

 **REGENERATION**<sup>®</sup>

# Impact Measurement

# Model Validation



January, 2026



# 1. Executive Summary

The impact assessment framework of the RegenerAction project is designed to assess, in a structured and multidimensional way, the relevance, coherence and expected effects of the RegenerAction model across economic, social and environmental dimensions within European rural contexts.

The framework focuses on the evaluation of impact pathways, motivations, perceptions and enabling conditions that emerge from scientific evidence and from the views of key institutional and territorial actors.

The evaluation system fulfils the functions assigned to WP5, and in particular:

- Task 5.1: development of an evidence-based impact measurement framework grounded in literature and stakeholder perceptions;
- Task 5.3: definition of data collection tools oriented to perceptions, priorities and expected outcomes;
- Task 5.4: support to comparative analysis and model replicability through conceptual and qualitative indicators.

The methodological approach is based on a systemic and integrated logic, combining different sources of evidence and analytical tools to capture multidimensional results without relying on farm-level quantitative performance data.

First, a systematic review of the scientific literature is conducted to identify the main impact domains, interpretative categories and recurring outcomes associated with regenerative agriculture. This phase provides the theoretical and empirical foundation for defining the dimensions along which impacts are expected to occur. In parallel, the application of Q methodology allows the exploration of policymakers' perceptions, narratives and priorities regarding regenerative models. This step is essential to understand the institutional, political and governance conditions that shape the feasibility and legitimacy of the transition, and to identify convergences and divergences in how impacts are perceived and valued.

Based on these two sources, Key Performance Indicators (KPIs) are defined as conceptual and perception-based indicators of expected change, rather than as calculated performance metrics. The KPI selection follows the structured logic outlined in Deliverable D5.1 and is informed by a Multicriteria Decision Analysis (MCDA) process, which integrates scientific relevance, policy priorities and stakeholder perspectives.

Participatory tools – including questionnaires, workshops and qualitative assessments – are coherent with the Living Lab approach and allow the evaluation framework to remain grounded in territorial realities. These tools are used to capture perceptions, priorities, levels of consensus and perceived effects, rather than numerical performance.

Finally, the framework adopts an integrated reading of economic, social and environmental dimensions, recognising their interdependence. This integrated perspective allows the construction of an impact assessment framework that is realistic, scientifically robust and aligned with the actual evidence generated by the project, providing a solid basis for interpretation, comparison and future replication of the RegenerAction model.

# 2. Impact Measurement Model

## 2.1 Territorial Baseline

The territorial baseline represents the reference framework for understanding the contexts in which the RegenerAction model is applied and assessed. Rather than constituting a quantitative measurement of pre-project impacts, the baseline provides a contextual and analytical description of the economic, social and environmental conditions of the pilot territories before the implementation of project activities. The purpose of the baseline is to frame the initial conditions, structural characteristics and enabling or constraining factors that shape the feasibility and relevance of regenerative approaches in different rural contexts. In this sense, the baseline does not aim to establish precise numerical benchmarks, but to offer an informed and coherent starting point for interpreting expected changes and perceived impacts.

The baseline is constructed through a practical and integrated approach, combining:

- analysis of available statistical and territorial data at regional or national level;
- qualitative information gathered through interviews and stakeholder engagement activities;
- technical and contextual inputs generated within other Work Packages, in particular WP2 and WP4.

The objective of this phase is:

- to characterise the initial territorial conditions, highlighting opportunities, critical issues and enabling factors relevant to the adoption of regenerative practices;
- to provide a qualitative and conceptual reference framework against which the expected economic, social and environmental effects of the RegenerAction model can be interpreted.

The baseline is structured along the three dimensions of sustainability pursued by the project:

- Economic, focusing on the general production structure, dominant agricultural systems, market organisation and employment dynamics at territorial level;
- Social, addressing participation patterns, community cohesion, human capital and the role of local actors and institutions;
- Environmental, considering the main ecological features of the territories.

## 2.2 KPI Systems

The Key Performance Indicator (KPI) system constitutes the core analytical component of the RegenerAction impact assessment framework. It is explicitly grounded in sustainability transition theory, integrating insights from the Multi-Level Perspective (MLP), theories of regime reconfiguration, and theory of change approaches applied to agri-food systems.

Within this framework, regenerative agriculture is conceptualised as a niche innovation capable of progressively influencing dominant agricultural regimes through processes of learning, social embedding, institutional alignment and environmental feedbacks. The KPI system operationalises these dynamics by translating abstract transition mechanisms into measurable, baseline-referenced indicators.

The system is designed to:

- assess direction, intensity and coherence of change relative to baseline (pre-transition) conditions;
- integrate scientific evidence and stakeholder perceptions, particularly where quantitative data are incomplete or context-dependent;
- enable longitudinal monitoring of transition dynamics;
- support policy learning and alignment with European and global sustainability objectives.

The KPI selection and structuring follow principles inspired by Multicriteria Decision Analysis (MCDA), ensuring that indicators:

- reflect multiple dimensions of sustainability;
- balance scientific robustness and policy relevance;
- are comparable across territorial contexts;
- are interpretable even in the absence of full quantitative measurement.

### 2.3 Measurement Logic and Baseline Reference

All KPIs are assessed relative to a defined baseline, corresponding to dominant conventional agricultural practices in the relevant territorial context prior to RegenerAction implementation.

Unless otherwise specified, KPIs are measured using a symmetric Likert-based change scale:

- -2 = Strong negative change relative to baseline
- -1 = Moderate negative change
- 0 = No significant change
- +1 = Moderate positive change
- +2 = Strong positive change

This scale allows:

- comparability across regions;
- aggregation into composite indices;
- integration with qualitative methods (Q methodology, narratives).

### 2.4 Economic KPIs

#### Economic Reconfiguration and System Resilience

Economic KPIs assess whether regenerative agriculture contributes to a reconfiguration of economic structures, reducing vulnerability, enhancing resilience and enabling innovation-driven transition pathways.

KPI	Definition
E1 Long-term Economic Viability	Change in the capacity of farms and rural territories to sustain economically viable activities over time

KPI	Definition
E2 Income Stability	Change in exposure to income volatility due to market, climate or policy shocks
E3 Dependency on External Inputs	Change in reliance on synthetic fertilisers, pesticides, energy and feed
E4 Cost Structure Efficiency	Change in production cost composition and efficiency
E5 Income Diversification	Change in number and relevance of income sources (e.g. ecosystem services, short supply chains)
E6 Market Access and Value Creation	Change in access to differentiated or premium markets
E7 Investment Capacity	Change in capacity to invest in innovation and infrastructure
E8 Innovation and Learning Capacity	Change in experimentation, learning-by-doing and knowledge exchange
E9 Economic Risk Perception	Change in perceived economic risk of farming activities
E10 Policy Coherence (Economic)	Alignment with rural development and agricultural policy objectives

Transition role: These indicators capture regime viability and reconfiguration, signalling whether regenerative agriculture is perceived as a credible economic pathway rather than a marginal alternative.

## 2.5 Social KPIs

### Social Embedding, Governance and Just Transition

Social KPIs evaluate the extent to which regenerative agriculture becomes socially embedded, supported by collective action, inclusive governance and enhanced well-being.

KPI	Definition
S1 Participation Intensity	Change in frequency and depth of stakeholder engagement
S2 Stakeholder Diversity	Change in diversity of actors involved in transition processes
S3 Collective Action Capacity	Change in coordination and joint initiatives
S4 Trust and Social Capital	Change in trust among actors
S5 Individual Well-being	Change in motivation, satisfaction and quality of life
S6 Community Well-being	Change in perceived collective well-being
S7 Inclusiveness and Equity	Inclusion of youth, women and new entrants

KPI	Definition
S8 Governance Quality	Change in transparency, legitimacy and responsiveness
S9 Empowerment and Agency	Change in perceived influence on decision-making
S10 Knowledge Co-production	Change in participatory learning and co-creation processes

Transition role: These KPIs capture social legitimacy and justice, essential for sustaining long-term transitions and avoiding exclusionary dynamics.

## 2.6 Environmental KPIs

### Ecological Regeneration and Climate Resilience

Environmental KPIs assess whether regenerative agriculture contributes to ecological regeneration, enhanced ecosystem functioning and climate resilience.

KPI	Definition
ENV1 Soil Organic Carbon	Change in soil organic carbon trends or perceived improvement
ENV2 Soil Physical Quality	Change in soil structure, compaction and water retention
ENV3 Soil Biological Activity	Change in biological life and fertility
ENV4 Environmental Pressure from Inputs	Change in chemical input use and pollution risks
ENV5 Functional Biodiversity	Change in beneficial organisms and ecosystem services
ENV6 Landscape Complexity	Change in habitat heterogeneity
ENV7 Agroecosystem Stability	Change in resilience to pests, diseases and climate stress
ENV8 Climate Mitigation	Change in carbon sequestration and emissions
ENV9 Climate Adaptation	Change in resilience to extreme events
ENV10 Policy Coherence (Environmental)	Alignment with environmental sustainability objectives

Transition role: These indicators represent foundational ecological leverage points, enabling economic and social sustainability over time.

## 2.7 Composite Regenerative Transition Index (CRTI)

### 2.7.1 Construction of the Index

Each KPI is normalised to a 0–100 scale:

$$\text{Normalised KPI} = \frac{(2)}{4} \times 100$$

### Sub-Indices

- Economic Transition Index (ETI) = mean of E1–E10
- Social Transition Index (STI) = mean of S1–S10
- Environmental Transition Index (ENVTI) = mean of ENV1–ENV10

Composite Index

$$CRTI = 0.33 \cdot ETI + 0.33 \cdot STI + 0.34 \cdot ENVTI$$

### 2.7.2 Interpretation

CRTI Value	Transition Stage
0–25	Pre-transition
26–50	Early niche development
51–75	Regime reconfiguration
76–100	Transformative transition

The RegenerAction KPI system is designed to speak not only to the specific objectives of the project, but also to the broader sustainability agenda promoted by the United Nations through the Sustainable Development Goals (SDGs). Aligning the impact assessment framework with the SDGs helps situate RegenerAction within an internationally shared vision of sustainable development, making its results more understandable, comparable and useful beyond the project itself.

Rather than linking each indicator mechanically to a single SDG, the RegenerAction approach recognises that real-world sustainability transitions are complex and interconnected. Economic, social and environmental changes do not occur in isolation, and neither do the SDGs. For this reason, the KPI system is built to capture how regenerative agriculture can contribute simultaneously to several goals, while also making visible possible tensions or uneven progress across different dimensions.

From an economic point of view, many of the RegenerAction KPIs relate directly to the ambition of SDG 2 (Zero Hunger), particularly through their focus on the long-term sustainability and resilience of food production systems. Indicators addressing farm viability, income stability and reduced dependence on external inputs reflect whether regenerative practices are perceived as capable of sustaining food production while coping with environmental and market pressures. At the same time, indicators linked to innovation, learning, investment capacity and market access resonate strongly with SDG 8 (Decent Work and Economic Growth) and SDG 9 (Industry, Innovation and Infrastructure), as they capture the potential of regenerative agriculture to support more dynamic, knowledge-based and adaptive rural economies. By promoting more efficient use of resources and new forms of value creation, these economic indicators also contribute to the objectives of SDG 12 (Responsible Consumption and Production).

The social dimension of the KPI system connects regenerative agriculture to SDGs that place people, communities and institutions at the centre of sustainability. Indicators related to individual motivation, sense of belonging and community well-being echo the core ideas of SDG 3 (Good Health and Well-being), recognising that sustainability is also about how people feel, engage and thrive in their everyday lives. At the same time, attention to inclusiveness—particularly the participation of

young people, women and new entrants—reflects the spirit of SDG 5 (Gender Equality) and SDG 10 (Reduced Inequalities). Governance-related indicators, such as stakeholder participation, trust and transparency, align with SDG 11 (Sustainable Communities) and SDG 16 (Peace, Justice and Strong Institutions), highlighting the importance of fair, participatory and credible decision-making processes in supporting lasting transitions.

Environmental KPIs naturally align with SDGs focused on ecosystems and climate, but again in a practical and grounded way. Indicators related to soil health, biodiversity and landscape complexity speak directly to SDG 15 (Life on Land), capturing the regenerative capacity of farming systems to restore ecological functions over time. At the same time, perceptions of carbon sequestration, emission reduction and adaptive capacity connect regenerative agriculture to SDG 13 (Climate Action), acknowledging agriculture’s growing role in addressing climate change. Improvements in soil structure and reductions in chemical inputs also have clear implications for water quality and regulation, contributing indirectly but meaningfully to SDG 6 (Clean Water and Sanitation).

Overall, the alignment between the RegenerAction KPI system and the SDGs is best understood as a shared direction rather than a checklist. By combining economic, social and environmental indicators into a composite transition index, the framework allows progress to be seen in a holistic way, while still highlighting where challenges remain. In doing so, RegenerAction does not simply report on SDG-related outcomes, but offers a practical tool to reflect on how regenerative agriculture can support fairer, more resilient and more sustainable rural futures.

## 2.8 Survey for KPIs systems validation among key opinion leaders:

After building the RegenerAction KPI system and the Composite Regenerative Transition Index (CRTI), we conducted a survey among Key Opinion Leaders (KOLs) to validate the relevance, clarity, and applicability of each KPI. The primary aim of this survey was to gather expert feedback to ensure that the indicators accurately capture the economic, social, and environmental dimensions of regenerative agriculture transitions.

The survey was designed to be concise, easy to complete, and fully compliant with GDPR regulations, allowing participants to provide both quantitative ratings and optional qualitative feedback. Each KPI was evaluated individually to assess its relevance, clarity, and alignment with the overall framework.

### RegenerAction – KPI Validation Survey

Target respondents: Key Opinion Leaders (KOLs)

Purpose: Validate individual KPIs and the composite index

### GDPR & Ethical Notice

This survey is conducted for research purposes under the RegenerAction project.

- Participation is voluntary.
- Responses are anonymous; no personal or sensitive data are collected.
- Data will only be used in aggregated form for scientific reporting.
- You may stop the survey at any time.

I agree to participate

(If unchecked, the survey ends.)

Section A – Respondent Background (Non-identifying)

1. Professional role:
  - Policy / public administration
  - Research / academia
  - Technical advisor / consultancy
  - Civil society / NGO
  - Industry / value chain
  - Other (please specify) \_\_\_\_\_
  
2. Years of experience in agriculture, sustainability, or rural development:
  - <5
  - 5–10
  - 10–15
  - >15
  
3. Geographic focus of expertise:
  - Local
  - Regional
  - National
  - European / international

Section B – Economic KPIs

Instruction: For each KPI, indicate how well it reflects economic impacts of regenerative agriculture in your experience.

Scale: 1 = Not relevant / Poorly defined, 5 = Highly relevant / Well-defined

KPI	Evaluation (1–5)	Comments (optional)
E1 – Long-term Economic Viability	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	
E2 – Income Stability	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	
E3 – Dependency on External Inputs	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	
E4 – Cost Structure Efficiency	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	
E5 – Income Diversification	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	
E6 – Market Access & Value Creation	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	
E7 – Investment Capacity	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	
E8 – Innovation & Learning Capacity	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	
E9 – Economic Risk Perception	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	
E10 – Policy Coherence (Economic)	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	

Section C – Social KPIs

Instruction: Evaluate how well each KPI captures social dimensions of regenerative transitions.

KPI	Evaluation (1–5)	Comments (optional)
S1 – Participation Intensity	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	
S2 – Stakeholder Diversity	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	
S3 – Collective Action Capacity	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	
S4 – Trust & Social Capital	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	
S5 – Individual Well-being	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	
S6 – Community Well-being	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	
S7 – Inclusiveness & Equity	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	
S8 – Governance Quality	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	
S9 – Empowerment & Agency	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	
S10 – Knowledge Co-production	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	

#### Section D – Environmental KPIs

Instruction: Evaluate the relevance and clarity of each environmental KPI.

KPI	Evaluation (1–5)	Comments (optional)
ENV1 – Soil Organic Carbon	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	
ENV2 – Soil Physical Quality	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	
ENV3 – Soil Biological Activity	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	
ENV4 – Environmental Pressure from Inputs	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	
ENV5 – Functional Biodiversity	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	
ENV6 – Landscape Complexity	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	
ENV7 – Agroecosystem Stability	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	

KPI	Evaluation (1–5)	Comments (optional)
ENV8 – Climate Mitigation	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	
ENV9 – Climate Adaptation	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	
ENV10 – Policy Coherence (Environmental)	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	

#### Section E – Composite Regenerative Transition Index (CRTI)

30. Do you think combining economic, social, and environmental KPIs into a single composite index is meaningful?  
 Yes  No  Unsure
31. Are the three dimensions (economic, social, environmental) adequately balanced in the index?  
 Yes  No  Unsure
32. Would the CRTI be useful for policy-making or evaluation?  
 Yes  No  Unsure

#### Section F – Final Reflections

33. Are there any KPIs you would add or remove?  
 (Open response) \_\_\_\_\_
34. Any additional comments or suggestions to improve the KPI system?  
 (Open response) \_\_\_\_\_

#### Section G – Sociodemographic Information

To better understand the perspectives of our respondents, please optionally provide the following non-identifying information:

- Age group: <30, 30–39, 40–49, 50–59, 60+
- Highest completed level of education: Bachelor, Master, PhD, Other: \_\_\_\_\_
- Type of organisation you are affiliated with: Public sector, Academic/research, Private consultancy, NGO/civil society, Industry, Other: \_\_\_\_\_
- Years of experience in your current role: <5, 5–10, 10–15, >15
- Primary region of professional activity: Local, Regional, National, European/International
- Gender (optional): Male, Female, prefer not to say, Other: \_\_\_\_\_

The results of this survey, including expert ratings and comments, are presented in the following sections, providing a robust validation of the KPI system and informing potential refinements for future applications.

## 2.9 Survey results

Following the development of the RegenerAction KPI system and the Composite Regenerative Transition Index (CRTI), we conducted a survey among Key Opinion Leaders (KOLs) to validate the clarity, relevance, and applicability of each KPI. The survey included economic, social, and environmental KPIs, CRTI-related questions, and optional sociodemographic data. The goal was to gather expert insights to assess the robustness of the KPI system and the composite index.

### Respondent Profile

- Roles: Respondents were diverse, including policy makers, researchers, technical advisors, civil society actors, industry representatives, and other stakeholders.
- Experience: Majority had over 10 years of experience in agriculture, sustainability, or rural development.
- Geographic focus: Responses represented local, regional, national, and European/international levels.
- Sociodemographic diversity: Age, education, organizational type, and gender varied across respondents, ensuring a broad spectrum of expert perspectives.

Most economic KPIs received mean ratings above 3.5, indicating that experts found them relevant and clearly defined. E1 (Long-term Economic Viability) and E8 (Innovation & Learning Capacity) scored highest (mean >4.0), showing strong perceived importance in evaluating regenerative agriculture’s economic dimension. Lower ratings for E9 (Economic Risk Perception) suggest some uncertainty or variability in expert perceptions regarding risk measurement.

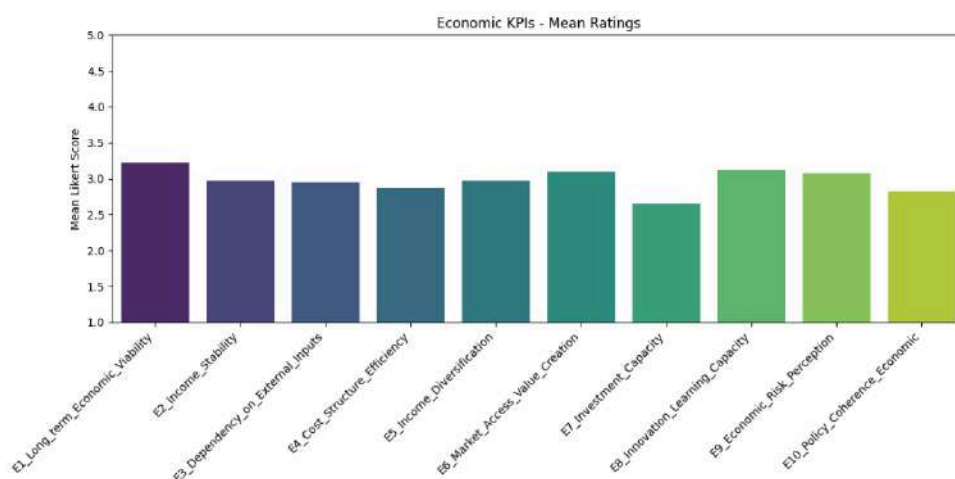


Figure 1: Economic KPIs evaluation

Social KPIs were generally rated highly, with S1 (Participation Intensity) and S5 (Individual Well-being) scoring particularly well. Lower-rated KPIs like S9 (Empowerment & Agency) indicate a need for clearer definitions or measurement guidance. Overall, experts confirmed that the KPIs capture participation, inclusiveness, governance, and well-being dimensions effectively.

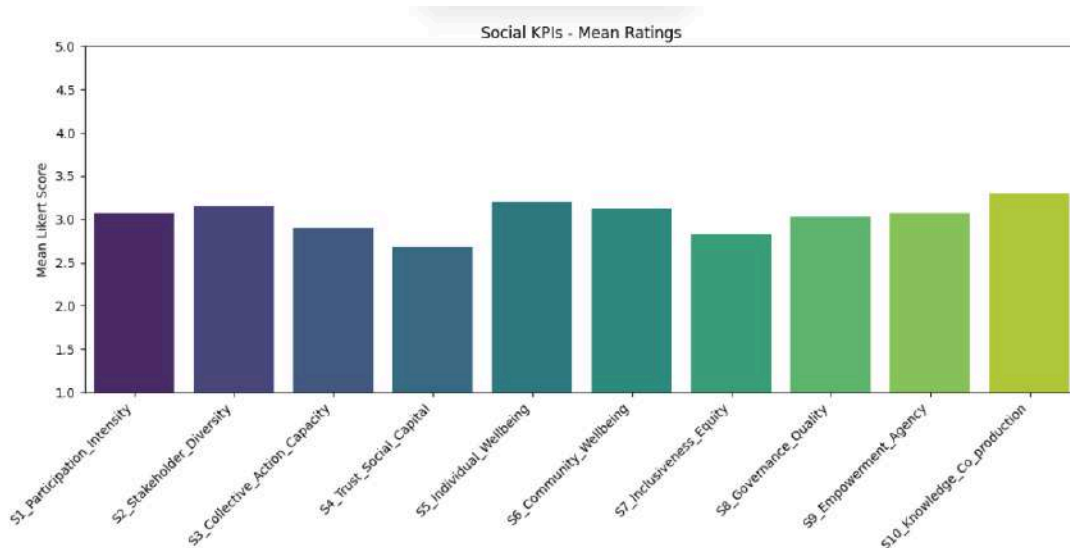


Figure 2: Social KPIs evaluation

Environmental KPIs showed strong consensus, especially ENV1 (Soil Organic Carbon) and ENV5 (Functional Biodiversity), reflecting their clear relevance and alignment with scientific evidence. Slightly lower scores on ENV10 (Policy Coherence) highlight perceived variability in alignment with current policy frameworks.

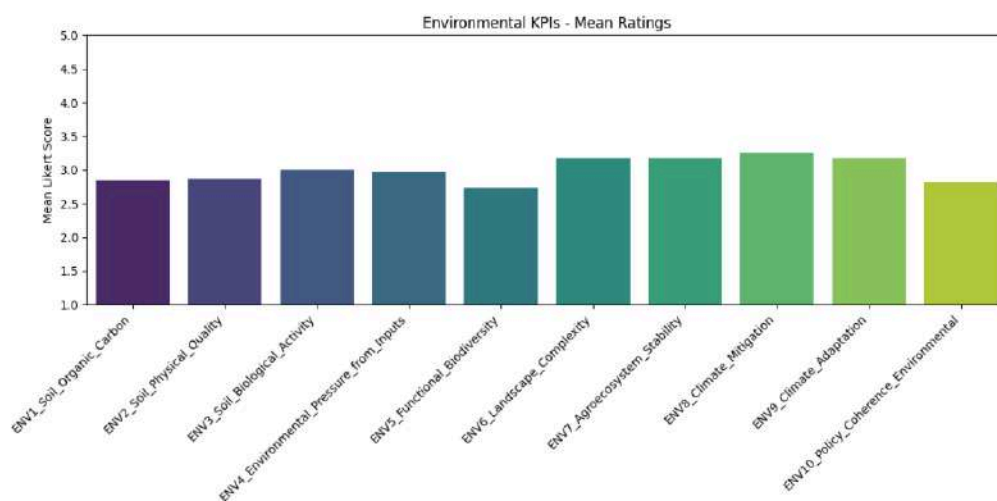


Figure 3: Environmental KPIs evaluation

Regarding the Composite Regenerative Transition Index (CRTI), table 1 shows that only 17–37% of respondents fully endorsed the CRTI as meaningful or policy-useful, indicating moderate acceptance. A high proportion of Unsure responses suggests that experts may need clearer guidance on how the composite index integrates KPIs and its practical application. CRTI Balance received the highest support (37.5% Yes), showing some agreement that the economic, social, and environmental dimensions are appropriately represented.

Table 1: Composite Regenerative Transition Index evaluation

Question	No (%)	Unsure (%)	Yes (%)
CRTI Meaningful	40.0	42.5	17.5
CRTI Balance	32.5	30.0	37.5
CRTI Policy Useful	32.5	42.5	25.0

## 2.10 Conclusion

D5.2 has validated the RegenerAction impact assessment framework and KPI system as a coherent, credible and policy-relevant tool for analysing regenerative agriculture transitions in European rural contexts. By combining scientific evidence, stakeholder perceptions and participatory validation, the framework moves beyond purely quantitative performance measurement and offers a realistic and context-sensitive approach to impact assessment, aligned with the complexity of sustainability transitions.

The results of the Key Opinion Leader (KOL) survey confirm that the majority of economic, social and environmental KPIs are perceived as relevant, well-defined and capable of capturing the multidimensional effects of regenerative agriculture. In particular, indicators related to long-term economic viability, innovation and learning, participation intensity, well-being, soil health and biodiversity received strong validation, underlining their central role in assessing regenerative pathways. Lower scores for some governance- and perception-based indicators, as well as the relatively cautious endorsement of the Composite Regenerative Transition Index (CRTI), do not weaken the framework but rather highlight the importance of clear guidance, transparent aggregation logic and careful interpretation when composite indicators are used in policy contexts.

Overall, the validation exercise demonstrates that the RegenerAction model is robust as a learning and decision-support tool, rather than as a deterministic scoring system. Its main strength lies in its ability to structure dialogue, comparison and reflection across territories, stakeholders and policy levels.

Within the project, the validated framework can be used to:

- support comparative analysis across pilot territories by providing a common analytical language while respecting contextual diversity;
- assess perceived direction and coherence of change rather than short-term performance, which is particularly relevant in early or experimental transition phases;
- inform Living Lab discussions, helping stakeholders reflect on trade-offs, priorities and enabling conditions;
- guide policy reflection by highlighting where regenerative approaches align—or fail to align—with existing economic, social and environmental objectives.

The KPI system and CRTI also provide a structured way to communicate project results to policymakers, funders and practitioners, translating complex transition dynamics into interpretable and policy-relevant signals.

Beyond RegenerAction, the model has strong potential for broader application and replication. In particular, it can be used as:

- a policy screening tool to assess the coherence of rural development, agri-environmental and climate policies with regenerative transition objectives;
- a monitoring and evaluation framework for programmes where quantitative farm-level data are limited or unavailable, such as pilot schemes, innovation hubs or Living Labs;
- a strategic planning tool for regional authorities to identify leverage points, bottlenecks and social acceptance issues in sustainability transitions;
- a learning and capacity-building instrument for advisory services, networks and training programmes, supporting reflection on economic resilience, social embedding and ecological regeneration;
- a basis for future research, including longitudinal studies, mixed-method impact assessments and integration with quantitative indicators as data availability improves.

Importantly, the perception-based and MCDA-inspired logic of the framework makes it adaptable to other sustainability transitions beyond agriculture, including food systems, bioeconomy strategies and nature-based solutions, provided that KPIs are contextually refined.

In conclusion, the RegenerAction impact assessment framework represents a practical and transferable contribution to the evaluation of regenerative agriculture and sustainability transitions. Rather than offering a single definitive score, it provides a structured, transparent and participatory way to understand how economic, social and environmental changes interact over time—supporting more informed, inclusive and adaptive decision-making at multiple governance levels.