

MARKETING BARRIERS AND OPPORTUNITIES FOR PAYMENTS FOR ECOSYSTEM SERVICES IN THE CIRCULAR ECONOMY: EVIDENCE FROM ALBANIA

Klea Nikolla¹, Etleva Muça²
e-mail: knikolla@ubt.edu.al, e-mail: evadashi@ubt.edu.al

Abstract

PES programmes have become essential to sustainable land management within the circular economy. However, their potential remains underutilized due to low public awareness, unclear value propositions, and limited stakeholder engagement. This study examines the key marketing barriers to the adoption of Payments for Ecosystem Services (PES) and explores how communication and marketing strategies can improve stakeholder participation. A mixed-methods approach was used, combining a structured survey of 112 respondents from businesses, policymakers, NGOs, and consumers with 15 semi-structured interviews. The findings indicate that awareness varies significantly across stakeholders, with consumers showing the lowest levels of understanding and willingness to engage. The results suggest that digital marketing tools, eco-labels, and targeted communication strategies may help improve PES visibility and stakeholder engagement. The study offers practical insights for policymakers, businesses, and environmental organizations seeking to enhance PES implementation through more effective communication.

Keywords: payments for ecosystem services (PES), circular economy, green marketing, willingness to pay, digital branding, corporate social responsibility

JEL: M31, Q01, Q50

Introduction

Economic mechanisms to tackle environmental challenges must be developed to ensure both conservation and economic sustainability. The payment system for ecosystem services (PES) is a market-based instrument that rewards landowners and land managers for delivering ecosystem services such as carbon sequestration, biodiversity protection, and water quality. PES comprises voluntary transactions in which beneficiaries compensate providers to maintain or enhance ecosystem services, aligning incentives with conservation goals and broader sustainability

¹ Assistant Lecturer, PhD Student, Department of Agribusiness Management, Agricultural University of Tirana, Albania, ORCID: 0009-0007-4407-0376

² Prof., PhD, Department of Economics and Rural Development Policies, Agricultural University of Tirana, Albania, ORCID: 0000-0002-6524-8467

objectives (Pojani 2021). PES aligns with circular economy principles by incentivizing resource stewardship alongside production and consumption cycles. Despite these advantages, PES programs remain underutilized, partly due to communication gaps and limited stakeholder engagement – challenges that this study aims to address. PES programs play a vital role in ensuring the sustainability of socio-economic systems and improving human well-being (Başal & Demircioglu, 2024).

Literature Review

The circular economy offers a transformative framework for addressing environmental degradation by rethinking how products are designed, used, reused, repaired, remanufactured, and recovered. Rather than following the traditional linear model of production and consumption, circular economy approaches seek to extend product life cycles, reduce waste, and maintain the value of materials within the economic system for as long as possible (Crump et al., 2019; Camacho-Otero et al., 2020; Russell & Okorie, 2023). The CE has emerged as a promising systemic response, designed to be regenerative, resource-efficient, and low-carbon (Acerbi & Taisch, 2020; Zighan et al., 2025), while PES mechanisms offer a complementary market-based instrument to incentivize environmental stewardship and internalize ecological externalities. Yet, despite this growth, the integration of PES within CE frameworks remains underdeveloped, and the marketing challenges and opportunities inherent in such integration have received insufficient systematic attention. This study is theoretically guided by two complementary frameworks: the theory of planned behavior, which links stakeholder attitudes and subjective norms to participation intentions in market-based environmental programs; and the diffusion of innovations model, which explains how novel market-based instruments spread across different adopter categories within a given social system.

The PES functions as a mechanism that rewards landowners and businesses for preserving or increasing carbon sequestration, biodiversity protection, and water quality (Gómez-Baggethun et al., 2010; Wunder, 2015). PES operates within the circular economy framework, which seeks to enhance sustainability by closing the loop between production and consumption (Geissdoerfer et al., 2017) and to create market incentives for sustainable behaviour (Stahel, 2013). PES adoption remains minimal despite its economic and environmental advantages, owing to marketing and communication challenges. Many stakeholders, including businesses and policymakers, struggle to understand ecosystem service value, which weakens demand for PES programs (Muradian et al., 2010). PES also faces visibility issues due to inconsistent branding and poor marketing that fail to place these services effectively in the market. Incorporating PES into CE

presents significant marketing opportunities, particularly through the strategic use of market-based instruments. In practice, using price incentives to address problems associated with material use is generally more efficient than relying on regulations (Magrini et al., 2020). However, consumer behaviour remains a critical marketing challenge for both CE and PES. Concepts such as remanufacturing, refurbishing, and reuse contradict traditional consumption preferences for new products, and consumers' concerns about the quality, performance, and safety of recycled products have not been fully addressed (Wang et al., 2022). The digital transformation offers significant marketing opportunities for PES within CE by enabling greater transparency, traceability, and value co-creation across supply chains. Digital transformation for circular supply chains is recognised as a key dimension of circular supply chain management, alongside supply chain integration and end-of-life management (Das 2024).

A comprehensive policy mix is essential for creating the market conditions necessary for PES integration within CE. Three essential ingredients for a comprehensive policy mix for CE are identified as: 1) policies for reuse, repair, and remanufacturing; 2) green public procurement and innovation procurement; and 3) policies for improving secondary materials markets (Milios, 2017). PES can be integrated within each of these policy areas as a complementary market-based instrument, providing financial incentives for ecosystem service delivery alongside regulatory and procurement-based drivers of circularity. The strategic market-based approach to PES implementation within CE needs to be multidimensional and to address not only the opportunities but also the challenges. It must combine robust policy frameworks with innovative business models, stakeholder engagement strategies, digital technologies, and credible measurement and reporting systems.

However, the transition towards circular economy models depends not only on technological innovation and business restructuring, but also on consumer acceptance and engagement. Consumers play a central role in determining whether circular products and services can move from niche markets to wider adoption. Studies of circular consumption show that consumer participation is influenced by awareness, perceived value, trust, convenience, price, product quality, and familiarity with circular solutions (Gomes et al., 2024; Serra & Alfinito, 2025). This behavioural dynamic is not new. For nearly a decade, consumers have been exposed to environmental issues, ranging from animal protection to the use of alternative fibres that replace wool in high-fashion clothing, and to the non-testing of skincare products on animals. Yet product selection remains largely driven by involuntary behaviour, which a more conscious approach can gradually reduce without relinquishing the appeal of brands (Meçe & Muça, 2022).

Global PES programmes achieve their effectiveness based on how well stakeholders participate and use market-oriented techniques for adoption. The current PES system lacks sufficient marketing systems that link ecosystem services with market consumer demands, economic incentives, and government policies. The main goal is linked to low awareness and understanding (Engel et al., 2008).

Research Objectives

This research examines the challenges and opportunities of promoting PES within circular economy systems. Specifically, it aims to:

1. Identify the main barriers preventing PES from reaching a broader audience.
2. Examine the role of green marketing, eco-labeling, and digital branding in promoting PES.
3. Explore how communication strategies can improve stakeholder engagement.

The study investigates PES marketing challenges in achieving its goals by addressing the following research questions:

1. What are the key marketing barriers to PES adoption?
2. How can PES be effectively marketed to businesses, policymakers, and consumers?
3. What role do digital marketing, green branding, and eco-certification play in PES's visibility?
4. What role do economic incentives play in participation in PES programs?

By framing PES not only as an environmental tool but also as a marketable service, this research aims to increase participation, investment, and the long-term sustainability of ecosystem service markets. To ensure a clear analytical structure, each research question is addressed directly in the empirical analysis. Specifically, stakeholder awareness and willingness to engage are examined using survey results, while preferences for marketing strategies are analysed using both quantitative data and qualitative insights. This approach ensures a consistent link between research objectives, data analysis, and conclusions.

Methodology

Research Context: Albania as a Case Study

This study is set in Albania, a Western Balkan country engaged in active EU accession negotiations, where the tension between aligning environmental policy with EU standards and building the market infrastructure required for instruments

such as PES is a particularly relevant research context. The country's forestry and watershed ecosystems offer significant potential for PES development, yet no formal national PES scheme currently exists (Pojani, 2021), and environmental governance remains fragmented across multiple ministries. Public awareness of ecosystem service valuation is limited across all societal levels, making Albania a productive case for examining the early-stage marketing barriers that prevent PES from gaining traction and the communication strategies that could accelerate adoption.

Research Design and Data Collection

The present study employs a mixed-methods design, combining quantitative and qualitative approaches to address the marketing challenges and opportunities of PES within the circular economy context. The methodology is based on the systematic collection and analysis of both primary and secondary data to achieve triangulation and a better understanding of stakeholder perceptions and marketing effectiveness. A structured, self-administered questionnaire was developed and distributed to key stakeholder groups, including businesses, policymakers, NGOs, and consumers. The survey was conducted from December 2024 to April 2025, and data were collected through online distribution channels.

A purposive sampling strategy was used, targeting respondents with prior exposure to or relevance to environmental or sustainability issues. The total number of respondents was 112, drawn from small and medium-sized enterprises operating in sectors such as services, agriculture, and trade; public institutions related to environmental governance; NGOs active in environmental and sustainability-related issues; and general consumers. Respondents were relatively evenly distributed across the four stakeholder groups, a distribution considered consistent with minimum thresholds for purposive qualitative sampling. Although the sample size ($n = 112$) is relatively limited, it is considered sufficient for exploratory research aimed at identifying general trends and stakeholder perceptions.

In addition to the survey, 15 semi-structured interviews were conducted with key stakeholders, including PES programme managers, policymakers, and corporate sustainability representatives. The interviews focused on identifying marketing challenges, communication gaps, and strategies to improve PES adoption. The number of interviews exceeds established saturation benchmarks for thematic analysis in environmental governance contexts.

Data Analysis

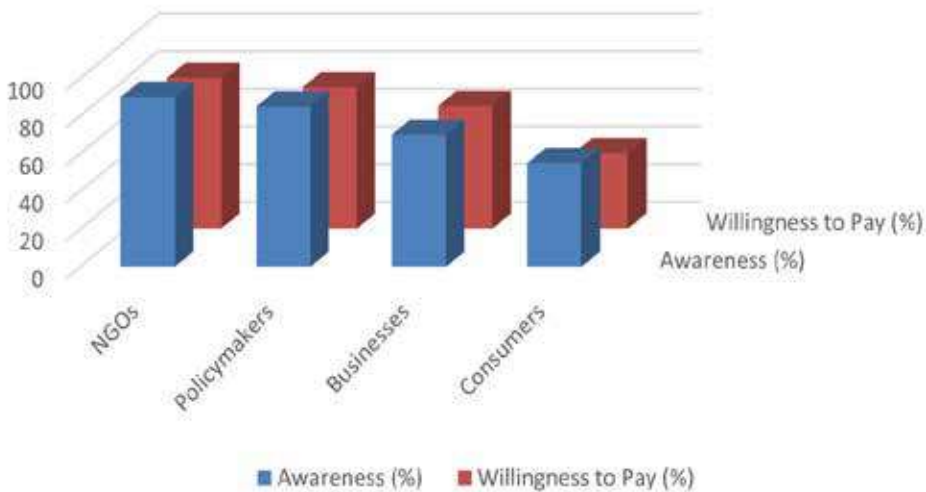
Quantitative data were analyzed using descriptive statistics, including frequency distributions and percentage analyses, and the results were visualized through charts to facilitate interpretation. Qualitative data from the interviews were analyzed using thematic analysis, enabling the identification of recurring patterns and insights across stakeholder groups.

Results

The results are presented through various charts to illustrate the significance of marketing in PES adoption.

Figure 1 was used to assess awareness levels and willingness to pay across various stakeholder groups. The results demonstrate that:

1. Non-governmental organizations and policymakers demonstrate the highest levels of awareness, at approximately 90% and 80%, respectively.
2. Businesses show intermediate awareness (about 70%), whereas consumers show the lowest awareness (around 50%).
3. The propensity to pay follows the same pattern, underscoring the importance of awareness in shaping financial commitment to PES.



Source: Author's survey data

Figure 1: Awareness and Willingness to Pay for PES

The results underscore a significant gap in customer awareness that can be addressed through targeted marketing initiatives. The bar chart illustrates this gap, highlighting the need for focused outreach to improve consumer engagement with PES initiatives. The results are based on respondents' self-reported awareness of PES concepts and their stated willingness to support selected PES-related initiatives presented in the survey. A noteworthy pattern emerges across all stakeholder groups: willingness to pay consistently exceeds awareness levels. This finding is analytically significant, as it challenges the common assumption that low financial commitment is the primary barrier to PES adoption. If stakeholders across all groups express greater readiness to pay than they do understanding of what PES entails, the primary bottleneck is informational rather than economic. This reframes the policy implication: the priority should not be financial incentive design, but communication and awareness-building. From the perspective of the theory of planned behaviour, this suggests that subjective norms and perceived behavioural control – shaped by information access and institutional trust – may be more constraining than attitude alone.

The next figure illustrates stakeholders' perceptions of the relationship between marketing investment and the adoption of PES.

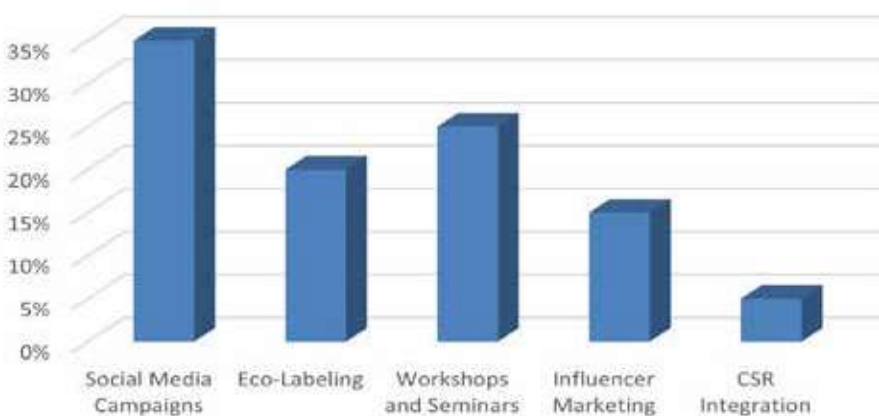


Source: Author's survey

Figure 2: PES Adoption Rate (%) vs Marketing Investment (in €1000s)

The results suggest that respondents generally associate higher levels of marketing effort with greater awareness, engagement, and potential participation in PES initiatives. At lower levels of investment, marketing activities are typically limited to basic communication tools, such as local outreach or single-channel digital campaigns. These approaches may build initial awareness but

are often insufficient to sustain engagement or drive behavioural change among stakeholders. As perceived investment levels rise, respondents report improved communication effectiveness. This includes using multiple channels, such as social media campaigns, eco-labeling initiatives, and stakeholder-oriented events. These strategies appear to enhance message consistency, visibility, and trust, which are important drivers of stakeholder engagement. At higher levels of investment, stakeholders associate marketing efforts with more integrated and strategic approaches. These may include coordinated digital campaigns, targeted messaging, and storytelling or partnerships to strengthen communication impact. According to respondents, such approaches can foster a deeper understanding of PES and stronger alignment with stakeholder values, particularly in relation to sustainability and corporate social responsibility. However, it is important to emphasise that these findings are based on stakeholder perceptions rather than empirical measurement of causal relationships. The chart does not represent statistically tested correlations between investment levels and adoption rates. Instead, it reflects how stakeholders interpret the potential influence of marketing strategies on PES engagement. Overall, the results highlight the perceived importance of well-designed communication strategies in supporting the adoption of PES, while also indicating the need for further research using quantitative methods to validate these relationships.



Source: Author's survey data

Figure 3: How different marketing channels are used or preferred in promoting PES

Figure 3 shows how stakeholders perceive the most effective marketing channels for promoting PES. The results suggest that PES communication should not rely on a single method. Instead, it should combine digital outreach, direct

engagement, consumer information, and institutional communication to reach different audiences effectively.

The most preferred channel is social media campaigns, selected by 35% of respondents. This suggests that stakeholders view social media as one of the most effective ways to raise awareness of PES. Platforms such as Facebook, Instagram, and LinkedIn enable rapid, cost-effective reach to a wide audience. They also allow messages to be tailored to different groups, such as young people, consumers, businesses, local communities, or policy actors.

The second most important channel is workshops and seminars, accounting for 25% of responses. This indicates that stakeholders still value direct communication and personal interaction. PES schemes often involve complex concepts, such as ecosystem protection, financial incentives, environmental responsibility, and cooperation among different actors.

Eco-labels account for 20% of stakeholder preferences. This suggests that labels and certifications can be important tools for building consumer trust. Eco-labels help consumers identify products or services that support environmental protection or sustainable resource management. In relation to PES, eco-labels can make the environmental contribution more visible at the point of purchase.

Influencer marketing accounts for 15% of responses. Although it is not the most preferred channel, it is becoming increasingly relevant, particularly among younger, digitally active audiences. Environmental influencers, sustainability advocates, or local public figures can help explain PES in a more accessible and engaging way.

The least preferred channel is integration with Corporate Social Responsibility initiatives, selected by 5% of respondents.

Taken together, the channel preference data can be interpreted through the two theoretical frameworks guiding this study. From a diffusion of innovations perspective, the dominance of social media campaigns and workshops reflects the need to target different adopter categories simultaneously: digital channels reach early adopters and the early majority, typically younger, more connected audiences, while workshops and seminars serve the late majority and institutional actors who require direct engagement and personal credibility before adopting a new concept. From the perspective of the theory of planned behaviour, the combined preference for eco-labels (20%) and CSR integration (5%), both of which operate at the point of purchase or within organisational frameworks, indicates that stakeholders also value mechanisms that reinforce subjective norms and reduce perceived barriers to action. The relatively low preference for CSR integration may reflect scepticism about corporate environmental commitments in the Albanian context, rather than disinterest in institutional endorsement per se.

Strengths and Limitations of the study

This study has several strengths, including its interdisciplinary approach and the use of mixed methods, which provide both quantitative and qualitative insights. The inclusion of multiple stakeholder groups enhances the relevance and practical applicability of the findings. However, the study also has limitations. The use of purposive sampling may limit the generalisability of the results, and the relatively small sample size may affect the robustness of the findings. Additionally, reliance on self-reported data introduces the possibility of response bias. These limitations are acknowledged in the interpretation of the findings and are taken into account when drawing conclusions.

Discussion and conclusion

The findings of this study highlight the critical role of marketing in shaping the adoption of PES within circular economy systems. The results indicate that awareness remains uneven across stakeholder groups, with consumers demonstrating the lowest levels of understanding. This finding aligns with previous research identifying awareness as a key barrier to environmental initiatives (Salzman et al., 2018). Notably, the consumer awareness gap identified here (approx. 50%) is consistent with findings from other transition economies in the Western Balkans, suggesting a regional pattern rather than an Albania-specific anomaly. This distinction carries implications for policy: region-wide communication campaigns may be more cost-effective than isolated national initiatives. Interpreted through the theory of planned behaviour, the consistent pattern of willingness to pay exceeding awareness across all groups suggests that attitudes towards PES are relatively favourable, but that subjective norms (the perceived social expectation to engage with PES) and informational barriers constrain actual participation intentions. This implies that communication interventions targeting norm formation, such as visible institutional endorsement and peer influence, may be more effective than price-based incentives alone. From the perspective of the diffusion of innovations model, the observed stakeholder hierarchy – from NGOs and policymakers as early adopters to consumers as the late majority – suggests that PES diffusion in Albania is currently stalled at the innovator-to-early-adopter transition. Crossing the adoption threshold into the early majority requires reducing the perceived complexity of PES and increasing its observability, both of which can be addressed through the multi-channel strategies identified in this study.

The strong preference for digital marketing channels suggests that communication strategies should prioritise accessibility, engagement, and targeted messaging. The channel preference data further suggest that trust and

visibility are the two primary levers for PES adoption – social media addresses the latter, while eco-labeling and CSR integration address the former. Targeting both simultaneously through an integrated communication strategy therefore appears to be the most promising approach. The perceived relationship between marketing investment and PES adoption suggests that even modest communication efforts can have a meaningful impact when strategically implemented. However, these findings should be interpreted as reflecting perceptions rather than causal relationships.

In conclusion, this study makes three contributions. Theoretically, it extends the application of the theory of planned behaviour and the diffusion of innovations frameworks to PES marketing in a transition economy. Empirically, it provides baseline data on stakeholder awareness and channel preferences in Albania, where such evidence is scarce. Practically, it recommends that PES programme managers prioritise multi-channel digital campaigns and eco-certification as cost-effective tools for early-stage adoption. Future research should employ experimental or longitudinal designs to establish causal relationships between marketing investment and PES uptake, and should broaden the geographic scope to enable cross-country comparisons within the Western Balkans.

References

- Acerbi, F., & Taisch, M. (2020). A literature review on circular economy adoption in manufacturing. *Journal of Cleaner Production*, 273, 123086. <https://doi.org/10.1016/j.jclepro.2020.123086>
- Başal, M., & Demircioglu, A. (2024). Digital Product Passport in Marketing and the Future of Sustainable Development. *American Journal of Industrial and Business Management*, 14(05), pp. 759-782. <https://doi.org/10.4236/ajibm.2024.145039>
- Camacho-Otero, J., Tunn, V.S.C., Chamberlin, L., Boks, C. (2020). Consumers in the circular economy. In: Brandao, M., Lazarevic, D., Finnveden, G. (Eds.). *Handbook of the Circular Economy*. Edward Elgar Publishing. <https://doi.org/10.4337/>
- Crump, P., Johnson, L., & Smith, R. (2019). Linear economy and resource consumption patterns. *Resources, Conservation and Recycling*, 144, pp. 20-30. <https://doi.org/10.1016/j.resconrec.2019.01.012>
- Das, K. (2024). Digital transformation in circular supply chains: A systematic review. *Sustainability*, 16(2), 845. <https://doi.org/10.3390/su16020845>
- Engel, S., Pagiola, S., & Wunder, S. (2008). Designing payments for environmental services in theory and practice: An overview of the issues. *Ecological Economics*, 65(4), pp. 663-674. <https://doi.org/10.1016/j.ecolecon.2008.03.011>

- Geissdoerfer, M., Savaget, P., Bocken, N. M. P., & Hultink, E. J. (2017). The circular economy: A new sustainability paradigm? *Journal of Cleaner Production*, 143, pp. 757-768. <https://doi.org/10.1016/j.jclepro.2016.12.048>
- Gómez-Baggethun, E., de Groot, R., Lomas, P. L., & Montes, C. (2010). The history of ecosystem services in economic theory and practice: From early notions to markets and payment schemes. *Ecological Economics*, 69(6), pp. 1209-1218. <https://doi.org/10.1016/j.ecolecon.2009.11.007>
- Gomes, G. M., Moreira, N., & Ometto, A. R. (2024). Consumer engagement in circular consumption systems: A roadmap structure for apparel retail companies. *Circular Economy and Sustainability*, 4(2), pp. 1405-1425. <https://doi.org/10.1007/s43615-023-00332-8>.
- Magrini, C., D'Addato, F., & Bonoli, A. (2020). Municipal solid waste prevention: A review of market-based instruments in circular economy. *Journal of Industrial Ecology*, 24(4), pp. 729-743. <https://doi.org/10.1111/jiec.12931>
- Meçe, M., & Muça, E. (2022). Consumer behavior toward sustainable products in emerging economies. *Journal of Consumer Behaviour*, 21(5), pp. 1023-1035. <https://doi.org/10.1002/cb.2021>
- Milios, L. (2017). Advancing to a circular economy: Three essential policy areas. *Sustainability Science*, 13(3), pp. 861-878. <https://doi.org/10.1007/s11625-017-0502-9>
- Muradian, R., Corbera, E., Pascual, U., Kosoy, N., & May, P. H. (2010). Reconciling theory and practice: An alternative conceptual framework for understanding payments for environmental services. *Ecological Economics*, 69(6), pp. 1202-1208. <https://doi.org/10.1016/j.ecolecon.2009.11.006>
- Organisation for Economic Co-operation and Development (OECD). (2021). *Making markets work for nature: Enhancing PES through policy innovation*. OECD Publishing. <https://doi.org/10.1787/8a9d56cf-en>
- Pojani, E. (2021). Innovative Financing Mechanism for Environmental Protection: Applying PES in a Watershed Area in Albania. *Interdisciplinary Journal of Research and Development*, 8(2), 13. <https://doi.org/10.56345/ijrdv8n202>
- Russell, J. D., & Okorie, O. (2023). Accelerating the adoption of a circular economy: An extended diffusion model for understanding consumer perceptions of circular economy products. In H. Lehtimäki, L. Aarikka-Stenroos, P. Jokinen, & A. Jokinen (Eds.). *The Routledge handbook of catalysts for a sustainable circular economy* (pp. 422-445). Routledge. doi: 10.4324/9781003267492-24.
- Salzman, J., Bennett, G., Carroll, N., Goldstein, A., & Jenkins, M. (2018). The global status and trends of payments for ecosystem services. *Nature Sustainability*, 1(3), pp. 136-144. <https://doi.org/10.1038/s41893-018-0033-0>

- Serra, L. S., & Alfinito, S. (2025). Consumer behavior in the circular economy: A systematic review of high-impact studies. *Circular Economy and Sustainability*, 5(6), pp. 5315-5349. doi: 10.1007/s43615-025-00679-0.
- Stahel, W. R. (2013). Policy for material efficiency – Sustainable taxation as a departure from the throwaway society. *Philosophical Transactions of the Royal Society A*, 371(1986), 20110567. <https://doi.org/10.1098/rsta.2011.0567>
- United Nations Environment Programme (UNEP). (2022). *Nature-based solutions for sustainable development*. <https://www.unep.org>
- Wang, Y., Zhang, H., & Liu, J. (2022). Consumer perception of remanufactured products: Evidence from circular economy practices. *Journal of Cleaner Production*, 350, 131418. <https://doi.org/10.1016/j.jclepro.2022.131418>
- Wunder, S. (2015). Revisiting the concept of payments for environmental services. *Ecological Economics*, 117, pp. 234-243. <https://doi.org/10.1016/j.ecolecon.2014.08.016>
- Zighan, S., Abualqumboz, M., & Dwaikat, N. (2025). Circular economy strategies in emerging markets: A sustainability perspective. *Sustainability*, 17(1), 112. <https://doi.org/10.3390/su17010112>