



## **From Policy to Practice: Addressing SDG Challenges and Opportunities Through Social Sciences**

**Firman Maulana Rusdi<sup>(1)</sup>, Arini Dwi Cahyani<sup>(2)</sup>**

<sup>1</sup>Universitas Negeri Semarang, Indonesia, <sup>2</sup>Universitas Negeri Semarang, Indonesia

<sup>1</sup>firmanmaulana221@students.unnes.ac.id, <sup>2</sup>arinicahyani@mail.unnes.ac.id

### **Abstract**

The achievement of Sustainable Development Goals (SDGs) presents various kinds of challenges and opportunities, especially in the context of social sciences. The purpose of this study is to examine the challenges and opportunities associated with implementing the SDGs from a social science approach. By analyzing relevant literature from 2020 to 2025, this study observes significant challenges such as policy inconsistencies, lack of inclusivity, and limited resources that obstruct effective implementation. In contrast, opportunities are identified in the form of interdisciplinary cooperation, technology developments, and the increasing focus on inclusive and equitable education. The findings show that social sciences play an important role in filling the gap between policy frameworks and practical applications, presenting innovative solutions to address complex societal issues. Furthermore, this study highlights the necessity of developing critical thinking, collaborative efforts, and adaptable solutions in order to overcome current obstacles and maximize the potential of SDGs. Practical recommendations are provided to improve the efficiency of SDG-related projects which highlight the need for collaborative strategies and dynamic policy frameworks.

**Keywords:** Sustainable Development Goals (SDGs), Social Sciences, Challenges, Opportunities, Interdisciplinary Collaboration

### **Abstrak**

Pencapaian Tujuan Pembangunan Berkelanjutan (SDGs) menghadirkan berbagai tantangan dan peluang, terutama dalam konteks ilmu sosial. Tujuan dari penelitian ini adalah untuk mengkaji tantangan dan peluang yang berkaitan dengan pelaksanaan SDGs dari pendekatan ilmu sosial. Dengan menganalisis literatur yang relevan dari tahun 2020 hingga 2025, penelitian ini mengamati tantangan signifikan seperti ketidakkonsistenan kebijakan, kurangnya inklusivitas, dan keterbatasan sumber daya yang menghambat pelaksanaannya. Sebaliknya, peluang telah diidentifikasi dalam bentuk kerja sama interdisipliner, perkembangan teknologi, dan peningkatan fokus pada pendidikan inklusif dan berkeadilan. Hasil penelitian menunjukkan bahwa ilmu sosial memainkan peran penting dalam menjembatani kesenjangan antara kerangka kebijakan dan pengaplikasiannya dengan menghadirkan solusi inovatif untuk mengatasi masalah sosial yang kompleks. Selain itu, penelitian ini menyoroti tentang perlunya mengembangkan kemampuan berpikir kritis, upaya kolaboratif, dan solusi yang adaptif guna mengatasi hambatan yang ada serta memaksimalkan potensi SDGs. Rekomendasi yang praktis ditawarkan untuk meningkatkan efisiensi terkait SDGs yang menekankan perlunya strategi kolaboratif dan kerangka kebijakan yang dinamis.

**Kata Kunci:** Tujuan Pembangunan Berkelanjutan (SDGs), Ilmu Sosial, Tantangan, Peluang, Kolaborasi Interdisipliner

Received : 07-04-2025

Revised: 30-04-2025

Accepted: 05-05-2025



## **Introduction**

In recent decades, the global community has faced increasingly complex challenges, ranging from climate change and poverty to social inequality and education disparity. These challenges are addressed collectively under the framework of the Sustainable Development Goals (SDGs), a set of 17 global objectives launched by the United Nations in 2015 to be achieved by 2030. Despite their universal appeal and comprehensive coverage, the implementation of SDGs has encountered significant hurdles, especially in countries facing structural inequalities and governance limitations (Sachs et al., 2022: 17).

Social sciences are uniquely positioned to contribute to the SDG agenda. They provide analytical tools to understand human behavior, institutional dynamics, power relations, and cultural values—all of which are crucial to understanding how development policies are interpreted, resisted, or adapted at local levels (Leach et al., 2013). The ability of social sciences to offer a critical lens on issues such as inequality, participation, and justice makes them a central player in identifying both the challenges and opportunities embedded within the SDG framework.

Literature from 2020–2025 points out three persistent issues in SDG implementation. First, the lack of policy coherence across sectors and levels of governance leads to fragmentation in planning and execution (Bexell & Jönsson, 2022: 140). Second, inclusive participation remains largely rhetorical, with marginalized groups still underrepresented in decision-making processes (Allen et al., 2019: 215). Third, resource limitations—including financial, human, and institutional—remain critical barriers, especially in low- and middle-income countries (Weitz et al., 2018: 455).

On the other hand, the last five years have also shown growing momentum toward inclusive and innovative strategies. The rise of interdisciplinary research, digital technology for education, and a push for community-based policy design signal significant opportunities to realign social science with the SDG mission (Kroll et al., 2019: 588). For example, participatory approaches in urban planning, gender mainstreaming in education policy, and social accountability frameworks have gained traction as tools to bridge gaps between policy intent and outcomes (UNESCO, 2021: 79).

One often overlooked aspect is the role of local knowledge systems and cultural frameworks. Social sciences provide the methodological space to explore how local communities interpret and reshape global goals in contextually meaningful ways. This

bottom-up engagement is crucial for the sustainability of SDG practices (Leach et al., 2013: 34). Moreover, the integration of social science evaluation tools—such as ethnography, discourse analysis, and participatory mapping—enhances our understanding of the long-term impacts of SDG-related policies.

Given the urgency of the 2030 deadline, there is a pressing need to advance the dialogue between global frameworks and local realities. This paper explores how social sciences can support the implementation of SDGs by identifying both the barriers and catalysts for success. Through a literature-based conceptual analysis, this study offers insight into how interdisciplinary collaboration, inclusive policy-making, and critical reflexivity can reshape development pathways toward sustainability and equity.

## **Method**

This study adopts a qualitative, conceptual research design based on a comprehensive review of literature published between 2020 and 2025. The purpose of this approach is to synthesize scholarly discourse on the implementation of Sustainable Development Goals (SDGs) from the perspective of social sciences. Data sources include peer-reviewed journal articles, academic books, international organizational reports (e.g., UNESCO, UNDP), and relevant policy briefs accessed through academic databases such as Google Scholar, Researchgate, ScienceDirect, and JSTOR.

The data collection procedure involved identifying and selecting literature that directly addresses the intersection of social sciences and SDG implementation. Keywords such as "social sciences and SDGs," "policy implementation challenges," "inclusive education," and "interdisciplinary development" were used to filter relevant materials. Only sources published in the last five years and containing empirical or theoretical contributions were included to ensure the validity and relevance of the analysis.

The data analysis employed a thematic content analysis approach. Key themes such as policy coherence, participation, resource allocation, and social innovation were extracted, coded, and compared across sources. The findings were interpreted in light of broader development theories and policy frameworks. To ensure validity, this study triangulated information from multiple high-impact academic and institutional sources. By systematically analyzing recurring themes and divergent perspectives, the paper aims to

provide a robust conceptual understanding of the opportunities and obstacles facing SDG implementation in the social sciences domain.

## **Result and Discussion**

### **1. Major Challenges in Implementing SDGs**

One of the most significant hurdles in realizing the Sustainable Development Goals (SDGs) is the issue of policy fragmentation. This challenge is particularly evident in both national and local contexts, where disjointed sectoral policies lead to inconsistent results. Different agencies often pursue conflicting objectives or operate without sufficient coordination, which undermines the effectiveness of SDG implementation. Research by Bexell and Jönsson (2022) highlights that these policy gaps are particularly problematic in developing countries, where SDGs are often adopted more as broad aspirations rather than concrete commitments integrated into domestic governance frameworks. This lack of integration prevents a comprehensive approach to sustainable development, stymying progress on multiple fronts.

In Indonesia, for example, the decentralization of authority has exacerbated these issues, as local governments interpret and implement SDGs in varying ways, leading to mismatched and, at times, contradictory actions across different regions (Yuniarto, 2023: 101). Another key challenge in SDG implementation is the insufficient alignment between national policies and local actions, which is compounded by the absence of a clear coordination mechanism. While the SDGs are global in nature, their application requires a nuanced approach that accounts for regional differences. This misalignment has been evident in countries like Indonesia, where decentralized governance means that local governments, acting autonomously, interpret and adapt SDGs based on regional priorities or available resources.

Sachs et al. (2022) argue that in many cases, SDGs are embraced symbolically rather than substantively, with local governments often lacking the necessary financial and technical support to integrate SDGs into their day-to-day operations. This has led to significant variability in the degree of SDG adoption, with some areas showing marked progress, while others lag behind, demonstrating the uneven nature of implementation at the local level (Yuniarto, 2023: 101).

Another critical challenge in the implementation of the SDGs is the lack of inclusivity in decision-making processes. Despite the SDG framework's foundational principle of

"leaving no one behind," many countries fail to integrate marginalized groups, such as Indigenous populations, women, youth, and persons with disabilities, in the design and execution of policies aimed at achieving sustainable development (Allen et al., 2019: 219). This exclusion not only undermines the legitimacy of SDG-related initiatives but also compromises their effectiveness on the ground. When policies are created without the voices and perspectives of these vulnerable groups, the resulting strategies tend to overlook their specific needs and realities, making it more difficult for them to benefit from development efforts.

Moreover, the failure to ensure that these groups are adequately represented often leads to policies that are either ineffective or irrelevant in addressing the systemic issues they face. A study conducted by Der Tambile et al. (2024) in South Asia further underscores the consequences of such exclusion. The study revealed that community engagement in rural SDG-related development planning remained below 15%, which highlights a glaring gap in bottom-up participation in decision-making. This lack of engagement is symptomatic of broader systemic barriers that prevent marginalized populations from having an active role in shaping policies that directly impact their lives.

Without genuine participation from these groups, SDG initiatives tend to lack the local ownership necessary for their success, as well as the insight needed to address the unique challenges these populations face. Additionally, the absence of inclusive decision-making diminishes the potential for more holistic and equitable solutions, as policies are crafted without fully understanding the complexities of the socio-cultural and economic barriers that marginalized communities often endure. As such, the exclusion of these groups not only hampers the broader achievement of SDGs but also perpetuates existing inequalities, ultimately undermining the very goal of leaving no one behind.

Furthermore, resource limitations remain a critical concern. The COVID-19 pandemic exacerbated fiscal constraints in many developing countries, diverting funds away from long-term sustainable development goals toward emergency response efforts. Many regions still face a shortage of skilled personnel, weak institutions, and insufficient data infrastructures (Weitz et al., 2018). According to the World Bank (2020), nearly 40% of countries report insufficient capacity to collect data on at least 10 of the 17 SDGs, severely hampering monitoring and evaluation processes.

## 2. Emerging Opportunities Through Social Sceinces

Despite the significant challenges faced in implementing the Sustainable Development Goals (SDGs), there are promising opportunities emerging, particularly through the application of social science frameworks. One notable opportunity lies in the growing trend of interdisciplinary collaboration. This approach encourages researchers and policymakers from various fields such as education, sociology, political science, and economics—to work together in crafting more comprehensive and nuanced solutions to development challenges (Kroll et al., 2019). These collaborations are fostering more integrated strategies for SDG implementation, as they allow for the synthesis of diverse perspectives and expertise. By combining the strengths of different disciplines, researchers and policymakers can create more holistic approaches that take into account the complex, multi-faceted nature of sustainable development.

This type of cross-disciplinary work is increasingly found within think tanks and university research centers, where academic research is closely tied to practical, actionable insights that can directly inform policy and community interventions. A compelling example of such collaboration is the "Global Goals Lab" initiative, spearheaded by several European universities. This initiative brings together local governance researchers with municipalities to co-develop practical SDG implementation blueprints. By working directly with local governments, the initiative helps ensure that the strategies developed are not only academically sound but also grounded in the specific needs and realities of the communities they aim to serve (Filho et al., 2024: 44). Through these types of partnerships, social scientists are playing a crucial role in bridging the gap between high-level development goals and local-level action.

This collaboration is particularly valuable in ensuring that SDG strategies are not only inclusive but also adaptable to diverse social, political, and economic contexts. By integrating multiple disciplines, these partnerships can tailor solutions to the unique challenges faced by specific regions or communities, ensuring that development strategies are both relevant and effective. Furthermore, this approach fosters a deeper sense of ownership among local governments and communities, which is essential for enhancing the sustainability and long-term impact of development efforts. When communities feel directly involved in the process, they are more likely to commit to the success of the initiatives and continue driving progress even after external support diminishes.

As social sciences continue to inform SDG implementation, they hold the potential to unlock innovative solutions that address both local needs and global aspirations. This not only increases the effectiveness of SDG strategies but also ensures that development is equitable, inclusive, and culturally appropriate (Filho et al., 2024: 44). In addition to interdisciplinary collaboration, technological innovations particularly in digital learning and governance present another promising opportunity for SDG advancement. The proliferation of mobile-based participatory platforms and online data dashboards enables communities to actively engage with development processes, track local progress toward SDGs, and provide real-time feedback on policies and interventions.

These digital tools enhance transparency and foster more inclusive decision-making by giving marginalized groups a platform to voice their concerns and ideas. One such platform, U-Report, created by UNICEF, has empowered youth in over 90 countries to share their views on development issues, allowing for a more responsive and participatory feedback loop (UNESCO, 2021). By leveraging digital technologies, development programs can become more accessible and flexible, enabling a broader range of stakeholders to contribute to the shaping of policies that affect their lives. This creates a more dynamic and inclusive environment for SDG implementation, where the voices of all community members regardless of location or background can help inform and drive progress.

The growing global emphasis on inclusive and context-based education signals a significant shift toward more responsive and equitable educational systems. Social sciences play a pivotal role in driving this shift by promoting culturally sensitive pedagogies, gender-responsive education, and curricula that incorporate sustainability values. By emphasizing the importance of context in educational frameworks, social sciences ensure that learning experiences are not only academically rigorous but also socially relevant and empowering for diverse populations. Leach et al. (2013) highlight the transformative power of these approaches, demonstrating how education systems can better serve marginalized communities by adapting to local cultures, traditions, and needs. In Kenya, for example, the integration of local storytelling and community-based knowledge into the curriculum has made education more meaningful and connected to

students' everyday lives, directly contributing to the achievement of SDG 4 (Quality Education).

This approach has led to increased school retention and engagement, particularly among students who may have otherwise felt disconnected from the traditional educational system (Mandikonza, 2019). These emerging opportunities suggest that the integration of social science thinking both in theory and practice holds the potential to transform development narratives. By shifting from top-down, one-size-fits-all planning models to more inclusive, adaptable, and community-driven action, the application of social sciences can create a more participatory development process. This change fosters local ownership and ensures that solutions are tailored to the specific needs and contexts of the communities they are meant to serve. Such an approach not only enhances the effectiveness of SDG implementation but also promotes long-term sustainability by empowering individuals and communities to take an active role in their own development. As these trends continue to gain momentum, the role of social sciences in shaping inclusive and contextually appropriate development strategies will only become more crucial, driving a more holistic and equitable vision for global sustainability.

### 3. The Role of Social Sciences in Bridging the Gap

Social sciences play a crucial role in bridging the gap between global development frameworks and local realities, providing essential insights into how people experience and respond to development policies in their everyday lives. By utilizing methodologies such as ethnography and participatory action research, social scientists can gather in-depth, context-specific knowledge that reveals the nuances of local cultures, social structures, and community dynamics. This knowledge is invaluable in designing development interventions that are not only effective but also legitimate and culturally appropriate. The inclusion of local perspectives ensures that interventions resonate with the values and expectations of the people they aim to serve, thereby increasing their acceptance and effectiveness.

As Leach et al. (2013) argue, the integration of social science methods into development planning is key to understanding the complex interplay between global goals and local realities, ultimately leading to more sustainable and inclusive outcomes. An illustrative example of this is the research conducted by Oruç et al. (2017) in East Java, which examined local women's cooperatives and their engagement with SDG-based poverty alleviation programs. The study found that these cooperatives were able to adapt



the standard poverty reduction strategies to better align with the community's values, particularly around trust and reciprocity.

By understanding the local social fabric, the cooperatives adjusted the design of the programs to foster greater trust among participants, leading to higher levels of engagement and participation. This example highlights how development programs can be more successful when they are shaped by the insights and priorities of local communities, rather than being imposed from external frameworks. It also underscores the importance of incorporating social science perspectives to ensure that development initiatives are not only effective in meeting their objectives but are also embraced by the communities they intend to help.

Furthermore, social sciences offer critical reflexivity, which helps identify unintended consequences of well-meaning policies. For instance, policies focused narrowly on economic growth may inadvertently increase inequality or displace vulnerable communities. Sociological and anthropological perspectives help in unpacking these dynamics, providing more nuanced and ethical development strategies (Bexell & Jönsson, 2022: 143).

Lastly, tools developed within the social sciences such as discourse analysis, social network analysis, and community mapping have proven to be powerful instruments for monitoring and evaluating the implementation of the SDGs. These tools are valuable not only for generating rich qualitative insights but also for supporting participatory governance models that align with the core principles of inclusivity, transparency, and accountability inherent in the SDG framework. By utilizing these methodologies, stakeholders can gain a deeper understanding of the social dynamics and power relations that shape the success of development interventions.

One prominent example is the "Mapping for Rights" initiative in Central Africa, which demonstrates how local communities, with the assistance of social scientists, use mapping tools to protect their customary land rights and monitor environmental changes. This initiative illustrates the potential of community-driven research to empower local populations, enabling them to actively participate in safeguarding their land and resources while also contributing valuable data for environmental monitoring (Sumarga & Hein,

2014). In summary, social sciences are not merely observers of the SDG process they are active facilitators, interpreters, and co-creators of sustainable development.

Their methodologies, theoretical frameworks, and commitment to justice make them indispensable in diagnosing and addressing the complex social dimensions of the global goals. Social scientists bring critical perspectives on power, identity, and social structure, offering insights that ensure SDG initiatives are not only technically effective but also socially equitable. By engaging with local communities and integrating their voices into the development process, social sciences help ensure that the pursuit of sustainability is not only about achieving global targets but also about fostering local ownership, participation, and long-term positive change. Through their contributions, social sciences make a profound impact on making the SDGs a truly inclusive and transformative agenda.

## **Conclusion**

This study has explored the intersection between social sciences and the implementation of the Sustainable Development Goals (SDGs), revealing a dual landscape marked by both complex challenges and promising opportunities. On one hand, the primary obstacles identified include policy fragmentation, limited inclusion of marginalized voices, and significant resource constraints issues that continue to undermine the effectiveness of SDG implementation across various national and local contexts. These barriers often lead to disjointed development efforts, preventing the full realization of the SDGs and hindering the achievement of equitable outcomes. Despite these challenges, however, a range of opportunities exists that, if strategically leveraged, could accelerate progress toward the 2030 agenda.

The growing emphasis on interdisciplinary collaborations, the rise of technological innovation, and the promotion of culturally responsive educational practices offer avenues for integrating social sciences into development strategies in ways that increase their relevance, effectiveness, and inclusivity. The emergence of these opportunities underscores the critical role that social sciences can play in driving transformative change. By offering analytical tools, methodological diversity, and reflexive frameworks, social sciences provide not only a diagnostic approach to understanding development gaps but also practical, context-sensitive pathways forward.

Through methods such as participatory action research, ethnography, and community-based mapping, social scientists help translate global development visions into

locally grounded actions, ensuring that interventions are tailored to the unique needs and values of communities. Their capacity to connect global goals with grounded, participatory, and contextually relevant approaches makes them indispensable in the pursuit of inclusive and sustainable development. The ability to incorporate local knowledge and perspectives into development strategies not only increases the effectiveness of SDGs but also ensures that these strategies are socially legitimate and widely accepted.

In conclusion, the role of social sciences must be further mainstreamed into SDG policy design, monitoring, and implementation. Their contributions extend far beyond critique they provide structure, voice, and legitimacy to sustainable development practices, bridging the gap between high-level goals and on-the-ground realities. As the 2030 deadline approaches, tapping into the full potential of social science perspectives will be crucial for ensuring that no one is left behind and that development outcomes are not only measurable but also truly meaningful.

By integrating social science methodologies into the core of SDG frameworks, we can create a development agenda that is truly inclusive, equitable, and capable of fostering long-term, positive change for all. Social sciences provide essential tools for understanding and addressing the complex social, cultural, and political dynamics that shape development outcomes. Through participatory research and community-driven approaches, social scientists ensure that development efforts are grounded in local realities, giving voice to marginalized communities and making sure their needs are met. The involvement of social sciences is not just beneficial it is essential for realizing a sustainable, just, and holistic future. Their insights enable us to design policies that address the root causes of inequality and exclusion, ensuring that development is not only effective but also inclusive and responsive to the diverse needs of all people, ultimately contributing to a more equitable and sustainable world.

## **Suggestion**

Based on the findings and discussions presented, several key suggestions are proposed to enhance the role of social sciences in supporting the successful implementation of the Sustainable Development Goals (SDGs):

1. **Policy Integration:** Governments and development agencies should actively work to integrate insights from the social sciences into SDG policy-making processes. This

involves not just consulting social scientists in the planning stages but also making their perspectives central in shaping policies across sectors. Social scientists bring critical understanding of human behavior, power dynamics, and cultural contexts that can improve policy effectiveness. Including qualitative analysis in monitoring and evaluation systems also helps capture the human and social dimensions of development outcomes, ensuring that the implementation of SDGs is both inclusive and adaptive to the changing needs of communities.

2. **Community Engagement Frameworks:** Development programs should embrace participatory models that genuinely involve marginalized and underrepresented communities in the co-creation of solutions. This approach ensures that development is not just about implementing top-down solutions but is rooted in local knowledge and priorities. Frameworks such as participatory mapping, focus group dialogues, and local storytelling provide platforms for communities to voice their needs, perspectives, and aspirations. By integrating these tools, development initiatives can promote inclusivity, enhance community ownership, and create solutions that are more likely to be accepted and sustained over time. Investment in
3. **Research and Capacity Building:** National and international stakeholders must prioritize investment in social science research that focuses on sustainable development issues. Adequate funding and support for research are critical in understanding the complex, local-specific factors that influence development. This includes supporting interdisciplinary research hubs where scholars from various social science disciplines can collaborate to address the multifaceted challenges of sustainable development. Additionally, fostering capacity building through training programs ensures that local researchers and practitioners have the skills to engage with SDG implementation effectively, creating a strong foundation for long-term progress.
4. **Curriculum Reform in Higher Education:** Universities and educational institutions have a crucial role in preparing future leaders, researchers, and policymakers with the necessary skills to address global challenges. By incorporating sustainability, development ethics, and SDG-related social science content into their curricula, institutions can equip students with critical thinking skills and a deep understanding of systemic issues. This curriculum reform will help nurture a generation of professionals who can approach development challenges from a holistic, ethical,

and interdisciplinary perspective. Furthermore, it will foster a culture of innovation and critical inquiry, essential for navigating the complexities of sustainable development.

5. Further Research: Future studies should delve deeper into how specific social science disciplines such as anthropology, political economy, or sociology contribute uniquely to achieving different SDG targets. Each discipline offers valuable insights into human behavior, social structures, and power relations, and understanding these contributions can enhance the overall effectiveness of SDG implementation. Additionally, comparative studies across regions and cultures are essential to identify region-specific challenges and solutions, enriching the global understanding of sustainable development and fostering more nuanced, context-sensitive approaches to achieving the SDGs.

By implementing these recommendations, stakeholders can harness the full potential of social sciences to address not only the technical dimensions of sustainable development, but also its social, cultural, and ethical complexities.

## **References**

- Allen, C., Metternicht, G., & Wiedmann, T. (2019). Prioritising SDG targets: assessing baselines, gaps and interlinkages. *Sustainability Science*, 14(2), 421–438. <https://doi.org/10.1007/s11625-018-0596-8>
- Leach, M., Raworth, K., & Rockstrom, J. (2013). Between social and planetary boundaries: Navigating pathways in the safe and just space for humanity. In *World Social Science Report 2013* (pp. 84–89). OECD. <https://doi.org/10.1787/9789264203419-10-en>
- Bexell, M., & Jönsson, K. (2022). Realizing the 2030 Agenda for sustainable development – engaging national parliaments? *Policy Studies*, 43(4), 621–639. <https://doi.org/10.1080/01442872.2020.1803255>
- Der Tambile, E., Ramachandran, V. S., Rajendrakumar, S., Remesh, M., Ramaswamy, J., & Ramesh, M. V. (2024). Rural livelihoods sustainability in South Asia and Africa: a systematic review with bibliometric analysis. *Discover Sustainability*, 5(1), 410. <https://doi.org/10.1007/s43621-024-00651-2>
- Filho, W. L., Sierra, J., Price, E., Eustachio, J. H. P. P., Novikau, A., Kirrane, M., Dinis, M. A. P., & Salvia, A. L. (2024). The role of universities in accelerating the sustainable

- development goals in Europe. *Scientific Reports*, 14(1), 15464. <https://doi.org/10.1038/s41598-024-65820-9>
- Kroll, C., Warchold, A., & Pradhan, P. (2019). Sustainable Development Goals (SDGs): Are we successful in turning trade-offs into synergies? *Palgrave Communications*, 5(1), 140. <https://doi.org/10.1057/s41599-019-0335-5>
- Mandikonza, C. (2019). Integrating indigenous knowledge practices as context and concepts for the learning of curriculum science: A methodological exploration. *Southern African Journal of Environmental Education*, 35(1). <https://doi.org/10.4314/sajee.v35i1.13>
- Oruç, E., Uzunöz, M., & Karadoğan, N. (2017). Rural Women's Participation of Local Development: A Case of the Women Shareholders of Vakifli Development Cooperative. *Asian Journal of Agricultural Extension, Economics & Sociology*, 17(2), 1–12. <https://doi.org/10.9734/AJAEES/2017/33435>
- Sachs, J., Kroll, C., Lafortune, G., Fuller, G., & Woelm, F. (2022). Sustainable Development Report 2022. In *Sustainable Development Report 2022*. Cambridge University Press. <https://doi.org/10.1017/9781009210058>
- Sumarga, E., & Hein, L. (2014). Mapping Ecosystem Services for Land Use Planning, the Case of Central Kalimantan. *Environmental Management*, 54(1), 84–97. <https://doi.org/10.1007/s00267-014-0282-2>
- UNESCO. (2021). *Reimagining our futures together: a new social contract for education*. UNESCO. <https://doi.org/10.54675/ASRB4722>
- Weitz, N., Carlsen, H., Nilsson, M., & Skånberg, K. (2018). Towards systemic and contextual priority setting for implementing the 2030 Agenda. *Sustainability Science*, 13(2), 531–548. <https://doi.org/10.1007/s11625-017-0470-0>
- World Bank. (2020). *World Development Report 2021*.