FEMISE CONFERENCE PAPER N. 11

LEVERAGING NETWORKS AND DIGITAL PLATFORMS OF COLLABORATIVE MODELS TO BUILD LOCAL AND REGIONAL SUSTAINABLE VALUE CHAINS IN AGRICULTURE AND WASTE MANAGEMENT

TWO CASES FROM LEBANON: GREEN CIRCLE AND THE AGRICULTURAL REVIVAL PROGRAM

Mohammad Makki and Annalisa Contini

FEMISE
ECONOMIC RESEARCH FORUM منتدى البحوث الاقتصادية
IEMed. European Institute of the Mediterranean

FEMISE CONFERENCE **PAPER**

LEVERAGING NETWORKS AND DIGITAL PLATFORMS OF COLLABORATIVE MODELS TO BUILD LOCAL AND REGIONAL SUSTAINABLE VALUE CHAINS IN AGRICULTURE AND WASTE MANAGEMENT

TWO CASES FROM LEBANON: GREEN CIRCLE AND THE AGRICULTURAL REVIVAL PROGRAM

Authors:

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

Annalisa Contini, Social Economy Unit Director at COSV

Editing: FEMISE

Peer Reviewer: Anonymous

Design Layout: Núria Esparza

Layout: Núria Esparza

June 2025

Published by FEMISE and IEMed

This paper was submitted and accepted for presentation at the FEMISE 2024 Annual Conference, "The Euromed Partnership as a Catalyst for SDGs: Advancing Value Chains, Climate Action, Digital Transformation, and Youth Empowerment," Cairo, Egypt, 10-12 December 2024.

The paper was evaluated and peer reviewed by experts, whose contributions are greatly appreciated. The revised version was accepted for publication under the FEMISE Conference Paper series.

FEMISE, **Forum Euroméditerranéen des Instituts de Sciences Économiques** (the Euro-Mediterranean Forum of Institutes of Economic Sciences), is a Euromed network established in Marseille, France in June 2005 as an NGO (under the French Law of 1901), following 8 years of activities. The network gathers more than 100 members of economic research institutes from the North and South of the Mediterranean, representing the 37 partners of the Barcelona Process and the European Neighbourhood Policy (ENP).

FEMISE is coordinated by the Economic Research Forum (ERF), Egypt.

The **Economic Research Forum** (ERF) is a regional network dedicated to promoting high quality economic research to contribute to sustainable development in the Arab countries, Iran and Turkey. ERF operates from two offices in the region, in Cairo, Egypt and in Dubai, United Arab Emirates. ERF's main office is located in Cairo, Egypt.

Established in 1993, ERF's core objectives are to build strong research capacity in the ERF region; to lead and support the production of independent, high quality economic research; and to disseminate research output to a wide and diverse audience.

The **European Institute of the Mediterranean** (IEMed), founded in 1989, is a think and do tank specialised in Euro-Mediterranean relations. It provides policy-oriented and evidence-based research underpinned by a genuine Euromed multidimensional and inclusive approach.

The IEMed is a consortium comprising the Catalan Government, the Spanish Ministry of Foreign Affairs, European Union and Cooperation, and the Barcelona City Council.

LEVERAGING NETWORKS AND DIGITAL PLATFORMS OF COLLABORATIVE MODELS TO BUILD LOCAL AND REGIONAL SUSTAINABLE VALUE CHAINS IN AGRICULTURE AND WASTE MANAGEMENT

TWO CASES FROM LEBANON: GREEN CIRCLE AND THE AGRICULTURAL REVIVAL PROGRAM

CONTENTS

ABSTRACT

The Euro-Med region's sustainable value chains are entangled in a web of challenges that demand strategic action. Fragmented regulations and inconsistent standards across borders restrain collaboration and hinder the continuous integration of eco-friendly practices. Weak infrastructure, particularly in transportation and logistics, poses a significant barrier to the development of efficient green trade networks. Economic disparities between EU and non-EU Mediterranean nations limit the participation of smaller enterprises in sustainable value chains, while political instability and governance issues further disrupt regional cooperation. On the other side the lack of knowledge about similar regional projects, joined with limited access to technologies and finance, hindered the potential for collaborations across borders. These combined obstacles make the path to sustainable, inclusive value chains more complex.

Objective and Knowledge Gap: This policy paper focuses on agriculture and waste management; it analyzes the key barriers in both sectors while presenting collaborative models that highlight the potential of local value chains to engage with local and regional networks. It explores how knowledge sharing using digital platforms can be utilized to foster cross-border partnerships, driving inclusive and sustainable growth. By addressing these issues, the policy paper aims to bridge knowledge gaps in the integration of digital tools and collaborative approaches, ultimately enhancing the capacity of local stakeholders to participate in green and sustainable economic development across borders.

Methodology and Approach: This paper presents two innovative collaborative models incubated by the social justice incubation program of SEE Change project funded by the EU and led by COSV. Green Circle focuses on waste management, while the Agricultural Revival Program has pioneered an agriculture hub. The paper utilizes the two case studies as a key methodological tool to illustrate real-world applications of its proposed solutions.

Results and Policy Implications: The paper builds on the two case studies to develop policy-oriented recommendations tailored for governments, policy makers and international donors. These recommendations will be presented to enhance awareness, facilitate knowledge sharing, and promote local collaborations to support cross-border partnerships among enterprises within the agriculture and waste management sectors. By doing so, the paper seeks to strengthen regional value chains, offering practical guidance on how stakeholders can foster more resilient, interconnected, and sustainable economies.

Key words: Collaboration, Agriculture, Waste Management, Value Chains, Digital Platforms, Policy.

RÉSUMÉ

Les chaînes de valeur durables de la région euro-méditerranéenne sont prises dans un enchevêtrement de défis qui exigent une action stratégique. Des réglementations fragmentées et des normes incohérentes entre les pays freinent la collaboration et entravent l'intégration continue de pratiques respectueuses de l'environnement. Des infrastructures insuffisantes, en particulier dans les domaines du transport et de la logistique, représentent un obstacle majeur au développement de réseaux commerciaux écologiques efficaces. Les disparités économiques entre les pays méditerranéens membres et non membres de l'UE limitent la participation des petites entreprises aux chaînes de valeur durables, tandis que l'instabilité politique et les problèmes de gouvernance perturbent davantage la coopération régionale. À cela s'ajoute un manque de connaissance des projets régionaux similaires, combiné à un accès limité aux technologies et au financement, ce qui entrave le potentiel de collaborations transfrontalières. L'ensemble de ces obstacles complexifie considérablement le chemin vers des chaînes de valeur durables et inclusives.

Objectif et lacunes en matière de connaissances : Ce document de politique publique se concentre sur l'agriculture et la gestion des déchets ; il analyse les principaux obstacles dans les deux secteurs tout en présentant des modèles collaboratifs qui mettent en lumière le potentiel des chaînes de valeur locales à s'intégrer dans des réseaux locaux et régionaux. Il explore comment le partage de connaissances via des plateformes numériques peut être utilisé pour favoriser les partenariats transfrontaliers, stimulant ainsi une croissance inclusive et durable. En abordant ces enjeux, le document vise à combler les lacunes en matière de connaissances concernant l'intégration des outils numériques et des approches collaboratives, afin de renforcer la capacité des acteurs locaux à participer au développement économique vert et durable au-delà des frontières.

Méthodologie et approche : Ce document présente deux modèles collaboratifs innovants incubés par le programme d'incubation pour la justice sociale du projet SEE Change, financé par l'Union européenne et dirigé par COSV. *Green Circle* se concentre sur la gestion des déchets, tandis que le *Programme de Relance Agricole* a mis en place un pôle agricole. Le document utilise ces deux études de cas comme outil méthodologique central pour illustrer des applications concrètes des solutions proposées.

Résultats et implications politiques : Le document s'appuie sur les deux études de cas pour élaborer des recommandations politiques à l'intention des gouvernements, des décideurs publics et des bailleurs de fonds internationaux. Ces recommandations visent à renforcer la sensibilisation, à faciliter le partage des connaissances et à promouvoir les collaborations locales pour soutenir les partenariats transfrontaliers entre entreprises dans les secteurs de l'agriculture et de la gestion des déchets. Ce faisant, le document cherche à renforcer les chaînes de valeur régionales en offrant des orientations pratiques sur la manière dont les parties prenantes peuvent encourager des économies plus résilientes, interconnectées et durables.

الملخص

تُواجه سلاسل القيمة المستدامة في منطقة الأورو-متوسط تحديات مترابطة تتطلب تحركًا استراتيجيًا.
فالتنظيمات المجزأة والمعايير غير المتناسقة عبر الحدود تعرقل التعاون وتعيق الدمج المستمر للممارسات الصديقة للبيئة. كما تُشكل البنية التحتية الضعيفة، لا سيما في مجالي النقل واللوجستيات، عائقًا كبيرًا أمام تطوير شبكات تجارة خضراء فعّالة. وتُسهم الفجوات الاقتصادية بين الدول المتوسطية الأعضاء وغير الأعضاء في الاتحاد الأوروبي في الحد من قدرة المؤسسات الصغيرة على المشاركة في سلاسل القيمة المستدامة، بينما تُفاقم عدم الاستقرار السياسي ومشكلات الحوكمة من تعقيد التعاون الإقليمي.
من جانب آخر، فإن نقص المعرفة بالمشاريع الإقليمية المماثلة، إلى جانب محدودية الوصول إلى التكنولوجيا والتمويل، يعيق فرص إقامة شراكات عابرة للحدود. وتُسهم هذه التحديات مجتمعة في تعقيد المسار نحو سلاسل قيمة مستدامة وشاملة.

الهدف والفجوة المعرفية:
يركّز هذا الورقة السياساتية على قطاعي الزراعة وإدارة النفايات، حيث تحلل العوائق الرئيسية في كلا القطاعين، وتقدّم نماذج تعاونية تُبرز إمكانيات سلاسل القيمة المحلية في الانخراط مع الشبكات المحلية والإقليمية. كما تستكشف الورقة كيف يمكن لتبادل المعرفة من خلال المنصات الرقمية أن يُسهم في تعزيز الشراكات العابرة للحدود، مما يدفع نحو نمو شامل ومستدام. ومن خلال تناول هذه القضايا، تهدف الورقة إلى سد الفجوات المعرفية في دمج الأدوات الرقمية والأساليب التعاونية، بما يعزز من قدرة أصحاب المصلحة المحليين على الانخراط في تنمية اقتصادية خضراء ومستدامة عبر الحدود.

المنهجية والنموذج المُتبع:
تعرض هذه الورقة نموذجين تعاونيين مبتكرين تم احتضانهما ضمن برنامج احتضان العدالة الاجتماعية لمشروع "SEE Change" الممول من الاتحاد الأوروبي والذي تقوده منظمة COSV.
يركز نموذج **"الدائرة الخضراء"** بينما أسّس **"برنامج النهضة الزراعية"** مركزًا زراعيًا على إدارة النفايات، رائدًا. وتستخدم الورقة هاتين الدراستين كأداة منهجية أساسية لتوضيح التطبيقات الواقعية للحلول المقترحة.

النتائج والتوصيات السياساتية:
تستند الورقة إلى الدراستين لتطوير توصيات موجهة لصنّاع السياسات والحكومات والجهات المانحة الدولية. تهدف هذه التوصيات إلى رفع مستوى الوعي، وتسهيل تبادل المعرفة، وتعزيز التعاون المحلي لدعم الشراكات العابرة للحدود بين المؤسسات العاملة في قطاعي الزراعة وإدارة النفايات. ومن خلال ذلك، تسعى الورقة إلى تقوية سلاسل القيمة الإقليمية، وتقديم إرشادات عملية لكيفية بناء اقتصادات أكثر ترابطًا، ومرونة، واستدامة.

INTRODUCTION

Value chain encompasses all activities needed to bring a product or service from its initial conception through various phases of production to delivery for end-users. Kaplinsky and Morris (2001) emphasize the interconnectedness of each phase, highlighting how coordinated activities contribute to efficiency, competitiveness, and the final value delivered to consumers. Strong and sustainable value chains are instrumental in fostering both economic and social growth. By optimizing processes and improving operational efficiency, well-structured value chains increase the competitiveness of businesses, enabling them to generate higher revenues and reinvest in local economies, which in return supports community development (Gereffi & Fernandez-Stark, 2016). Furthermore, sustainable value chains that prioritize environmental and social standards contribute to improved working conditions and foster social equity, ultimately enhancing the quality of life for workers and the surrounding communities (Boström, Micheletti, & Oosterveer, 2015). These value chains also facilitate connections between local businesses and international markets, creating avenues for knowledge transfer and skill development that are essential for long-term economic resilience and innovation (Barrientos, Gereffi, & Rossi, 2011).

Thus, strengthening local and regional value chains is a strategic priority for countries seeking economic growth. Locally developed value chains allow communities to capture more of the economic value generated from their resources, resulting in increased employment opportunities, inclusive growth, and reduced dependence on global markets (Pietrobelli & Rabellotti, 2011). At the regional level, integrated value chains promote economic collaboration among neighboring countries, leveraging shared resources and comparative advantages to boost collective competitiveness. This interconnected framework supports the exchange of knowledge, the transfer of technology, and the innovation across borders (Gereffi & Fernandez-Stark, 2016).

Given the importance of sustainable value chains on the local and regional levels, the Euro-Mediterranean (Euro-Med) region faces a complex array of challenges in building them, which underscores the need for coordinated policy action. Fragmented regulations and inconsistent standards across borders create obstacles to collaboration, limiting the integration of eco-friendly practices throughout regional value chains (Matten, Crane, & Windsor, 2018). On the other hand, weak infrastructure, particularly in transportation and logistics, restricts the development of efficient, green trade networks, that are essential for sustainable growth in the Euro-Med region (Dimitriou & Karlaftis, 2019). Economic disparities between the European Union (EU) and non-EU Mediterranean nations also contribute to the exclusion of smaller enterprises from sustainable value chains. These barriers are exacerbated by political instability and governance issues that disrupt regional cooperation and reduce the efficacy of cross-border initiatives (Ahmed & Elsheikh, 2020).

Furthermore, limited knowledge of regional projects, combined with restricted access to advanced technologies and financial resources, also hampers collaboration, making sustainable value chains challenging to achieve on a regional scale (Rodriguez, Gracia, & Benitez, 2021). Another layer of challenges add-up to the complexity of integrating sustainable values chains, where environmental degradation, including critical issues such as water scarcity, pollution and climate change threaten the health of ecosystems, strain resources and complicate efforts to develop and preserve sustainable practices (Cramer, et al., 2018).

This policy paper examines the challenges and complexities involved in building sustainable value chains, with a focus on the agriculture and waste management sectors. These sectors often feature value chains embedded in local contexts that encounter substantial obstacles to regional integration. Furthermore, it explores the role of digital platforms in enhancing knowledge exchange, fostering cross-border partnerships, and promoting inclusive and sustainable economic growth.

This policy paper provides illustrative examples on how collaborative local models that strengthen local value chains and benefit from digital platforms for knowledge sharing across boarders can generate high potentials for enhancing their practices and for regional partnerships. The paper involves examining two collaborative models incubated in the social justice incubation program (SJIP)[1] that is part of the SEE Change project[2], funded by the EU and led by Coordinamento delle Organizzazioni per il Servizio Volontario (COSV)[3].

The first model, "Green Circle", is a model designed to actively engage community members in promoting environmentally responsible consumer behavior by raising awareness, encouraging waste sorting and recycling, producing fertilizers, and offering incentives and rewards to participants. It developed a local value chain in the waste management sector and succeeded in turning the village of "Bchatfin" into a zero-waste village. The second model, the "Agricultural Revival Program" (ARP) is a long-term plan for agricultural development based on increased domestic productivity, targeting small and medium scale farmers, and resulting in bolstering societal food security and family income, as well as improved practices through training, factual knowledge, and improved effective technical skills. The model has

[1] 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.

[2] 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 actives in Lebanon, while creating employment opportunities, enhancing social stability, and supporting the local economy.

[3] COSV 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.

established an agricultural hub, “the model farm” that advances knowledge-sharing mechanisms to enhance agricultural value chains in south Lebanon and have scaled-up its activities to other areas in the country. The paper also demonstrates how both models leveraged their local networks and benefited from digital platforms supported by COSV to explore collaborations and regional partnerships.

After this introduction section, the paper presents a comprehensive literature review on the challenges and complexities of sustainable value chains, with a focus on agriculture and waste management in the Euro-Med region. Then the paper provides more details on the methodology, and the approach used, and it presents the two collaborative modes while highlighting their best practices, lessons learned, digital platforms, partnerships, and future opportunities. Finally, the paper builds on the presented collaborative models and provides a set of recommendations aimed at policymakers, government bodies, and international donors. These recommendations are designed to raise awareness, improve knowledge-sharing infrastructure, and encourage local and regional collaborations. By supporting cross-border partnerships within the agriculture and waste management sectors, these insights contribute to stronger, more resilient, and sustainable regional value chains, offering actionable guidance for stakeholders to foster interconnected economies that are better equipped to face contemporary environmental and economic challenges. The recommendations also highlight the strategic role of International Non-Governmental Organizations (INGOs) as intermediaries that connect and support cross-border initiatives and enterprises. By bridging knowledge gaps between local and regional projects, INGOs facilitate collaboration and foster partnerships, enhancing the reach and effectiveness of sustainable value chains.

LITERATURE REVIEW

The concept of sustainable value chains has gained significant attention in recent literature due to its potential to generate economic, environmental, and social benefits across production networks. As businesses increasingly commit to sustainable practices, there is a corresponding rise in regional efforts to address the unique challenges associated with these practices. However, generating sustainable value chains at the regional level presents distinct challenges, including limited infrastructure, varying regulatory frameworks, and resource disparities. These regional challenges can hinder the consistency and effectiveness of sustainable practices across supply chains, highlighting the need for targeted, collaborative approaches that address local complexities while aligning with broader sustainability goals. This section of the policy paper highlights the importance of sustainable practices in value chains and explores the challenges surrounding them in the Euro-Med region, with a specific focus on the agriculture and waste management sectors. It also highlights the crucial role of collaboration and networking in advancing these sustainable practices at local and regional levels.

Empirical evidence supports the pivotal role of sustainability in enhancing value chain performance across different sectors. Through a meta-analysis of sustainable value chains, a study revealed that sustainability-driven innovations led to a 26% improvement in enterprises performance and a 20% reduction in operational costs (Touboulic & McCarthy, 2020). Quantitative analyses of sustainable value chains demonstrate their profound economic, environmental, and social benefits. Geissdoerfer et al. (Geissdoerfer, Savaget, Bocken, & Hultink, 2020) reported that companies incorporating sustainable practices into their core strategies experienced a 22% improvement in competitive advantage and a 17% reduction in operational risks. A study has further found that sustainable supply chain management enhances cost efficiency by up to 20% through optimized resource use (Brandenburg & Rebs, 2021).

The Global Sustainability Index demonstrates that organizations engaged in sustainability reporting and practices achieved a 25% rise in resource efficiency and a 23% reduction in environmental impact over a five-year period (Global Sustainability Index (GSI), 2023). Sustainable practices undertaken by companies and enterprises can contribute to the growth of different sectors and enhance their value chains. Under the agriculture sector, farms adopting eco-friendly techniques experienced a 44% improvement in soil health and a 37% boost in resilience to climate-related stressors (Rockström, Edenhofer, Gärtner, & DeCle, 2020). Dangelico and Vocalelli (Dangelico & Vocalelli, 2022) indicate a 35% increase in crop productivity and a 27% reduction in water usage in regions implementing sustainable agricultural practices which in return enhance the quality of the value chain within the sector.

In waste management, adopting sustainable practices strengthened the value chains and contributed to environmental welfare. Boubellouta and Kusch-Brandt (2019) observe a 40% improvement in

recycling rates and a 22% decrease in landfill dependency due to integrated waste management systems. Moreover, sustainable logistics and waste management practices have shown a 32% reduction in waste generation and a 27% increase in recycling efficiency (Bag, Dhamija, Bryde, & Giannaki, 2021).

In the Euro-Med region, creating sustainable value chains faces challenges related to regulatory disparities, economic dependencies, and environmental sustainability demands. Fragmented regulatory frameworks across Euro-Med countries create significant barriers to developing sustainable value chains. Variations in environmental standards, labor laws, and governance practices complicate cross-border cooperation, making it difficult for businesses to adopt and integrate sustainable practices seamlessly. While countries such as Tunisia, Morocco, and Egypt serve as vital manufacturing hubs for labor-intensive industries like textiles and automotive components, benefiting from favorable tax policies that facilitate exports to EU markets, their reliance on EU demand makes them susceptible to shifts in EU trade policies and technological advancements. This dependency poses a potential risk to economic stability in these nations, as changes in these external factors could significantly impact their manufacturing sectors (European Institute of the Mediterranean (IEMed), 2023).

Initiatives like Interreg Euro-MED and the Union for the Mediterranean (UfM) have sought to address these disparities by promoting policy alignment and governance harmonization. Through fostering collaboration and knowledge-sharing, these programs aim to tackle the “polyhedron challenges” of sustainable development—where local economic objectives can sometimes conflict with broader sustainability mandates (Bedos & Calvo, 2023). Achieving effective governance in this complex landscape requires diverse stakeholder engagement, including governments, regional organizations, and SMEs, which often face resource limitations in independently implementing sustainable practices (Union of the Mediterranean (UFM), 2022).

Another major regulatory challenge affecting the establishment of sustainable regional value chains in the Euro-Med area is the inconsistency in environmental regulations among different countries. Each nation has its own unique set of rules and standards related to environmental protection, waste management, and resource usage, resulting in a fragmented regulatory landscape that complicates cross-border cooperation and compliance. For instance, while the European Union has implemented rigorous regulations governing emissions and waste management, countries in the Euro-Med region often exhibit varying enforcement levels and criteria for what qualifies as sustainable practices (Perez & Fernandez, 2021).

This regulatory divergence poses significant challenges, particularly for industries such as renewable energy and waste management. Companies operating across multiple jurisdictions face increased operational complexity and costs due to the need to adapt to differing regulations. For example, a solar energy company with operations in both Spain and Morocco must navigate Spain’s stringent requirements for environmental impact assessments and grid integration while also dealing with Morocco’s evolving yet comparatively less stringent regulatory framework (El Basyouny, 2020). Those

inconsistencies can deter investment in sustainable initiatives and hinder the overall effectiveness of regional value chains that seek to promote sustainability.

The absence of standardized certifications in the Euro-Med region is another factor that hinders establishing regional sustainable value chains. It significantly impacts the efficiency and competitiveness of regional value chains by creating discrepancies in quality, environmental, and labor standards. Certifications are essential for ensuring that products meet specific benchmarks, increasing consumer confidence, and facilitating cross-border trade, particularly as sustainability expectations grow (Aikins, 2020). In the Euro-Med area, where supply chains cross numerous national borders, the lack of harmonized certification systems introduces operational inefficiencies and limits the appeal of regional products in international markets, especially the EU. For example, the agricultural sector in Tunisia and Morocco faces export challenges due to varying certification standards for organic and sustainable products, limiting market access and reducing the price premiums these products can command (Salem, 2020). Similarly, the textile industry in Egypt is constrained by the need to meet diverse certification requirements to access European markets, which imposes additional compliance costs, particularly on SMEs with limited resources (Jabbour, de Sousa Jabbour, Sarkis, & Filho, 2020).

Environmental sustainability objectives represent another significant challenge especially when considering goals like reducing carbon emissions, conserving resources, and adopting circular economy principles. These objectives require substantial collaboration and technological innovation, which can be particularly difficult for smaller economies. While the European Union's Green Deal provides a framework to drive sustainability across its member states, many Mediterranean economies face financial and technical constraints that hinder their full adoption of these practices (Interreg Euro-MED, 2023). Financial constraints, especially in low-income and developing areas where access to capital and investment remains limited, are a major concern. Without sufficient funding, local producers and businesses struggle to scale operations, improve infrastructure, and adopt modern technology—all essential for boosting productivity and competitiveness in regional markets. For example, small and medium-sized enterprises (SMEs) in Egypt, encounter high-interest rates and limited access to long-term financing, which restrict their ability to invest in production capacity and modern technology necessary for competitive participation in regional markets (EBRD, 2020).

In Jordan, financial challenges hinder the ability of local businesses to grow and integrate more effectively into supply chains. High lending costs and the lack of credit history or collateral prevent many small and medium-sized enterprises (SMEs) from securing the financing needed to invest in quality enhancements and expand their export capabilities. The International Monetary Fund (IMF) notes that these financial barriers limit the participation of Jordanian SMEs in regional supply networks, reducing their economic impact and weakening regional economic connectivity (IMF, 2019). In Greece, local SMEs in sectors such as food processing and textile manufacturing often struggle to adopt circular processes due to high upfront costs for new technologies and the lack of government subsidies or incentives (MedCIRC, 2023). Furthermore, environmental issues unique to the Mediterranean region, including water scarcity and land degradation, complicate efforts to implement sustainable practices in dominant sectors like agriculture and manufacturing. In Spain, the ongoing challenges with water availability affect the agricultural sector's

ability to adopt more sustainable irrigation techniques, limiting growth in line with circular economy principles (Interreg Euro-MED, 2023).

Social and cultural differences across the Euro-Mediterranean region create complexities in achieving a unified sustainable value chain approach. The differences in social norms, workforce structures, and consumer behaviors necessitates a tailored approach that can address each region's unique socioeconomic dynamics. Programs such as the Community of Practice initiative by Interreg Euro-MED attempt to create synergies among these diverse practices to facilitate the adoption of cohesive sustainable policies across the region. However, balancing local priorities with the EU's sustainability goals continues to be a complex task (Ayadi, 2024).

Addressing agriculture and waste management sectors, the Euro-Med region's agricultural value chains encounter significant challenges that impede value chain sustainability and efficiency. One of the primary issues is the fragmentation of regulations across different countries, which creates inconsistencies in standards and practices, making it difficult for producers to collaborate effectively (Kader & Jaafar, 2020). In addition to that, inadequate infrastructure including transportation and logistics for trade makes it hard for enterprises to access markets and it increases costs which in return reduces competitiveness of agricultural products (Worldbank, 2021). Economic disparities between EU and non-EU Mediterranean countries further complicate the landscape, as smaller farms and enterprises often lack the resources to engage in sustainable practices or compete in international markets (FAO, 2022). Political instability in some regions also disrupts agricultural activities and investment, leading to uncertainty and reduced stakeholder confidence (OECD, 2021). Furthermore, the limited dissemination of knowledge regarding innovative agricultural practices and technologies, coupled with insufficient access to financing, hampers efforts to modernize value chains and adopt eco-friendly methodologies (UNCTAD, 2023).

The waste management value chains in the Euro-Med examine similar challenges to the ones of the agriculture sector. Fragmented regulatory landscape is a major obstacle, with countries adopting divergent policies and standards, leading to inconsistencies in waste handling, recycling, and disposal practices (OECD, 2022). This fragmentation hampers cross-border cooperation and prevents the harmonization of best practices. The region also suffers from inadequate infrastructure, particularly in waste collection, sorting, and recycling facilities, which limits the ability to manage waste sustainably (Worldbank, 2020). Economic disparities between EU and non-EU countries exacerbate these challenges (UNEP, 2021), as well as political instability and governance issues delay critical reforms and deter private sector investment. On the other hand, public awareness and education on waste reduction and recycling remain low, contributing to higher levels of unmanaged waste and limited participation in regional value chains (Ellen MacArthur, 2022).

In Lebanon, sustainable value chains in agriculture and waste management present both significant challenges and promising opportunities. The agricultural sector heavily depends on natural resources, and faces persistent issues such as water scarcity, soil degradation, and limited access to advanced

technology, all of which hinder the adoption of sustainable practices (Chalak, Abou Daher, Chaaban, & Abiad, 2018). Water scarcity, in particular, hampers irrigation efforts, reduces productivity, and limits the use of water-saving methods like drip irrigation that could conserve resources (Saab, 2020). Similarly, Lebanon's waste management system struggles with inadequate infrastructure and high operational costs, making efficient waste collection and recycling difficult.

Despite these obstacles, there are valuable opportunities for Lebanon. Decentralized waste management systems and a growing interest in organic farming hold the potential to support sustainable agriculture and promote waste-to-compost initiatives (Massoud, El Fadel, & Mohtar, 2019). Additionally, digital platforms and public-private partnerships offer pathways to improve resource efficiency, link farmers with markets, and foster regional integration of value chains. These innovations, while constrained by current financial and technical limitations, could significantly advance sustainable practices across the sector (Jaoude & Medlej, 2021).

Given the presented challenges and complexities facing regional value chains, collaboration and networking play a critical role in advancing them at both local and regional levels by promoting resource sharing, knowledge exchange, and coordinated action. Through collaboration, barriers such as limited access to technology and funding can be addressed. A prime example is the East African Coffee Initiative, a regional collaboration that provides local farmers in Ethiopia, Kenya, and Tanzania with training on sustainable farming practices and market access, thus enhancing productivity and resilience against climate challenges (Vellema, Laven, Ton, & Van Wijk, 2020).

At the regional level, the Mediterranean's SWITCH-Med program brings together stakeholders from multiple countries to support sustainable practices in areas such as agriculture and waste management. This initiative provides a platform for SMEs to exchange ideas and adopt resource-efficient technologies, enabling them to integrate into larger regional markets while aligning with circular economy principles (Bassi, D'Agostino, & Baietti, 2018). Networking through such programs not only strengthens local producers' capacities but also fosters cross-border partnerships, creating an interconnected, sustainable value chain that benefits a broad range of economic actors and bolsters regional economic resilience (Tukker, Emmert, & Charter, 2021).

Given the above challenges facing sustainable value chains in general and in agriculture and waste management in specific, a holistic approach is essential for promoting regional integration and driving inclusive, sustainable economic growth. Comprehensive policy solutions must focus on aligning regulations, investing in infrastructure, bridging economic disparities, stabilizing political atmosphere, and addressing environmental impacts. By tackling these issues strategically, the Euro-Med region can build a more cohesive and resilient framework for sustainable value chains, paving the way for a greener and more equitable future.

METHODOLOGY AND APPROACH

This policy paper utilizes case study methodology which is a qualitative research approach that involves an in-depth investigation of two collaborative local models that were incubated in the social justice incubation program (SJIP). This method allows us to understand how the collaborative model partners created shared values, how they benefited from their experience and networks, and how they benefited from knowledge sharing platforms to exchange experiences, best practices and create regional partnerships with enterprises in the region.

The data on the case studies is collected from various sources, including COSV's documents and records, as well as interviews with collaborative model partners. This approach enables us to develop a comprehensive understanding of the cases, identify the challenges they encountered, and gain insights into the policies they wish to see to help them foster stronger local and regional partnerships and enhance their ongoing activities.

The methodology behind the Social Justice Incubation Program (SJIP) is crucial to understanding the development of the collaborative models that supported various types of social enterprises across Lebanon. COSV has decided to bring together the "Solidarity" that has its origins in cooperative and mutual organizations with the "Collaborative Economy" that has emerged through the pooling of resources made possible by digital platforms. The Social Justice Incubation Program journey explored the shift in the context of Lebanon's labour dynamics, emphasizing flexibility over rigid legal forms, and examining the potential positive impact of leveraging the "scaling through partnership" mechanism in Lebanon's social entrepreneurship context. Thus, the Incubation Program, that is based on COSV research in the field, the findings of a feasibility study[4] on the social and solidarity economy, and on the Institutional Trajectories and Resulting SE Models Framework[5] came to support piloting several models beyond social business framework as presented in Figure 1 in the following page.

Ultimately, the program did not accept individual applicants; instead, it required collaboration among multiple types of enterprises or entities. Throughout the program, 21 SE collaborative models received both

[4] The feasibility study's overarching goal is to collaborate with local communities and key stakeholders to determine the best possible actors (individuals and organizations) and environmental factors for forming new social economy initiatives in Beqaa, North Lebanon, Mount Lebanon, Beirut, and South Lebanon. The program is designed to analyze and test two major development patterns; the capacity of the Lebanese CSOs/Social Enterprises in promoting the advancement of the social justice policies in collaboration with public authorities and with the engagement of the business community, and the role that the advancement of the social justice policy can play in supporting the scaling up of the Lebanese social entrepreneurship movement.

[5] The first international framework resulting from simultaneous research that identified several types of social enterprises while overcoming the geographic barriers, the local context, and the culture of countries. According to the authors all associations (voluntary organizations) attempting to advance the interests of their members are placed in the "mutual interest" angle–as are all conventional cooperatives. However, because their general interest (the community they serve) is typically not as broad as the one served by the state, associations (voluntary organizations, charities, etc.) seeking a public benefit are located much closer to the general interest angle than the vertex itself like ENPs and PSEs, as illustrated in the Figure 1.

financial and technical support over approximately 18 months. The piloted models were categorized under four main categories provided below:

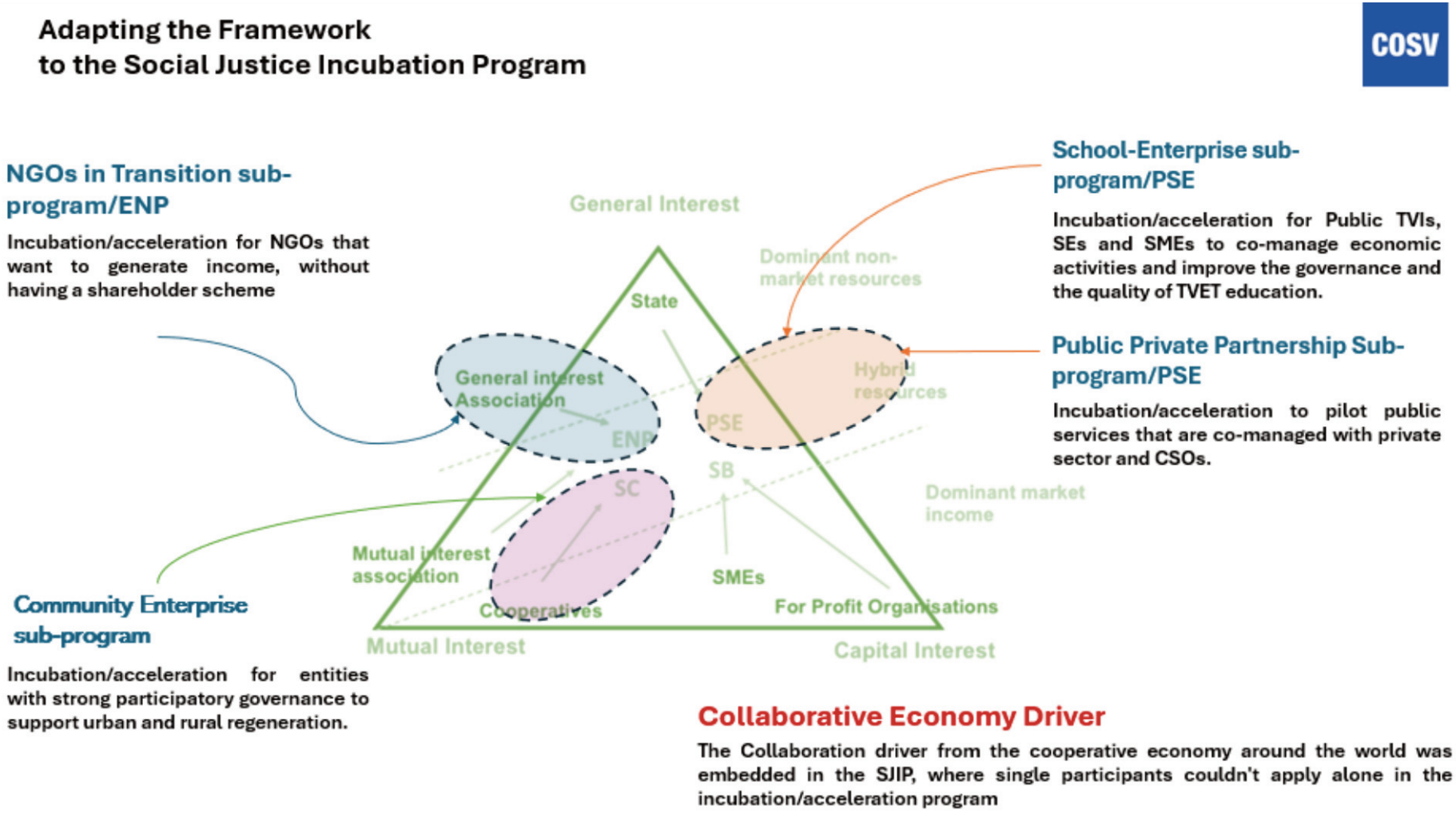
Entrepreneurial Non-Profits (ENPs) are non-profit organizations that engage in business activities to advance their social mission. These organizations employ various revenue-generating strategies, including unrelated commercial ventures, profit-driven subsidiaries, and market-based initiatives aligned with their mission. A notable example is the work integration of social enterprises (WISEs), which generate income through the sale of goods or services while providing training and employment opportunities for unskilled workers.

Social Cooperatives (SCs) arise from mutual interest organizations that shift their focus toward activities that prioritize the common good. These cooperatives blend democratic governance with a restriction on the return of capital shares, aiming to serve broader community interests beyond just their members. They can take the form of single-stakeholder cooperatives, which concentrate on mutual interests while also contributing to the wider community, or multi-stakeholder cooperatives that engage diverse members, including workers, beneficiaries, and volunteers.

Social Businesses (SBs) are increasingly popular among enterprises striving to achieve a balance between social impact and commercial success. These businesses place a social mission at the core of their operations, seamlessly integrating economic objectives with social goals. Examples include companies that offer personal services, engage in environmental protection, or sell fair-trade products. This model also includes "Yunus-type" social businesses, which are dedicated to serving low-income customers and reinvesting their profits to further their social missions.

Public-Sector Social Enterprises (PSEs) are established by public bodies to provide public services more efficiently and innovatively. This model includes "public-sector spin-offs," in which public services are outsourced to social enterprises to enhance service delivery while potentially lowering public costs. Additionally, these enterprises may emerge from community development initiatives or the reallocation of social service responsibilities to newly formed social enterprises.

Figure 1: Institutional Trajectories and Resulting SE Models Framework and SJIP



Beyond social business, the 21 social enterprise models evolved to represent one or a combination of multiple categories. For example, ARP representing a community enterprise came to embody the characteristics of a social cooperative, while Green Circle, representing NGOs in transition, developed into a hybrid model combining elements of an entrepreneurial non-profit and a social cooperative.

COLLABORATIVE MODELS; ANALYSIS

This section of the paper 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. Following this overview, the paper highlights how COSV supported these models by connecting them with regional enterprises through digital platforms. This approach enabled knowledge sharing, lessons learned, and cross-border partnership opportunities.

The Green Circle

THE MODEL

From households to farmers and other customers. The story of the Green Circle began with a shared commitment to sustainability and community betterment in Chouf. Before joining the SJIP program, "0-Waste Community" and "Dekenet El Nes" had already connected over their aligned visions, each working towards a common goal for their local community.

Our journey truly took shape during the first SJIP meetings as Nibal Dahouk Bou Hamdan says - the founder and CEO of 0-waste community - where organizations from all over Lebanon gathered to introduce their work and the Sustainable Development Goals (SDGs) they aimed to support. These early encounters set the stage for collaboration, and by the end of the program, Garbaliser reached out to us, expressing interest in replicating our model in Baalbek. The initiative soon expanded with an invitation for Dekenet El Nes to join as a third partner, leading to the decision to anchor the project in a village called "Bchatfin" within the Chouf district. Thus, the Green Circle was formed as a collaborative model driven by shared purpose, national partnership, and a commitment to sustainable impact.

With the support of SJIP, the "Green Circle" model received a substantial grant of $18,000 USD, which became the driving force behind the creation of an environmental hub embodying a holistic and innovative approach to waste management. The SEE Change project was instrumental in enabling the establishment of this eco-friendly facility on previously unused municipal land. The facility operates with a multi-dimensional focus, aiming to transform waste management practices within the community.

SERVICES AND VALUE CHAIN CREATION

"Green Circle" model embodies a holistic approach to sustainable waste management and eco-friendly product distribution within the targeted village. This model is crafted to actively involve the community, improve agricultural practices, and encourage environmentally conscious consumer choices. The process starts with households, guided by the 0-waste community, to sort and contribute their waste. The waste

is then sent to the treatment facility, where it is converted into liquid fertilizers under the supervision of Garbalizer. These fertilizers are sold to farmers and villagers, many of whom are from the same households participating in the program. To encourage sustained involvement, the initiative includes a reward system that offers discounts on organic products at Dekenet El Nes, creating a complete value chain and a full-circle approach that promotes sustainability and benefits the community. Below are the main activities/services and products of this model:

1. Community-Driven Collection of Sorted Waste

Nibal says: we offer a door-to-door collection service that focuses on separating organic and non-organic waste from both residential and non-residential units within the village. This community-driven approach actively engages citizens and activists in a self-organized collection system, supported by direct communication through WhatsApp and neighborhood leaders—predominantly women who have over two years of experience with the "0-Waste Bshatfeen" Committee.

This service plays a vital role in minimizing landfill waste, encouraging recycling, and ensuring proper disposal and treatment of organic materials. The sorted collection process enhances recycling efficiency and supports the creation of organic compost and liquid fertilizers, furthering a circular economy within the community.

2. Sustainable Shopping Experience

Anwar Zeineddine – Co-founder and CEO of Dekenet El Nes – says that we provide exclusive discounts and special offers on eco-friendly shopping at the Dekenet El Nes community store. This shop features a variety of Lebanese-made, environmentally friendly detergents and food products, promoting sustainable living among community members. The households participating in the waste sorting process receive a unique unit code that allows them to track and assess their sorted recyclables in line with the project's guidelines. Based on these assessments, they can access tiered discounts at Dekenet El Nes and buy a variety of discounted organic products.

By encouraging the purchase of locally sourced and green products, the "Green Circle" model aims to lower the community's carbon footprint, bolster local economies, and nurture a culture of environmental stewardship. This system incentivizes active participation and fosters community-wide engagement in sustainable practices.

3. Liquid Fertilizer

A standout product of the "Green Circle" model is the liquid fertilizer produced from treated organic waste. Zeinab and Hanan Ismaiel, the founders of Garbalizer, say: here comes our role as Garbalizer. We have provided our expertise in producing fertilizers. This eco-friendly solution is designed to enhance the agricultural practices of local farmers and villagers by improving soil fertility and increasing crop yields. By using this natural fertilizer, farmers can adopt sustainable practices, reduce reliance on chemical fertilizers, and promote the overall health of the village's ecosystem.

HYBRID RESOURCES

The “Green Circle” model adopts a hybrid resource model to secure funding and ensure sustainability, drawing from international grants, sales revenue, underutilized public assets, and personal contributions. This diverse funding strategy strengthens financial stability and supports long-term success through the following key elements:

- International Grants: Serve as seed funding for initial setup and operational expenses, allowing the project to launch without immediate financial pressure.
- Revenue from Sales: Generates continuous income through the sale of recycled materials, organic fertilizers, and eco-friendly products, contributing to the project’s self-sufficiency.
- Utilization of Unused Public Assets: Establishes partnerships with local governments to access municipal land for facilities, minimizing infrastructure costs and fostering strong community connections.
- Personal Contributions: Demonstrates the dedication of the founders and local stakeholders, bridging financial gaps and aligning the project with community-specific needs.

This hybrid funding model diversifies financial resources, reinforces sustainability, encourages community participation, and provides the flexibility needed for growth and adaptation. It strategically supports the “Green Circle’s” mission of sustainable waste management and community empowerment, showcasing a replicable, resilient framework for environmental initiatives.

IMPACT AND SUSTAINABILITY

The “Green Circle” model has successfully created employment for five individuals, including a project coordinator, a sales lead at Dekenet El Nes, a driver, and two warehouse workers. The “Green Circle’s” impact is becoming increasingly measurable, with both qualitative and quantitative progress carefully documented. Major key achievements are provided below:

- The 0-Waste community expanded its sorting points from 150 to 160, which increased its monthly average revenue from $86 to $92.
- Garbalizer extended outreach to the Bchatfen community, establishing 100 organic waste collection points with a target to increase this to 105, and aiming to raise monthly revenue from $900 to $945. Additionally, approximately 50 households have adopted composting to provide feed for chicken, or have donated to neighbors’ pets, while supporting organic waste reduction.
- Through refilling practices, Dekenet El Nes has diverted 50 kg of waste from disposal. It also supports at least 10 local suppliers, achieving a 10% net profit from a monthly revenue of $1,500.

The model has faced challenges in scaling, especially in tracking individual participation due to a database organized by households rather than individuals, along with limited funding for a digital management system. Despite these obstacles, Green Circle has delivered direct benefits to 147 community members and 15 refugees.

The sustainability of the Green Circle project relies heavily on efficient waste sorting and the continued operations of Dekenet El Nes. According to the internal Memorandum of Understanding (MOU), the project coordinator oversees all financial records and revenues from the three partner entities. To ensure financial viability, Green Circle's expenses will be supported through combined revenue streams, which include:

1. Sales of collected and sorted non-organic waste,

2. Revenue from liquid fertilizer produced from organic waste, and

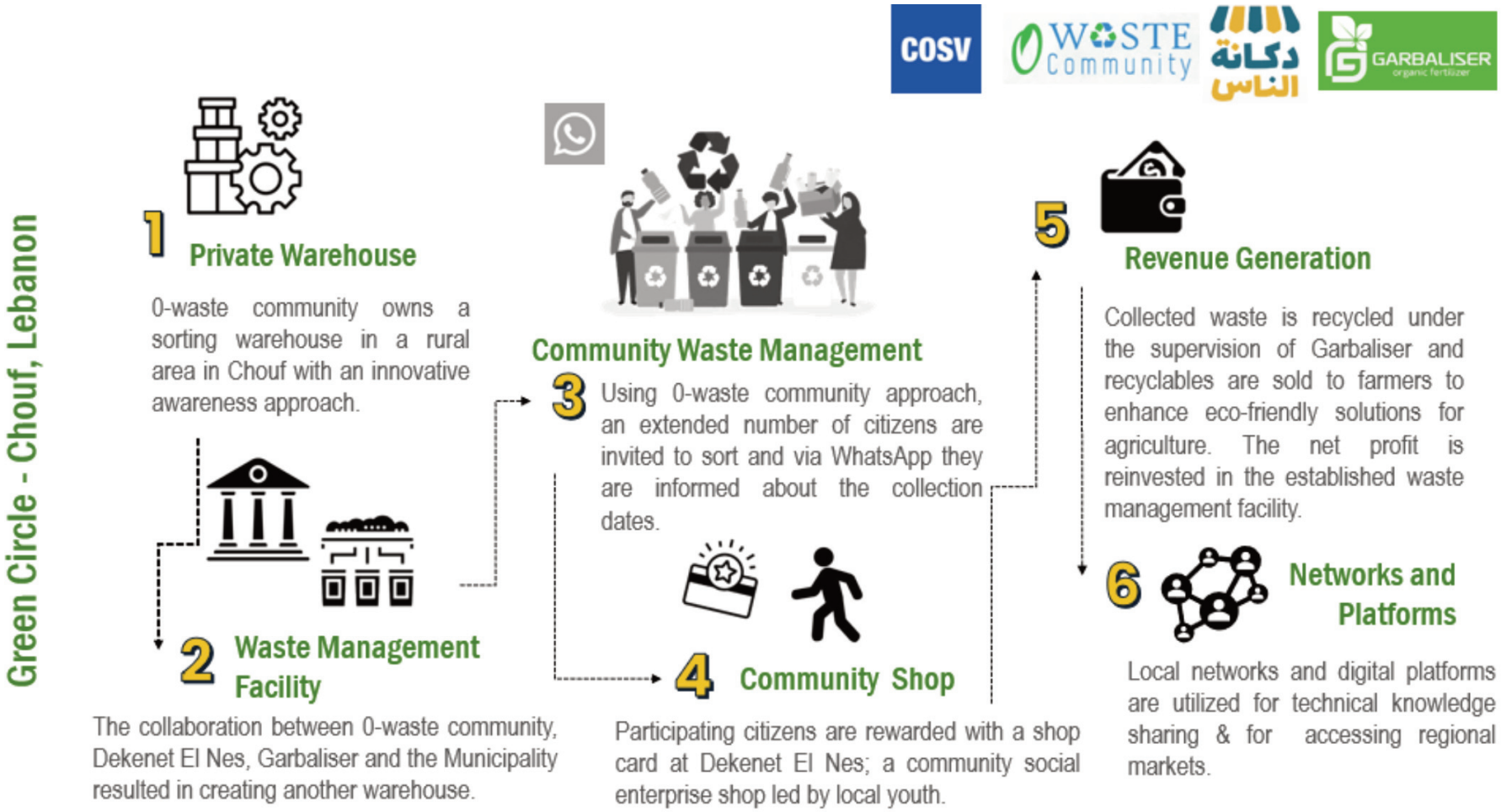
3. Sales of various products offered by Dekenet El Nes within the Bshatfin project, including detergents, oils, tahini, and confectionery.

To enhance efficiency and reduce costs, the project will undergo a strategic realignment of responsibilities, with Dekenet El Nes employees taking on more central roles. This shift aims to streamline human resource expenses, consolidating staffing from five to four positions and reallocating certain tasks previously handled by the project coordinator. As part of its growth strategy, "Green Circle" has set an ambitious goal to increase sorting checkpoints by 5% each month. This expansion will boost revenue streams and broaden the project's impact to encompass all households and small businesses within the village. The ultimate vision is to transform Bchatfin into a zero-waste community.

Looking ahead, the project anticipates additional funding to activate essential initiatives, notably the implementation of a data management system and necessary hardware. This system will be vital for tracking household participation, assigning reward points based on compliance with project guidelines, and supporting data analysis to assess the project's social impact comprehensively. The Green Circle project shows tremendous potential as a model for waste sorting and sustainability, drawing interest from neighboring villages. All three partner organizations are committed to establishing this initiative as a replicable success across Lebanon, demonstrating its viability for broader application and transformative impact.

Figure 2: The Green Circle Model

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.



The Agricultural Revival Program (ARP)

THE MODEL

From farmers to food processors and customers. The Agricultural Revival Program (ARP), launched by the National Development Committee (NDC) in July 2020, aims at strengthening Lebanon's agricultural sector amidst severe economic challenges. The ARP identified a critical issue: Lebanon's heavy reliance on imported strategic agricultural products. To counter this, the ARP developed a long-term strategy focused on increasing domestic productivity, especially among small and medium scale farmers. Through training, knowledge sharing, and technical skill development, the program seeks to enhance food security, boost family incomes, and promote sustainable farming practices.

Dr. Hafez El Zein, the founder of NDC, says that the ARP model is designed to establish an economic safety net for farmers by providing free seeds for planting and a guaranteed purchase of the crop. It also offers technical support and a standardized crop-care process to maximize yield potential. This model aims to promote sustainable food production systems and implement resilient agricultural practices to boost productivity. By employing high-yield crop varieties and a reliable crop-care protocol, the model seeks to make farming sufficiently profitable to attract more farmers. To help preserve genetic diversity in seeds, NDC partnered with the Lebanese Agriculture Research Institute (LARI) to secure the latest hybrid varieties, tested and certified by the institution. Additionally, they collaborated with Nebras Vocational Institute, which provides essential training and supervision throughout the project.

With the support of SJIP, the partners received a $40,039.05 grant to expand wheat and barley production and create agriculture hub in the south region of Lebanon. This project has now grown eightfold, with farmers replanting more and reaching a point where they can retain 40% for replanting and allocate 60% for consumption. The SJIP enabled us to purchase the harvest from our partner farmers, which, though modest at the time, amounted to 16 tons, says Dr. Hafez. Additionally, we acquired a few small-scale machines and two transport vehicles, and we undertook infrastructure improvements and created a model farm in Nabatieh area. These advancements motivated us to move into another phase of the project's exponential expansion.

SERVICES AND ENHANCING THE VALUE CHAIN

The Agricultural Revival Program (ARP) presents a distinctive value proposition by tackling critical areas of agricultural development, community empowerment, and national resilience. The value chain that starts with the farmers and ends at the customers' side was already created before the SJIP. Dr. Hafez explains that the model is structured around an annual vision, where each year we set a new baseline and build upon it, expanding in all directions. We establish mutually beneficial agreements with local farmers, providing them with high-quality seeds and grains. The Lebanese Agricultural Research Institute (LARI) plays a key role here, testing and ensuring the quality of these grains. Additionally, we offer training and supervision, with support from Nibras Vocational Institute, which assists in delivering these training programs on-site at the model farm. We also guarantee to purchase the farmers' crops, paying for them with processed food products which they can market and sell within their communities. This partnership model with farmers creates a strong,

collaborative framework. By pooling resources, we conduct group purchases of fertilizers and supplies, as well as collective processing of food products within the model farm, enabling everyone involved to sell the products and generate revenue.

Below is a detailed overview of the model's unique features:

Accelerated Growth in Domestic Production: The ARP is strategically designed to stimulate rapid growth in the domestic production of key agricultural crops, aiming to reduce import dependency, ensure a stable food supply, and strengthen the resilience of the nation's agricultural sector.

Enhancement of Food Security: By increasing local production, the ARP makes a direct contribution to food security. It aims to establish a sustainable and reliable supply of essential food items, reducing the nation's vulnerability to global market disruptions.

Creation of a National Strategic Reserve: With a focus on developing a strategic reserve covering 25-50% of annual consumption, the program adopts a proactive approach to crisis preparedness. This reserve serves as a safety net during economic downturns, natural disasters, or geopolitical challenges, ensuring food accessibility for the population in times of need.

Empowerment of Rural Communities: A central feature of the ARP is the empowerment of rural farmers, with each village treated as an independent production, service, and local marketing unit. The Model Farm serves as a crucial training hub for farmers, offering a comprehensive example of sustainable agriculture by demonstrating both effective planting techniques and the production of organic fertilizers to enhance the farming process. By prioritizing the enhancement of small-scale farming productivity through training, knowledge sharing, and technical skill-building, it lays a solid foundation for sustainable growth in the agricultural sector.

Efficient Surplus Centralization and Distribution: By pooling surplus agricultural products from local communities, the ARP facilitates organized and efficient distribution. This system not only prevents excess production waste but also enhances strategic alignment with regional and national demands. Exporting surpluses further support economic diversification and generate foreign exchange.

Support for Economically Vulnerable Groups: The ARP positions itself as a social and economic development initiative by focusing on supporting those facing economic hardship. This aligns the program with broader socio-economic goals, contributing to poverty alleviation and enhancing community welfare.

HYBRID RESOURCES

The program empowers rural communities by treating each village as a self-sustaining unit that drives economic development and supports residents facing hardship. The ARP adopts a Hybrid Resource Model that primarily relies on market activity to sell agricultural products. However, its structure aligns more closely with the social cooperative (SC), due to its collaborative decision-making process and the redistribution of

net profits across the value chain. This inclusive approach ensures that both farmers and stakeholders benefit directly, while profits are reinvested to enhance efficiency, emphasizing long-term sustainability.

IMPACT AND SUSTAINABILITY

By the end of the SJIP, the ARP had successfully achieved several goals, including the establishment of a model farm to offer hands-on training for farmers. They have successfully contacted many new farmers and expanded the planted and harvested areas to reach many villages. During the 2022-23 season, the ARP collaborated with 59 farmers to cultivate 12,500 kg of wheat, barley, chickpeas, vetch, and lentils. The harvest totaled 118 tons, with 18.5 tons designated for animal feed, 54 tons reserved for replanting in the 2023-24 season, and 45.5 tons processed into food products such as freekeh (green germ wheat), bulgur, peeled wheat, and flour.

These food products were distributed through various channels: direct sales to the public, partner marketing organizations, and humanitarian agencies providing food rations to vulnerable families. The table below outlines the progression of activities, along with relevant indicators.

Activity	At the Start of SJIP	At the End of SJIP
Number of new farmers contracted	10	59
Planted local area (hectares)	9.2	54
Number of planted seeds (kg)	12,500	54,000
Harvest (kg)	16,200	118,000
Areas covered	6	11

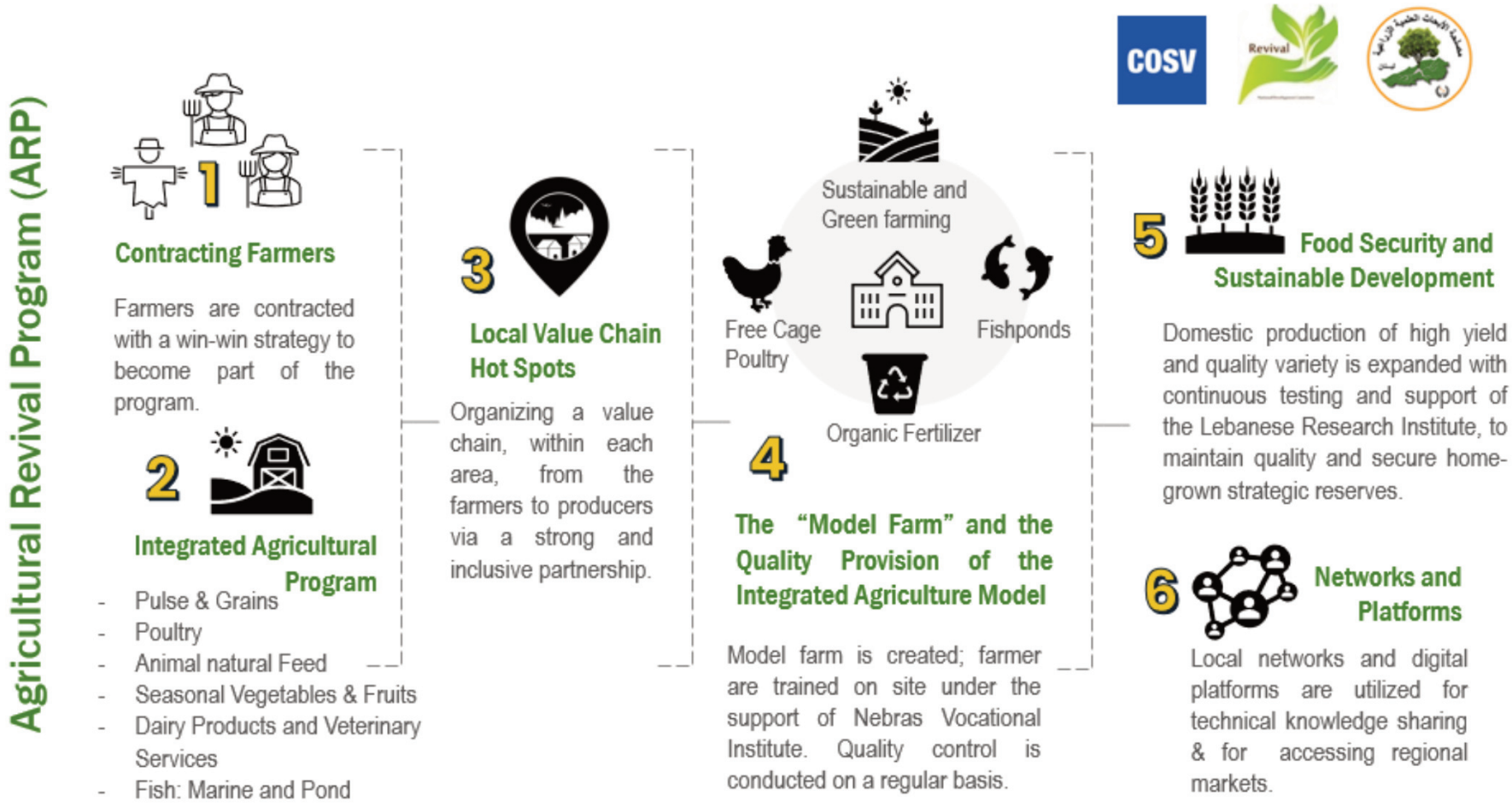
The ARP sustainability plan is centered on optimizing the efficiency and impact of its model by promoting inclusive decision-making and equitable profit redistribution. Dr. Hafez reveals that key strategies include advocating for government subsidies to prioritize domestically produced flour, enhancing the model through market-responsive adaptations and targeted training, and improving the value chain through transparent communication and profit-sharing mechanisms. Additionally, the plan emphasizes crop diversification to expand processing into food products, alongside local and international market expansion, impact monitoring, community engagement, and transparent financial management.

A central advocacy goal is to collaborate with the public and media to reallocate government subsidies, shifting them from imported flour to domestically produced grains in the program. Specific objectives include:

1. Utilizing locally grown crops to produce food derivatives marketed as healthy, domestically sourced nutritional options, focusing primarily on Lebanese markets and, when needed, on export markets.
2. Gradually increasing the share of raw material crops processed into food products, targeting approximately 80% by 2027, equating to over 10,000 tons, to make the program increasingly self-sustaining through revenue from product sales.

Figure 3: 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.



NETWORKING AND DIGITAL PLATFORMS

Networking is an essential tool for enterprises, as it enhances their capacity to adapt, innovate, and sustain growth in competitive markets. Strong networking capabilities enable firms to forge strategic partnerships, access new markets, and share knowledge, which are crucial during periods of uncertainty or economic volatility. These relationships provide a platform for resource sharing and collaborative problem-solving, thereby boosting organizational resilience (Wegner, Foguesatto, & Zuliani, 2023). Furthermore, networks play a key role in fostering dynamic capabilities, allowing businesses to reconfigure their strategies and operations in response to shifting market conditions. This adaptability is particularly valuable for small and medium-sized enterprises (SMEs), which benefit from both the stability of strong ties and the diverse opportunities provided by weak ties (Martínez-Pérez & Beauchesne, 2023).

Both collaborative models have shared their networks, expertise, and experience to ensure the success of this partnership. Nibal says: through our network, we linked the concept of the project directly with the local community of Bchatfin, who were highly motivated to tackle the waste problem with us. The village committee took on a significant role, committed to transforming their community into a zero-waste village. With their support, we fostered a deep sense of environmental responsibility and citizenship among all villagers. Joining SJIP allowed us to strengthen partnerships, as we recognized the need not only for new initiatives but for synergy among existing ones to amplify impact. We wanted to unify these initiatives toward a shared, larger vision. During the program, we have also connected with other collaborative models like Regenerate Hub, Baskinta Baytouna and Cezars projects. Meeting with them and sharing experiences and data have enriched our project and created feedback that we utilized to enhance our activities.

To achieve meaningful change at the grassroots level, Dr. Hafez says: NDC believes that a broad network of partner farmers, throughout Lebanon, should integrate their efforts into a common long-term plan for sustainable agricultural development. To that effect, NDC acted with the conviction that for agricultural development to be sustainable, it must involve a large coalition of organizations and coops operating at the locality level, who have active field operations and can support in duplicating the model and in accessing local markets. Dr. Hafez explains that based on our networks and connections we formed collaboration groups that opened the door for farmers and small producers to connect and work with us. Those groups included Khiyam agricultural coop, Sarada agricultural coop in Wazzani, AWFA organization in Ein Ebel and Bent Jbeil, Rural Produce coop, Kfar Sir, Nabatiyeh, Islamic orphanage home in Souk Elkhan – Hasbaya, Dardara spring irrigation agricultural coop and Peace generations organization in Rachaya area, Houla agricultural coop, Rashaya Environmental committee organization and Culture and development coalition in Hasbaya,

Two-springs development organization in Dhaniyeh and the Lebanese Association for Urban Agriculture in Baalbek.

COSV shared the outcomes of the SJIP and presented the collaborative models through both in-person and virtual meetings, significantly enhancing visibility for these initiatives. This exposure created valuable opportunities for individual enterprises. For example, the 0-Waste Community secured funding and was incubated under the ILO-funded EMDAD project, along with other enterprises supported by the SEE Change project.

Digital platforms like Zoom and Microsoft Teams have revolutionized how enterprises operate by enhancing connectivity, fostering collaboration, and streamlining communication. These platforms facilitate real-time interactions, enabling organizations to maintain productivity regardless of geographical barriers (Zeng, Wang, & Bai, 2024). Beyond internal operations, digital platforms play a critical role in connecting enterprises regionally and globally, allowing businesses to share best practices, build strategic partnerships, and tap into diverse market insights. This connectivity fosters innovation, accelerates decision-making, and strengthens the overall business ecosystem, making digital platforms indispensable for modern enterprises (Smith, 2023).

COSV has been instrumental in using digital platforms to facilitate knowledge-sharing between enterprises and create substantial opportunities for partnerships among SJIP participants, both locally and regionally. Leveraging its network, COSV established a peer exchange program, organized seminars, and developed an international channel through the Social Enterprise World Forum (SEWF), enabling participants to connect with enterprises and donors at regional and global levels.

In collaboration with Catalyst 2030's Lebanon's chapter, COSV organized a peer exchange program for participants across various countries. The program aimed to establish a dynamic knowledge-sharing environment for social enterprises, providing an online space for discussions on Sustainable Development Goals (SDGs), related activities, challenges, policies, and more. Five facilitators with a team of reports led five groups, each focusing on a specific SDG, through three online sessions per group. The online sessions were organized using Zoom with immediate translation, and covered topics related to defining social entrepreneurship, evaluating collaboration among MENA region social enterprises and local development authorities, and recommending strategies to promote SDGs within the available legal frameworks.

With the support of Catalyst 2030, the program included enterprises from Lebanon, Syria, Palestine, Yemen, Jordan, Egypt, Greece, Tanzania, Italy, Kenya, South Africa, and the UK. Ultimately, the initiative resulted in a policy paper that underscores the essential role of social entrepreneurship in advancing SDGs in the MENA region. Key recommendations made by participating entrepreneurs include fostering collaboration and networking among social entrepreneurs across the region. To achieve this, platforms, conferences, and events should be established to promote partnerships, knowledge-sharing, and resource mobilization, enabling social entrepreneurs to learn from one

another and access essential resources. These efforts would facilitate cross-border knowledge exchange, access to global markets, and funding opportunities, amplifying the impact of social enterprises regionally.

The program fostered collaboration among enterprises within the same country and across borders. Coming from Yemen, Faten Sultan Abdulaziz and Maha Awn found common ground in promoting peace and development, leading to joint initiatives. Cross-border exchanges between Nova Scotia Parent Cross-Cultural Organization in Jordan and Canada, led by Samar Al Zeer, and Nibal Dahouk's 0-Waste Community facilitated discussions on cultural issues and conflict resolution. Furthermore, John Skikuku from Kenya, Dr. Harez, and Ali Assaf from Lebanon shared insights on climate action and sustainable agriculture, exchanging best practices and lessons learned to enhance regional impact. Ziad Al Daoud, from Jawa in Syria, was inspired by the community engagement practices implemented by Dekenet El Nes and the 0-Waste Community. Motivated by their success, he decided to adopt similar approaches in launching their own community-based project, aiming to foster greater local involvement and sustainable development.

Dr. Hafez emphasized the importance of strong coordination and partnerships among Lebanon, Syria, Jordan, and Iraq to improve the quality of grains and pulses in the region. Through the participation of representatives from Jordan, he successfully facilitated regional collaboration with the Arab Group for the Protection of Nature (APN), which operates in both Jordan and Palestine. This partnership enabled the exchange of information and contacts, linking ARP with Jordanian farmers to enhance their agricultural practices and lay the groundwork for joint projects being prepared.

COSV leveraged its network, partnering with the Arab Foundations Forum (AFF) to host a seminar focused on the role and impact of collaborative models in Lebanon, particularly for marginalized groups in rural areas. The seminar featured COSV's social economy team and highlighted initiatives like Green Circle, ARP, and other incubated collaborative models. This event served as an interactive platform for participants to explore activities, challenges, and opportunities, while also fostering connections. Through the network of AFF, Dr. Hafez from ARP was later able to connect with suppliers in Egypt and are discussing the possibilities to procure specific seed varieties, that can strengthen ARP's supply chain. Given the current situation in Lebanon, ARP is still operating in North Lebanon and in Chouf areas, while hoping the war to end to be able to resume operations in the South.

COSV showcased its collaborative models and methodologies for supporting and connecting social enterprises during seminars at the Saint Joseph University of Beirut and the Holy Spirit University of Kaslik. These sessions not only introduced the activities and the structure of the collaborative models but also emphasized the critical role of designing collaborative frameworks within the universities' incubation programs. The seminars highlighted the importance of fostering innovation and entrepreneurship by integrating these models into academic environments, helping to prepare students and entrepreneurs for real-world challenges in value chain development.

COSV has also partnered with the Social Enterprise World Forum (SEWF) to facilitate global verification for social enterprises. In this role, COSV acts as a verification partner, enabling participating enterprises to access platforms like Good Market. This platform enhances visibility and offers enterprises opportunities to connect and trade internationally. To date, five enterprises supported by COSV have obtained global verification. Recently, COSV, with SEWF's support, developed communications materials shared on SEWF's blog to showcase the resilience and efforts of these enterprises amid the challenges of Lebanon's war. This increased visibility aims to attract international support and donor funding, ultimately benefiting both the enterprises and displaced communities in Lebanon.

CONCLUSIONS AND RECOMMENDATIONS

Despite Lebanon's political fragmentation and prolonged financial crisis, as well as a dominant profit-driven culture, the two case studies reveal the transformative potential of collaboration. They demonstrate how partnerships can create sustainable value chains in specific sectors by treating the community as a partner rather than a client. The case studies also show how individual partners can leverage their expertise and networks to strengthen the collaboration, expand operations, and enhance long-term sustainability and growth opportunities, proving that cooperation can thrive even in challenging environments.

Furthermore, the two presented cases provide valuable frameworks for addressing waste management and agricultural challenges in the SEMED region. Green Circle's community-driven waste management approach, which integrates recycling and organic fertilizer production, can be adapted to countries like Tunisia, Egypt, and Jordan by fostering public-private partnerships, utilizing underutilized municipal land, and incentivizing household participation through reward systems. By replicating Green Circle's circular economy model, SEMED countries can reduce landfill waste, promote sustainable agriculture, and encourage local enterprises to invest in eco-friendly initiatives.

The ARP model, which strengthens local agricultural value chains by providing farmers with free seeds, guaranteed purchase agreements, and technical training, offers a replicable strategy for SEMED nations facing food security and economic challenges. By fostering cooperative networks among farmers, research institutions, and local processors, governments can enhance productivity and market access while reducing reliance on imported crops. ARP's model farm, serving as a hands-on training hub, can be duplicated to promote the best agricultural practices across the region.

On the other side, International NGOs like COSV play a crucial intermediary role by connecting enterprises that might otherwise struggle to establish cross-border relationships. This facilitates knowledge sharing, allowing businesses to learn from each other's experiences and solutions to common challenges. Such connections open doors for collaborations that can strengthen both local and regional value chains, driving innovation and enhancing the resilience of enterprises in competitive markets.

Based on the cases discussed, the two collaborative models provide a set of policy recommendations that can inspire and guide governments, donors and policy makers:

- Governments play a crucial role in fostering enterprise collaboration, particularly through the strategic use of regulatory frameworks and certifications. By offering tax incentives for joint initiatives focused on innovation, sustainability, or regional development, they can encourage

partnerships that drive economic growth. However, to truly unlock the potential of regional markets, governments must prioritize revisiting and modernizing regulatory frameworks. Streamlining regulations and promoting standardized certifications are essential steps in facilitating market access for producers. These measures not only ensure compliance and quality assurance but also enable producers to seamlessly operate across regional borders. Furthermore, governments should reevaluate trade agreements to establish the necessary infrastructure that supports cross-border trade, thereby strengthening regional integration.

- Governments should facilitate access to underutilized resources, such as rural land, which can play a pivotal role in scaling production and fostering innovation. Providing avenues for enterprises to collaborate with research hubs and incubators can reduce barriers to innovation, enabling smaller enterprises to partner effectively with larger organizations.

- 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.

- 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.

- The collaborative models discussed in this context highlight the immense potential of pooling resources, such as human capital, grants, in-kind support, and market income, to foster value chain creation and strengthen the overall ecosystem. In a highly interconnected and competitive global market, relying on a single source of funding or support can significantly limit productivity and jeopardize long-term sustainability. Therefore, it is crucial for enterprises to explore strategic

collaborations that allow them to diversify their resource base. This approach could involve partnerships with other local or regional businesses, development organizations, or even government bodies. By pooling resources, whether financial, technical, or human enterprises can reduce the risks associated with reliance on one funding stream and enhance their collective ability to innovate and adapt.

- Adopting UNIDO's cluster development approach (UNIDO, 2020) is instrumental. This approach emphasizes fostering cooperation among enterprises within a geographical concentration, while leveraging their shared resources, challenges, and opportunities. By promoting joint actions such as bulk purchasing, shared innovation projects, and collaborative marketing efforts, clusters can improve collective efficiency and competitiveness and can enhance visibility and attract regional partnerships. For example, through cluster development, UNIDO's work with the Argan Oil Cluster in Morocco under the PAMPAT program, which supported women's cooperatives in complying with food safety laws while preserving traditional methods has led to increasing the number of certified producers and allowed cooperatives to boost their income and competitiveness. Thus, we recommend applying the clusters approach to strengthen local ties and between small enterprises and target larger regional buyers or suppliers.

- The international community and donors should prioritize the development of programs and proposals that foster value chain creation, particularly in emerging and underserved markets. This approach is essential for driving inclusive economic growth, enhancing competitiveness, and promoting regional integration. We recommend adopting similar frameworks, like the collaborative models outlined in this policy paper tailored to local contexts, to build robust value chains that drive sustainable development. Moreover, these initiatives should encourage joint applications from multiple countries within the same region, facilitating cross-border collaboration and knowledge sharing. By providing both financial support and technical assistance, such programs can enable local stakeholders to overcome common challenges, such as infrastructure gaps, limited market access, and insufficient technical capacity.

- Integrating Environmental, Social, and Governance (ESG) principles into business operations can significantly enhance regional value chains by improving sustainability and competitiveness (Wurzer , et al., 2024). ESG compliance helps companies reduce environmental impact through better waste management, energy efficiency, and sustainable sourcing. It also opens doors to attractive financing options for green technologies and allows businesses to meet increasing regulatory demands, such as the EU's Corporate Sustainability Reporting Directive. By proactively adopting ESG frameworks, enterprises can build resilience, foster stakeholder trust, and position themselves as string stakeholders in sustainable value chain practices.

- 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.

Aikins, E. (2020). Certification as a Business Strategy: The Case of Corporate Sustainability Standards. *Journal of Business Ethics,* 164(3), 505-523.

Ayadi, R. (2024). *Global Value Chains in the Euro-Mediterranean: Opportunities and Challenges. EMEA Platform.* Retrieved from euromed-economists.org.

Bag, S., Dhamija, P., Bryde, D., & Giannaki, M. (2021). Sustainable supply chain management and the circular economy: A systematic literature review and future research directions. *Journal of Cleaner Production,* 278, 123882.

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.

Bedos, N., & Calvo, G. (2023). Innovative Sustainable Economy Mission Governance Projects Reflect on Governance Perspectives and Synergistic Cooperation at MedCat Partners Forum. *Interreg Euro-MED.* Retrieved from innovative-sustainable-economy.interreg-euro-med.eu.

Boström, Micheletti, & Oosterveer. (2015). The sustainability agenda in international trade: Harnessing the potential of value chains. *Global Environmental Politics,* 1-24.

Boubellouta, B., & Kusch-Brandt, S. (2019). Waste management performance indicators for sustainable development: A review. *Sustainable Development,* 27(5), 845-857.

Brandenburg, M., & Rebs, T. (2021). Sustainable supply chain management: A modeling perspective. *Annals of Operations Research*, 299(1), 87-103.

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.

Dangelico, R., & Vocalelli, D. (2022). Green marketing: An analysis of definitions, dimensions, and relationships with stakeholders. *Business Strategy and the Environment,* 31(1), 123-138.

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.

EBRD. (2020). *Supporting Egypt's SME Sector for Inclusive Growth.* European Bank for Reconstruction and Development.

El Basyouny, K. (2020). Renewable Energy in the Euro-Mediterranean Region: Trends and Policy Challenges. *Energy Policy,* 138.

Ellen MacArthur. (2022). *Circular Economy in the Mediterranean: Pathways and Challenges.*

European Commission. (2020). *Sustainable food systems and the role of the EU in the Mediterranean.*

European Institute of the Mediterranean (IEMed). (2023). *European Institute of the Mediterranean Yearbook: Multi-Level Crisis and Economic Resilience.* Retrieved from iemed.org.

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.

Gereffi, G., & Fernandez-Stark, K. (2016). Global value chain analysis: A primer. *Journal of international business studies,* 535-554.

Global Sustainability Index (GSI). (2023). *Annual sustainability performance report.* Global Sustainability Index Foundation.

IMF. (2019). *Financial Inclusion and SME Development in Jordan.* International Monetary Fund.

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.

Kader, A., & Jaafar, M. (2020). Agricultural Value Chains in the Euro-Mediterranean Region: Current Challenges and Opportunities. *Mediterranean Journal of Economics, Agriculture and Environment.*

Kaplinsky, R., & Morris, M. (2001). A handbook for value chain research. *International Journal of Technology Management & Sustainable Development,* 9-14.

Martínez-Pérez, M., & Beauchesne, S. (2023). Entrepreneurial networks, entrepreneurial orientation, and performance of SMEs: Dynamic capabilities as the missing link. *Journal of Innovation and Entrepreneurship.*

Massoud, M., El Fadel, M., & Mohtar, R. (2019). Waste management in Lebanon: A review and outlook. *Waste Management & Research,* 37(1), 1-12.

Matten, D., Crane, A., & Windsor, D. (2018). Cross-border environmental governance: Challenges in the Euro-Med region. *Journal of Environmental Policy & Planning,* 824-837.

MedCIRC. (2023). *Supporting circular economy in Mediterranean SMEs: Challenges and solutions.*

OECD. (2021). *Agricultural Policies in Egypt: A Review of the Current Challenges.* Retreived from oecd.org.

OECD. (2021). *Environmental Sustainability and Economic Growth in the Mediterranean.* Retrieved from oecd.org

OECD. (2022). *Improving Waste Management Policies in the Mediterranean: Regulatory Gaps and Harmonization.* Retreived from oecd.org.

Perez, M., & Fernandez, L. (2021). The Role of Regulations in Sustainable Development: An Analysis of the Euro-Med Region. *Environmental Science & Policy,* 118, 12-20.

Pietrobelli, C., & Rabellotti, R. (2011). Global value chains meet innovation systems: Are there learning opportunities for developing countries? *World Development,* 1261-1269.

Rockström, J., Edenhofer, O., Gärtner, J., & DeCle, F. (2020). Planetary boundaries: Exploring the safe operating space for humanity. *Nature Sustainability,* 3(7), 589-595.

Rodriguez, J., Gracia, M., & Benitez, C. (2021). Digital platforms and regional development in sustainable value chains. *International Journal of Sustainable Development & World Ecology,* 169-181.

Saab, N. (2020). Water management challenges in Lebanon and sustainable solutions. *Journal of Environmental Studies,* 15(2), 45-58.

Salem, Z. (2020). Challenges of Sustainable Agriculture in North Africa: The Role of Certification in Market Access. *Mediterranean Agriculture Journal,* 45(2), 89-104.

Smith, A. (2023). Regional Collaboration through Digital Platforms: Building Global Business Partnerships. *Journal of Business Strategy.*

Touboulic, A., & McCarthy, L. (2020). The impact of supply chain sustainability practices on firm performance: A meta-analytic review. *Supply Chain Management: An International Journal,* 25(4), 456-472.

Tukker, A., Emmert, S., & Charter, M. (2021). Transition to sustainable production and consumption: Enhancing regional value chains through collaboration. *Journal of Cleaner Production,* 300,126-135.

UNCTAD. (2023). *Innovative Financing for Sustainable Agriculture: Trends and Implications.*

UNEP. (2021). *Waste Management and Circular Economy in the Mediterranean.* Retreived from unep.org.

UNIDO. (2020). *The UNIDO Approach to Cluster Development.* Vienna, Austria: United National Industrial Development Organization.

Union of the Mediterranean (UFM). (2022). GreenerMED Agenda 2030: Blue and Green Economy for a Sustainable Mediterranean. *UfM Reports.* Retrieved from ufmsecretariat.org.

Vellema, S., Laven, A., Ton, G., & Van Wijk, J. (2020). Enhancing sustainable coffee production through market-based partnerships: The case of the East African Coffee Initiative. *Journal of Sustainable Agriculture,* 34(2), 112-129.

Wegner, D., Foguesatto, C., & Zuliani, A. (2023). Firm performance in uncertain times: the importance of networking capabilities. *Journal of Small Business and Enterprise Development,* 30(2), 369-389.

Worldbank. (2020). *Improving Waste Management Systems in the Euro-Mediterranean Region.*

Worldbank. (2021). *Enhancing Agricultural Competitiveness in the Mediterranean Region.* Retrieved from worldbank.org

Worldbank. (2022). *Agricultural sustainability and standards in the Mediterranean region.*

Wurzer , G., Jerratsch, J., Kulik, L., Borrmann, K., Wiring, R., Staber, G., . . . Gehra, B. (2024). *The Hidden Advantages for Medtech in Europe's ESG Rules.* Boston Consulting Group.

Zeng, Y., Wang, Z., & Bai, R. (2024). The Impact of Digital Platforms on Entrepreneurial Innovation. *Sustainability* 16(10), 3919.

FEMISE

CMCI · 2 rue Henri Barbusse · F-13 241 Marseille cedex 01 · France
+ 33 (0) 4 91 31 51 95 · www.femise.org

ECONOMIC RESEARCH FORUM
منتدى البحوث الاقتصادية

21 Al-Sad Al-Aaly Street, Dokki, Giza, Egypt · PO Box: 12311
+202 333 18 600 · https://erf.org.eg/

IEMed.
European Institute of the Mediterranean

Carrer Girona, 20 · 08010 Barcelona · Spain
+34 93 244 98 50 · https://www.iemed.org/

With the financial support of

MINISTERIO DE ASUNTOS EXTERIORES, UNIÓN EUROPEA Y COOPERACIÓN · aecid · Cooperación Española