

*Millenium*, 2(Edição Especial Nº18)

---

en

---

**SE A ECONOMIA CIRCULAR NÃO ESTÁ A CIRCULAR, VAMOS ULTRAPASSAR A NARRATIVA**  
**IF THE CIRCULAR ECONOMY ISN'T CIRCULATING, LET'S MOVE BEYOND THE NARRATIVE**  
**SI LA ECONOMÍA CIRCULAR NO CIRCULA, SUPEREMOS LA NARRATIVA**

Daniela Spina<sup>1</sup>  <https://orcid.org/0000-0002-7587-6360>

<sup>1</sup> University of Catania, Catania, Italy

Daniela Spina – daniela.spina@unict.it



---

**Corresponding Author:**  
Daniela Spina  
Piazza Università, 2,  
95124 - Catania - Itália  
daniela.spina@unict.it

RECEIVED: 04<sup>th</sup> April, 2025  
ACCEPTED: 21<sup>st</sup> April, 2025  
PUBLISHED: 21<sup>st</sup> May, 2025

## EDITORIAL

### IF THE CIRCULAR ECONOMY ISN'T CIRCULATING, LET'S MOVE BEYOND THE NARRATIVE

For years, the circular economy has been portrayed as the perfect solution to sustainability issues: a system capable of reducing waste, cutting emissions, and ensuring economic growth without depleting the planet (EMF, 2013; 2015). A kind of magic potion that could transform waste into resources and generate an endless virtuous cycle. But the reality is quite different: today, the circular economy is not circulating enough.

The numbers speak for themselves. The Circularity Gap Report (2024) shows that the global circularity rate has dropped from 9.1% in 2018 to 7.2% in 2023. In other words, the world is becoming less and less able to reuse materials to create new resources. Not only that: over the past six years, the global economy has consumed 582 billion tons of materials, almost as much as was used throughout the entire 20th century. The current production system is pushing ecosystems beyond their limits while the Earth's biocapacity is increasingly shrinking (Siegel, 2021).

According to the Circular Economy Report in Italy (2024), the country is a European leader in investments and employment in the sector. With €12.4 billion invested in 2021 and over 613,000 workers, Italy is among the most advanced nations. However, when it comes to concrete results, challenges emerge: Italy's recycling rate remains at 33.8%, well below the EU average of 46.2% and far from the 65% target.

European and national policies are trying to reverse the trend (EU, 2018; 2021). The EU Green Deal and new regulations on packaging, critical raw materials, and waste management are important steps, but they are not enough. The issue runs deeper and requires structural changes. The Circularity Gap Report 2024 highlights that bridging this gap requires bold policies, financial reforms that penalize unsustainable products, and investments in skills for the ecological transition.

However, as demonstrated by Kirchherr (2017), who analyzed 114 different definitions of the circular economy, the concept itself remains ambiguous and qualitative, making its actual measurement difficult. Current indicators, including those developed by the European Commission (Moraga et al., 2019), are still unable to fully assess the circularity of a system, leading to differing conclusions depending on the metrics adopted (Spina et al., 2025). This methodological gap further complicates the adoption of effective strategies.

Adopting the principles of the circular economy should lead to a reduction in the use of natural resources, increased use of recyclable materials and renewable energy, lower emissions and waste, and the preservation of the economic value of products through extended lifespan (Cembalo et al., 2020). While the narrative is compelling, the current implementation of circular principles is still hindered by concrete difficulties. Many companies claim to adopt circular economy principles, but in practice, only 65% have implemented genuinely circular processes. The agri-food sector, for instance, still struggles to integrate sustainable management models. Additionally, the high cost of technologies and the lack of adequate incentives slow down the transformation of the production system.

There is also a deeper issue: the widespread belief that the circular economy can guarantee infinite economic growth while reducing waste. De Man & Friege (2016) point out that this is one of the great illusions of circularity: while material reuse is a step forward, excessive resource consumption continues to rise. The Sustainable Development Goals Report (2015) confirms that, despite improvements in production efficiency, global material consumption is steadily increasing, driven by economic models that encourage hyper-consumption, planned obsolescence, and ever-shorter product life cycles.

Companies struggle to adopt truly sustainable models, even when they have the necessary technical knowledge. The transition to circular economy management models is not just about introducing new technologies; it requires a structural transformation of the entire production system and a cultural shift (De Jesus & Mendonça, 2018). According to Geels' (2002) socio-technical transition theory, systemic change is possible only when three key elements align: the "landscape" (macro-economic, political, and environmental changes), the "regime" (established practices and existing institutional structures), and the "niches" (emerging innovations). Without alignment among these factors, change risks remain confined to isolated experiments, incapable of transforming the entire system.

The current international scenario could be a turning point. Major economic transitions never occur in times of stability. Often, they result from global crises, geopolitical shifts, or structural market changes. In recent years, the pandemic disrupted supply chains, the war in Ukraine reshaped the energy and raw materials market, and climate change is accelerating the need for new production models. These shocks have highlighted the urgency of rethinking economic and production systems, pushing many countries to seek greater self-sufficiency, reduce dependence on foreign resources, and invest in more resilient solutions.

In the agri-food sector, these changes are even more evident. From the Neolithic Agricultural Revolution to the Green Revolution of the 20th century, major changes in food production have been driven by economic, social, or environmental necessities. Today, climate crisis, food insecurity, and increasing volatility in agricultural markets are pushing the sector toward a new production model. Droughts, soil degradation, and rising energy costs are challenging intensive agriculture, paving the way for more sustainable practices such as regenerative agriculture, waste recovery, and the valorization of by-products (FAO, 2020). At the same time, recent geopolitical crises have highlighted the risks of excessive reliance on imports, leading many countries to strengthen local supply chains and invest in more resilient production models (OECD, 2024).

In the food industry, startups and established companies are investing in the recovery of agricultural waste to create new products, from bioplastics to cosmetic ingredients. Additionally, the use of agricultural residues for biogas production is emerging as a significant opportunity: organic waste, such as fruit and vegetable scraps, is transformed into renewable energy, reducing emissions and contributing to energy sustainability (Modica et al., 2024). These examples demonstrate that with the right regulatory and financial support, the circular economy can become a concrete reality.

Every goal, especially one so ambitious, requires effort and time, but we can no longer afford to procrastinate. A deep revision of political and economic priorities is needed, along with adaptations in corporate policies and production models and a cultural transformation involving all social actors, including consumers (Borrello et al., 2017; Raimondo et al., 2024). Without changes in purchasing and consumption habits and without greater awareness of the impact of individual choices, the circular economy will remain an unfinished idea. The illusion of a waste-free world is not enough: concrete efforts are needed to reduce energy demand, slow down the depletion of natural resources, and decisively focus on eco-design. As Nelson Mandela once said, "It always seems impossible until it is done."

## REFERENCES

Borrello, M., Caracciolo, F., Lombardi, A., Pascucci, S., & Cembalo, L. (2017). Consumers' perspective on circular economy strategy for reducing food waste. *Sustainability*, 9(1), 141. <https://doi.org/10.3390/su9010141>

De Man, R., & Friege, H. (2016). Circular economy: European policy on shaky ground. *Waste Management & Research*, 34(2), 93-95. <https://doi.org/10.1177/0734242x15626015>

EMF (Ellen MacArthur Foundation), & SUN. (2015). *Growth within: A circular economy vision for a competitive Europe*. <https://unfccc.int/sites/default/files/resource/Circular%20economy%203.pdf>

EMF (Ellen MacArthur Foundation). (2013). Towards the circular economy. *Journal of Industrial Ecology*, 2(1), 23-44. <https://www.aquafil.com/assets/uploads/ellen-macarthur-foundation.pdf>

European Commission. (2018). A clean planet for all. A European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy. *COM 773*.

European Commission. (2021). *The European Green Deal: Striving to Be the First Climate-Neutral Continent*. [https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal\\_en](https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en)

Fund, S. (2015). *Sustainable development goals*. <https://www.un.org/sustainabledevelopment/inequality>.

Geels, F. W. (2002). Technological transitions as evolutionary reconfiguration processes: a multi-level perspective and a case-study. *Research Policy*, 31(8-9), 1257-1274. [https://doi.org/10.1016/S0048-7333\(02\)00062-8](https://doi.org/10.1016/S0048-7333(02)00062-8)

Cembalo, L., Borrello, M., De Luca, A. I., Giannoccaro, G., & D'Amico, M. (2020). Transitioning agri-food systems into circular economy trajectories. *Aestim*, 199-218. <https://doi.org/10.13128/aestim-8860>

De Jesus, A., & Mendonça, S. (2018). Lost in transition? Drivers and barriers in the eco-innovation road to the circular economy. *Ecological economics*, 145, 75-89. <https://doi.org/10.1016/j.ecolecon.2017.08.001>

FAO (2020) Legislative Approaches to Sustainable Agriculture and Natural Resources Governance. *FAO Legislative Study*, 114 at 93. <https://www.unenvironment.org/resources/publication/legislative-approaches-sustainableagriculture-and-natural-resources>

Fraser, M., Conde, Á., & Haigh, L. (2024). *Circularity Gap Report 2024*. Circle Economy.

Kirchherr, J., Piscicelli, L., Bour, R., Kostense-Smit, E., Muller, J., Huibrechtse-Truijens, A., & Hekkert, M. (2018). Barriers to the circular economy: Evidence from the European Union (EU). *Ecological economics*, 150, 264-272. <https://doi.org/10.1016/j.ecolecon.2018.04.028>

Modica, G., Pulvirenti, A., Spina, D., Bracco, S., D'Amico, M., & Di Vita, G. (2024). Clustering olive oil mills through a spatial and economic GIS-based approach. *Cleaner Environmental Systems*, 14, 100207. <https://doi.org/10.1016/j.cesys.2024.100207>

Moraga, G., Huysveld, S., Mathieu, F., Blengini, G. A., Alaerts, L., Van Acker, K., de Meester, S., & Dewulf, J. (2019). Circular economy indicators: What do they measure? *Resources, Conservation, and Recycling*, 146, 452-461. <https://doi.org/10.1016/j.resconrec.2019.03.045>

Network, C. E. (2024). Rapporto sull'economia circolare in Italia 2024. <https://circulareconomynetwork.it/rapporto-sulleconomia-circolare-in-italia-2024/>

OECD. (2024). *Development Co-operation report 2024: tackling poverty and Inequalities through the green transition*. OECD. <https://doi.org/10.1787/357b63f7-en>

Raimondo, M., Spina, D., Hamam, M., D'Amico, M., & Caracciolo, F. (2024). Intrinsic motivation strongly affects the readiness toward circular food consumption: evidence from the motivation–opportunity–ability model. *British Food Journal*, 126(2), 715-737. <http://dx.doi.org/10.1108/BFJ-09-2022-0800>

Siegel, F. R. (2021). *The Earth's human carrying capacity: limitations assessed, solutions proposed*. Springer Nature.

Spina, D., Carbone, R., Pulvirenti, A., Rizzo, M., D'Amico, M., & Di Vita, G. (2024). What Gets Measured Gets Managed-Circular Economy Indicators for the Valorization of By-Products in the Olive Oil Supply Chain: A Systematic Review. *Agronomy*, 14(12), 2879. <https://doi.org/10.3390/agronomy14122879>