



FEMISE POLICY BRIEF 7  
July 2025

# From Waste to Wealth: Digital Platforms and Networks Powering Lebanon's Sustainable Value Chains <sup>[1]</sup>

Authors:

Mohammad Makki, PhD , Social Economy  
Unit Co-director for the MENA region at  
COSV and Full-time faculty member at  
USEK Business School, Beirut, Lebanon

Email: [mohammad.makki@cosv.org](mailto:mohammad.makki@cosv.org)

Annalisa Contini, Social Economy  
Unit Director at COSV, Milan, Italy

Email: [annalisa.contini@cosv.org](mailto:annalisa.contini@cosv.org)

# 1. Executive Summary

This policy brief explores the transformative role of networks and digital platforms in strengthening sustainable value chains in agriculture and waste management, with a focus on two collaborative models in Lebanon: Green Circle and the Agricultural Revival Program (ARP). Developed under the SEE Change<sup>[1]</sup> project, led by COSV,<sup>[2]</sup> these models showcase how local enterprises can harness partnerships and online platforms to foster inclusive, cross-border economic growth while addressing pressing environmental and economic challenges.

The South Mediterranean region faces persistent challenges in establishing sustainable value chains, including fragmented regulations, weak infrastructure, economic disparities, and political instability. These challenges hinder cross-border collaboration, restrict market access for smaller enterprises, and slow the adoption of eco-friendly and circular economic practices. Furthermore, limited knowledge-sharing and inadequate financing prevent many promising initiatives from scaling or integrating into regional networks. By examining Green Circle and ARP, this policy brief highlights innovative solutions to these challenges. Green Circle, a waste management initiative, engages local communities in sorting, recycling, and organic fertilizer production, transforming the village of Bchatfin into a model zero-waste village. Meanwhile, ARP strengthens agricultural value chains by providing small and medium-scale farmers with high-quality seeds, training, and guaranteed market access, reducing dependence on imports and enhancing national food security. Both models demonstrate the strategic role of digital platforms and networking in facilitating knowledge exchange, expanding market opportunities, and fostering cross-border collaboration, to ensure long-term sustainability and scalability.

[1] Social Entrepreneurship Ecosystem Change" (SEE Change) is a project funded by the EU, and is implemented by Oxfam, COSV and Beyond Group. The project aims at increasing the impact of social entrepreneurial activities in Lebanon, while creating employment opportunities, enhancing social stability, and supporting the local economy.

Building on these two models, the policy brief concludes with policy recommendations aimed at raising awareness, enhancing knowledge-sharing infrastructure, and fostering local and regional collaborations. By supporting cross-border partnerships, these insights strengthen sustainable value chains, equipping economies to tackle environmental and economic challenges. Furthermore, the policy brief underscores the crucial role of International Non-Governmental Organizations as facilitators of cross-border initiatives, bridging knowledge gaps and enhancing collaboration to scale sustainable practices.

---

[2] [COSV](#) (Coordinamento delle Organizzazioni per il Servizio Volontario) is an Italian NGO with more than 40 years of experience in development cooperation, operating across the MENA region, the Balkans, and Africa. With a strong focus on community engagement, COSV employs a human-centered approach to drive economic development, enhance human security, and promote social justice. For COSV, the Social Economy is a catalyst for innovation, inclusivity, and sustainability, shaping a future that leaves no one behind.

## 2. Introduction

Value chains encompass all activities required to transform a product or service from conception to final delivery. Kaplinsky and Morris (2001) emphasize the interconnected nature of these phases, underscoring how coordinated efforts drive efficiency, competitiveness, and consumer value. Strong and sustainable value chains are critical to economic and social growth, as they enhance operational efficiency, boost business competitiveness, and stimulate local economies through reinvestment (Gereffi & Fernandez-Stark, 2016). Moreover, by prioritizing environmental and social standards, sustainable value chains improve working conditions, promote social equity, and elevate the well-being of workers and communities (Boström, Micheletti, & Oosterveer, 2015). They also link local enterprises to regional and global markets, fostering knowledge transfer, skill development, and long-term economic resilience (Barrientos, Gereffi, & Rossi, 2011).

Strengthening local and regional value chains is a strategic priority for economic development. Locally developed value chains enable communities to retain more economic value from their resources, generating employment, fostering inclusive growth, and reducing reliance on global markets (Pietrobelli & Rabellotti, 2011). At a regional level, integrated value chains enhance collaboration among neighboring countries by leveraging shared resources and comparative advantages, thus strengthening collective competitiveness. This interconnected system facilitates knowledge exchange, technology transfer, and cross-border innovation (Gereffi & Fernandez-Stark, 2016).

However, the South-Med region<sup>[3]</sup> faces significant barriers to building sustainable value chains, necessitating coordinated policy action. Regulatory fragmentation and inconsistent standards hinder cross-border collaboration and the adoption of eco-friendly practices (Matten, Crane, & Windsor, 2018). Weak infrastructure, particularly in transportation and logistics, further impedes the development of efficient, sustainable trade networks (Dimitriou & Karlaftis, 2019).

---

[3] South -Med region are the South Mediterranean partners countries

Additionally, economic disparities in the South Med region limit the participation of small enterprises in sustainable value chains, exacerbated by political instability and governance challenges that disrupt regional cooperation (Ahmed & Elsheikh, 2020). Restricted access to financial resources, advanced technologies, and information on regional projects further complicates collaboration (Rodriguez, Gracia, & Benitez, 2021). While environmental threats including water scarcity, pollution, and climate change add another layer of complexity, straining resources and hindering sustainable practices (Cramer et al., 2018).

This policy brief explores these challenges with a focus on the agriculture and waste management sectors, which often encounter difficulties in regional integration despite their strong local roots. It examines the role of digital platforms in fostering knowledge exchange, cross-border partnerships, and inclusive economic growth. The policy brief highlights two collaborative models developed under the Social Justice Incubation Program (SJIP)<sup>[4]</sup> within the EU-funded SEE Change project, led by COSV.

The first model, “Green Circle,” promotes environmentally responsible consumer behavior by raising awareness, encouraging waste sorting and recycling, producing fertilizers, and providing incentives. This initiative successfully established a local waste management value chain, transforming Bchatfin into a zero-waste village. The second model, the “Agricultural Revival Program” (ARP), focuses on improving domestic agricultural productivity for small and medium-scale farmers. By enhancing food security, increasing family incomes, and providing training, ARP has created an agricultural hub, the “model farm”, which serves as a knowledge-sharing platform in South Lebanon and has expanded its reach nationally. Both models utilized COSV-supported digital platforms to explore collaborations and regional partnerships. These models serve as strong, practical examples for fostering collaboration, strengthening value chains, and replicating successful approaches across borders.

[4] SJIP is an innovative incubation and acceleration program designed for Social Enterprise (SE) organizations, built on the principles of co-design and a collaborative economy. This program is tailored to support SE ecosystems in emerging economies. Within the framework of SEE Change, the Social Justice Incubation Program has provided support to 21 initiatives, split into four sub-programs: (i) School enterprises, focused on co-production between public vocational technical institutes (VTI) and Small and Medium Enterprises (SMEs). (ii) Community enterprises, targeting multi-actor co-production involving citizens, social enterprises, SMEs, and municipalities to revitalize rural and urban areas. (iii) NGOs in transition, designed to assist not-for-profit organizations in their transition to a more entrepreneurial model. (iv) Public-private partnership programs, aimed at fostering partnerships between social enterprises and public authorities in the management of community-based services and the utilization of underutilized public assets.



### 3. Mediterranean Context

Sustainable value chains are crucial for driving economic growth, environmental resilience, and social equity. However, the South-Med region faces multifaceted challenges in achieving truly integrated and sustainable supply chains. Fragmented regulatory frameworks, economic disparities, and increasing environmental demands create hurdles that impede consistent and scalable sustainability practices across borders. While sustainability-driven innovations have led to improved efficiency and resource management (Touboullic & McCarthy, 2020; Geissdoerfer et al., 2020), regulatory misalignment remains a significant obstacle. Countries like Tunisia, Morocco, and Egypt benefit from preferential EU trade policies, yet they remain vulnerable to fluctuations in EU demand and policy shifts, which can directly impact their industrial and manufacturing sectors.

Additionally, the absence of standardized sustainability certifications across the region further complicates cross-border trade and market integration. For instance, Tunisia and Morocco's agricultural exports encounter challenges due to inconsistent certification requirements for organic and sustainable products (Salem, 2020), while Egypt's textile sector struggles with similar regulatory fragmentation (Jabbour et al., 2020). These discrepancies restrict businesses from fully capitalizing on international markets and hinder the scalability of sustainability efforts.

Environmental concerns add another layer of complexity. The transition towards lower carbon emissions, circular economic principles, and eco-friendly production systems requires collaborative governance and innovation. However, many South-Med countries face significant financial and technical constraints in implementing these changes (Interreg Euro-MED, 2023). Water scarcity and land degradation further exacerbate the situation, limiting the feasibility of sustainable agricultural practices and resource management (Chalak et al., 2018; Saab, 2020).

Sector-specific challenges underscore the urgency of coordinated action. In agriculture, regulatory inconsistencies, inefficient infrastructure, and limited access to financing restrict market entry and competitiveness, particularly for smallholder farmers in South-Med countries (FAO, 2022).

Similarly, the waste management sector suffers from fragmented policies, underdeveloped recycling infrastructure, and insufficient public awareness, leading to inefficient waste disposal and increased landfill reliance (OECD, 2022; Ellen MacArthur Foundation, 2022). Economic disparities in the South-Med countries further exacerbate these issues, as smaller businesses often lack the capital to invest in sustainable technologies and practices (UNEP, 2021).

Despite these obstacles, various regional initiatives provide a foundation for progress. Programs like Interreg Euro-MED and SWITCH-Med aim to bridge policy gaps, foster knowledge-sharing, and encourage multi-stakeholder collaboration (Bassi et al., 2018). These initiatives help businesses integrate sustainable practices, strengthen regional value chains, and facilitate smoother market access. In Lebanon, for example, the rise of decentralized waste management systems and the growing interest in organic farming signal promising developments, though infrastructure and financial constraints remain significant challenges (Massoud et al., 2019; Jaoude & Medlej, 2021). To build sustainable value chains in the Euro-Mediterranean region, a comprehensive and cooperative approach is necessary. Policy harmonization, enhanced infrastructure, targeted financial support, and a strong commitment to environmental resilience must all be prioritized.

## 4. Approach and Results

This policy brief examines two collaborative local models incubated in the Social Justice Incubation Program (SJIP) using a case study methodology. This qualitative approach investigates how partners created shared values, benefitted from networks and knowledge-sharing platforms, and developed regional partnerships. Data was gathered from COSV documents, records, and interviews with partners, providing insights into challenges faced and policies needed to strengthen local and regional collaborations.

The SJIP, developed by COSV, blends "Solidarity" from cooperative organizations with the "Collaborative Economy" fueled by digital platforms. The program aims to foster social enterprises by shifting labor dynamics in Lebanon towards flexibility and exploring scalable partnerships. Based on research and feasibility studies, the program supported 21 social enterprises over 18 months, promoting collaboration among various entities rather than individual applicants. These models were categorized into four types:

1. **Entrepreneurial Non-Profits (ENPs):** Non-profit organizations engaging in business activities to support their social mission, including integration of social enterprises that offer training and employment.
2. **Social Cooperatives (SCs):** Organizations with democratic governance focused on the common good, including both single and multi-stakeholder cooperatives.
3. **Social Businesses (SBs):** Enterprises that balance social impact with commercial success, reinvesting profits to further social missions.
4. **Public-Sector Social Enterprises (PSEs):** Social enterprises created by public bodies to improve service delivery, often through public-sector spin-offs or community-based initiatives.

The remaining part of this section introduces the collaborative local models by sharing their stories, activities, impacts, and future directions. Each model is then visually summarized to facilitate a clearer understanding of how collaborative efforts created sustainable value chains.



## a. The Green Circle

The Green Circle model is a collaborative waste management initiative that began in Chouf, Lebanon, involving three organizations: "O-Waste Community," "Dekenet El Nes," and "Garbalizer." Supported by the Social Justice Incubation Program (SJIP), the project aimed to promote sustainability, community empowerment, and waste management. The Green Circle received a \$18,000 grant, which helped establish an environmental hub on unused municipal land, focusing on waste treatment and the production of eco-friendly products like liquid fertilizers.

The model operates through a community-driven waste collection system, with households sorting their waste for door-to-door collection. This waste is processed into liquid fertilizers, sold to local farmers and villagers, creating a circular economy. Participants in the program also receive discounts on eco-friendly products at Dekenet El Nes, encouraging sustainable consumer choices.

The Green Circle uses a hybrid funding model, drawing from international grants, revenue from product sales, public assets, and personal contributions to ensure long-term sustainability. The project has created jobs and increased waste sorting points, generating measurable progress and a positive impact on the local community. Challenges include scaling difficulties and limited tracking of individual participation due to a lack of a digital management system. However, the project's expansion is ongoing, with goals to increase sorting points by 5% monthly and to transform Bchatfin into a zero-waste village. Future plans include acquiring additional funding for a data management system to track progress and improve operations. Figure 1 below provides a visual presentation of the model that captures its main features and presents the interrelations between the stakeholders to create a sustainable value chain.



**Figure 1: The Green Circle**

Green Circle encompasses several models of SE; the ENP (Enterprises Not-for-Profit) model, exemplified by 0-Waste Community, a non-profit NGO advocating for a zero-waste lifestyle, the SC (Social Cooperative) model, represented by Dekenet El Nes, a zero-waste shopping initiative registered as a company (SAL), and the SB (Social Business) model, illustrated by Garbaliser, a for-profit company in the circular economy sector that provides innovative solutions for managing organic waste.

## **b. The Agricultural Revival Program**

The Agricultural Revival Program (ARP), launched by the National Development Committee (NDC) in 2020, aims to strengthen Lebanon's agricultural sector and reduce reliance on imported products by increasing domestic production, especially among small and medium farmers. The program provides free seeds, technical support, and guarantees crop purchases to ensure sustainability and enhance food security. It also partners with the Lebanese Agriculture Research Institute (LARI) for seed quality control and the Nebras Vocational Institute for training.

The ARP model has expanded significantly, reaching new farmers, increasing crop production, and establishing an agriculture hub in southern Lebanon with a \$40,039 grant from SJIP. It empowers rural communities by creating a self-sustaining agricultural ecosystem, enhancing food security, and developing a national strategic food reserve. By pooling resources and collaborating with local farmers, the program improves efficiency, reduces waste, and supports local economies through processed food products like freekeh and bulgur. The ARP follows a Hybrid Resource Model, relying on market activity but also emphasizing profit redistribution and collaboration, which supports long-term sustainability. In its first year, the program achieved significant growth, with 59 farmers involved and 118 tons of crops harvested. The harvested crops were distributed to local markets, humanitarian agencies, and farmers for replanting. The program plans to expand its processing operations, advocate for government subsidies for domestically produced crops, and focus on crop diversification and market expansion.

The sustainability plan includes optimizing efficiency, promoting crop diversification, and collaborating with the government to prioritize locally grown crops. The ARP aims to process 80% of its raw material crops into food products by 2027, making the program self-sustaining through product sales and enhancing Lebanon's food security. Figure 2 below provides a visual presentation of the model that captures its main features and presents the interrelations between the stakeholders to create a sustainable value chain.

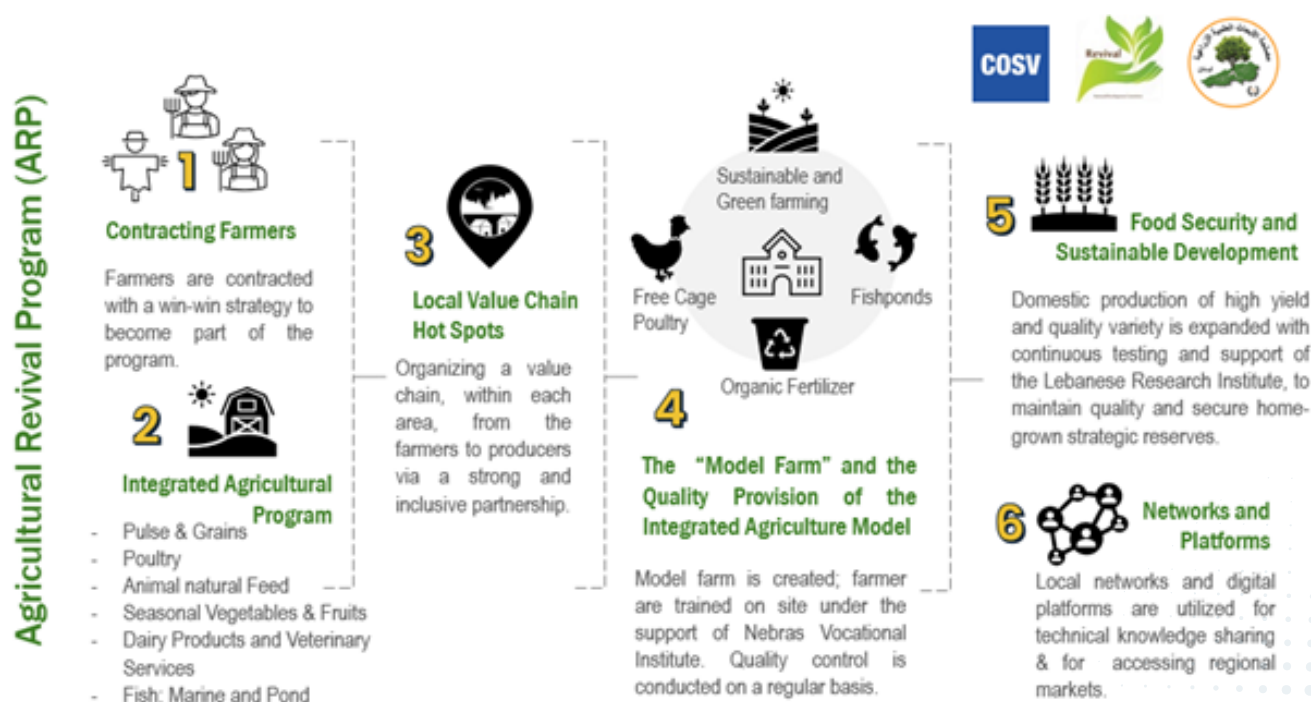


Figure 2: The Agricultural Revival Program

The model acts as a second-degree social cooperative (Consortia) even though the legal form is not available in Lebanon. Farmers are contracted and organized to strengthen the value chain, from production, to processing food, to distribution and sale. A strong participatory approach is applied in the decision-making process.

COSV and other partners have utilized digital platforms like Zoom and Microsoft Teams to enhance connectivity, collaboration, and knowledge-sharing across regions. These platforms have allowed enterprises to connect, share best practices, and access funding opportunities. Through collaboration with Catalyst 2030, COSV organized a peer exchange program, promoting cross-border knowledge-sharing on the Sustainable Development Goals (SDGs) among social enterprises in the MENA region and beyond. The initiative highlighted the need for stronger regional networks and resource mobilization to advance SDGs and foster social entrepreneurship.

COSV also partnered with the Arab Foundations Forum (AFF) to host seminars focused on the role of collaborative models, particularly in rural areas. These seminars connected organizations and showcased initiatives that support marginalized groups. COSV's global network further helped enterprises secure international verification, increasing their visibility and access to global markets and funding opportunities.

## 5. Implications & Recommendations

The two case studies from Lebanon highlight the transformative potential of collaboration, even in the face of political and financial challenges. They demonstrate that partnerships, when treated as collaborations rather than transactional relationships, can create sustainable value chains, expand operations, and enhance long-term growth. The following recommendations are offered based on these cases:

- 1. Governments' Role:** Governments should foster enterprise collaboration through regulatory frameworks, tax incentives, and modernizing regulations to facilitate market access. This includes prioritizing cross-border trade infrastructure and promoting standardized certifications to streamline regional integration.
- 2. Access to Resources:** Governments should unlock underutilized resources like rural land to scale production and foster innovation. They should also provide support for enterprises to collaborate with research hubs and incubators, reducing barriers for smaller businesses.
- 3. Pilot Projects:** Develop local pilot projects with government and donor support to adapt the presented case to different SEMED contexts. Governments should identify municipalities or rural areas with pressing waste management and agricultural challenges and allocate funding or land to launch small-scale versions of these initiatives. For Green Circle's replication, municipalities can establish pilot zero-waste communities by collaborating with local NGOs and private waste management firms, using incentives such as tax breaks or subsidies to encourage participation. For ARP, ministries of agriculture can initiate pilot projects in small farming clusters, providing farmers with high-quality seeds, training programs, and guaranteed off-take agreements with local food processors. International donors and development agencies, such as the European Bank for Reconstruction and Development (EBRD) and the Food and Agriculture Organization (FAO), can co-finance these projects, ensuring financial sustainability and long-term policy integration.



**4. Marketplaces:** Create digital and physical marketplaces to scale impact will ensure that waste management products and agricultural goods find viable markets, making the models economically sustainable. Governments and NGOs should establish online platforms where agricultural cooperatives, organic fertilizer producers, and sustainable product vendors can connect with buyers, reducing dependence on intermediaries and increasing profit margins. Green Circle's waste-to-fertilizer model can be expanded in SEMED countries by linking local composting initiatives with farmers through digital marketplaces and physical distribution hubs. Similarly, ARP's farm-to-market model can be scaled by creating cooperatively managed retail spaces in urban centers, where smallholder farmers can sell their products directly to consumers.

**5. Pooling Resources:** Enterprises should explore strategic collaborations to diversify their resource base, reducing risks and increasing their collective ability to innovate. Pooling resources from multiple sources can foster value chain creation and strengthen the ecosystem.

**6. Cluster Development:** Adopting UNIDO's cluster development approach is recommended to foster cooperation among enterprises within specific regions, improving efficiency, competitiveness, and regional visibility. This approach can be applied to small enterprises to strengthen their ties with larger regional buyers.

**7. International Support:** The international community and donors should prioritize programs that foster value chain creation in underserved markets. These initiatives should support cross-border collaboration, knowledge sharing, and joint applications for funding, promoting regional integration.

**8. ESG Integration:** Enterprises should integrate Environmental, Social, and Governance (ESG) principles into their operations to enhance sustainability, improve market competitiveness, and attract green financing. ESG compliance also positions enterprises to meet regulatory demands and improve stakeholder trust.

**9. Role of International NGOs:** International NGOs can play a crucial intermediary role in fostering collaboration and knowledge exchange among local and regional enterprises by leveraging digital platforms. These platforms serve as dynamic hubs, enabling businesses to connect, share insights, and collaborate across borders in real-time. Through digital tools including Zoom and Microsoft Teams, enterprises can gain exposure to similar projects in other countries, providing valuable insights into how these initiatives operate in different contexts. This knowledge helps them better understand the challenges faced by their counterparts and the innovative strategies used to overcome them. Additionally, digital platforms offer opportunities for enterprises to collaborate on joint proposals for common calls, enhancing their chances of securing funding and technical support. They can also refine the design of their own services, forge partnerships with suppliers, and engage in cross-border production. Beyond immediate collaboration, these interactions facilitate the sharing of best practices and the adoption of advanced methodologies and certifications. These improvements are critical for meeting regional standards, accessing larger markets, and expanding operations sustainably.

## References

- Ahmed, A., & Elsheikh, A. (2020). Political instability and economic cooperation in the Mediterranean region. *Journal of Economic Policy Reform*, 281-297.
- Barrientos, S., Gereffi, G., & Rossi, A. (2011). Economic and social upgrading in global production networks: A new paradigm for a changing world. *International Labour Review*, 319-340.
- Bassi, S., D'Agostino, D., & Baietti, M. (2018). SWITCH-Med: Building sustainable production and consumption in the Mediterranean region. *Environmental Development*, 27, 45-52.
- Boström, Micheletti, & Oosterveer. (2015). The sustainability agenda in international trade: Harnessing the potential of value chains. *Global Environmental Politics*, 1-24.
- Chalak, A., Abou Daher, C., Chaaban, J., & Abiad, M. (2018). The global cost of a sustainable diet: Lebanon as a case-study. *Agriculture and Food Security*, 7(1).
- Cramer, W., Guiot, J., Fader, M., Garrabou, J., Gattuso, J., Iglesias, A., & Xoplaki, E. (2018). Climate change and interconnected risks to sustainable development in the Mediterranean. Vol 8. *Nature Climate Change*, 972-980.
- Dimitriou, L., & Karlaftis, M. (2019). Transportation infrastructure and green trade networks in the Euro-Med region. *Transportation Research Part D: Transport and Environment*, 731-742.
- Ellen MacArthur. (2022). *Circular Economy in the Mediterranean: Pathways and Challenges*.
- FAO. (2022). *The State of Mediterranean and Black Sea Fisheries*.
- Geissdoerfer, M., Savaget, P., Bocken, N., & Hultink, E. (2020). The circular economy: A new sustainability paradigm? *Journal of Cleaner Production*, 255, 120210.
- Gereffi, G., & Fernandez-Stark, K. (2016). Global value chain analysis: A primer. *Journal of International Business Studies*, 535-554.
- Interreg Euro-MED. (2023). *Mediterranean perspectives on the EU Green Deal: Environmental and economic transitions*. Retrieved from [Interreg Euro-MED website].
- Jabbour, C., de Sousa Jabbour, A., Sarkis, J., & Filho, M. (2020). Unlocking the Circular Economy Potential of the Mediterranean Region: An Integrative Review and Research Agenda. *Journal of Cleaner Production*, 123-145.
- Jaoude, I., & Medlej, R. (2021). Digital transformation in Lebanon's agricultural sector: Challenges and opportunities. *Lebanese Agricultural Journal*, 56(3), 91-104.
- Kaplinsky, R., & Morris, M. (2001). A handbook for value chain research. *International Journal of Technology Management & Sustainable Development*, 9-14.

## Acknowledgment

The financial support of the Spanish Agency for International Development Cooperation (AECID) is greatly acknowledged

## About FEMISE

FEMISE, the Forum Euroméditerranéen des Instituts de Sciences Économiques, is a Euro-Mediterranean network of over 100 economic and social research institutes from both shores of the Mediterranean. Established in Marseille, France, in 2005 as an NGO, FEMISE promotes dialogue on economic and social policies to foster cooperation and mutual benefit between Europe and its Mediterranean partners. Coordinated by the Economic Research Forum (ERF) in Egypt, FEMISE focuses on strengthening research capacity, fostering public-private dialogue, disseminating research findings, and building partnerships to support regional collaboration and sustainable development.

## About IEMed

The European Institute of the Mediterranean (IEMed), founded in 1989, is a think-and-do tank focused on Euro-Mediterranean relations. Guided by the Euro-Mediterranean Partnership (EMP), European Neighbourhood Policy (ENP), and Union for the Mediterranean (UfM), it promotes cooperation, mutual understanding, and intercultural dialogue to build a shared space of peace, stability, and prosperity. IEMed is a consortium of the Catalan Government, the Spanish Ministry of Foreign Affairs, the EU, and the Barcelona City Council, with contributions from civil society through its Board of Trustees and Advisory Council.

## About ERF

The Economic Research Forum (ERF), established in 1993, is a regional network promoting high-quality economic research for sustainable development in Arab countries, Iran, and Turkey. Based in Cairo, Egypt, with a branch in Dubai, UAE, ERF builds research capacity, supports independent studies, and disseminates findings through publications, seminars, and the ERF Policy Portal. As a non-profit organization, ERF is supported by regional and international donors and guided by a distinguished Board of Trustees and a network of researchers.

---

## Contact information



**Address:** 2 Rue Henri Barbusse, 13001  
Marseille, France  
**Phone:** ++33(0) 9 71 53 89 15

 <https://www.femise.org>

