PARI
PATHS FOR RURAL INNOVATION

Project ID: 101169803

CSEIs – A new motor for rural innovation

PRELIMINARY OVERVIEW OF EXISTING PROJECTS

Deliverable 2.1

Co-funded by the European Union

Co-funded by the European Union

Project data:	PARI – Project ID: 1011698037
Title:	PRELIMINARY OVERVIEW OF EXISTING PROJECTS
Authors:	F. Martinez and D. Daniele (DIESIS Network)
	Contributions to Chapter 3 from REVES, Östergötland Region, Coompanion Östergötland, ANEL, Gobierno de Navarra, Câmara Municipal de Torres Vedras
Reviewers:	E. Mancinelli and L. Martignetti (REVES), T. Johnson (DIESIS Network)
Dissemination level:	PU

Photo credits and consent notice: To protect the privacy of individuals in accordance with the General Data Protection Regulation (GDPR), all images in which people appear have been made non-identifiable unless the individual has provided their explicit consent to be shown in a recognizable manner.

Photo credits attributed to the PARI project partners.

Acknowledgement of use of AI: *ChatGPT, free version – used on 25 and 26 February and on 8 August 2025 to check the use of English and grammar – All chapters, based on original contents developed by the authors.*

Table of Contents

1. Introduction

1.1 Background and Context

Definition and Concept of Clusters for Social and Ecological Innovation (CSEI)

Clusters for Social and Ecological Innovation (CSEIs) represent a novel and increasingly significant approach to rural development, distinguishing themselves from traditional economic clusters by their inherent dual commitment to social value creation and ecological sustainability. At their core, CSEIs are dynamic networks of diverse, geographically concentrated and interconnected actors. These actors typically encompass a broad spectrum of entities, including social enterprises, traditional businesses, local public authorities, academic and research institutions, and various civil society organisations. Their collaboration is not merely incidental but is purposefully structured to address pressing social and environmental challenges in a defined territory, concurrently fostering sustainable economic activities. This collaborative synergy allows for the emergence of innovative solutions that would be beyond the reach of individual actors operating in isolation. [1]

Unlike conventional industrial clusters, which are primarily driven by the pursuit of economic efficiency, market competition and profit maximisation, **CSEIs are fundamentally rooted in the principles of the social and solidarity economy (SSE)**. This means they emphasise **cooperation over competition**, **democratic governance** and the **reinvestment of surpluses for social or environmental objectives** rather than private gain. **The defining characteristic of a CSEI is its deliberate integration of social and ecological dimensions into its operational model and strategic objectives**.

For instance, a CSEI might focus on developing circular economy solutions for local waste management, simultaneously creating employment opportunities for marginalised groups. Or, it could involve a network of organic farmers, local food processors, and community-supported agriculture (CSA) initiatives working together to build a resilient, sustainable food system that also enhances social cohesion and provides healthy, affordable food to the community.

The theoretical underpinning of CSEIs draws from **an evolved understanding of cluster theory, where the emphasis shifts from purely economic agglomeration to a more holistic view that includes social capital, trust and shared values as critical drivers of innovation and resilience**. In a CSEI, the 'cluster' functions as a collaborative ecosystem where resources, knowledge and expertise are pooled. This collective action facilitates the development of new products, services and business models that are not only economically viable but also intrinsically linked to social equity and environmental protection. For example, the PLOUCS initiative in France, structured as a Pôle Territorial de Coopération Économique (PTCE), exemplifies this by fostering cooperation among SSE players, local authorities and universities to address socio-economic challenges in the Landes department. Its activities, such as the SSE Project Incubator and youth cooperatives, are designed to build capacity and strengthen the social fabric, illustrating how social economy principles are embedded in the cluster's operational model. Similarly, GOEL Bio, an Italian group of agricultural cooperatives, explicitly states its commitment to ethical practices, fighting organised crime, and fostering community and redemption, alongside its organic farming activities. This demonstrates a clear alignment with SSE principles, where economic activity serves broader social and ethical goals.

The **CSEI model thus represents a powerful framework for fostering integrated, place-based development that responds to the complex, interconnected challenges of the 21st century**.

Importance of CSEIs in Rural Development

Rural areas across Europe face a unique and complex array of challenges that threaten their vitality and long-term sustainability. These include persistent issues such as depopulation, particularly among younger generations seeking opportunities in urban centres; an aging population, leading to increased pressure on social services and a shrinking workforce; limited access to essential services like healthcare, education and digital infrastructure; and a pervasive lack of diverse and high-quality employment opportunities, often leading to economic stagnation and social exclusion. Beyond these socio-economic hurdles, rural landscapes are frequently at the forefront of environmental degradation, with intensive agricultural practices, deforestation and biodiversity loss posing significant threats to their ecological integrity and the provision of vital ecosystem services. The increasing frequency and intensity of extreme weather events, driven by climate change, further exacerbate these vulnerabilities, impacting agricultural productivity, water resources and overall rural livelihoods. [2]

In this challenging context, Clusters for Social and Ecological Innovation (CSEIs) offer a particularly promising and transformative pathway for a just and green transition in rural Europe. By promoting a more inclusive, resilient and sustainable model of development, CSEIs can play a pivotal role in revitalising rural economies, creating new and meaningful jobs, and significantly improving the quality of life for rural residents. Their strength lies in their ability to address multiple challenges simultaneously through integrated solutions. For instance, a CSEI focused on renewable energy might not only generate clean power but also create local jobs in installation and maintenance, provide energy independence for the community, and retain economic value in the region. This contrasts sharply with traditional, often extractive, economic models that tend to drain resources and talent from rural areas.

The transformative impact of the Bałtów "Jurassic" cluster in Poland emerged from a region grappling with a staggering 35% unemployment rate following the decline of its traditional steel industry, coupled with a severe lack of basic infrastructure and social services. Rather than succumbing to these challenges, the community, through a grassroots initiative, leveraged a unique local asset – dinosaur tracks – to pivot towards a new economic model. By establishing the first Jurassic Park in Poland, the Bałtów CSEI not only created a thriving tourism hub but also generated a substantial number of new jobs across various sectors, from hospitality to retail, and fostered a renewed sense of community pride and identity. This example vividly illustrates how a CSEI can act as a powerful engine for economic diversification and social regeneration, turning a local disadvantage into a unique competitive advantage.

Similarly, the PLOUCS initiative in France directly confronts unemployment and precariousness in the rural Landes department. As a Pôle Territorial de Coopération Économique (PTCE), PLOUCS supports the development of the social and solidarity economy (SSE) by incubating new social enterprises, providing management consultancy and training, and organising youth cooperatives. By fostering social entrepreneurship and building local capacity, PLOUCS creates alternative employment pathways and strengthens the social fabric of the region, demonstrating a proactive approach to addressing rural economic fragility. These concrete examples underscore the profound potential of CSEIs to address the needs and

challenges of rural communities, offering a powerful, community-led alternative to conventional, often top-down, development strategies. They highlight how local assets, combined with collaborative innovation and a commitment to social and ecological values, can drive significant and sustainable positive change in rural landscapes. [3]

Objectives and Scope of the Research

This research aims to provide a comprehensive and nuanced analysis of existing experiences of Clusters for Social and Ecological Innovation (CSEIs) in rural areas across Europe. The overarching aim is to illuminate their transformative potential and to extract actionable insights for policy-makers, practitioners and communities interested in fostering sustainable and inclusive rural development. To achieve this, the research is guided by several primary objectives:

- **To develop a clear and nuanced understanding of the CSEI concept**. This involves moving beyond generic definitions to explore the multifaceted nature of CSEIs, drawing upon both established theoretical frameworks (such as cluster theory, social economy principles and innovation studies) and practical examples from the field. The goal is to articulate what constitutes a CSEI, how it differs from other forms of economic or social organisation, and its unique value proposition in rural contexts.
- **To identify the key characteristics, success factors and challenges of CSEIs**. This objective focuses on dissecting the operational mechanics of CSEIs, examining the elements that contribute to their effectiveness, and recognising the obstacles they encounter. This includes analysing their governance structures, stakeholder engagement models, funding mechanisms, and the types of innovations they generate. [4]
- **To conduct an in-depth comparative analysis of selected case studies from the PARI project**. A central component of this research is the detailed examination of diverse CSEIs documented in the PARI project. This comparative approach will highlight both the commonalities in their underlying principles and the divergences in their strategic approaches, contextual adaptations and measurable impacts. By analysing initiatives from different national and regional contexts (Belgium, France, Germany, Italy, Poland, Portugal, Spain and Sweden), the research aims to identify transferable lessons and good practices.
- **To draw policy-relevant conclusions and provide actionable recommendations**. This research seeks to inform policy development and implementation. By synthesising findings from the theoretical review and case study analysis, the research will formulate concrete recommendations for supporting the creation, development and scaling-up of CSEIs in rural areas across Europe. These recommendations will address aspects such as policy frameworks, funding mechanisms, capacity building and ecosystem development.

The scope of this research is intentionally focused, primarily drawing its empirical evidence from the rich collection of case studies and experiences gathered during the PARI project. This includes detailed analyses of initiatives from Belgium (Ceinture Alimentaire Charleroi Métropole), France (PLOUCS), Poland (Bałtów), Portugal (Encosta-Ecosystem, SmartFarmCoLab), Spain (RURALLINK) and Sweden (Egnahemsfabriken, Offerdal, Väderstad, Röstånga). To provide a broader European perspective and enrich the conceptual understanding, the research also incorporates insights from other relevant examples, such as the GOEL Bio cooperative in Italy and the Silicon Vilstal innovation platform in Germany. The research systematically examined the social, economic and environmental dimensions of CSEIs, paying particular attention to their role in promoting social inclusion, fostering circular economy principles, and driving community-led local development. It will delve into how these initiatives contribute to job creation, enhance local resilience, preserve natural and cultural heritage, and improve the overall quality of life in rural communities. The analysis maintains a strong emphasis on specific examples and

concrete actions taken by these CSEIs, avoiding generalised statements to ensure the document is rich in detailed information and practical insights. [5]

1.2 Methodology

Research Approach and Design

This research employs a rigorous qualitative, case-study-based approach, meticulously designed to analyse the intricate and multifaceted nature of Clusters for Social and Ecological Innovation (CSEIs) in diverse rural contexts across Europe. The design is primarily descriptive and analytical, aiming to provide a rich, in-depth understanding of how these clusters operate, the foundational principles that guide their actions, and their tangible impacts on local communities and environments. By focusing on real-world examples, the research endeavours to transcend abstract definitions and instead vividly illustrate the practical application and dynamic evolution of CSEI concepts in varied socio-economic and geographical settings. This approach allows for the capture of nuanced details, contextual specificities, and the complex interplay of factors that contribute to the success or challenges faced by these initiatives.

The selection of case studies for this research is purposive, meaning they were chosen deliberately to maximise the relevance and depth of the analysis. The **primary source of these case studies is the extensive mapping exercise undertaken by the PARI project**, which systematically identified and documented CSEI practices across a range of European countries. The aim of the mapping phase was to ensure a thorough understanding of the landscape by applying a set of general criteria to determine whether the selected practices aligned partially or fully with the characteristics of a CSEI.

A set of **general criteria** was applied, to assess each practice's alignment with the CSEI features and objectives. These criteria focused on the following aspects:

- **Geographical scope/coverage**
- **Legal status**
- **Maturity level**
- **Membership**
- **Governance style and management**
- **Field of operations**
- **Sectoral representation**
- **Contribution to inclusion, employment and ecological significance**

CRITERION	DESCRIPTION
Geographical scope/coverage	The focus is on whether the practice operates physically in a clearly defined rural area, or in a periurban/rural transition zone (an area blending urban and rural characteristics), or if the practice is rural "in its thematic scope", regardless of its specific location.
Legal status	This criterion assesses the formal legal standing of the practice, distinguishing those with official recognition (e.g. registered associations, cooperatives and social enterprises) from those operating under lighter, informal arrangements such as memorandums of understanding or verbal agreements.
Maturity level	Initiatives are classified by their 'age' to understand development stages and stability: early-stage (up to 3 years), established (4 to 10 years), and mature (more than 10 years).

CRITERION	DESCRIPTION
Membership	The focus is on understanding the types of actors that are involved in the practice alongside social economy entities. Possible membership configurations include collaborations between SEEs and: service providers, academic institutions, businesses, public bodies, or diverse combinations thereof. The aim is to capture the breadth of multi-actor involvement and partnership geometries, noting emerging or atypical configurations for further study.
Governance style and management	The analysis distinguishes between community-led initiatives (grassroots-driven), network/platform models (multi-actor collaborations through intermediary organisations), and cooperative or multi-stakeholder governance (formalised collective decision-making among diverse groups), to clarify leadership and organisational dynamics, and to assess levels of democratic participation, transparency and inclusivity.
Field of operations	The focus is on understanding the purpose or orientation of the CSEI, namely whether the practice pursues general public interest objectives (fully or partially) or focuses mainly on member benefits or self-interest.
Sectoral representation	The cases reflect diverse sectors relevant to rural development, including food systems, housing and local services, tourism and cultural heritage, and innovation sectors such as digital and green technologies, ensuring broad thematic coverage.
Contribution to inclusion, employment and ecological significance	This criterion helps in observing how the practice contributes to social inclusion (e.g. involving marginalised groups), job creation or sustained employment, and environmental sustainability or ecological improvements, linking social and ecological dimensions of rural development.

An additional dimension, not really a criterion, was considered in the mapping and analysis processes: the **use of EU funding instruments/facilities.** The case studies were selected to illustrate how different EU financial instruments (e.g. ERDF, EAFRD/LEADER, ESF, Horizon) were mobilised, including examples of fund linkage and integration.

These criteria have enabled the homogeneous collection of data across countries, and a robust structure to carry out comparative analysis, highlighting not only the commonalities in the underlying principles and objectives of CSEIs but also the significant divergences in their strategic approaches, governance models and operational adaptations. By examining initiatives from countries such as Belgium, France, Germany, Italy, Poland, Portugal, Spain and Sweden, the research can effectively reflect the diverse socio-economic, cultural, and policy landscapes that shape rural Europe. This comparative lens is vital for identifying transferable lessons, understanding the contextual factors that influence CSEI development, and ultimately, for formulating policy recommendations that are both broadly applicable and sensitive to local specificities. The qualitative nature of this design ensures that the voices and experiences embedded in each case study are given prominence, allowing for a holistic and human- centred understanding of CSEI practices.

Data Collection Methods

Data for this research have been systematically collected through a multi-pronged approach, ensuring a comprehensive and well-rounded understanding of the subject matter: [6]

- **Extensive Literature Review**. An exhaustive review of academic databases constitutes a primary data collection method. This includes prominent databases such as Scopus, Web of Science, and Google Scholar. The search strategy has employed a combination of carefully selected keywords, including but not limited to:
    - *"social innovation clusters"*
    - *"ecological innovation clusters"*
    - *"rural development"*
    - *"social economy"*
    - *"sustainable clusters"*
    - *"community-led innovation"*
    - *"green economy in rural areas"*

  This review encompassed a broad spectrum of scholarly outputs, including peer-reviewed journal articles, seminal books, book chapters, and relevant conference proceedings, ensuring access to cutting-edge research and established theoretical perspectives.
- **Policy Document Analysis**. A critical examination of relevant policy documents forms another crucial data source. This involves scrutinising official publications from the European Union, such as those related to the European Green Deal, Cohesion Policy frameworks, and specific Rural Development Programmes. Additionally, national government policies and regional authority directives were analysed to gain a nuanced understanding of the policy landscape and the support mechanisms, incentives and regulatory frameworks that either facilitate or hinder the emergence and growth of CSEIs. This analysis helped in mapping the institutional environment in which CSEIs operate.
- **Case Study Analysis**. In-depth analysis of publicly available information pertaining to selected CSEIs has been conducted. This included, but is not limited to, official organisational websites, annual reports, impact assessments, news articles, press releases, and any available external evaluations or academic studies focusing on these specific clusters. Furthermore, **primary data have been collected through semi-structured interviews with key stakeholders** involved in these case studies, such as cluster managers, social entrepreneurs, local government representatives and community leaders. These interviews provided nuanced insights into the operational dynamics, challenges and success factors that may not be fully captured in secondary sources. The selection of case studies has been strategically guided by criteria aimed at ensuring geographical diversity across Europe (e.g. Western, Southern, Central, Eastern European contexts) and a varied sectoral focus (e.g. agriculture, energy, tourism, social services), thereby providing a rich tapestry of experiences and models. The goal is to capture a representative sample of successful and innovative CSEI initiatives. [7]

Analytical Framework

To ensure a systematic and coherent examination of the collected data, a robust analytical framework has been employed. This framework guided the interrogation of each CSEI case study and the broader literature, focusing on several key dimensions:

- **Definition and Characteristics**. This dimension has assessed how each identified cluster is aligned with the established definition and core characteristics of a CSEI. It delved into the objectives of the cluster, its foundational values, and the diverse types of actors (e.g. social enterprises, farmers, local government, universities) that constitute its collaborative network. Understanding these elements is crucial for categorising and comparing different CSEI models.

For instance, the Bałtów cluster in Poland, with its objective to revitalise a community through tourism and its diverse actors including local residents and scientists, clearly matches the definition of a CSEI focused on social and economic revitalisation. Similarly, GOEL Bio in Italy, with its explicit commitment to ethical practices and fighting organised crime through organic farming, exemplifies a CSEI driven by strong foundational values and a clear social mission.

- **Governance Structure**. A critical examination of the organisational and decision-making mechanisms in each cluster has been undertaken. This includes analysing the nature of leadership (e.g. centralised, distributed), the strategies employed for stakeholder engagement (e.g. participatory, top-down), the models adopted for resource management and funding (e.g. grants, social investment, revenue generation), and the formal or informal processes for decision-making. Effective governance is paramount for the sustainability and impact of CSEIs. The RURALLINK case study from Spain, for example, provides a detailed assessment of the types of actors involved and the level of democratic governance, emphasising the importance of broad participation and equitable power-sharing in the cluster. The Offerdal initiative in Sweden showcases a strong community-led governance model, where local residents have consistently taken ownership of service provision and development through cooperative solutions. [8]
- **Innovation Processes**. This dimension explored how social and ecological innovations are conceived, developed, implemented and disseminated in the cluster. It investigates the mechanisms for knowledge exchange, collaborative problem-solving, experimentation, and the adoption of new practices or technologies that address social needs and environmental challenges. Understanding these processes reveals the dynamic nature of CSEIs as innovation hubs. The PLOUCS initiative in France exemplifies this through its SSE Project Incubator, which provides mentorship and resources to nascent social enterprises, fostering new solutions for social and economic challenges. The Bałtów cluster's transformation from a high-unemployment area to a thriving Jurassic Park tourism destination, driven by local initiative and leveraging a unique natural asset, is a prime example of a successful innovation process in a rural CSEI.
- **Impact Assessment**. The research seeks to identify and, where possible, quantify the social, ecological, and economic impacts generated by each cluster in its rural context. This includes assessing contributions to job creation (especially for vulnerable groups), environmental benefits (e.g. reduced emissions, biodiversity conservation), community empowerment, improved access to services, and overall regional resilience. While precise quantification may be challenging with secondary data, qualitative indicators of impact have been prioritised. The transformation of Bałtów from a high-unemployment area to a thriving tourist destination not only created jobs but also instilled a renewed sense of pride and identity in the community, showcasing both economic and social impacts. The Ceinture Alimentaire Charleroi Métropole in Belgium, through its focus on local food systems, contributes to environmental resilience by promoting short supply chains and also enhances social well-being by ensuring access to healthy food.

- **Enabling Factors and Barriers**. A crucial part of the analysis involves identifying the factors that facilitate the emergence and success of CSEIs, as well as the obstacles that hinder their development. Enabling factors can include supportive policy environments (e.g. the French PTCE framework), access to funding, strong local leadership, existing social capital, and the presence of unique local assets. Barriers might include lack of funding, regulatory hurdles, resistance to change, limited technical expertise, or challenges in fostering effective collaboration among diverse stakeholders. For example, the Bałtów cluster benefited from the unique local asset of dinosaur tracks and strong community mobilisation, while many CSEIs face challenges related to securing sustainable funding and navigating complex administrative procedures. The Swedish CSEIs often highlight the importance of strong community engagement and local self-organisation as key enabling factors. [9]

Limitations and Challenges

The qualitative nature of this research also means that while it provides rich, in-depth insights into specific cases and emerging trends, its findings may not be directly generalisable to all rural contexts or CSEI models without further empirical validation.

Firstly, the reliance on secondary data, supplemented by a limited number of primary interviews, means that the depth and granularity of analysis are inherently constrained by the availability, quality and focus of existing information. This can lead to variations in the level of detail obtainable for different case studies.

Secondly, there may be a notable lack of standardised data or reporting metrics across diverse CSEI initiatives and countries, which inevitably complicates direct comparative analysis and the aggregation of findings. This heterogeneity necessitates a more interpretative approach to comparison. Furthermore, the dynamic and evolving nature of innovation clusters implies that information, particularly concerning their operational details and recent developments, can rapidly become outdated. This necessitates a focus on established patterns and foundational characteristics rather than real-time operational specifics. [10]

2. Conceptual Framework

2.1 Theoretical Foundations of CSEIs

The concept of Clusters for Social and Ecological Innovation (CSEIs) is not a standalone theoretical construct but rather a rich synthesis drawing upon and extending several established academic frameworks. Primarily, it integrates insights from classical cluster theory, the evolving principles of the social economy, and contemporary innovation studies. This interdisciplinary approach allows for a comprehensive understanding of how CSEIs function as unique drivers of sustainable rural development.

Traditionally, **cluster theory**, as popularised by Michael Porter, focuses on the geographical concentration of interconnected companies, specialised suppliers, service providers, firms in related industries, and associated institutions (e.g. universities, standards agencies) in particular fields. The core premise is that proximity and interconnectedness foster competitive advantages through increased productivity, enhanced innovation, and new business formation. These benefits arise from factors such as the availability of specialised labour pools, privileged access to specific information, complementarities among cluster members, and the stimulus of local rivalry. However, this classical view primarily emphasises economic efficiency and market competition as the driving forces. [11]

CSEIs, however, represent a significant departure from this purely economic perspective by integrating the **social and ecological dimensions** as central to their purpose and functioning. This integration is deeply rooted in the principles of the **social and solidarity economy (SSE)**. The SSE prioritises social utility, democratic governance, and the reinvestment of surpluses for social or environmental purposes over maximising financial returns. In the context of CSEIs, this means that the 'cluster' is not merely a collection of businesses seeking competitive advantage, but a collaborative ecosystem of diverse actors committed to collective well-being and environmental stewardship. For example, **GOEL Bio**, an Italian group of agricultural cooperatives, explicitly states its commitment to ethical practices, fighting organised crime, and fostering community and redemption, alongside its organic farming activities. This demonstrates a clear alignment with SSE principles, where economic activity serves broader social and ethical goals, and the pursuit of profit is subordinated to social and environmental impact. The cooperative's work in Calabria, a region historically challenged by organised crime, showcases how economic activity can be intentionally designed to build social capital and promote legality, thereby contributing to a more just and resilient society.

The evolution of cluster theory in the social economy recognises that **social capital, trust and shared values** are as crucial as, if not more important than, traditional economic factors in driving innovation and resilience in these clusters. The **PLOUCS** initiative in France, structured as a **Pôle Territorial de Coopération Économique** (PTCE), exemplifies this by fostering cooperation between SSE players, local authorities, and universities to address socio-economic challenges in the Landes department. Its activities, such as the SSE Project Incubator and youth cooperatives, are designed to build capacity and strengthen the social fabric, illustrating how social economy principles are embedded in the cluster's operational model. The PTCE framework itself is a policy innovation that acknowledges the unique collaborative dynamics of the SSE and provides a legal and institutional environment for such clusters to thrive, emphasising collective action over individual firm performance.

Furthermore, CSEIs are inherently linked to **innovation studies**, particularly those focusing on systemic and social innovation. **Systemic innovation** emphasises changes across an entire system, including technologies, institutions and social practices, to address complex societal challenges. CSEIs, by bringing together diverse actors to co-create solutions for rural development and environmental sustainability, embody this systemic approach. They often act as living laboratories where new models of

production, consumption and governance are experimented with and scaled up. **Social innovation**, on the other hand, refers to new solutions that simultaneously meet a social need and lead to new or improved capabilities and relationships, and better use of assets and resources. [12]

The **Bałtów cluster's transformation** from a high-unemployment area to a thriving Jurassic Park tourism destination, driven by local initiative and leveraging a unique natural asset, is a prime example of social innovation in a rural CSEI. This highlights how CSEIs are not just about economic growth, but about transforming social structures and relationships to achieve more equitable and sustainable outcomes. The innovation here is not just technological (e.g. building attractions) but deeply social, involving community mobilisation, new forms of governance, and a re-imagining of local identity and economic potential.

Rural applications of cluster models, particularly in the context of CSEIs, often emphasise the importance of **place-based development** and the **leveraging of local assets**. Unlike urban centres, rural areas may lack the density of specialised firms or research institutions that characterise traditional clusters. However, they possess unique assets such as abundant natural resources, rich cultural heritage, strong community ties, and a significant potential for social entrepreneurship. CSEIs in rural settings capitalise on these assets to create localised solutions that are deeply embedded in their contexts.

The **Swedish case studies**, such as **Egnahemsfabriken**, which addresses housing challenges through sustainable development and social innovation by promoting self-built eco-friendly homes, and **Offerdal**, which focuses on preserving essential public services through community-driven initiatives, clearly demonstrate this rural application. These initiatives leverage local engagement and community resilience to build sustainable solutions tailored to their rural contexts, showcasing how local knowledge and collective action can overcome resource constraints and external pressures. [12]

In summary, the theoretical foundations of CSEIs are multidisciplinary, drawing from the economic insights of cluster theory, the social justice and participatory governance principles of the social economy, and the transformative potential of systemic and social innovation. Their application in rural areas further underscores the importance of context-specific, place-based approaches that harness local assets and community agency to drive sustainable and inclusive development. They represent a powerful convergence of economic, social and environmental objectives, offering a robust framework for understanding and fostering resilient rural futures.

2.2 Policy Context

The development and proliferation of Clusters for Social and Ecological Innovation (CSEIs) in Europe are significantly shaped by a supportive and evolving policy environment, particularly at the European Union level. This policy landscape increasingly recognises the pivotal role of the social economy and the imperative of ecological transition in achieving sustainable and inclusive growth across the continent. The European Union has progressively integrated the social economy into its overarching policy frameworks, moving beyond a purely economic growth paradigm to one that emphasises social cohesion, environmental protection, and democratic participation. This strategic shift is evident in various legislative and programmatic initiatives that directly or indirectly support the emergence and strengthening of CSEIs.

European Union Policy Framework for CSEIs

The European Union's commitment to fostering the social economy is articulated in several key policy documents and strategies. The **Social Economy Action Plan (SEAP)**, adopted by the European Commission in December 2021, stands as a landmark initiative designed to unlock the full potential of the social economy. It explicitly recognises social economy entities – including cooperatives, mutuals, associations, and foundations – as crucial drivers of job creation, social innovation, and a fair and green transition. The SEAP proposes concrete measures to create a more enabling environment for the social economy, encompassing improved access to funding, strengthened legal frameworks, and enhanced

visibility and recognition. This comprehensive plan directly supports the growth and scaling up of CSEIs by fostering an ecosystem where collaborative, socially and ecologically driven initiatives can thrive. For instance, by facilitating access to finance, the SEAP can enable CSEIs like the Ceinture Alimentaire Charleroi Métropole to secure investment in order to expand their sustainable food production infrastructure and to develop new circular economy models in their operations. [5]

Furthermore, the **European Green Deal**, the EU's overarching strategy for making Europe climate-neutral by 2050, provides a crucial and complementary framework for the ecological dimension of CSEIs. The Green Deal stresses the urgent need for a transition towards a circular economy, the development of sustainable food systems, robust biodiversity protection, and the widespread adoption of clean energy solutions. CSEIs, by their very nature, are inherently aligned with these objectives through their focus on resource efficiency, local production, and community-led environmental initiatives. For example, the **Väderstad Experience Centre** for Food in Sweden, by promoting local food production and delivering education on sustainable food systems, directly contributes to the Green Deal's goals of fostering a more resilient and environmentally sound agricultural sector. Similarly, the **Egnahemsfabriken** (Sweden), with its emphasis on eco-friendly housing and the use of recycled materials, embodies the circular economy principles advocated by the Green Deal.

Beyond these flagship policies, EU cohesion policy, rural development programmes (such as the Common Agricultural Policy's second pillar), and research and innovation funding (e.g. Horizon Europe) also provide significant avenues for supporting CSEIs. These policies often prioritise collaborative projects, innovation in rural areas, and initiatives that address complex social and environmental challenges, which puts CSEIs in a good position to access such funding and support. The emphasis on smart specialisation strategies in regional development also encourages regions to identify and invest in their unique strengths, which can include emerging CSEIs, thereby fostering a tailored approach to regional development that leverages local potential.

National and Regional Policy Approaches

While the EU provides an overarching strategic framework, national and regional policies play an absolutely critical role in translating these broad objectives into concrete support mechanisms that are tailored to local contexts and needs. Many EU member states have developed specific legal frameworks and support programmes for the social economy, demonstrating a growing recognition of its importance. For example, France stands out with its well-established legal framework for the social and solidarity economy, including the explicit legal recognition and promotion of **PTCEs (Pôles Territoriaux de Coopération Économique)** through dedicated legislation, specifically Law no. 2014-856 of 31 July 2014 on the social and solidarity economy (Article 9). These PTCEs are explicitly designed to foster cooperation among SSE actors and strengthen their role in territorial development. The PLOUCS initiative, as a recognised PTCE, directly benefits from this national policy, which actively encourages the formation of such clusters to drive integrated territorial development. This demonstrates how national legislation can create fertile ground for CSEIs to emerge, formalise and scale up, providing a stable institutional environment for their growth. [3]

In other countries, support for CSEIs might manifest itself through regional development agencies, specific funding calls for social innovation, or their integration into broader rural development strategies. The Swedish case studies, such as **Egnahemsfabriken** and **Offerdal**, while rooted in powerful grassroots initiatives, often interact with municipal authorities and regional platforms like Krokom's Växtkraft. This indicates a degree of regional policy support or at least a conducive environment for community-led development, even if not through a national PTCE-like framework. The effectiveness of these national and regional policies often lies in their ability to provide flexible funding mechanisms, tailored technical assistance, and a supportive regulatory environment that recognises the unique operating models and hybrid nature of CSEIs, which often blend social, environmental and economic objectives in ways that traditional legal and financial structures may not fully accommodate.

Rural Development Policies and CSEIs

Rural development policies, traditionally focused on agricultural support, infrastructure development and basic service provision, are increasingly recognising the importance of broader, more integrated approaches that explicitly include social and ecological dimensions. CSEIs fit exceptionally well into this evolving paradigm by offering a model for diversified rural economies that are less reliant on traditional sectors and more resilient to external shocks, such as market fluctuations or climate change impacts. They contribute significantly to the diversification of rural income sources, the retention of young people in rural areas by creating attractive opportunities, and the provision of essential services that might otherwise decline due to centralisation or lack of profitability for conventional providers.

The **Bałtów cluster in Poland** serves as a prime example of how CSEIs can directly contribute to rural revitalisation beyond traditional agricultural subsidies. By creating a new economic engine through tourism in a previously struggling rural area, Bałtów not only generated employment but also fostered a sense of community pride and identity, demonstrating a holistic approach to rural development. Similarly, the **Röstånga initiative in Sweden**, which combats rural depopulation through affordable housing, green tourism and community-led projects, perfectly matches integrated rural development policies aimed at enhancing the quality of life and economic opportunities in rural localities. These examples highlight how CSEIs can be instrumental in achieving the broader goals of rural development policies, transforming them from mere recipients of aid into dynamic centres of innovation and sustainability. They represent a shift towards a more endogenous, place-based development model, where local communities are empowered to shape their own futures in a sustainable and inclusive manner. [13]

The policy landscape for CSEIs is multi-layered and dynamic, with the EU providing strategic direction and financial instruments, and national and regional governments adapting these to their contexts. This interplay of policies creates both significant opportunities and unique challenges for CSEIs, as they navigate different regulatory environments and funding mechanisms to achieve their complex social, ecological and economic objectives. Effective policy support is therefore crucial for nurturing and scaling up these initiatives.

2.3 European Commission Identified CSEIs

The European Commission, through its various initiatives, policy documents and funding programmes, plays a crucial role in identifying, promoting and fostering Clusters for Social and Ecological Innovation (CSEIs) across the continent. While the diverse nature and often grassroots origins of CSEIs make a definitive, exhaustive and static list challenging to compile, the Commission's efforts have been instrumental in establishing typologies, highlighting key characteristics, and providing a framework for

understanding and supporting these innovative clusters. These efforts contribute significantly to a better understanding of their geographical distribution, sectoral focus, and the critical balance between rural and urban applications, thereby informing policy development and resource allocation.

Typology and Classification

The European Commission's engagement with CSEIs often involves attempts to classify and categorise them to better understand their impact, identify best practices and inform policy development. While there is no single, universally adopted typology, **common classifications often consider several key factors**. These include their **primary focus** (e.g. social inclusion, environmental sustainability, local economic development, cultural preservation), their **governance structures** (e.g. cooperative, associative, multi-stakeholder partnership, informal network), and their **scale of operation** (local, regional, national).

For instance, some CSEIs might be primarily focused on **circular economy principles**, such as waste reduction, resource efficiency and product longevity, actively engaging in activities like repair cafés, upcycling workshops and local material exchange platforms. Others might prioritise **social integration** through employment for vulnerable groups, providing training and job opportunities in sectors like organic farming or sustainable tourism.

The PARI project itself, by mapping diverse practices, significantly contributes to this understanding of typology, as seen in the varied approaches of the case studies provided. [14] For example, the **Ceinture Alimentaire Charleroi Métropole in Belgium** can be classified as a CSEI with a strong focus on sustainable food systems and local economic development, driven by a multi-stakeholder approach that includes farmers, consumers and local authorities. Its primary type leans towards an ecological and economic CSEI with significant social benefits. In contrast, **GOEL Bio in Italy**, while also having an economic dimension through organic farming, is primarily characterised by its ethical and social mission to combat organised crime and promote social redemption through legal and sustainable economic activities. This places it firmly in the social innovation typology, demonstrating how economic activity can be intentionally designed to achieve profound social change.

The **PLOUCS initiative in France**, with its SSE Project Incubator and youth cooperatives, clearly falls into the social innovation and capacity-building type, aiming to strengthen the social economy ecosystem in a rural area. These examples illustrate the broad spectrum of CSEIs and the need for flexible typologies that can capture their unique characteristics and integrated impacts.

Geographical Distribution

CSEIs are emerging across various geographical contexts in Europe, reflecting diverse regional needs, historical trajectories and opportunities. While some might be concentrated in regions with strong social economy traditions or particular environmental challenges, they are by no means confined to any single area.

The case studies from the PARI project vividly demonstrate this wide geographical spread, encompassing initiatives **in Poland (Bałtów), France (PLOUCS), Belgium (Ceinture Alimentaire Charleroi Métropole), Spain (RURALLINK), Portugal (Encosta-Ecosystem, SmartFarmCoLab), and Sweden (Egnahems-fabriken, Offerdal, Väderstad, Röstånga)**. This broad distribution underscores the universal applicability of the CSEI concept, adapting to local conditions while pursuing common goals of social and ecological innovation.

For instance, the **Bałtów** cluster in rural Poland emerged from a local challenge of high unemployment in a post-industrial area, leveraging a unique paleontological discovery to create a thriving tourism economy. This highlights a CSEI arising from a need for economic diversification and revitalisation in a historically disadvantaged region. In contrast, the Swedish CSEIs like **Egnahemsfabriken** and **Röstånga** address issues pertinent to rural depopulation and sustainable living in their respective regions, often building on

existing community resilience and a strong tradition of local self-organisation. The **Silicon Vilstal platform** in Germany further exemplifies this geographical diversity, fostering innovation in rural Bavaria through events and networking. This geographical diversity highlights the organic growth of CSEIs as responses to localised needs rather than top-down mandates, showcasing their adaptability and embeddedness in specific territorial realities. [13]

Sectoral Focus

CSEIs exhibit a wide and varied range of sectoral focuses, reflecting the diverse challenges and opportunities present in rural areas. Their activities are often aligned with the social and ecological needs of the region, leading to specialisation in particular domains. Common sectors include:

- **Sustainable Agriculture and Food Systems**. Many CSEIs are deeply embedded in transforming local food economies. The Ceinture Alimentaire Charleroi Métropole focuses explicitly on food systems, aiming to create a more resilient, localised and sustainable food economy by promoting short supply chains, urban farming and food education. Similarly, the Väderstad Experience Centre for Food in Sweden promotes local food production, culinary traditions and sustainable agriculture, serving as a hub for both producers and consumers. SmartFarmCoLab in Portugal, with its emphasis on leveraging technology for sustainable farming, also falls into this category.
- **Tourism and Cultural Heritage**. Leveraging unique local assets for sustainable tourism is a significant focus for some CSEIs. The Bałtów cluster is a prime example, transforming a post-industrial area into a major tourist destination based on its paleontological discoveries. The Röstånga initiative in Sweden also integrates green tourism with its efforts to combat depopulation, capitalising on its proximity to a national park. [13]
- **Sustainable Housing and Community Building**. Addressing housing challenges through eco-friendly and community-led approaches is another key sector. Egnahemsfabriken in Sweden, with its emphasis on self-built eco-friendly homes and the use of recycled materials, operates in the sustainable housing and construction sector, empowering individuals and fostering community resilience.
- **Provision of Essential Services**. In areas facing rural decline, CSEIs often step in to maintain or re-establish vital services. The Offerdal initiative in Sweden is a powerful example, where the community has actively worked for decades to preserve essential public services like schools, healthcare and local shops, often through cooperative models.
- **Social Integration and Capacity Building**. Many CSEIs have a strong focus on social inclusion, employment for disadvantaged groups, and skill development. PLOUCS in France is a clear example, with its incubator for social enterprises and programmes for youth which aim to strengthen the social economy and address unemployment. [3]

This diversity in sectoral focus demonstrates the remarkable adaptability of the CSEI model to address a broad spectrum of social and environmental issues through innovative, collaborative approaches tailored to local contexts.

Rural vs. Urban Distribution

While CSEIs can and do exist in both urban and rural settings, this research focuses on their manifestation and impact in rural areas. This deliberate focus is due to the particularly significant potential for transformative impact that CSEIs hold in these contexts. Rural CSEIs often play a crucial role in addressing issues such as rural depopulation, the decline of essential services, limited economic diversification, and the preservation of natural and cultural landscapes.

They distinguish themselves by leveraging unique local assets, fostering strong community resilience, and creating place-based solutions that are deeply tailored to the distinct characteristics of rural environments. The case studies provided overwhelmingly illustrate this rural emphasis. For example, PLOUCS

operates in the Landes department, a predominantly rural area in France facing socio-economic challenges. Similarly, all the Swedish case studies (Egnahemsfabriken, Offerdal, Väderstad, Röstånga) are situated in rural localities, and tackle issues like preserving essential services, promoting sustainable community development, and revitalising local economies through food and tourism. The Bałtów cluster in Poland is another clear example of a CSEI driving revitalisation in a rural, post-industrial setting. [13]

While urban CSEIs might focus on issues like urban regeneration, sustainable consumption in dense environments, or social housing in metropolitan areas, rural CSEIs often emphasise the preservation of natural landscapes, the promotion of local food systems, the maintenance of cultural heritage, and the creation of vibrant, self-sustaining communities that can retain and attract residents. The challenges and opportunities in rural areas often necessitate a more integrated approach, where social, ecological and economic objectives are intertwined, making the CSEI model particularly well-suited for these contexts. They contribute to a more balanced territorial development, ensuring that rural areas are not left behind in the transition towards a more sustainable and equitable future.

3. In-depth Analysis of Selected European CSEIs

This section provides an in-depth analysis of selected European CSEIs, drawing primarily from the case studies provided by the PARI project. Each case study is examined in terms of its context, objectives, activities, key stakeholders and governance model, highlighting how they embody the principles of social and ecological innovation in rural settings. Following the individual analyses, a comparative discussion synthesises common themes, unique approaches, and lessons learned across the diverse range of initiatives.

3.1 Belgium

Ceinture Alimentaire Charleroi Métropole (CACM)

CONTEXT: The Ceinture Alimentaire Charleroi Métropole (CACM) is a pioneering bottom-up initiative located in the Charleroi Métropole region of Belgium. This region, known for its industrial past, has been undergoing a significant transition, facing socio-economic challenges common to post-industrial areas, including unemployment and the need for economic diversification. In this context, the initiative emerged as a response to the growing recognition of the importance of local, sustainable food systems for both environmental resilience and community well-being. It is part of a broader effort to build capacity in areas such as bottom-up movements, stakeholder aggregation, business management, governance, social skills and innovation, suggesting a comprehensive approach to regional development through the lens of food. The CACM operates in a territory composed of 30 communes around the city of Charleroi, extending to the south of the Botte du Hainaut and the Entre Sambre et Meuse Region. This area, approximately 85km from North to South, is characterised by a highly urbanised north and a rural south with a diversified and significant agricultural potential. The initiative is deeply embedded in the principles of the social and solidarity economy, and aims to create a food system that is not only ecologically sound but also socially just and economically viable for local producers and consumers. This fits with the broader efforts of organisations like SAW-B (Solidarity of Walloon and Brussels Alternatives), a pluralistic social economy federation that conducts advocacy for and supports social enterprises in Wallonia and Brussels, providing a supportive ecosystem for initiatives like CACM.

OBJECTIVES: The primary objective of the Ceinture Alimentaire Charleroi Métropole is to contribute to the transition towards a resilient territory by developing a local, sustainable and environmentally friendly food system, involving all actors in the sector, in the framework of a social, local and inclusive economy. This overarching goal is broken down into several interconnected aims: [18]

- **To Foster Local Food Production**. The aim is to increase the volume and diversity of food produced in the metropolitan area, reducing reliance on long supply chains and enhancing food sovereignty. CACM aims to nourish all inhabitants with healthy, equitable and respectful food.
- **To Promote Short Supply Chains**. The initiative aims to connect producers and consumers directly, ensuring fair prices for farmers and fresh, accessible food for residents, thereby strengthening the local economy. This is achieved by developing and facilitating short-circuit supply chains and social economy projects.
- **To Enhance Food Security and Accessibility**. This aims to ensure that all residents, particularly vulnerable populations, have access to healthy, affordable and sustainably produced food. The CACM takes into account all actors in the food system, including farmers, distributors, traders, associations, politicians and citizens. [19]
- **To Build Capacity and Empower Stakeholders**. To equip farmers, food entrepreneurs, community organisations and citizens with the knowledge, skills and networks necessary to participate effectively in and benefit from the local food system. This includes training in sustainable agricultural practices, business development and collaborative governance. The CACM provides information and orientation, acting as a reference point for short-circuit food systems.
- **To Drive Social and Ecological Innovation**. To develop and implement innovative solutions that address environmental challenges (e.g. soil degradation, biodiversity loss, food waste) and social issues (e.g. unemployment, social exclusion) through the food system. The CACM aims to transform the food system collectively, promoting a healthy, equitable and respectful diet.
- **To Promote the Territory**, bringing together actors in the food system of the territory, sensitising producers, consumers and other actors in the food system to the transformation of the system. Also, the initiative contributes to capitalise on achieved results and provide advice to local public authorities.

ACTIVITIES AND TIMELINE: The CACM engages in a continuous process of community engagement, collaborative project development and capacity building. Its bottom-up nature ensures a flexible and responsive approach to implementation.

I. Key Activities:

- **Mapping and Networking**. Initial activities involved mapping existing local food producers, identifying needs and gaps in the food system, and building a network of interested stakeholders. The CACM addresses all actors who are willing to collectively transform the food system by relocating it with healthy, equitable and respectful food.
- **Collaborative Project Development**. The initiative facilitates the development of concrete projects, such as: [12]
    - **The Food Policy Council (Conseil de Politique Alimentaire – CPA)**. Launched in April 2024, this governance body brings together representative actors in the local food system (farmers, distributors, traders, associations etc.) to coordinate, define a common strategy around food, identify concrete solutions to complex problems, and establish recommendations and priorities for the Charleroi Métropole territory.
    - **The Logistics Hub**. A 2,000m^2 facility, scheduled to open in June 2025, for storing, processing, and marketing local food products. It will integrate a vegetable processing unit (légumerie), a transformation workshop accessible to local producers, a marketing counter, and a dispatching service to supply local authorities and food professionals.

    - **The Carolostore store**. Launched in March 2024 by the Circulacoop cooperative (a project that emerged from the CACM), this store is a concrete response to a need identified during consultations, providing a marketing location that sells products from local producers and artisans at a fair price. It places producers at its heart, offering a supermarket model for local producers in Marcinelle. [20]
- **Educational Programmes and Awareness-Raising Initiatives**. The CACM co-organises or takes part in events on the territory to raise awareness among citizens, associative actors, political actors and economic actors about the challenges of healthy, equitable and respectful food. This includes workshops, farm visits and public awareness campaigns on sustainable food, healthy eating and the benefits of local food systems.
- **Capacity Building Workshops**. Regular workshops and training sessions are conducted focusing on key areas such as stakeholder aggregation, business management, governance and participation, and social skills and innovation.

II. Timeline/Chronological Development:

- **Ongoing Process:** CACM's activities are part of a continuous process of community engagement and capacity building, reflecting its flexible and responsive bottom-up approach.
- **April 2024:** Launch of The Food Policy Council (Conseil de Politique Alimentaire – CPA).
- **June 2025:** Scheduled opening of The Logistics Hub.
- **March 2024:** Launch of The Carolostore store by the Circulacoop cooperative.

KEY STAKEHOLDERS: The success of the Ceinture Alimentaire relies on a broad and active network of stakeholders, reflecting its multi-faceted approach. These include:

- **Promoters/Core Team**, that is the visionary individuals and organisations who initiated and continue to drive the initiative.
- **Local Farmers and Food Producers**. The backbone of the local food system, including conventional and organic farmers, market gardeners, and small-scale food processors. [22]
- **Consumers/Citizens**. Actively engaged through direct purchasing, participation in CSAs, and educational programmes.
- **Community Organisations**. Local associations, social enterprises and NGOs working on food justice, environmental protection and social inclusion.
- **Local Authorities**. Municipal and regional governments providing policy support, land access and sometimes funding. [5]
- **Research and Academic Institutions**. Contributing expertise in sustainable agriculture, food systems analysis and social innovation.
- **SAW-B** (Solidarity of Walloon and Brussels Alternatives). A pluralistic social economy federation that conducts advocacy for and supports social enterprises in Wallonia and Brussels, providing a supportive ecosystem for initiatives like CACM.

GOVERNANCE MODEL: As a bottom-up initiative, the governance model of the Ceinture Alimentaire Charleroi Métropole is inherently participatory and collaborative. The CACM functions as a territorial animator, with six defined missions that guide its operations and decision-making: territorial animation, information and orientation, structuring and animating sectors, sensitisation, capitalisation, and advocacy. The launch of the Food Policy Council in April 2024 exemplifies a structured approach to governance, providing a formal space for coordination, strategy definition, problem-solving and recommendation setting. This council ensures that decision-making processes are inclusive and reflect

the needs and aspirations of the local community. The emphasis on capacity-building in governance and participation demonstrates a continuous effort to develop robust and democratic structures that ensure all stakeholders have a voice. This fits with the principles of the social economy, where governance is characterised by transparency, accountability to members, and a commitment to collective benefit over private profit. The CACM employs various mechanisms for collective decision-making, such as regular meetings, working groups and consensus-building processes, to ensure that its strategic direction is co-created by its diverse network of participants. [18]

CONTRIBUTION TO CSEI PRINCIPLES: The CACM is a compelling example of a CSEI that closely integrates social, ecological and economic objectives in a sectoral focus. Ecologically, its commitment to local, sustainable food production, short supply chains, and the development of a logistics hub for local products directly contributes to reducing the environmental footprint of the food system, promoting biodiversity, and fostering circular economy practices. Socially, it builds community capacity, empowers local actors, enhances food accessibility for all, and strengthens social cohesion through collaborative efforts, as shown by the Food Policy Council and the CAROLOSTORE initiative. Economically, it supports local farmers and food entrepreneurs, creating new jobs and retaining economic value in the region. Its bottom-up approach, multi-stakeholder engagement and continuous focus on capacity building further reinforce its alignment with the collaborative and community-driven nature of CSEIs. It serves as a powerful illustration of how a specific sector, like food, can serve as a comprehensive vehicle for integrated social and ecological innovation, contributing significantly to the resilience and well-being of a metropolitan area with strong rural connections.

3.2 France

PLOUCS

CONTEXT: The PLOUCS (Projets Locaux Ouverts Utiles Collectifs et Solidaires) initiative is strategically situated in the Landes department of Nouvelle Aquitaine, a predominantly rural area in southwestern France. This region, despite its rich natural resources and economic diversity, has historically grappled with significant socio-economic challenges, notably persistent high unemployment rates and precariousness, particularly affecting vulnerable populations. PLOUCS was formally established as a PTCE, taking advantage of a specific legal framework introduced in France in 2014. This framework was designed to actively encourage cooperation among social and solidarity economy (SSE) actors and to strengthen their collective role in fostering integrated territorial development. This context underscores a proactive and supportive policy environment that specifically facilitates the formation of such collaborative clusters to address complex local socio-economic issues through collective action and social innovation. [3]

OBJECTIVES: The overarching objective of PLOUCS is to significantly strengthen the SSE and its core principles of solidarity, social entrepreneurship and sustainable development in the Landes region. This involves directly addressing the identified need for enhanced cooperation among SSE players and strategically leveraging their collective potential to drive local development that is both economically viable and socially inclusive. Their goals extend far beyond mere economic growth, being deeply rooted in generating tangible social impact, fostering community resilience, and building a more equitable local economy.

ACTIVITIES AND TIMELINE: Established in 2017, PLOUCS has systematically developed and implemented a diverse range of activities, strategically organised across multiple interconnected areas,

to achieve its objectives. The initiative's evolution is marked by the continuous development and implementation of these activities.

I. Key Activities:

- **SSE Project Incubator**. PLOUCS operates a dedicated incubator that provides comprehensive support and guidance to nascent and developing SSE projects and their leaders. This includes offering tailored management consultancy, specialised training programmes, one-to-one coaching sessions, and access to co-working spaces. This activity directly fosters social entrepreneurship by nurturing new initiatives from their conceptualisation through to their successful implementation, ensuring they are equipped with the necessary tools and knowledge to thrive in the social economy landscape. For example, the incubator has supported projects focused on local organic food distribution networks, creating short supply chains and new employment opportunities for individuals facing barriers to traditional employment. [3]
- **Education and Awareness of the SSE**. The association actively develops innovative educational tools and conducts impactful awareness campaigns designed to demystify and promote SSE principles. A notable example is the “Kess’Essa” game, an interactive and engaging tool designed to help young people and other diverse audiences understand the complexities and benefits of the SSE in an accessible manner. It also runs a vibrant youth group focused on learning about and advocating SSE values, thus fostering a new generation of social entrepreneurs and engaged citizens. This educational outreach is crucial for building a broader understanding and appreciation of the SSE model in the community.
- **Coopératives Jeunesse de Services (CJS)**. PLOUCS organises Youth Service Cooperatives (CJS), an innovative programme that enables young people (typically aged 16-20) to take part in cooperative projects during the summer. This initiative not only helps them acquire valuable entrepreneurial skills, teamwork abilities, and a practical understanding of cooperative governance but also allows them to contribute meaningfully to community service activities. For instance, CJS groups have undertaken projects ranging from organising local cultural events to providing services for elderly residents, thereby generating both social value and practical experience for the young people.
- **Support for Local SSE Initiatives**. This encompasses a broad spectrum of direct support for existing and emerging cooperatives, associations and social enterprises in the Landes department. PLOUCS offers specialised training courses designed to enhance the capacities of its members in areas such as financial management, marketing and legal compliance. Furthermore, the association holds the “Guide’Asso” label, which serves as a recognised quality mark and helps direct other SSE structures to relevant resources, expertise and support networks, thereby acting as a central hub for the local SSE ecosystem. [5]
- **Networking and Cooperation**. A fundamental pillar of PLOUCS’s strategy is to promote and facilitate robust networking and cooperation among a diverse array of stakeholders. This includes SSE actors themselves, local authorities, educational partners (such as universities and vocational training centres) and other organisations with complementary objectives. This is achieved through regular meetings, structured exchanges of best practices, and systematic knowledge transfer initiatives. These networking efforts are vital for fostering a cohesive and collaborative environment where synergies can be identified and leveraged, leading to more impactful collective projects.

II. Timeline/Chronological Development:

- 2017: PLOUCS was formally established and began systematically developing and implementing its activities.
- Ongoing: Continuous development and implementation of various activities across multiple interconnected areas to achieve its objectives.

KEY STAKEHOLDERS: PLOUCS involves a diverse and interconnected network of stakeholders, primarily its member organisations. These include associations and cooperatives that are members of PLOUCS; local and regional governments offering support and recognition; the CRESS (Regional Chamber of Social and Solidarity Economy) and ADI (Development and Innovation Agency), which are other local structures forming stable partnerships; and the national government, which provides accreditation as a PTCE. The active involvement of these diverse entities underscores the multi-stakeholder nature characteristic of successful CSEIs, bringing together different perspectives, resources and forms of capital (social, financial, intellectual) to achieve common goals.

GOVERNANCE MODEL: Currently, PLOUCS brings together around 20 legal entities from across the region. Its governance reflects its cooperative objectives, and it operates on a collective basis. The Board of Directors is made up of five organisations (La Smalah, C Koi Ça, Co-Action, Artelandes and La Cowo) which operate on a collective basis. The Board meets every month to review current, past and future initiatives. The agenda is prepared by the coordinator, and decisions are made by mutual consent or, in the event of disagreement, by a vote. The general assembly includes all members, allowing diverse perspectives in decision-making. Regular meetings with members show commitment to engagement and input from constituents, fostering ownership and investment in the organisation's success. Decision-making uses a collegial governance structure for consensus-based decision-making. It leads to better decisions and promotes unity among members. [3]

CONTRIBUTION TO CSEI PRINCIPLES: PLOUCS stands as a compelling example of a CSEI, particularly in its robust fostering of collaboration among SSE actors to address critical social and economic challenges in a rural French context. Its activities directly contribute to social innovation by systematically incubating new social enterprises, building significant capacity through targeted education and training programmes, and actively promoting youth engagement in cooperative models. While the ecological dimension is not explicitly detailed as a primary, standalone focus in the document provided, the overarching emphasis on sustainable development in the broader SSE framework suggests an implicit and integral commitment to environmental considerations. The initiative’s demonstrable success in strengthening the SSE ecosystem in the Landes department, fostering new forms of economic activity, and enhancing social cohesion, clearly illustrates the transformative potential of a well-supported and networked cluster to drive positive, integrated change in rural communities. It exemplifies how a supportive policy environment, combined with dedicated local action, can create a vibrant hub for social and ecological innovation.

3.3 Germany

Silicon Vilstal

CONTEXT: Silicon Vilstal, located in the rural district of Landshut in Bavaria, represents a unique and innovative approach to fostering social and ecological innovation in a rural setting. It was conceived as a proactive platform to stimulate creativity, collaboration and entrepreneurship in a region that, while economically stable, sought to enhance its future resilience and attractiveness. The initiative operates in a broader German context that increasingly values regional development, innovation ecosystems, and the integration of digital and sustainable practices into traditional rural economies. The name itself, a playful nod to Silicon Valley, signals an ambition to create a hub of innovation, albeit one deeply rooted in the specific characteristics and values of the Vilstal region. Silicon Vilstal is a non-profit organisation and is the first German organisation recognised as a Social Economy Cluster by the EU Commission. Its activities are enabled by a broad social network of institutions, municipalities, companies and individuals.

OBJECTIVES: The primary objectives of Silicon Vilstal are multifaceted, and it aims: [1]

- **To Foster Innovation and Entrepreneurship**, so to create a dynamic environment that encourages the development of new ideas, projects and businesses, particularly those with a social or ecological dimension. This includes promoting education, popular and vocational training, science and research, and civic engagement.
- **To Promote Interdisciplinary Collaboration**. The aim is to bring together diverse individuals and organisations from various sectors (including art, culture, technology, business and social initiatives) to facilitate the cross-pollination of ideas and collaborative problem-solving.
- **To Strengthen Regional Identity and Attractiveness**. The aim is to enhance the Vilstal region's appeal as a place to live, work and innovate, thereby counteracting a potential rural exodus and attracting new talent and investment. It is worth mentioning that the region is part of the Munich Metropolitan Region and the European Danube-Moldau Region. [2]
- **To Bridge Urban-Rural Divides**. The aim is to demonstrate that cutting-edge innovation and vibrant creative communities are not exclusive to urban centres but can thrive in rural environments, leveraging their unique advantages.

ACTIVITIES AND TIMELINE: Silicon Vilstal operates primarily as a platform and network, organising a series of events and initiatives that serve as catalysts for innovation and collaboration. Its continuous activity since its inception suggests an ongoing commitment to its mission.

I. Key Activities:

- **Annual Festival**. The centrepiece of Silicon Vilstal's activities is its annual festival, which brings together a diverse audience of entrepreneurs, artists, scientists, social innovators and local citizens. These festivals feature workshops, lectures, pitches and networking opportunities, designed to inspire new ideas and facilitate connections. The festival acts as a temporary, intense cluster, generating momentum and fostering a sense of community among innovators.
- **Workshops and Think Tanks**. Throughout the year, Silicon Vilstal organises smaller, focused workshops and think tanks on themes related to social, ecological and technological innovation. These events provide a space for deeper engagement, problem-solving and the development of concrete projects.
- **Networking and Community Building**. A core activity is the continuous effort to build and maintain a strong network of innovators, creatives and local stakeholders. This involves facilitating informal meet-ups, online platforms and direct introductions to foster ongoing

collaboration beyond the formal events. Silicon Vilstal is a member of the Social Entrepreneurship Network Germany (SEND e.V.).

- **Showcasing Best Practices:** Silicon Vilstal actively highlights successful projects and initiatives that emerge from its network, providing visibility and inspiring others. This acts as a form of knowledge transfer and validation for the innovative work being done in the region. Silicon Vilstal has received numerous awards, including being recognised as one of the top 10 entrepreneurship organisations in Germany by the European Enterprise Promotion Award (EEPA). [4]
- **International Collaboration:** Silicon Vilstal serves as a learning example for rural innovators from Asia and Africa, by hosting visits and conducting workshops for international groups.

II. Timeline/Chronological Development:

- **Since Inception:** Silicon Vilstal has demonstrated continuous activity, reflecting an ongoing commitment to its mission.
- **Since 2019:** The Silicon Vilstal Experience Festival has been selected annually by the EU Commission as a "European Social Economy Regions" (ESER) Event. [3]
- **Ongoing:** Workshops, think tanks, networking, community building, showcasing best practices, and international collaboration are continuous activities throughout the year.

KEY STAKEHOLDERS: The success of Silicon Vilstal relies on a broad and engaged network of stakeholders. This includes:

- **Founders and Core Team**. The visionary individuals who conceived and continue to drive the initiative, combining regional roots with professional experience. [17]
- **Local Entrepreneurs and Innovators**, **Individuals and Startups** who participate in the events and contribute new ideas and projects.
- **Artists and Cultural Practitioners**, who bring creative perspectives and contribute to the interdisciplinary nature of the platform.
- **Local Authorities and Businesses**, who provide support and resources, and participate in the events, recognising the value of the initiative for regional development. [6]
- **Academic and Research Institutions** who contribute their expertise in sustainable agriculture, food systems analysis and social innovation.
- **Civil Society Members**, comprising 5 of its 18 member organisations, actively contributing to its social innovation focus.

GOVERNANCE MODEL: Silicon Vilstal operates with a flexible, network-based governance model, characteristic of many innovation hubs. It is a non-profit organisation with a core organisational team that works predominantly on a voluntary basis. The emphasis is on facilitating connections and empowering participants rather than a rigid hierarchical structure. Decision-making is agile and responsive, driven by the needs and interests of the community it serves. The annual festival and ongoing events serve as key mechanisms for community engagement and direction-setting, allowing for a dynamic and evolving agenda. The organisation's legal form and statutes are publicly available. [7]

CONTRIBUTION TO CSEI PRINCIPLES: Silicon Vilstal is a recognised Cluster for Social and Ecological Innovation (CSEI) by the EU Commission, making it a leading example in Germany. It embodies CSEI principles through its proactive approach to fostering social and ecological innovation in a rural context. It acts as a catalyst for new ideas and collaborations that lead to tangible social and environmental benefits for the region. By promoting education, science, research, art, culture and civic engagement, it

directly contributes to social well-being and community development. Its focus on interdisciplinary exchange and empowering local actors builds social capital and enhances the region's capacity for self-driven development. The recognition of its annual festival as a "European Social Economy Regions" (ESER) Event since 2019 further solidifies its role as a key player in the European social economy landscape. Its emphasis on bridging urban-rural divides and showcasing rural innovation is directly aligned with the broader goals of sustainable rural development. Silicon Vilstal provides a valuable model for how a region can proactively cultivate an environment conducive to the emergence and growth of CSEIs, demonstrating that innovation can flourish outside traditional urban centres and contribute to a vibrant, resilient rural future.

3.4 Poland

Bałtów "Jurassic" cluster

CONTEXT: The Bałtów "Jurassic" cluster is a remarkable example of rural revitalisation, situated in a small rural community of approximately 4,000 inhabitants in the Świętokrzyskie region of Eastern Poland. This area faced profound socio-economic challenges in the 1990s following the draconian restructuring of the steelworks in nearby Ostrowiec Świętokrzyski. This industrial decline led to a staggering 35% unemployment rate, widespread poverty, and significant social exclusion. The community also suffered from a critical lack of basic infrastructure and social services, which, coupled with limited opportunities, resulted in a significant outflow of younger generations seeking livelihoods elsewhere. This dire situation, however, acted as a powerful catalyst, spurring a group of local stakeholders to initiate forward-thinking initiatives to enhance the region's sustainability which culminated in the creation of a vibrant social economy cluster in Bałtów.

OBJECTIVES: The Bałtów cluster was established with a clear set of interconnected objectives, all aiming to comprehensively revitalise the community and addressing its deep-seated challenges: [8]

- **To Build a Robust Civil Society**. This involved actively promoting social entrepreneurship and fostering strong cooperation and collective action in the community, moving away from individualistic approaches to problem-solving.
- **To Develop Comprehensive Tourist Infrastructure**. The goal was to strategically leverage and showcase the unique natural landscape and rich cultural heritage of the region, transforming it into an attractive destination for visitors.
- **To Create New and Sustainable Employment Opportunities**. By enhancing tourism and related services, the initiative aimed to generate economic development that would directly address the high unemployment rate and provide stable livelihoods for local residents. [15]
- **To Address Pressing Socio-Economic Issues**. Specifically, to combat the pervasive unemployment, attract much-needed investment, and foster social integration in the Bałtów municipality, thereby reversing the trends of decline and exclusion.

ACTIVITIES AND TIMELINE: The Bałtów "Jurassic" cluster's development is a testament to sustained community effort, dating back to 2001 with the active involvement of over 100 residents of the Bałtów municipality. Its evolution can be traced through several key phases:

I. Key Activities:

- **Community Activation.** The initial phase focused on mobilising the local population. A local partnership was formally established, and a comprehensive development programme was outlined. In April 2002, an organisational headquarters and a community club were launched,

serving as central points for coordination and engagement. Various workshops were conducted to activate the local community, including initiatives to empower women interested in agri-tourism, demonstrating an early focus on diversified economic activities and inclusive participation. [16]

- **Branded Local Product Development.** This phase focused on creating a unique and compelling attraction to draw tourists. This involved:
  - **Rafting on the Kamienna River.** Rafting activities were launched on the Kamienna river, accompanied by the development of tourist-friendly infrastructure, laying the groundwork for a nature-based tourism offering.
  - **Discovery of Dinosaur Tracks.** A pivotal moment occurred with the discovery of Jurassic-period dinosaur tracks by scientists from the Polish Academy of Sciences in several locations in Bałtów. This scientific discovery provided an extraordinary and unique selling proposition for the cluster. [8]
  - **Establishment of the Jurassic Park.** Leveraging this scientific find, the community embarked on an ambitious project to reconstruct an Allosaurus dinosaur, which subsequently led to the establishment of the first Jurassic Park in Poland. This attraction became the cornerstone of the cluster's economic revitalisation, drawing hundreds of thousands of visitors annually and creating a multitude of direct and indirect jobs in hospitality, retail and entertainment. The park's success is a direct result of the community's vision and ability to transform a scientific curiosity into a large-scale, sustainable economic engine.

II. Timeline/Chronological Development:

- **2001:** Initial community effort began with the active involvement of over 100 residents.
- **2001-2002:** Community Activation phase, including the formal establishment of a local partnership and outlining of a comprehensive development programme.
- **April 2002:** An organisational headquarters and a community club were launched.
- **Since 2002:** Rafting activities were launched on the Kamienna river.
- **Post-2002:** Branded Local Product Development phase, including the discovery of dinosaur tracks and the subsequent establishment of the Jurassic Park.

KEY STAKEHOLDERS: The success of Bałtów is attributable to a diverse and committed group of stakeholders. This includes the initial group of over 100 residents who spearheaded the initiative, demonstrating powerful grassroots leadership. Local stakeholders from Ostrowiec, the nearby town, also played a crucial role, indicating regional collaboration. Critically, scientists from the Polish Academy of Sciences provided the foundational scientific discovery that became the unique selling proposition for the cluster. The Bałt Association, a local non-governmental organisation, was instrumental in initiating and developing the Jurassic Park project, leveraging the paleontological discovery to create a tourist attraction. The initiative's success in transforming a struggling region into a thriving tourist destination suggests a combination of community-driven efforts, strategic leveraging of local assets, and potentially, various private and public funding mechanisms that supported its growth over time. The sustained involvement of these diverse entities (from local citizens to scientific experts and the entrepreneurial spirit of the Bałt Association) highlights the power of multi-stakeholder collaboration in driving complex rural development projects.

GOVERNANCE MODEL: The governance model of the Bałtów cluster is characterised by its strong community-driven origins and a formalised, yet participatory, structure. The initiative originated from a broad base of local residents, indicating a bottom-up approach to decision-making. The establishment of

a local partnership and the opening of an organisational headquarters suggest a structured framework for collective action. The continuous involvement of local stakeholders in decision-making processes and activity implementation underscores a participatory governance model, where community needs and aspirations directly shape the cluster's strategic direction and operational activities. This model ensures that the development remains aligned with local priorities and fosters a strong sense of ownership among residents. [8]

CONTRIBUTION TO CSEI PRINCIPLES: The Bałtów cluster is a very relevant example of a CSEI, particularly in its robust integration of social and economic innovation in a rural context. It directly addresses severe social issues such as high unemployment and social exclusion by creating new, diversified economic opportunities through tourism. The ecological dimension, while not the primary explicit focus, is implicitly present through the preservation and showcasing of natural heritage (the dinosaur tracks and the Kamienna river), demonstrating a commitment to responsible resource utilisation. The initiative powerfully illustrates how a community can strategically leverage its unique local assets (in this case, paleontological discoveries) to construct a sustainable economic model that generates broad benefits for the entire community, fostering social cohesion, reversing decline, and revitalising a struggling rural area. Its transformation from a post-industrial landscape of despair to a vibrant, internationally recognised tourist destination showcases the profound and transformative power of a well-executed, community-led CSEI.

3.5 Portugal

SmartFarmCoLab

CONTEXT: SmartFarmCoLab (SFCOLAB) is a collaborative laboratory for Digital Innovation in Agriculture, based in Torres Vedras, Portugal. It operates as a quadruple helix entity, bringing together private companies, research institutions, universities and society. Its mission is to develop innovative digital solutions and services, and to be a reference in Digital Agriculture in Portugal. SFCOLAB is an initiative led by the municipality of Torres Vedras and approved by the Foundation for Science and Technology (FCT), positioning it as a key player in agricultural innovation in the region, emphasising collaborative efforts in smart farming to contribute to social and ecological innovation in rural areas. [6]

OBJECTIVES: SFCOLAB's primary objectives are to develop concrete solutions for the pressing challenges of climate change, advance the digitalisation of agriculture, and foster the development of a circular economy. These objectives are tailored to benefit small and medium-sized agricultural units:

- **Innovation**. Diagnosing sector needs, developing or adapting customised and modular solutions, providing assertive technological support, offering inclusive and affordable solutions, building an ecosystem of applications based on data analysis and models, supporting decision-making processes, providing recommendations and alerts, and ensuring data interoperability.
- **Training**. Transferring knowledge and developing basic capacities for the use of innovative technological tools and systems, and digital qualification of the agricultural sector through partnerships with educational institutions and companies. [29]
- **Awareness for Digital Technologies**. Maximising the use and adoption of digital technologies and tools for the agricultural sector, enabling the sustainable intensification of agriculture and ensuring the quality of agricultural products for market valuation.
- **Services and Products for the Sector**. Bringing value to the SFCOLAB ecosystem, regional and national levels, generating new business models, and identifying existing services in the ecosystem.

ACTIVITIES AND TIMELINE: SFCOLAB's activities follow four main axes of action: Innovation, Training, Awareness of Digital Technologies, and Services and Products for the Sector. While a specific timeline is not detailed, its operations involve research and development in smart farming technologies, data analysis, and collaborative experimentation. For instance, SFCOLAB has successfully monitored 570 sensors in the field, installed 127 SOFIS (Smart Object for Farm Information System) devices, and operates in 74 different locations, monitoring 16 different crops. The lab focuses on creating solutions for climate change adaptation in agriculture, implementing digital tools for farm management, and promoting circular economy principles in agricultural practices. This includes pilot projects, workshops, and training sessions designed to integrate new methodologies and tools for sustainable farming. [15]

I. Key Activities:

- **Innovation:** Diagnosing sector needs, developing or adapting customised and modular solutions, providing assertive technological support, offering inclusive and affordable solutions, building an ecosystem of applications based on data analysis and models, supporting decision-making processes, providing recommendations and alerts, and ensuring data interoperability.
- **Training:** Transferring knowledge and developing basic capacities for the use of innovative technological tools and systems, and digital qualification of the agricultural sector through partnerships with educational institutions and companies. [29]
- **Awareness of Digital Technologies:** Maximising the use and adoption of digital technologies and tools for the agricultural sector, enabling the sustainable intensification of agriculture, and ensuring the quality of agricultural products for market valuation.
- **Services and Products for the Sector:** Bringing value to the SFCOLAB ecosystem, regional and national levels, generating new business models, and identifying existing services in the ecosystem.

II. Timeline/Chronological Development:

- **Ongoing Operations:** SFCOLAB's operations are continuous, involving research and development in smart farming technologies, data analysis, and collaborative experimentation.
- **Tangible Results:** SFCOLAB has successfully monitored 570 sensors in the field, installed 127 SOFIS (Smart Object for Farm Information System) devices, and operates in 74 different locations, monitoring 16 different crops. [15]
- **Continuous Integration:** The lab continuously focuses on creating solutions for climate change adaptation in agriculture, implementing digital tools for farm management, and promoting circular economy principles in agricultural practices. This includes pilot projects, workshops and training sessions designed to integrate new methodologies and tools for sustainable farming.

KEY STAKEHOLDERS: SFCOLAB involves a diverse range of stakeholders, reflecting its quadruple helix model:

- **Private Companies**, that are involved in the development of digital solutions and services.
- **Research Institutions and Universities**, contributing knowledge, research and training. Its approval by the Foundation for Science and Technology (FCT) indicates strong involvement from academic and research institutions. [16]
- **Society**, including farmers and agricultural businesses, particularly small and medium-sized agricultural units, who are direct beneficiaries and active participants in the development and adoption of solutions.
- **Public Bodies**. The municipality of Torres Vedras leads the initiative, ensuring public sector involvement and alignment with regional development goals.

GOVERNANCE MODEL: SFCOLAB operates as a collaborative laboratory, suggesting a governance model that prioritises collective decision-making and broad participation from its members across the quadruple helix. Its foundation as an FCT-approved project led by the municipality implies a structured yet flexible approach, adapting to best suit its collaborative nature and objectives. The emphasis on developing solutions to various agricultural challenges necessitates a governance structure that facilitates interdisciplinary collaboration and efficient resource allocation. [13]

CONTRIBUTION TO CSEI PRINCIPLES: SFCOLAB is strongly aligned with CSEI principles through its multi-stakeholder collaboration, inclusive governance, and focus on sustainable rural development in agriculture. By developing solutions for climate change, agricultural digitalisation and circular economy, it directly contributes to ecological sustainability. Its emphasis on supporting small and medium-sized agricultural units and being led by the municipality of Torres Vedras highlights its commitment to social equity and local community empowerment. The tangible results, such as the number of monitored crops and installed sensors, demonstrate its practical impact. This initiative serves as a concrete example of a collaborative effort to foster social and ecological innovation in agriculture, promoting sustainable practices, and enhancing the economic viability and resilience of rural communities.

Encosta

CONTEXT: The Encosta Programme is an urban and social regeneration initiative located in Encosta de São Vicente, a historically deprived urban area in the centre of Torres Vedras. This programme extends urban regeneration efforts to the northern part of the city, focusing on the recovery and transformation of vacant, dilapidated or ruined buildings and the revitalisation of public spaces, including the creation of green spaces. It addresses issues of substandard housing, precarious employment, and socioeconomic vulnerabilities, aiming to improve living conditions for the 724 residents in the Encosta de São Vicente Urban Rehabilitation Area (ARU).

OBJECTIVES: The Encosta Programme has multifaceted strategic objectives aimed at comprehensive urban and social revitalisation: [2]

- **To Create a New Urban Centre** and to transform Encosta de São Vicente into a vibrant and functional urban hub.
- **To Enhance the Overall Perception and Attractiveness of the Area**, promoting a positive and integrated territorial image in the city.
- **To Promote Economic and Cultural Revitalisation**, stimulating local economy and cultural activities. [1]

- **To Promote a Socially-Based Economic System**, fostering economic opportunities that benefit the local community.
- **To improve Green Spaces and Environmental Quality** contributing to the environmental valorisation of the city.
- **To encourage residents to stay and newcomers to settle in the area**. [2]
- **To Ensure Transparency and Community Engagement in the Regeneration Process**, fostering effective communication with the population.

ACTIVITIES AND TIMELINE: The Encosta Programme involves a series of structuring interventions centred on the former Municipal Slaughterhouse. These include public space improvements, equipment upgrades, housing rehabilitation and mobility enhancements. The programme is in line with the Urban Regeneration Action Plan (PARU) and the Integrated Action Plan for Disadvantaged Communities (PAICD).

I. Key Activities:

- **Structuring Interventions:** The programme focuses on public space improvements, equipment upgrades, housing rehabilitation and mobility enhancements, centred on the former Municipal Slaughterhouse.
- **Specific Activities:** These include the transformation of underused spaces, the recovery of dilapidated buildings, and the creation of new public green areas.

II. Timeline/Chronological Development:

- **Ongoing Alignment:** The programme continuously aligns itself with the Urban Regeneration Action Plan (PARU) and the Integrated Action Plan for Disadvantaged Communities (PAICD).
- **Direct Impact:** The programme has had a direct impact on 724 residents in the Encosta ARU, demonstrating tangible results in urban regeneration, and indicating ongoing implementation and progress.

KEY STAKEHOLDERS: The primary stakeholders of the Encosta Programme include the municipality of Torres Vedras, which leads the initiative, and the residents of Encosta de São Vicente, who are directly impacted by the regeneration efforts. Other stakeholders are likely to include local authorities, community organisations like Somos Comunidade and Porta do Bairro (which are involved in community intervention and social inclusion in Encosta S. Vicente), and potentially private entities involved in construction and development. The programme's alignment with PARU and PAICD also suggests the involvement of various governmental and social support agencies. [2]

GOVERNANCE MODEL: The Encosta Programme is led by the municipality of Torres Vedras, indicating a governance model with strong public sector leadership. However, its focus on social and urban regeneration, and its alignment with initiatives like PAICD, suggests a participatory approach that involves local communities and organisations in decision-making processes. The programme's emphasis on communication with the population and its direct impact on residents highlight a governance structure that prioritises community engagement and responsiveness to local needs.

CONTRIBUTION TO CSEI PRINCIPLES: The Encosta Programme is a robust example of a CSEI which has both social and ecological objectives. Socially, it directly addresses housing affordability, social exclusion and economic vulnerabilities by regenerating deprived urban areas and supporting vulnerable communities. The programme's impact on 724 residents and its focus on creating a positive living environment underscore its commitment to social equity and community well-being. Ecologically, its efforts in revitalising public spaces, creating green areas and transforming dilapidated buildings

contribute to environmental valorisation and sustainable urban development. Its municipal leadership and focus on local community need further reinforce its alignment with CSEI principles, demonstrating how integrated urban regeneration can lead to significant social and ecological benefits.

3.6 Spain

RURALLINK

CONTEXT: The RURALLINK initiative in Spain is a collaborative network focused on fostering inclusive development in rural areas of Navarra. It emerged from the PARI project's Practice Mapping exercise, which aimed to identify and assess CSEIs. RURALLINK addresses challenges and opportunities in rural contexts by promoting collaborative efforts for sustainable development. Its assessment framework emphasises understanding its geographical scope, legal status, membership and management, aligning its structure and operations with CSEI principles. This initiative operates in a Spanish context that seeks to foster social and ecological innovation through collaborative networks, especially where traditional economic models may be insufficient to address complex socio-environmental issues.

OBJECTIVES: RURALLINK's core objectives are centred on fostering social and ecological innovation through collaborative networks in rural contexts. These include: [23]

- **To Promote Collaborative Development**. The initiative aims at facilitating partnerships among diverse actors to address local challenges. For example, it aims to generate synergies and share knowledge among network entities.
- **To Drive Social and Ecological Innovation**, by generating new solutions that simultaneously meet social needs and contribute to environmental sustainability. This involves making projects visible and consolidating them as development agents in rural areas, with a focus on the individual.
- **To Enhance Rural Resilience**, building the capacity of rural communities to adapt to change, diversify their economies, and improve the quality of life. [24]
- **To Foster Inclusive Governance**, ensuring that decision-making processes are participatory, transparent, and representative of all stakeholders.
- **To Promote Quality Employment**, creating qualified and inclusive employment, fostering inclusive entrepreneurship, and promoting generational replacement in rural areas.
- **To Enhance Transversality**, addressing key aspects such as housing, mobility, equality, digitalisation and sustainability. [18]

ACTIVITIES AND TIMELINE: RURALLINK functions informally through an agreed "white paper" and engages in a range of collaborative activities. The network's evolution is characterised by continuous engagement and the development of collaborative projects.

I. Key Activities:

- **Network Building and Facilitation:** Organising meetings, workshops and platforms to connect social economy entities, academic bodies, businesses and public bodies. The network is structured around four thematic poles: Circular Economy (led by Josenea Bio S.L.U), Active Aging (Eutsi S. Microcoop), Accessibility and Care (Aspace Navarra), and Social Entrepreneurship (Gure Sustraiak S. Coop de Iniciativa Social).
- **Collaborative Project Incubation:** Supporting the development and implementation of joint projects that address social and ecological challenges. An example is the HIZKETAN project, a collaborative effort between Aspace Navarra, Josenea and Gure Sustraiak. HIZKETAN focuses on making learning tools accessible and adaptable for people with disabilities and those at risk of exclusion, by training them as environmental and natural/cultural heritage guides. This project involves Aspace Navarra providing accessibility and new technology support, training and communication; Josenea developing a circular economy park and working with people at risk of social exclusion; and Gure Sustraiak co-designing actions and facilitating participatory processes. [25]
- **Knowledge Exchange and Capacity Building:** Facilitating the sharing of best practices, technical expertise, and training among members. This includes digital training initiatives conducted via Navarra Employment Service using travelling training vehicles to address digital literacy challenges in rural areas.
- **Advocacy and Policy Engagement:** Representing the interests of its members and advocating supportive policies at local, regional and national levels. This includes advocating a paradigm shift from rural-to-urban to urban-to-rural interactions and proposing solutions like establishing automated urban pick-up points for rural producers.

II. Timeline/Chronological Development:

- **Ongoing:** RURALLINK's activities are continuous, driven by its agreed "white paper" and the collaborative engagement of its members.
- **Continuous Project Incubation:** The network consistently supports the development and implementation of joint projects, such as the HIZKETAN project.
- **Informal Functioning:** The network operates informally, emphasising trust and collective objectives, leading to incremental network growth based on real community needs and transparent governance.

KEY STAKEHOLDERS: RURALLINK's multi-stakeholder approach includes: [26]

- **Founding Entities**. Aspace Navarra (focused on cerebral palsy and related disabilities), Josenea (working with people facing employment difficulties, focusing on environmental sustainability), and Gure Sustraiak (social initiative cooperative focused on inclusive projects, social, environmental and economic commitment). Eutsi S. Microcoop (addressing aging and depopulation) is also a key member.
- **Social Economy Entities and Service Providers**. Cooperatives, associations and foundations operating in the social economy sector.
- **Academic and Research Bodies**. Universities, research centres, and educational institutions contributing knowledge and training. [27]
- **Businesses**. Traditional private sector companies engaging in partnerships with social economy organisations.

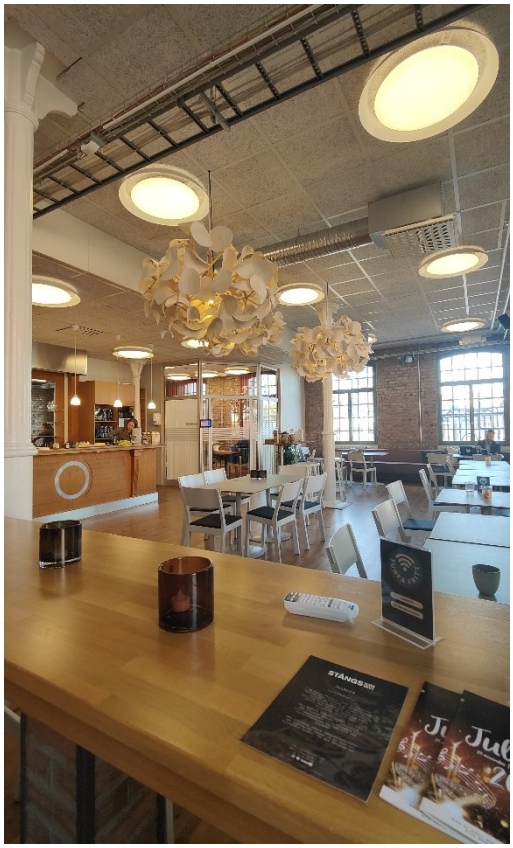
- **Public Bodies**. Local, regional or national government agencies providing policy support, funding or regulatory frameworks.
- **Local Communities**. Residents of rural areas, including those with disabilities and at risk of exclusion, who are direct beneficiaries of the initiatives. [28]

GOVERNANCE MODEL: RURALLINK functions informally through an agreed "white paper," which emphasises inclusivity and addressing identified community needs collaboratively. It operates as a "network of networks" with four thematic poles, each managed by specialised social economy entities. This model prioritises trust among participants, collective objectives over individual interests, and incremental network growth based on real community needs and transparent governance. Whenever possible, solutions are implemented through the "Innova Social" initiative, supported by Fundación Caja Navarra.

CONTRIBUTION TO CSEI PRINCIPLES: RURALLINK strongly embodies CSEI principles through its multi-stakeholder collaboration, inclusive governance, and focus on sustainable rural development. Its efforts to create qualified and inclusive employment, address housing and mobility, and promote digitalisation directly contribute to social equity and economic resilience. The HIZKETAN project, for instance, exemplifies social innovation by providing accessible training for vulnerable groups. The network's focus on circular economy (Josenea Bio S.L.U) and sustainable practices demonstrates its commitment to ecological sustainability. By fostering a collaborative ecosystem among diverse actors, RURALLINK provides concrete solutions to complex socio-environmental challenges in rural Spain.

3.7 Sweden

Egnahemsfabriken



CONTEXT: Egnahemsfabriken is a grassroots initiative located on the Swedish island of Tjörn. It addresses modern housing challenges by combining sustainable development with social innovation. Inspired by Sweden's historic "Egnahem" movement, which promoted self-built homes for working-class families, Egnahemsfabriken modernises this concept to tackle issues such as housing shortages, affordability, and rural depopulation. It functions as a collaborative hub where individuals and communities work together to build small, eco-friendly homes. [12]

OBJECTIVES: Egnahemsfabriken's overarching goals are multifaceted, addressing both social and ecological dimensions:

- **Housing Access**, providing affordable housing solutions to individuals excluded from the traditional housing market.
- **Community Building**, fostering social cohesion and reducing isolation in rural areas. [17]
- **Sustainability**, encouraging the use of recycled materials and energy-efficient designs to minimise environmental impact.
- **Empowerment**, enabling participants to gain hands-on skills and autonomy in creating their own homes.
- **Rural Revitalisation**, supporting local economies and reversing depopulation trends in Tjörn and similar regions. [6]

ACTIVITIES AND TIMELINE: The initiative engages participants in a structured yet flexible process, with key milestones.

I. Key Activities:

- **Workshops and Training:** Participants attend sessions to learn about sustainable construction techniques, tool use, and planning.
- **Collaborative Construction:** The factory provides space, tools, and expert guidance in building homes together. [7]
- **Community Events:** Regular gatherings foster collaboration, skill-sharing and networking among participants.

II. Timeline/Chronological Development:

- **Initiation (2017–2018):** This phase included project planning, funding acquisition and facility establishment. [8]
- **Implementation (2019–2022):** This period involved active workshops and home construction projects.
- **Expansion (2023–Present):** This ongoing phase entails increased capacity, new partnerships and scaling up of the model.

KEY STAKEHOLDERS: The primary stakeholders include the individuals and communities participating in the home-building process, local authorities, and potentially environmental organisations and material suppliers. The grassroots nature of the initiative suggests a strong emphasis on community involvement and self-organisation. [19]

GOVERNANCE MODEL: Egnahemsfabriken operates as a collaborative hub, implying a participatory governance model where participants are actively involved in the construction process and potentially in decision-making related to the project. The focus on empowerment and community building suggests a horizontal structure that prioritises collective action and shared responsibility.

CONTRIBUTION TO CSEI PRINCIPLES: Egnahemsfabriken is a strong example of a CSEI, particularly in its integration of social and ecological objectives. Socially, it addresses housing affordability and social isolation, empowering individuals through skills development and fostering community cohesion. Ecologically, its commitment to recycled materials and energy-efficient designs is aligned with circular economy principles and sustainable development. Its grassroots origin and focus on rural revitalisation further underscore its alignment with the CSEI framework, demonstrating how community-led initiatives can provide innovative solutions to complex challenges in rural areas.

Offerdal

CONTEXT: Offerdal, located in Krokom Municipality in Jämtland County, Sweden, is a rural community characterised by strong local engagement and resilience. Due to centralisation trends, the area has historically faced threats of losing essential public services, such as schools, preschools and healthcare. Despite these challenges, Offerdal has become a model for community-driven initiatives aimed at preserving and sustaining rural services through grassroots action, cooperative solutions, and collaborative platforms like Krokom's Växtkraft. [10]

OBJECTIVES: The main goals of Offerdal's initiatives are centred on maintaining and strengthening the community's infrastructure and social fabric:

- **To Preserve Essential Services**, including healthcare, schools and preschools, as a foundation for community growth.
- **To Strengthen Cooperation**, through Krokom's Växtkraft, a platform for local and municipal collaboration to promote sustainable rural development. [11]
- **To Create Long-Term, Community-Led Solutions** for service delivery and infrastructure.
- **To Empower Local Residents**, thus counteracting centralisation trends and enabling local people to make decisions for their own communities.

ACTIVITIES AND TIMELINE: Offerdal's efforts span several decades, demonstrating a sustained commitment to community resilience. [12]

I. Key Activities:

- **Building Community Infrastructure**: (Early 1900s) Construction of local rural schools and establishment of village cooperatives to supply essential goods and support local farmers and businesses.
- **Protecting Local Services**: (1950s–1970s) Communities organised to maintain post offices, grocery shops and transport services as urbanisation began to divert resources. Founding of cultural and sports associations to sustain social cohesion.
- **Resisting Centralisation**: (1980s) Local protests emerged in response to threats of school closures and reductions in bus services, helping to delay or reverse some proposed cuts. [20]

- **Cooperative Health Centre**: (Early 2000s) Facing closure, residents established a cooperative health centre that remains operational, providing critical healthcare services.
- **Krokom's Växtkraft**: (2018–Present) A platform for local and municipal collaboration, further strengthening community-driven development.

II. Timeline/Chronological Development:

- Early 1900s: Building Community Infrastructure.
- 1950s–1970s: Protecting Local Services.
- 1980s: Resisting Centralisation.
- Early 2000s: Establishment of Cooperative Health Centre.
- 2018–Present: Krokom's Växtkraft platform in operation.

KEY STAKEHOLDERS: The key stakeholders in Offerdal are primarily the local residents themselves, who have consistently demonstrated strong civic engagement. Other important stakeholders include the Krokom Municipality and various local associations and cooperatives that have been instrumental in preserving services and fostering community life. [21]

GOVERNANCE MODEL: Offerdal's governance model is characterised by strong community-led decision-making and cooperative solutions. The establishment of a cooperative health centre and the active participation in platforms like Krokom's Växtkraft highlight a decentralised and participatory approach, where local residents take ownership of their development and service provision. This bottom-up governance ensures that solutions are tailored to local needs and priorities.

CONTRIBUTION TO CSEI PRINCIPLES: Offerdal is a remarkable example of a CSEI driven by social innovation and community resilience. Its focus on preserving essential services and empowering local residents directly addresses social challenges in rural areas, such as access to healthcare and education. While the ecological dimension is not explicitly detailed, the emphasis on sustainable rural development and local self-sufficiency often has implicit environmental benefits. The long-term commitment to community-led solutions and cooperative models demonstrates a robust and adaptable CSEI that prioritises social well-being and local control over external pressures, making it a powerful model for other rural communities facing similar challenges.

Väderstad

CONTEXT: Väderstad, a small locality in Mjölby Municipality in Östergötland County, Sweden, is known for its vibrant local culture, agricultural roots, and entrepreneurial spirit. Strategically positioned between Linköping and Jönköping, Väderstad has experienced growth in tourism and rural development initiatives. A key project in this area is the establishment of an Experience Centre for Food, which serves as a hub celebrating local food production, culinary traditions and sustainable agriculture. [5]

OBJECTIVES: The Experience Centre for Food in Väderstad focuses on economic development, education and community engagement, its key goals being:

- **To Promote Local Food Production** and strengthen small-scale farmers and food businesses in the area.
- **To Create a Visitor Destination** offering education on food systems, sustainability and regional culinary heritage. [5]

- **To Support the Local Economy**, by driving tourism and creating opportunities for food producers, artisans and entrepreneurs.
- **To Foster Community Engagement and Education** in healthy eating, food security and ecological farming practices.

ACTIVITIES AND TIMELINE: The project has evolved through several phases.

I. Key Activities:

- **Concept Development:** Local food producers, community leaders and Mjölby Municipality collaborated to develop the idea. Feasibility studies were conducted to identify economic and social benefits and funding opportunities.
- **Planning and Partnerships:** Partnerships were formed with local farms, food artisans, schools and tourism organisations to ensure broad support and involvement. The location in Väderstad was chosen due to its proximity to major transport routes and strong local agricultural identity.
- **Construction and Opening:** The Experience Centre for Food opened to the public, featuring exhibition areas on agricultural history, and a local food market showcasing regional produce. [23]

II. Timeline/Chronological Development:

- **2015–2018:** Concept Development phase.
- **2019:** Planning and Partnerships phase.
- **2021:** Construction and Opening. The centre opened to the public, featuring exhibition areas on agricultural history, and a local food market showcasing regional produce. [23]

KEY STAKEHOLDERS: Key stakeholders include local food producers, community leaders, Mjölby Municipality, local farms, food artisans, schools and tourism organisations. This broad range of actors highlights a collaborative approach involving both public and private entities, as well as community groups.

GOVERNANCE MODEL: The centre's development involved collaboration between local food producers, community leaders and the Mjölby Municipality, suggesting a multi-stakeholder governance model. The formation of partnerships with various local entities indicates a shared decision-making process and a collective commitment to the project's success. This collaborative governance ensures that the centre serves the diverse needs of the community and local economy.

CONTRIBUTION TO CSEI PRINCIPLES: Väderstad's Experience Centre for Food is a compelling example of a CSEI with a strong focus on ecological and economic sustainability, intertwined with social benefits. Ecologically, it promotes sustainable agriculture and educates on food systems, contributing to a more circular and environmentally conscious food economy. Economically, it supports local producers, drives tourism, and creates entrepreneurial opportunities, revitalising the rural economy. Socially, it fosters community engagement, educates on healthy eating, and strengthens local identity through culinary heritage. The collaborative development and multi-stakeholder involvement further align it with the principles of CSEIs, demonstrating how food systems can be a powerful lever for integrated rural development. [5]

Röstånga

CONTEXT: Röstånga is a small locality in Skåne County, Sweden, known for its innovative approaches to rural community development, sustainability and revitalisation. Located near the Söderåsen National Park, it has a strong focus on leveraging its natural surroundings and cultural heritage to foster sustainable growth and attract both residents and visitors. Facing challenges such as population decline and limited services in the early 2000s, local actors initiated a series of grassroots efforts to create a vibrant and sustainable community.

OBJECTIVES: The main goal in Röstånga has been to combat rural depopulation, improve the quality of life, and enhance local economic opportunities. Röstånga strives to balance the conservation of its natural and cultural resources with progressive community planning and social cohesion.

ACTIVITIES AND TIMELINE: Key milestones in Röstånga's development include efforts spanning two decades, with notable achievements such as the construction of new housing for artists and the promotion of the area as a hub for creative professionals [20].

I. Key Activities:

- **Establishment of the Röstånga Development Association** to drive projects in housing, cultural activities and green tourism.
- **Creation of New Affordable Housing Units**, partly through innovative financing models involving local residents.
- **Development of Cultural and Natural Tourism Initiatives** connected with Söderåsen National Park. [25]

II. Timeline/Chronological Development:

- **Over two decades:** These efforts have spanned two decades, with notable achievements such as the construction of new housing for artists and the promotion of the area as a hub for creative professionals.
- **Early 2000s:** Local actors initiated a series of grassroots efforts to create a vibrant and sustainable community, addressing challenges such as population decline and limited services.

KEY STAKEHOLDERS: Key players include the Röstånga Development Association, Svalöv Municipality (supporting planning and funding initiatives), and local residents and small businesses, who are heavily involved in cooperative housing and sustainable tourism projects.

GOVERNANCE MODEL: The governance structure in Röstånga relies on a cooperative and participatory approach, integrating input from residents, municipal authorities and private investors. Community-led decision-making plays a central role, ensuring that development initiatives are aligned with local needs and aspirations. [20]

CONTRIBUTION TO CSEI PRINCIPLES: Röstånga serves as an excellent example of a CSEI that effectively integrates social, ecological and economic objectives. Socially, it addresses rural depopulation and improves the quality of life through affordable housing and community engagement. Ecologically, its focus on green tourism and leveraging natural surroundings demonstrates a commitment to environmental sustainability. Economically, it enhances local opportunities by attracting residents and visitors, and fostering creative professionals. The strong emphasis on grassroots initiatives, cooperative models, and participatory governance further solidifies its alignment with CSEI principles, showcasing how a community can proactively shape its future through integrated and sustainable development.

4. Analysis of CSEI Resources and Governance

4.1 Social Resources in Rural CSEIs

Social resources are the collective assets embedded in social networks, including trust, norms of reciprocity, and shared values, which facilitate collective action and cooperation. In rural CSEIs, these resources are paramount for fostering collaboration and achieving shared goals.

Methods for Identification of Social Resources

Identifying social resources in rural CSEIs involves understanding the existing community structures, informal networks, and the levels of trust and engagement among residents. This can be achieved through: [27]

- **Community Mapping**. Visualising existing social networks, community groups, and key individuals. For instance, the Bałtów cluster in Poland leveraged pre-existing community bonds and a strong sense of local identity, which were crucial for mobilising over 100 residents to initiate the Jurassic Park project.
- **Stakeholder Analysis**. Identifying all relevant actors, their relationships and their potential contributions. The PLOUCS initiative in France systematically identifies and engages a diverse array of SSE actors, local authorities and academic institutions, recognising that their social capital is a vital resource for collaborative development.
- **Participatory Assessments**. Engaging community members in discussions and workshops to uncover shared values, common interests, and potential for collective action. The Offerdal initiative in Sweden demonstrates a long history of participatory approaches, where local residents actively identify needs and co-create solutions for essential services, highlighting deep social resources. [28]

Strategies for Involvement and Engagement

Effective strategies for involving and engaging social resources are crucial for the vitality of CSEIs:

- **Inclusive Governance Models**. Ensuring that decision-making processes are participatory and representative of all stakeholders. The RURALLINK case study from Spain emphasises the importance of broad participation and equitable power-sharing in the cluster, indicating strategies for inclusive governance.
- **Capacity Building and Empowerment**. Providing training and opportunities for community members to develop skills and take ownership of initiatives. PLOUCS actively empowers youth through its CJS programme, fostering entrepreneurial skills and civic engagement, thereby strengthening social resources for future endeavours. [3]
- **Facilitating Dialogue and Trust-Building**. Creating platforms for open communication and fostering relationships based on mutual trust. Silicon Vilstal in Germany, through its festivals and workshops, acts as a catalyst for interdisciplinary collaboration, building trust and fostering a sense of shared purpose among diverse individuals.

Challenges and Solutions

Challenges in leveraging social resources often include apathy, conflicts of interest or lack of trust. Solutions involve:

- **Building Consensus**, through transparent communication and conflict resolution mechanisms. The Bałtów cluster successfully navigated potential conflicts by focusing on a shared vision for community revitalisation, overcoming initial scepticism. [8]
- **Demonstrating Tangible Benefits**, showcasing early successes to build confidence and encourage broader participation. The visible transformation of Bałtów into a thriving tourist destination served as a powerful motivator for continued community involvement.
- **Sustained Engagement**, maintaining continuous dialogue and involvement to prevent disengagement. The long-term commitment of the Offerdal community to preserving services highlights the importance of sustained engagement and collective action over decades.

4.2 Environmental Resources in Rural CSEIs

Rural areas are rich in environmental resources, including biodiversity, fertile land, clean water, and natural landscapes. CSEIs play a critical role in identifying, managing, and integrating these resources into sustainable development models. [15]

Methods for Identification of Environmental Resources

Identifying environmental resources involves assessing natural assets and their potential for sustainable use:

- **Ecological Surveys and Mapping** documenting local ecosystems, biodiversity hotspots, and natural assets. The Bałtów cluster leveraged the unique paleontological discovery of dinosaur tracks, a significant item of natural heritage, as the foundation for its tourism development.
- **Resource Audits** assessing the availability and quality of natural resources like water, soil and forests. The Ceinture Alimentaire Charleroi Métropole in Belgium focuses on local food systems, implicitly identifying fertile land and water resources as critical for sustainable food production. [18]
- **Community-Based Monitoring** engaging community members in discussions and workshops to uncover shared values, common interests, and potential for collective action. The Röstånga initiative in Sweden leverages its proximity to Söderåsen National Park, indicating an awareness and valuation of its natural surroundings for green tourism.

Sustainable Management Approaches

CSEIs take various approaches to the sustainable management of environmental resources:

- **Circular Economy Principles**, implementing practices that minimise waste and maximise resource efficiency. Egnahemsfabriken in Sweden promotes the use of recycled materials and energy-efficient designs in housing construction, embodying circular economy principles. [12]
- **Eco-friendly Production Methods**, based on the adoption of sustainable agricultural practices, renewable energy, and responsible tourism. GOEL Bio in Italy is committed to organic farming practices, ensuring environmental sustainability and responsible resource management in citrus production. The Väderstad Experience Centre for Food in Sweden promotes local food production and sustainable agriculture, contributing to a more environmentally conscious food economy.
- **Conservation and Restoration**, protecting natural habitats and restoring degraded ecosystems. The Bałtów cluster, while focused on tourism, implicitly contributes to the conservation of its unique geological heritage.

Integration of Ecological Innovation

Ecological innovation in CSEIs involves developing and implementing new solutions that address environmental challenges: [30]

- **Technological Innovations**, adopting smart farming technologies or renewable energy solutions. SmartFarmCoLab in Portugal focuses on leveraging technology for sustainable farming, integrating ecological innovation into agricultural practices.
- **Process Innovations**, developing new methods of waste management, water conservation or sustainable land use. The Ceinture Alimentaire Charleroi Métropole promotes short supply chains and local food production, which are process innovations reducing the environmental footprint of food systems.
- **Social Innovations for Environment**, fostering community-led initiatives for environmental protection. The Röstånga initiative integrates green tourism with community development, showcasing social innovation for environmental benefits. [20]

4.3 Economic Resources in Rural CSEIs

Economic resources encompass financial capital, infrastructure, market access, and entrepreneurial capacity. CSEIs develop innovative models to mobilise and manage these resources for sustainable economic development.

Methods for Identification of Economic Resources

Identifying economic resources involves assessing financial flows, local markets and entrepreneurial potential:

- **Economic Mapping**, analysing local businesses, supply chains and consumption patterns. The Väderstad Experience Centre for Food aims to strengthen small-scale farmers and food businesses, indicating an identification of local economic potential in the food sector. [5]
- **Feasibility Studies**, assessing the economic viability of new projects and initiatives. The Bałtów cluster undertook a significant economic transformation by establishing the Jurassic Park, demonstrating a successful assessment of tourism potential.
- **Entrepreneurial Audits**, identifying local entrepreneurial talent and opportunities for new ventures. PLOUCS in France operates an SSE Project Incubator, directly identifying and nurturing entrepreneurial potential in the social economy.

Financing Models and Sustainability

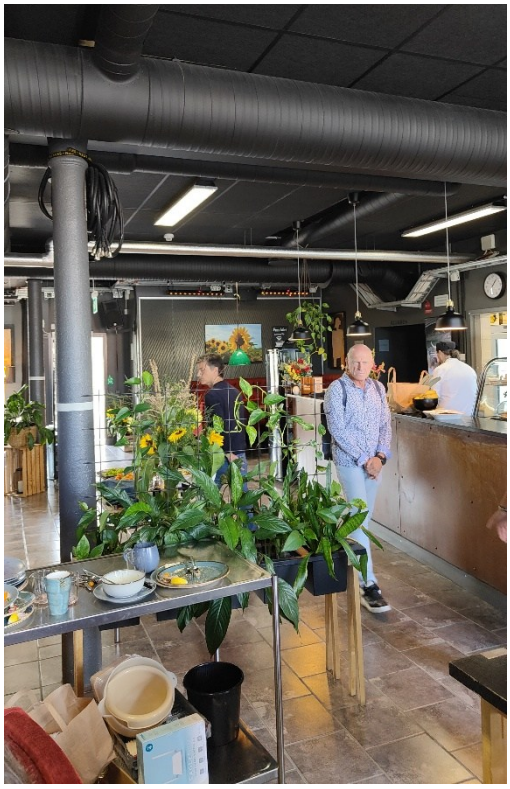
CSEIs employ diverse financing models to ensure their sustainability: [3]

- **Revenue Generation** through direct sales of products or services. GOEL Bio generates revenue from the sale of organic citrus fruits, which directly supports its social and environmental mission. The Bałtów cluster generates substantial revenue from tourism activities, which is reinvested in community development.
- **Grants and Subsidies**, accessing public funding from national or EU programmes. Many CSEIs, including those in the PARI project, are likely to rely on grants for initial set-up and specific projects, though their goal is often to achieve financial self-sufficiency.
- **Social Investment**, attracting impact investors who prioritise social and environmental returns alongside financial ones. The Ceinture Alimentaire Charleroi Métropole focuses on capacity building in business management, suggesting efforts to attract diverse forms of investment. [18]

- **Community-Based Funding**, mobilising local financial resources through cooperative models or crowdfunding. The Offerdal initiative in Sweden has a history of community-led cooperative solutions for services, indicating local financial mobilisation.

Market Access and Value Chain Integration

CSEIs focus on improving market access and integrating into sustainable value chains:



- **Short Supply Chains**, connecting producers directly with consumers to ensure fair prices and reduce intermediaries. The Ceinture Alimentaire Charleroi Métropole explicitly promotes short supply chains for local food. [18]
- **Local Market Development**, creating platforms for local producers to sell their goods. The Väderstad Experience Centre for Food includes a local food market showcasing regional produce.
- **Ethical Sourcing and Fair Trade**, ensuring fair practices throughout the value chain. GOEL Bio is a prime example, guaranteeing fair prices to producers and dignified working conditions, thereby creating an ethical supply chain.

Economic Impact Assessment

Assessing the economic impact of CSEIs involves measuring job creation, income generation and local economic multiplier effects: [6]

- **Job Creation**. Many CSEIs directly create employment opportunities, particularly for vulnerable groups. The Bałtów cluster significantly reduced unemployment in its region by creating jobs across various sectors related to tourism. PLOUCS fosters social entrepreneurship, leading to job creation in the SSE.
- **Local Value Retention**, ensuring that economic benefits remain in the local community. The focus on local production and consumption in initiatives like the Ceinture Alimentaire Charleroi Métropole helps retain economic value locally .
- **Diversification of Rural Economies**, reducing reliance on single industries. The Bałtów cluster transformed a post-industrial area into a diversified tourism economy. [8]

EU funding for CSEIs

- **Structural and Investment Funds**, such as the ERDF and ESF+, which support regional development and social inclusion. CSEIs can access these funds for infrastructure, capacity building, and social innovation projects. Bałtów's transformation from a crisis-affected rural area into a thriving tourism and educational cluster demonstrates how the structural funds can support comprehensive rural revitalisation initiatives.
- **Common Agricultural Policy (CAP)**. The second pillar of CAP (rural development) can support CSEIs focused on sustainable agriculture, rural diversification, and community-led local development (CLLD). PLOUCS, operating in the French PTCE framework, exemplifies how rural development funding can support territorial cooperation and social economy initiatives in agricultural regions.

- **Horizon Europe** for research and innovation projects related to social and ecological challenges. SmartFarmCoLab, with its focus on technology in agriculture, could potentially benefit from such research funding. Both PLOUCS's innovation incubator activities and Bałtów's educational and research components are aligned with Horizon Europe's objectives for rural innovation. [7]
- **Specific Social Economy Initiatives**. The EU Social Economy Action Plan aims to improve access to finance for social economy entities, including CSEIs. PLOUCS's structure as a PTCE (Pôle Territorial de Coopération Économique) positions it well to benefit from social economy funding mechanisms, while Bałtów's community-driven development model is aligned with social economy principles.

4.4 Governance Tools for CSEIs

Effective governance is crucial for the sustainability and impact of CSEIs, in order to ensure transparency, accountability, and participatory decision-making.

Governance Models and Structures

CSEIs adopt various governance models, which are often characterised by their collaborative and inclusive nature: [19]

- **Cooperative Models**, where members have shared ownership and democratic control. GOEL Bio, as an agricultural cooperative, operates under a democratic governance model, ensuring collective decision-making. The Offerdal initiative in Sweden has a history of community-led cooperative solutions for services.
- **Multi-Stakeholder Partnerships** involving diverse actors in decision-making. The Väderstad Experience Centre for Food involved collaboration between local food producers, community leaders, and the Mjölby Municipality, indicating a multi-stakeholder governance.
- **Network-Based Governance**. These are flexible structures that facilitate collaboration among autonomous entities. Silicon Vilstal operates as a platform and network, emphasising connections and empowering participants rather than rigid hierarchy. [10]
- **Formalised Frameworks**, such as the PTCE model in France, which provide a legal structure for collaborative clusters. PLOUCS benefits from this formalised framework, which encourages cooperation among SSE actors.

Stakeholder Participation Mechanisms

CSEIs prioritise active participation by their stakeholders:

- **Community Assemblies and Workshops**, engaging local residents in planning and decision-making. The Bałtów cluster involved over 100 residents in its initial stages, demonstrating strong community activation. [8]
- **Working Groups and Committees** that allow specialised input and shared responsibility. The Ceinture Alimentaire Charleroi Métropole focuses on capacity building in governance and participation, suggesting structured engagement.
- **Digital Platforms** that facilitate online collaboration and communication among dispersed stakeholders. While not explicitly detailed, many modern CSEIs would leverage digital tools for broader participation.

Decision-making Processes

Decision-making in CSEIs often emphasises consensus-building and inclusivity: [12]

- **Consensus-Based Decisions** aiming for broad agreement among stakeholders. The bottom-up nature of many CSEIs, like Offerdal, suggests a preference for consensus to ensure community buy-in .
- **Participatory Budgeting** involving community members in allocating resources. While not explicitly stated, this could be a mechanism used by CSEIs with strong community governance.
- **Transparent Reporting** ensuring that decisions and their rationale are clear and accessible to all stakeholders. The assessment criteria for RURALLINK and Encosta-Ecosystem emphasise transparency in management. [2]

Monitoring and Evaluation Frameworks

CSEIs need robust frameworks to monitor progress and evaluate impact:

- **Social Impact Measurement** assessing contributions to social well-being, inclusion and equity. The PARI project's assessment framework for all case studies implicitly involves evaluating social impact.
- **Ecological Impact Assessment** measuring environmental benefits, such as reduced carbon footprint or biodiversity enhancement. GOEL Bio's commitment to organic farming implies a focus on ecological outcomes . [21]
- **Economic Performance Indicators** tracking job creation, income generation and financial sustainability. The success of the Bałtów cluster is evident in its economic revitalisation and job creation.
- **Participatory Evaluation** involving stakeholders in the evaluation process to ensure relevance and ownership. The continuous engagement in initiatives like Offerdal suggests ongoing, informal evaluation by the community.

4.5 Transferable Models and Approaches

While each CSEI is unique, there are transferable models and approaches that can inform development in other contexts. [22]

Adaptation Requirements for Different Contexts

Transferability requires careful adaptation to local conditions:

- **Contextual Sensitivity**, recognising that successful models must be adapted to their socio-economic, cultural and environmental contexts. The Bałtów model, while inspiring, requires a unique local asset (like dinosaur tracks) or a similar strong community mobilisation for replication.
- **Scalability vs. Replicability**. This distinction is key to reckon whether it is worth scaling up an existing initiative in its context or replicating its core principles in a new context. The PTCE framework in France allows for the replication of the collaborative cluster model, as seen with PLOUCS, across different regions. [3]
- **Resource Availability**, adapting approaches based on the availability of social, environmental and economic resources. Initiatives in resource-constrained areas might prioritise grassroots mobilisation, like Offerdal.

Policy Recommendations and Support Mechanisms

Policies can facilitate the transfer and adaptation of CSEI models:

- **Flexible Funding Mechanisms**, providing funding that can be adapted to diverse local needs and innovative approaches. EU funds should be made more accessible and flexible for CSEIs. [14]

- **Knowledge Transfer Platforms**, creating mechanisms for sharing best practices and lessons learned across regions and countries. The PARI project itself serves as a valuable platform for this.
- **Capacity Building Programmes**, supporting local actors in developing the skills needed to adapt and implement CSEI models. PLOUCS's incubator and training programmes are examples of capacity building.
- **Enabling Legal Frameworks**, developing legal and regulatory environments that support the formation and operation of CSEIs, such as the French PTCE framework. [3]

4.6 Comparative Analysis

This section provides a focused comparative analysis of the CSEIs through the lens of resources and governance, building on the individual analyses.

Inception and Development Pathways

CSEIs emerge through diverse pathways:

- **Crisis-Driven**. Some, like Bałtów, emerged from severe economic crisis and unemployment, leveraging unique assets for revitalisation. [8]
- **Proactive Innovation**. Others, like Silicon Vilstal, were proactively established to foster innovation and collaboration in stable regions.
- **Community-Led Response to Decline**. Offerdal and Röstånga represent long-term community efforts to counteract rural decline and preserve essential services.
- **Policy-Enabled**. PLOUCS benefited from a supportive national policy framework (PTCE) that facilitated its formation. [3]

Success Factors and Challenges

Common success factors include strong community engagement, multi-stakeholder collaboration, and effective leadership. Challenges often involve securing sustainable funding, navigating complex regulations, and managing internal conflicts.

- **Success Factors:**
  - **Strong Local Leadership and Vision**. This is evident in Bałtów's transformation and GOEL Bio's ethical mission. [8]
  - **Ability to Leverage Unique Local Assets**, as seen with Bałtów's dinosaur tracks and Röstånga's national park proximity.
  - **Effective Multi-Stakeholder Engagement**, crucial for PLOUCS, Ceinture Alimentaire Charleroi Métropole, and the Spanish/Portuguese cases .
- **Challenges:** [26]
  - **Sustainable Funding**. This is a common challenge for many CSEIs, requiring diverse financing models.
  - **Bureaucracy and Regulatory Hurdles**. Navigating complex administrative procedures can be difficult, especially for grassroots initiatives.
  - **Maintaining Engagement**. Sustaining community and stakeholder involvement over the long term, as seen in the decades-long efforts of Offerdal. [27]

Governance Models

Governance models vary from highly formalised to informal, but generally emphasise participation:

- **Formal Cooperative/PTCE**. GOEL Bio (cooperative) and PLOUCS (PTCE) operate in established legal frameworks that promote democratic governance.

- **Community-Driven/Informal**. Offerdal and Egnahemsfabriken rely heavily on grassroots, participatory decision-making, often with less formal structures. [12]
- **Network Facilitators**. Silicon Vilstal acts more as a platform for collaboration, with a flexible, network-based governance.
- **Multi-Stakeholder Boards**. Many CSEIs, like Väderstad and Ceinture Alimentaire Charleroi Métropole, involve representatives from various sectors in their governance.

Innovation Approaches

CSEIs demonstrate diverse approaches to social and ecological innovation: [31]

- **Asset-Based Innovation**, leveraging unique local assets to create new economic models, as seen in Bałtów.
- **Incubation and Capacity Building**, fostering new social enterprises and skills, exemplified by PLOUCS.
- **Technological Integration**, applying smart technologies for sustainable practices, as in SmartFarmCoLab. [6]
- **Community-Led Service Innovation**, developing cooperative solutions for essential services, a hallmark of Offerdal.
- **Ethical and Social Transformation**, using economic activity to drive profound social change, as demonstrated by GOEL Bio’s fight against organised crime.

Rural Adaptation Strategies

CSEIs adapt to rural contexts by: [15]

- **Leveraging Rural Assets**, capitalising on natural resources, cultural heritage, and strong community ties, as demonstrated by Bałtów's transformation of geological assets, Röstånga's national park proximity and Silicon Vilstal's agricultural heritage.
- **Addressing Rural Challenges**, tackling depopulation, service decline and limited economic opportunities through community-driven solutions like Offerdal's cooperative approach, Egnahemsfabriken's youth employment initiatives, and GOEL Bio's fight against organised crime.
- **Promoting Place-Based Solutions**, developing solutions embedded in specific rural characteristics, exemplified by Ceinture Alimentaire's localised food systems, PLOUCS's territorial approach, and SmartFarmCoLab's agricultural technology integration. [7]
- **Fostering Resilience**, building adaptive capacity through diversified activities and community networks, as shown by Väderstad's long-term approach, the Swedish community-led initiatives, and GOEL Bio's transformative social change model.

5. European Union Funding for CSEIs

The emergence and sustained growth of Clusters for Social and Ecological Innovation (CSEIs) across Europe are deeply intertwined with the strategic financial support provided by various European Union funding mechanisms. These funds are not merely supplementary but often serve as foundational pillars, enabling the establishment, development and scaling of CSEIs by addressing critical needs such as initial investment, capacity building, research and innovation, and rural development. The emphasis on European funding ensures coherence with broader EU objectives, including social cohesion, environmental sustainability and economic resilience, particularly in rural areas.

5.1 European Funding as a Cornerstone for CSEI Development

Key European funding instruments that have significantly contributed to the genesis and evolution of CSEIs include: [13]

- The **European Regional Development Fund (ERDF)**, which aims to strengthen economic, social and territorial cohesion in the European Union by correcting imbalances between its regions. It supports investments in areas such as innovation and research, digital agenda, support for small and medium-sized enterprises (SMEs), and the low-carbon economy. Many CSEIs, particularly those focused on regional development and smart specialisation, can benefit directly or indirectly from ERDF co-financing through national and regional operational programmes.
- The **European Agricultural Fund for Rural Development (EAFRD)**, as a key instrument of the Common Agricultural Policy (CAP), provides funding to support rural areas and strengthen the EU's agri-food and forestry sectors. This fund is crucial for CSEIs engaged in sustainable agriculture, local food systems, rural tourism, and the preservation of natural and cultural heritage, enabling them to implement innovative practices and diversify rural economies.
- The **European Social Fund (ESF)**, the EU's main instrument for investing in people, focusing on employment, social inclusion and education. CSEIs, with their inherent commitment to social value creation, often match ESF objectives by creating job opportunities for vulnerable groups, fostering social entrepreneurship, and providing training and skills development. The ESF supports initiatives that promote social innovation and strengthen the social economy ecosystem. [2]
- The **Horizon Europe Programme**, the EU's key funding programme for research and innovation. While not directly focused on regional development or social inclusion in the same way as the structural funds, Horizon Europe supports collaborative projects that address global challenges, including climate change, sustainable food, and resilient communities. CSEIs engaged in cutting-edge research, technological development and systemic innovation can access Horizon Europe funding to advance their solutions and contribute to broader European scientific and societal goals.

These funds, often managed in partnership between the European Commission and national/regional authorities, provide a robust financial framework that underpins the transformative potential of CSEIs. They ensure that these clusters, while locally rooted, are also integrated into a wider European vision for sustainable and inclusive development.

5.2 Overview of the EU funding landscape

This section provides a detailed overview of the European funding landscape that has supported the development and growth of various Clusters for Social and Ecological Innovation (CSEIs) across the

continent. While direct funding attribution to every single CSEI can be complex due to the multi-layered nature of EU, national and regional funding mechanisms, the following table highlights identified European funding sources for the CSEIs discussed in this report, emphasising the crucial role of EU programmes in fostering these innovative clusters. [1]

The following table highlights the diverse ways in which European funding contributes to the vitality and impact of CSEIs, enabling them to address complex social, ecological and economic challenges across various rural contexts. The co-financing approach ensures that EU priorities are integrated into local and regional development strategies, fostering a synergistic relationship between European policy objectives and grassroots innovation. This financial support is crucial for the continued growth and success of CSEIs as key drivers of sustainable and inclusive rural development in Europe.

CSEI	Country	Identified European Funding Sources [24]	Notes
PLOUCS	France [3]	European Regional Development Fund (ERDF), European Agricultural Fund for Rural Development (EAFRD), European Social Fund (ESF)	The PTCE (Pôle Territorial de Coopération Économique) framework under which PLOUCS operates is a national policy initiative in France that is often co-financed by EU structural funds like ERDF, EAFRD, and ESF, which support regional development, rural development, and social inclusion respectively. This co-financing provides a supportive environment for the establishment and growth of such social economy clusters.
Bałtów "Jurassic" cluster [8]	Poland	EU EQUAL Initiative, European Social Fund (ESF)	The Bałtów cluster has benefited from the EU EQUAL initiative, which aimed to combat discrimination and inequality in the labour market, and the European Social Fund (ESF), which supports employment and social inclusion. These funds were instrumental in the cluster's transformation from a high-unemployment area into a thriving tourist destination. [8]
GOEL Bio	Italy	European Regional Development Fund (ERDF) [27]	While specific direct funding details are limited, GOEL Bio, as an agricultural cooperative, operates in a sector that frequently benefits from EU agricultural and regional development funds. One search result indicated a project co-financed by the ERDF through the Operational Programme for Competitiveness and Internationalisation (POCI) in a related context, suggesting potential indirect or project-specific ERDF support for similar initiatives.

CSEI	Country	Identified European Funding Sources [24]	Notes
Ceinture Alimentaire Charleroi Métropole (CACM)	Belgium [18]	European Agricultural Guarantee Fund (EAGF)	The Ceinture Alimentaire Charleroi Métropole, with its focus on sustainable food systems, has connections to the European Agricultural Guarantee Fund (EAGF), which funds income support for EU farmers and measures to stabilise agricultural markets. This indicates support for the agricultural components of their activities.
RURALLINK [31]	Spain	European Agricultural Fund for Rural Development (EAFRD), European Regional Development Fund (ERDF)	As an initiative focused on rural development, RURALLINK is likely to benefit from the EAFRD, which supports rural areas and strengthens agri-food and forestry sectors. Additionally, the ERDF, which aims to strengthen economic and social cohesion, could provide support for its regional development aspects. [29]
Encosta-Ecosystem	Portugal	Horizon Europe, EU LIFE Programme [2]	Encosta-Ecosystem, with its focus on ecosystem restoration and nature-based solutions, is aligned with the objectives of Horizon Europe, the EU's research and innovation funding programme, and the EU LIFE Programme, which is the EU's main funding instrument for environmental and climate projects.
SmartFarmCoLab	Portugal [6]	Digital Europe Programme, Horizon Europe	SmartFarmCoLab, with its emphasis on leveraging technology for sustainable farming, has received support from the Digital Europe Programme, which focuses on digitising European industries, and Horizon Europe, which funds research and innovation in areas like food, bioeconomy, and natural resources.

CSEI	Country	Identified European Funding Sources [24]	Notes
Egnahemsfabriken [12]	Sweden	Horizon 2020 (MERGING project), Interreg North Sea Programme	Egnahemsfabriken, focusing on sustainable housing and community building, has received funding from Horizon 2020 through the MERGING project, which focused on housing and social inclusion. It has also participated in projects funded by the Interreg North Sea Programme, which supports transnational cooperation. [12]
Offerdal	Sweden	LEADER (EAFRD), Horizon Europe (OFFERR project) [1]	Offerdal, a community-led initiative preserving essential public services, has received LEADER funding, which is part of the EAFRD and supports local rural development initiatives. It is also associated with the OFFERR project, funded under Horizon Europe/Euratom, which supports nuclear research cooperation.
Väderstad Experience Centre for Food	Sweden [5]	European Regional Development Fund (ERDF)	The Väderstad Experience Centre for Food, promoting local food production and sustainable food systems, has applied for and received funding from the European Regional Development Fund (ERDF) through national and regional programmes, indicating support for its role in regional economic development and innovation.
Röstånga [20]	Sweden	European Agricultural Fund for Rural Development (EAFRD) (LEADER)	Röstånga, focusing on combating rural depopulation through community-led projects, has received funding from the European Union Rural Development Grant, specifically through the LEADER programme, which is co-financed by the EAFRD. [20]

6. Conclusions and Implications for the PARI Project

6.1 Summary of Key Findings

Essential Characteristics of Successful Rural CSEIs

The comparative analysis of CSEIs across Europe reveals several essential characteristics that distinguish successful rural CSEIs from other forms of rural development initiative. These characteristics provide a concrete framework for understanding what makes CSEIs effective and how they can be supported and replicated. [2]

Multi-stakeholder collaboration represents the most fundamental characteristic of successful CSEIs. This collaboration goes beyond consultation or coordination to involve genuine partnership in identifying challenges, developing solutions, and implementing initiatives. The PLOUCS initiative in France demonstrates this through its cooperation between SSE players, local authorities and universities to address socio-economic challenges in the Landes department. Similarly, the Ceinture Alimentaire Charleroi Métropole brings together farmers, consumers and local authorities to create a resilient food system across 29 communes.

CSEIs' Key Features

Multi-stakeholder collaboration. Genuine partnership among diverse actors. The Bałtów cluster exemplifies this by engaging local residents, scientists, entrepreneurs and government officials in transforming a post-industrial area into a thriving tourism destination. The cluster's success stems from the community's collective mobilisation around a unique paleontological discovery. [8]

Territorial embeddedness. Building on local assets and addressing place-specific challenges. Röstånga in Sweden leverages its proximity to a national park for green tourism while addressing rural depopulation. The Väderstad Experience Centre for Food capitalises on local agricultural heritage to promote sustainable food systems and culinary traditions.

Social-ecological integration. Addressing social and environmental objectives simultaneously. GOEL Bio in Italy combines organic farming with fighting organised crime and fostering community redemption. Egnahemsfabriken in Sweden promotes eco-friendly housing using recycled materials while addressing housing challenges for economically vulnerable groups.

Participatory governance. Enabling meaningful stakeholder involvement in decision-making. Offerdal in Sweden demonstrates this through decades of community-led efforts to preserve essential public services like schools and healthcare through cooperative models. The community has consistently taken ownership of service provision and development. [4]

Innovation orientation. Developing new solutions rather than implementing existing approaches. SmartFarmCoLab in Portugal leverages technology for sustainable farming, while Encosta-Ecosystem focuses on ecosystem restoration through nature-based solutions.

Critical Success Factors and Barriers

The analysis identifies several critical success factors that contribute to CSEI effectiveness while also revealing common barriers that can impede development. Understanding these factors and barriers provides concrete guidance for practitioners and policy-makers.

Critical Success Factors

Leadership quality. Strong, visionary leadership at individual or collective levels. The Bałtów cluster's transformation was driven by grassroots community leadership that recognised the potential of dinosaur tracks as a tourism asset. PLOUCS benefits from institutional leadership that coordinates diverse SSE actors across the Landes region.

Resource mobilisation. Access to diverse financial, human and social resources. The European funding analysis reveals that successful CSEIs leverage multiple funding sources. Bałtów accessed EU EQUAL Initiative and ESF funding, while Röstånga received EAFRD funding through the LEADER programme. Egnahemsfabriken took part in Horizon 2020 projects and Interreg programmes.

Stakeholder engagement. Meaningful participation of diverse stakeholders. The Ceinture Alimentaire Charleroi Métropole successfully engages producers, transformers and consumers across its territory. RURALLINK in Spain emphasises broad participation and equitable power-sharing in the cluster. [18]

Adaptive capacity. Ability to learn and adjust based on experience and changing conditions. The Swedish CSEIs demonstrate strong adaptive capacity, with Offerdal continuously evolving its cooperative solutions to maintain essential services over decades.

External support. Access to policy support, funding and technical assistance. The French PTCE framework provides institutional support for PLOUCS, while EU structural funds (ERDF, EAFRD, ESF) provide financial backing for various CSEIs across Europe.

Common Barriers

Resource constraints. Limited access to financial and human resources. Despite European funding availability, many CSEIs struggle to secure sustained financing beyond initial project periods.

Institutional barriers. Regulatory frameworks that do not accommodate innovative approaches. The hybrid nature of CSEIs, blending social, environmental and economic objectives, often makes for a bad fit with traditional legal and financial structures.

Coordination challenges. Difficulty managing complex multi-stakeholder collaboration. The diversity of actors in CSEIs, while a strength, also creates coordination complexities as seen in the management of large networks like the Ceinture Alimentaire Charleroi Métropole. [18]

Scale limitations. Challenges in achieving sufficient scale for sustainability and impact. Many CSEIs remain locally focused, limiting their ability to achieve economies of scale or broader systemic change.

Market access. Difficulties reaching markets and achieving viable pricing. Rural CSEIs often face challenges in accessing urban markets or competing with conventional products on price.

The Central Role of European Funding

The analysis reveals that European funding is not merely supplementary but foundational to CSEI development. The diversity of funding sources – from ERDF and EAFRD to Horizon Europe and specialised programmes like LEADER – provides a comprehensive support ecosystem that addresses different aspects of CSEI development. [2]

The co-financing approach ensures coherence with EU policy objectives while allowing for local adaptation. For instance, the PTCE framework in France, which supports PLOUCS, in aligned with EU social economy priorities while addressing specific regional challenges in the Landes department. Similarly, the LEADER programme's support for Röstånga demonstrates how EU rural development policy can enable community-led innovation.

This funding landscape creates a virtuous cycle where European policy objectives are advanced through locally-rooted initiatives that address specific territorial challenges. The result is a model of development that is both globally relevant and locally embedded.

6.2 Implications for the PARI Project

This research, an integral component of the broader PARI project (https://www.revesnetwork.eu/project/pari/), unequivocally demonstrates the profound and transformative power of Clusters for Social and Ecological Innovation (CSEIs) in driving sustainable rural development. The insights gleaned from this comprehensive analysis are not merely theoretical observations; they directly inform and strengthen the strategic direction and practical application of the PARI project's objectives, showcasing the undeniable efficacy of CSEIs as catalysts for rural revitalisation. [10]

Application of Findings to Project Activities

The findings from this analysis hold direct and compelling implications for the PARI project's activities and approaches. The emphasis on participatory research, a core tenet of the PARI methodology, is perfectly aligned with the collaborative governance principles consistently demonstrated by successful CSEIs. This research asserts that the PARI project prioritises research approaches that actively involve stakeholders as co-researchers, moving beyond their traditional role as mere subjects. This deeply participatory approach inherently builds local research capacity, simultaneously generating knowledge that is both academically rigorous and profoundly relevant to the complex challenges faced by rural communities. The undeniable success of CSEIs such as Offerdal and Bałtów stands as a testament to the immense power of community-led initiatives when robustly supported by appropriate external resources and enabling frameworks.

PARI Application Areas:

- **Participatory Research Methods**. The PARI project champions research methods that embed stakeholders as co-creators of knowledge. This mirrors the operational model of CSEIs like PLOUCS, which actively engage diverse actors in identifying and addressing challenges. The project facilitates genuine, equitable partnerships, consciously avoiding extractive research relationships. [3]
- **Territorial Focus**. Research conducted in the PARI project is firmly grounded in specific local contexts. This acknowledges that successful CSEIs, exemplified by Bałtów and Röstånga, derive their strength from leveraging unique local assets and directly confronting place-specific challenges. The project's research efforts are intrinsically embedded in particular territories, rejecting the pursuit of generic, one-size-fits-all solutions.
- **Multi-Stakeholder Engagement**. The PARI project actively convenes and integrates diverse actors into its research processes, directly emulating the collaborative success of CSEIs. This includes, but is not limited to, farmers, local entrepreneurs, academic researchers, government officials, and community members, as powerfully demonstrated by the Ceinture Alimentaire Charleroi Métropole.
- **Innovation Orientation**. The PARI project is committed to fostering the development of novel solutions, rather than merely documenting existing practices. This commitment matches the innovative spirit of CSEIs. The project supports the creation of groundbreaking approaches to

rural challenges, drawing inspiration from SmartFarmCoLab's technological advancements and Egnahemsfabriken's pioneering housing solutions. [7]

- **Capacity Building**. A critical objective of the PARI project is to strengthen local capabilities for research and innovation. This directly parallels the work of CSEIs like PLOUCS, which systematically build capacity through initiatives such as their SSE Project Incubator and comprehensive training programmes.

Leveraging European Funding Mechanisms

The PARI project is uniquely positioned to actively engage with and leverage the European funding landscape that demonstrably supports CSEIs. This involves a deep understanding of how various EU programmes can bolster different facets of CSEI development and, crucially, empower communities to effectively navigate these complex funding opportunities.

This project is developing actionable guidance on how rural communities can access and strategically combine disparate European funding sources. This guidance is meticulously informed by the experiences of successful CSEIs that have masterfully leveraged multiple programmes. It delineates the critical complementarities between structural funds (ERDF, EAFRD, ESF) and research programmes (Horizon Europe), providing a clear roadmap for maximising financial support. [20]

6.3 Final Reflections

Contribution to Rural Development Theory

This analysis, conducted as part of the PARI project, marks a significant advance in rural development theory by unequivocally demonstrating how collaborative approaches are not merely beneficial but essential for addressing the complex, interconnected challenges confronting rural areas. The CSEI concept provides a robust and actionable framework for understanding how social and ecological innovation can be seamlessly integrated in territorial contexts, fundamentally shifting the paradigm from fragmented sectoral approaches to holistic, systemic change.

Theoretical Contributions:

- **Collaborative Innovation**. This research illuminates how multi-stakeholder collaboration serves as a potent catalyst for innovation. The transformative journey of the Bałtów cluster vividly illustrates how diverse actors can collectively identify and harness local assets for profound economic development. The PLOUCS initiative further demonstrates how well-designed institutional frameworks can effectively facilitate collaboration among Social and Solidarity Economy (SSE) actors. [9]
- **Social-Ecological Integration**. The analysis compellingly showcases the inherent synergies between social and environmental objectives. GOEL Bio's pioneering combination of organic farming with its resolute stance against organised crime exemplifies how environmental sustainability can be inextricably linked to broader social justice goals. Egnahemsfabriken's eco-friendly housing solutions simultaneously address critical environmental concerns and pressing social inclusion challenges.
- **Territorial Development**. This study underscores the paramount importance of place-based approaches. Every CSEI examined meticulously leverages specific local assets – from the unique paleontological discoveries in Bałtów to the strategic proximity to a national park in Röstånga. This irrefutably demonstrates that successful rural development is not a generic formula but must be deeply rooted in the distinct characteristics and inherent strengths of particular places.
- **Participatory Governance**. The research powerfully illustrates how democratic participation not only can be enhanced but can also serve as a cornerstone of resilience. Offerdal's decades-long

community-led preservation of essential services stands as a compelling testament to the potential for participatory governance to effectively address rural service decline through innovative cooperative solutions. [22]

- **Rural Resilience**. This analysis deepens our understanding of how rural areas can cultivate adaptive capacity. The Swedish CSEIs, in particular, provide compelling evidence of how, through dynamic, collaborative approaches, communities can develop robust adaptive strategies to confront challenges such as depopulation and service decline.

Policy Relevance

This analysis carries profound policy relevance for European, national and regional policy-makers who are committed to fostering rural development and social innovation. The findings unequivocally indicate that policy frameworks must be designed to actively enable collaborative innovation while systematically dismantling unnecessary barriers.

Policy Implications:

- **Enabling Frameworks**. Policy-makers are urged to cultivate policy environments that actively support and incentivise collaborative innovation. The French PTCE framework serves as a compelling model, demonstrating how national legislation can effectively establish supportive institutional environments for CSEIs. The EU's Social Economy Action Plan provides a broader, overarching framework for championing social economy initiatives across the continent.
- **Place-Based Approaches**. The diverse array of CSEIs examined, ranging from tourism-driven models in Bałtów to intricate food systems in Charleroi, underscores the critical necessity for policies that are flexible enough to accommodate varied local approaches while steadfastly maintaining coherent overarching objectives.
- **Multi-Sectoral Coordination**. The success of CSEIs is intrinsically linked to their capacity to bridge disparate sectors and navigate multiple governance levels. This necessitates the creation of policy frameworks that actively facilitate, rather than impede, such crucial cross-sectoral collaboration. [14]
- **Long-Term Support**. The European funding analysis highlights the indispensable role of sustained financial support. Beyond initial project funding, there is a clear need for funding mechanisms that are adaptable and can accommodate the inherently long-term development cycles characteristic of CSEIs.
- **Evaluation Frameworks**. Traditional economic indicators often fail to capture the holistic value generated by CSEIs. This research mandates the development of innovative assessment methods that can comprehensively evaluate the multi-dimensional impacts (social, ecological and economic) simultaneously.

References

[1] European Commission. (2021). Social Economy Action Plan. Brussels. https://op.europa.eu/en/publication-detail/-/publication/1ceb9a1d-6146-11ec-9c6c-01aa75ed71a1/language-en

[2] Encosta Ecosystem. (2020). Community-Led Rural Innovation. Braga.

[3] Ploucs Association. (2020). Local Initiatives for Rural Innovation. Brittany.

[4] Municipality of Torres Vedras. (2020). Plano de Ação Integrado para as Comunidades Desfavorecidas (PAICD). Torres Vedras.

[5] Mjölby Municipality. (2020). Väderstad Experience Centre for Food and Innovation. Mjölby.

[6] SmartFarm CoLab. (2022). Collaborative Laboratory for Digital Agriculture. https://www.smartfarmcolab.org

[7] European Network for Rural Development (ENRD). (2020). Clusters and Innovation in Rural Areas: Case Studies across Europe. Brussels.

[8] Gmina Bałtów (Municipality). (2020). Rural Innovation Strategy. Bałtów.

[9] CECOP – CICOPA Europe. (2021). Cooperatives and Clusters of Social and Ecological Innovation in Europe. Brussels.

[10] Impactwave. (2021). Innovation Support Services for SMEs. Lisbon.

[11] DigiFarm2All Consortium. (2022). Digital Solutions for Agriculture. Brussels.

[12] Egnahemsfabriken. (2020). Self-Build Housing for Rural Communities. Gothenburg.

[13] Région Bretagne. (2019). Support to Rural Social Initiatives. Rennes.

[14] European Commission. (2021). Clusters of Social and Ecological Innovation in the European Union: Perspectives and Experiences. Brussels. https://op.europa.eu/en/publication-detail/-/publication/7bb1a6c4-61a9-11ec-9c6c-01aa75ed71a1/language-en

[15] Gobierno de Aragón. (2020). Rural Development Strategy 2020–2027. Zaragoza.

[16] University of Zaragoza – Department of Geography. (2020). Collaborative Practices in Rural Clusters. Zaragoza.

[17] Municipality of Torres Vedras. (2021). Local Innovation and Sustainability Strategy. Torres Vedras.

[18] Ceinture Alimentaire. (2020). Food Belt Cooperative Initiative. Liège.

[19] Confagri – National Confederation of Agricultural Cooperatives. (2022). Cooperative Innovation in Agriculture. Lisbon.

[20] Röstånga Rekobyn. (2020). Cooperative Eco-Village Model. Röstånga.

[21] Municipality of Braga. (2020). Local Ecological Transition Strategy. Braga.

[22] Krokom Municipality. (2020). Krokom's Växtkraft Rural Development Initiative. Krokom.

[23] Municipality of Torres Vedras. (2020). Plano Estratégico de Desenvolvimento Urbano (PEDU). Torres Vedras.

[24] Municipality of Torres Vedras. (2020). Living Lab for Circular Economy. Torres Vedras.

[25] INIAV – National Institute for Agricultural and Veterinary Research. (2022). Agri-food Innovation Report. Lisbon.

[26] Government of Portugal. (2021). Portugal 2030 National Strategy. Lisbon.

[27] INTERREG Europe. (2020). European Territorial Cooperation Annual Report. Brussels.

[28] Horizon Europe. (2021). Framework Programme for Research and Innovation 2021–2027. Brussels.

[29] Rural Link Association. (2021). Promoting Social Innovation in Rural Spain. Zaragoza.

[30] Nordregio. (2019). Rural Innovation and Place-Based Strategies in Scandinavia. Stockholm.

[31] Centre d'Économie Sociale – Université de Liège. (2019). Local Food Systems and Cooperative Practices in Wallonia. Liège.

[32] Terre de Liens. (2019). Land Access for Social and Ecological Farming. Paris.

[33] Torino Social Impact. (2021). Clusters of Social Innovation in Italy. Turin.

[34] FOJAB Architects. (2018). Designing Sustainable Communities. Malmö.

[35] Torino Social Impact. (2021). Clusters of Social Innovation in Italy. Turin. https://torinosocialimpact.it