double-blind peer-review process, supported by more than 20 reviewers with high-quality journal review or publication experience. At least two experts and academics in the related subject independently reviewed each submission. Achieving a balance in interdisciplinary evaluation was emphasized, making sure that submissions are assessed from the proper disciplinary perspective while also considering their overall contribution to research on the Sustainable Development Goals.

The invited editor made editorial decisions on revisions and acceptance based on the reviewers' reports and the special issue's overall goals. All accepted papers underwent two rounds of revision, enabling authors to respond to reviewers' feedback and further enhancing the overall quality and consistency of the papers.

After this rigorous selection process, the final rejection rate was 66%, and six papers were eventually accepted for the special issue. These contributions represent a carefully selected set of interdisciplinary research, reflecting the knowledge exchange promoted by the symposium and the journal's academic standards.

## **4. Thematic and Methodological Contributions**

The thematic structure of this Special Issue reflects the interdisciplinary dialogue initiated during the Interdisciplinary Symposium on Achieving the Sustainable Development Goals. Rather than organizing contributions solely by discipline or SDG category, the papers are grouped according to shared research concerns that emerged through conference discussions, including measurement and governance of sustainability, management of environmental and infrastructural risks, and human-centered digital transformation. These themes capture both the diversity of approaches and the common questions that connected scholars across fields.

### **4.1 Measuring and Governing Sustainability Performance**

One of the themes that can be identified from the Special Issue is related to the measurement and governance of sustainability performance. The studies included in this Special Issue critically discuss the shortcomings of the traditional economic measures and examine new approaches that are capable of addressing the environmental and social aspects of performance. At the macro-level, this focus is represented in the research on Green GDP accounting, which suggests the use of an entropy method to enhance comparability among G20 countries (Chen & Lin, 2026). Through the integration of the environmental dimension into national accounts, this research addresses the issue of applying sustainability-adjusted indicators for policy evaluation and development planning.

In addition to the macro-outlook, another advantage of the report is that it analyzes the sustainable development performance at the company level, with a focus on the relationship between executive education in China's real estate industry and corporate profitability (Wu et al., 2026). It was found that a higher level of executive education does not necessarily lead to better financial performance and that efficiency and context are more decisive. This finding was highly praised at the session on governance and management, where it was pointed out that human capital investment should be in line with organizational structure and the environment to ensure sustainable economic performance. Together, these two papers illustrate how sustainability governance requires coherent measurement frameworks and realistic assessments of organizational capabilities.

### **4.2 Environmental Trade-offs, Food Security, and Infrastructure Resilience**

Another major topic emerging from the Special Issue concerned environmental trade-offs associated with industrial development and infrastructure expansion. Some of the discussions were centered on the conflict between economic

development, environmental sustainability, and resilience. This is evident in the paper that examines the effect of industrial air pollution on food security and relevant agricultural production in Eastern China (Lyu & Yang, 2026). By linking the data of industrial air pollution and economic variables in agriculture, the paper presents empirical evidence of spillovers between sectors, showing how industrial air pollution harms agriculture and food security. It is worth noting that the paper emphasizes the moderating effect of governance ability, indicating the agreement reached at the conference that environmental outcomes are determined not only by technology but also by governance ability.

From the perspective of engineering and infrastructure, the contribution of the improvement experience Fourier decomposition solves the sustainability problem through the perspectives of resilience and maintenance efficiency (Sun et al., 2026). A signal processing method for early damage identification of structural systems was proposed and experimentally verified. During the seminar, infrastructure resilience is often discussed as a practical entry point for sustainable development, especially in rapidly urbanizing areas. This article directly addresses this issue by providing an economically effective and technically robust approach, which can reduce resource waste and extend the service life of infrastructure. Taken together, these two studies underscore the importance of interdisciplinary approaches that connect environmental science, engineering, and governance in managing sustainability-related risks.

### **4.3 Human-Centered Digital Transformation and Sustainability Education**

The third prominent subject under discussion in the special issue is the use of digital technology in creating an inclusive and sustainable society. The scholars not only concentrated on the efficiency of technology but also explored the social and ethical dimensions of digital change. This is seen in the research paper on intergenerational communication in the digital age, where the researchers examine the contribution of older content creators on short video-sharing platforms to the realization of digital inclusion and social sustainability. (Shen et al., 2026). Through content analysis and audience engagement, the authors of this paper illustrate the role of digital platforms in enhancing the presence and social engagement of older people, which corresponds to the discussions on inclusiveness and social well-being at the symposium.

Issues pertaining to the application of human-centered technology have also reinforced the role of artificial intelligence in sustainable early childhood education (Fan et al., 2025). This conceptual paper proposes an “artificial intelligence co-pilot” framework, which views artificial intelligence as a helper system in the role of teachers, rather than as a decision-maker. This framework reflects the discussions during the conference on balancing innovation with ethical boundaries and professional autonomy. By emphasizing value guidance, functional consistency and clear constraints, this study helps to discuss how emerging technologies can support sustainable education without compromising human judgment or teaching value.

### **4.4 Synthesis Across Themes**

Although these six papers involve different empirical backgrounds and methodological approaches, the connections among them have become evident through conference-based communication. Some common insights have emerged in different themes. First of all, sustainability outcomes are formed by the interaction between technological solutions and governance structures. Second, the measurement and evaluation framework plays a crucial role in determining priorities and guiding actions. Thirdly, digital and technological innovation must be integrated into people-oriented and environmentally sensitive designs to support inclusive and sustainable progress towards achieving the Sustainable Development Goals.

Through the organization of special issues based on themes that mirror these shared concerns, the editorial underlines that these articles should not be seen as isolated research endeavors but rather as part of an ongoing interdisciplinary conversation that has been initiated at the conference and continued through this publication.

## **5.Future Research Directions**

The contributions of this special issue and the interdisciplinary discussions initiated during the conference have pointed out several research directions worthy of continuous academic attention. These directions do not represent isolated gaps but rather reflect the structural challenges in current research on Sustainable Development Goals and highlight the opportunities where an interdisciplinary approach can generate the greatest added value.

### **5.1 SDG Interactions, Causal Pathways, and Integrated Policy Design**

A recurring viewpoint in the paper is that the outcome of sustainable development is determined by the interaction among

policies, sectors, and goals, rather than by isolated interventions. Therefore, future research should go beyond single policy assessment and shift towards designing and evaluating comprehensive policy options to clearly simulate the interactions and causal pathways of the Sustainable Development (Allen et al., 2025). For instance, policies that focus on the achievement of industrial upgrading and economic growth may need complementary policies on environmental regulations and agricultural support in order to avoid negative spillover effects on food security. Similarly, only with the support of appropriate organizational reforms and governance mechanisms can policies oriented towards education and skills be transformed into sustainable productivity improvements. Developing an analytical framework capable of capturing these interactions remains a key task in interdisciplinary research on sustainable development goals (Pradhan et al., 2017).

### **5.2 Governance Capacity as a Determinant of Sustainable Development Outcomes**

Some of the articles in this special issue strongly emphasize that governance capacity is not a background condition but a positive determinant of policy effectiveness. This point is an indication that future research must conceptualize and measure governance capabilities more explicitly (Khan & Hussain, 2024). Potential approaches include formulating operational indicators for regulatory enforcement, institutional transparency, public participation, and digital governance mechanisms (Breuer et al., 2023). Then, empirical research can examine how changes in governance capacity mitigate the impact of environmental, technological, and social interventions. This type of work will help explain why similar policies produce different results in different regional and institutional settings and will enhance the policy relevance of Sustainable Development Goals research (Knox & Orazgaliyev, 2024; Wiegant et al., 2024).

### **5.3 Data Quality, Comparability, and Ethical Data Infrastructures**

Reliable measurement remains a core challenge in sustainable development research (Biermann et al., 2022). As demonstrated by the green GDP and corporate sustainability assessment work, the indicators related to the Sustainable Development goals rely on consistent, transparent, and comparable data across scales. Future research should explore how to better integrate the data generated by national accounting systems, corporate reporting frameworks, and platforms to support comprehensive sustainability analysis (Bebbington & Unerman, 2018; Sætra, 2023). Meanwhile, the increasing use of digital and AI-driven data sources has raised significant ethical issues (Camilleri, 2024). Issues such as consent, data protection, bias, and accountability must be addressed to ensure that data infrastructure supports rather than undermines trust and social legitimacy in sustainable governance (Taeihagh, 2025)

### **5.4 Scaling and Field Deployment of Sustainability-Oriented Innovations**

Several studies in this Special Issue propose methods or frameworks that have been validated under controlled or pilot conditions. A key challenge for future research lies in scaling these innovations and assessing their performance in real-world settings (Cooley & Linn, n.d.). For instance, infrastructure monitoring technologies must be tested under conditions of environmental noise, operational complexity, and long-term use (Azimi et al., 2020). Similarly, community-based digital inclusion initiatives and AI-supported education models need to be evaluated in different demographic, cultural and institutional contexts (Fu et al., 2025). For transforming promising innovations into sustainable and scalable solutions, it is crucial to focus on research related to implementation, adaptation, and system-level integration (Adenle et al., 2023).

### **5.5 Human-Centered Sustainability and the Measurement of Social Outcomes**

Finally, the special issue emphasizes the significance of a people-centered perspective in sustainable development research. Achievements such as well-being, social inclusion, professional autonomy, and dignity are often recognized but still not fully measured. Future studies should aim at creating strong interdisciplinary tools for the measurement of these “social sustainability” dimensions (Custodio et al., 2023; Li et al., 2025). A design with a mix of quantitative and qualitative elements could be especially useful for studying complex social outcomes like intergenerational unity, senior digital participation, and teachers’ experience with AI-based teaching. Strengthening the empirical basis of social sustainability indicators is crucial for ensuring that the progress of sustainable development goals is in line with human values and life experiences (Jansen et al., 2024).

## **6. Conclusion and Acknowledgments**

This Special Issue demonstrates that interdisciplinary research can generate more than broad narratives about sustainability:

it can offer tangible approaches, mechanisms, and governance knowledge. The six papers together offer an advancement in SDG thoughts through better measurement (Green GDP), understanding capability routes (executive education and company performance), estimating inter-sector environmental spillovers (pollution and agriculture), justifying engineering innovations for resilience (enhanced EFD for damage detection), and suggesting human-focused digital approaches for inclusion and education (silver-haired influencers and AI co-pilot pedagogy).

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## Reference

- [1] Adenle, A. A., Steur, H. D., Mwongera, C., Rola-Rubzen, F., Barcellos, M. D. de, Vivanco, D. F., Timilsina, G. R., Possas, C., Alders, R., Chertow, M., Poons, S., & Scholes, B. (2023). Global UN 2030 agenda: How can Science, Technology and Innovation accelerate the achievement of Sustainable Development Goals for All? *PLOS Sustainability and Transformation*, 2(10), e0000085. <https://doi.org/10.1371/journal.pstr.0000085>
- [2] Allen, C., Malekpour, S., Persson, Å., & Bennich, T. (2025). Accelerating progress on the SDGs: Policy guidance from the global modeling literature. *One Earth*, 8(6). <https://doi.org/10.1016/j.oneear.2025.101286>
- [3] Azimi, M., Eslamlou, A. D., & Pekcan, G. (2020). Data-Driven Structural Health Monitoring and Damage Detection through Deep Learning: State-of-the-Art Review. *Sensors*, 20(10), 2778. <https://doi.org/10.3390/s20102778>
- [4] Bebbington, J., & Unerman, J. (2018). Achieving the United Nations Sustainable Development Goals: An enabling role for accounting research. *Accounting, Auditing & Accountability Journal*, 31(1), 2–24. <https://doi.org/10.1108/AAAJ-05-2017-2929>
- [5] Bennich, T., Weitz, N., & Carlsen, H. (2020). Deciphering the scientific literature on SDG interactions: A review and reading guide. *Science of The Total Environment*, 728, 138405. <https://doi.org/10.1016/j.scitotenv.2020.138405>
- [6] Berrone, P., Rousseau, H. E., Ricart, J. e., Brito, E., & Giuliadori, A. (2023). How can research contribute to the implementation of sustainable development goals? An interpretive review of SDG literature in management. *International Journal of Management Reviews*, 25(2), 318–339. <https://doi.org/10.1111/ijmr.12331>
- [7] Breuer, A., Leininger, J., Malerba, D., & Tosun, J. (2023). Integrated policymaking: Institutional designs for implementing the sustainable development goals (SDGs). *World Development*, 170, 106317. <https://doi.org/10.1016/j.worlddev.2023.106317>
- [8] Camilleri, M. A. (2024). Artificial intelligence governance: Ethical considerations and implications for social responsibility. *Expert Systems*, 41(7), e13406. <https://doi.org/10.1111/exsy.13406>
- [9] Cooley, L., & Linn, J. F. (n.d.). Taking Innovations to Scale:
- [10] Custodio, H. M., Hadjikakou, M., & Bryan, B. A. (2023). A review of socioeconomic indicators of sustainability and wellbeing building on the social foundations framework. *Ecological Economics*, 203, 107608. <https://doi.org/10.1016/j.ecolecon.2022.107608>
- [11] Falk, A., & Nemon, M. (2023). Advancing the United Nations Sustainable Development Goals through Higher Education Community Engagement. 1(1).
- [12] Fu, Y., Weng, Z., & Wang, J. (2025). Examining AI Use in Educational Contexts: A Scoping Meta-Review and

- Bibliometric Analysis. *International Journal of Artificial Intelligence in Education*, 35(3), 1388–1444. <https://doi.org/10.1007/s40593-024-00442-w>
- [13] Jansen, A., Wang, R., Behrens, P., & Hoekstra, R. (2024). Beyond GDP: A review and conceptual framework for measuring sustainable and inclusive wellbeing. *The Lancet Planetary Health*, 8(9), e695–e705. [https://doi.org/10.1016/S2542-5196\(24\)00147-5](https://doi.org/10.1016/S2542-5196(24)00147-5)
- [14] Kanie, N., Griggs, D., Young, O., Waddell, S., Shrivastava, P., Haas, P. M., Broadgate, W., Gaffney, O., & Körösi, C. (2019). Rules to goals: Emergence of new governance strategies for sustainable development. *Sustainability Science*, 14(6), 1745–1749. <https://doi.org/10.1007/s11625-019-00729-1>
- [15] Khan, R., & Hussain, F. (2024). Assessing policy capacity and policy effectiveness: A comparative study using sustainable governance indicators. *European Policy Analysis*, 10(4), 575–603. <https://doi.org/10.1002/epa2.1217>
- [16] Knox, C., & Orazgaliyev, S. (2024). Sustainable development goals and good governance nexus: Implementation challenges in central Asia. *Public Administration and Development*, 44(4), 237–251. <https://doi.org/10.1002/pad.2038>
- [17] Leal Filho, W., Vidal, D. G., Chen, C., Petrova, M., Dinis, M. A. P., Yang, P., Rogers, S., Álvarez-Castañón, L., Djekic, I., Sharifi, A., & Neiva, S. (2022). An assessment of requirements in investments, new technologies, and infrastructures to achieve the SDGs. *Environmental Sciences Europe*, 34(1), 58. <https://doi.org/10.1186/s12302-022-00629-9>
- [18] Li, J., Warchold, A., & Pradhan, P. (2025). Revisiting social foundations and well-being indicators for sustainability: Insights from a systematic literature review. *Ecological Indicators*, 178, 113890. <https://doi.org/10.1016/j.ecolind.2025.113890>
- [19] Nilsson, M., Chisholm, E., Griggs, D., Howden-Chapman, P., McCollum, D., Messerli, P., Neumann, B., Stevance, A.-S., Visbeck, M., & Stafford-Smith, M. (2018). Mapping interactions between the sustainable development goals: Lessons learned and ways forward. *Sustainability Science*, 13(6), 1489–1503. <https://doi.org/10.1007/s11625-018-0604-z>
- [20] Norström, A. V., Cvitanovic, C., Löf, M. F., West, S., Wyborn, C., Balvanera, P., Bednarek, A. T., Bennett, E. M., Biggs, R., De Bremond, A., Campbell, B. M., Canadell, J. G., Carpenter, S. R., Folke, C., Fulton, E. A., Gaffney, O., Gelcich, S., Jouffray, J.-B., Leach, M., ... Österblom, H. (2020). Principles for knowledge co-production in sustainability research. *Nature Sustainability*, 3(3), 182–190. <https://doi.org/10.1038/s41893-019-0448-2>
- [21] Pradhan, P., Costa, L., Rybski, D., Lucht, W., & Kropp, J. P. (2017). A Systematic Study of Sustainable Development Goal (SDG) Interactions. *Earth's Future*, 5(11), 1169–1179. <https://doi.org/10.1002/2017EF000632>
- [22] Sætra, H. S. (2023). The AI ESG protocol: Evaluating and disclosing the environment, social, and governance implications of artificial intelligence capabilities, assets, and activities. *Sustainable Development*, 31(2), 1027–1037. <https://doi.org/10.1002/sd.2438>
- [23] Sianes, A., Vega-Muñoz, A., Tirado-Valencia, P., & Ariza-Montes, A. (2022). Impact of the Sustainable Development Goals on the academic research agenda. A scientometric analysis. *PLoS One*, 17(3), e0265409. <https://doi.org/10.1371/journal.pone.0265409>
- [24] Taeihagh, A. (2025). Governance of Generative AI. *Policy and Society*, 44(1), 1–22. <https://doi.org/10.1093/polsoc/puaf001>
- [25] Wiegant, D., Dewulf, A., & Van Zeben, J. (2024). Alignment mechanisms to effectively govern the sustainable development goals. *World Development*, 182, 106721. <https://doi.org/10.1016/j.worlddev.2024.106721>