TrueFoodS

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Post-Harvest Food Systems in the CAP Strategic Plans of Eight EU Member States

D3.1 Legal-Policy Comparative Report

Version 1.0

30/09/2026

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Deliverable	3.1 – Legal-Policy Comparative Report: *Post-Harvest Food Systems in the CAP Strategic Plans of Eight EU Member States*
Work Package	WP3 – Legal and regulatory framework analysis
Task	T3.1 – Comparative analysis of CAP Strategic Plans
Lead partner	Ecologic Institute
Contributing partners	Scuola Superiore Sant'Anna Institute for Climate, Economic and Social Resilience
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Layout	Marja Boström (Hållbar Utveckling Skåne)
Due date	30.09.2026
Status	Final

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This deliverable was conceived, designed, and developed under the full intellectual leadership of the authors. Generative artificial intelligence (AI) tools – ChatGPT (GPT-5.6 Sol, OpenAI) and Claude (Sonnet 5, Anthropic) – were used in a supporting capacity to assist with the extraction, organisation and analysis of information from the CAP Strategic Plans, as well as with drafting and linguistic refinement. The use of AI did not replace human expertise, judgement or decision-making. The authors independently developed the methodological approach, critically reviewed and validated all AI-assisted outputs and retained sole responsibility for selecting and interpreting the evidence and for formulating all analytical judgements and conclusions. The authors assume full responsibility for the accuracy and integrity of the analysis and for the final content of this deliverable.

Further details on the tools, analytical workflow and validation procedures are provided in Appendix A, Information A.1

Version Control

Version	Date	Author	Description
0.1	20.09.2026	All authors	Draft completed
0.2	21.09.2026	Sara Moreira, Jorge Milian Gómez	Internal peer review
0.3	23.09.2026	Johanna Meier, Zoritza Kiresiewa	Draft revised
0.4	25.09.2026	Marja Boström	First layout
0.5	25.09.2026	Zoritza Kiresiewa, Johanna Meier	Layout revised
0.6	28.09.2026	Marja Boström	Final layout
1.0	30.09.2026	Johanna Meier, Zoritza Kiresiewa, Holger Gerdes	Final version

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List of Abbreviations

Abbreviation	Full name
AKIS	Agricultural Knowledge and Innovation Systems
CAP	Common Agricultural Policy
CSP	CAP Strategic Plan
EAFRD	European Agricultural Fund for Rural Development
EAGF	European Agricultural Guarantee Fund
EC	European Commission
EIP-AGRI	European Innovation Partnership for Agricultural Productivity and Sustainability
ERDF	European Regional Development Fund
EU	European Union
LEADER	Liaison Entre Actions de Développement de l'Économie Rurale (Links between Actions for the Development of the Rural Economy)
SME	Small and Medium-sized Enterprise
SO	Specific Objective
SWOT	Strengths, Weaknesses, Opportunities, and Threats

Executive Summary

The purpose of this report is to assess to what extent and how the CAP (Common Agricultural Policy) Strategic Plans (CSPs) of the TrueFoodS consortium countries recognise and support the transition towards more sustainable, inclusive and resilient post-harvest systems. The analysis covers nine CSPs from eight EU Member States – Belgium (Flanders and Wallonia), Bulgaria, Germany, Italy, Portugal, Romania, Spain and Sweden – and examines two complementary dimensions of policy design: the strategic consideration of post-harvest systems across the wider CSP architecture and the operational support provided through CAP interventions. A common analytical framework covering eight post-harvest stages and five sustainability dimensions enables systematic comparison across the CSPs. The assessment focuses on planned policy design and support architecture and does not evaluate actual uptake, implementation or impacts.

Key findings of the analysis

- **Post-harvest systems are relevant across the CSPs but are rarely framed as a distinct policy area.** Relevant functions and support mechanisms are instead distributed across different objectives, needs and intervention types. The concept of "post-harvest" therefore serves primarily as an analytical lens for bringing together activities that are otherwise dispersed across the CSP architecture.
- **At the strategic level, post-harvest considerations are most consistently developed where they align with established CAP concerns around farmers' position in the value chain.** Producer organisation, processing and value addition, market access and cooperation are particularly prominent, most clearly under CAP's Specific Objective (SO) 3. Post-harvest dimensions of other objectives, particularly income resilience (SO1) and the environmental objectives (SO4-SO6), are reflected less consistently. The progression from diagnosis to identified and prioritised needs also varies substantially between CSPs, demonstrating that the recognition of a relevant issue does not necessarily translate into an equivalent policy priority or commitment.
- **Strategic consideration of sustainability is generally broad, but uneven in depth and orientation.** *Economic viability* is the most consistently developed dimension, reflecting established CAP pathways such as value creation, market access, producer cooperation and quality systems. *Resilience* is frequently well developed but is oriented predominantly towards market, price and organisational disruption, while climate-related are not explicitly addressed. *Environmental sustainability* and *governance* are integrated less consistently, while *social equity* receives the least systematic attention and generally depends on explicit inclusion, access or territorial mechanisms. Formal funding boundaries and coordination with other EU instruments introduce a further source of variation, ranging from relatively broad formal eligibility and concrete coordination arrangements to more general or weakly specified approaches.

- **At the operational level, the CAP provides multiple legal and policy routes for post-harvest support rather than a dedicated post-harvest instrument.** Across the nine CSPs, 273 interventions covering 30 intervention types were identified as substantively post-harvest relevant. Their use and design vary considerably between CSPs, resulting in different levels of prominence, functional coverage and sustainability integration. Operational support is particularly oriented towards market-facing and market-organising functions, including the stages *retail and marketing* and *distribution and market organisation*. *Handling and conditioning*, *waste management and circularity* and *consumption and use* are addressed less consistently. As at the strategic level, *economic viability* is the most consistently reflected dimension in intervention design, followed by *governance*, whereas *environmental sustainability*, *resilience* and particularly *social equity* are incorporated more selectively.
- **The operational support portfolio is diverse but unevenly distributed across support mechanisms and sustainability objectives.** Relevant interventions can be clustered according to their dominant support mechanism: *physical capacity and infrastructure* constitute the most prominent cluster, followed by *knowledge, cooperation and organisational capacity*; *market access, commercialisation and demand development*; *quality, traceability and compliance;* and, to a considerably lesser extent, *targeted environmental and circularity measures*. National CSPs nevertheless combine these support pathways in markedly different ways, indicating that there is no single operational model of post-harvest support.
- **Reading the strategic and operational strands together reveals selective rather than uniform correspondence.** Alignment is strongest around value-chain position, value addition, market access and producer cooperation, where strategic diagnosis is clearly reflected in operational support. Beyond these areas, the two strands do not necessarily correspond: relevant interventions may be available despite limited visibility at the strategic level, while broad strategic recognition does not automatically translate into equally broad integration within individual interventions.
- **A key opportunity for strengthening post-harvest support lies in considering post-harvest systems more coherently across the entire policy-design chain.** This requires stronger connections between evidence-based diagnosis, identified and prioritised needs, strategic commitments, eligibility conditions, funding coordination and their translation into operational support. At the operational level, relevant interventions should be designed and combined as complementary elements of a broader support architecture, linking physical investment with market-oriented measures, knowledge and cooperation, quality and traceability and environmental or circularity support where appropriate. Such an integrated approach can help ensure that identified post-harvest needs are addressed through mutually reinforcing rather than fragmented support mechanisms.

Overall, the analysis shows that the CAP already provides a relevant and diverse framework for supporting sustainable post-harvest systems, but its potential is not yet fully realised across CSPs. Strengthening its contribution will therefore require both more coherent and systematic use by Member States of the policy space and support pathways already available, as well as further development of the CAP-level regulatory and intervention framework itself to provide clearer and more enabling conditions for integrated post-harvest support and a more balanced consideration of sustainability objectives.

1. Introduction

1.1 Background

The transition towards more sustainable, equitable and resilient European food systems requires attention not only to primary agricultural production, but also to the subsequent stages of the food supply chain. The post-harvest phase – including storage, handling, processing, transport, distribution and the management of products, by-products and waste – constitutes a critical interface between agricultural production and the wider food system. Decisions and investments made at these stages have important implications for resource efficiency, environmental performance, value creation, food loss and waste as well as the capacity of different actors to participate in sustainable food value chains. The importance of addressing these stages is underscored by persistent environmental and economic challenges along the downstream food supply chain. In 2023, the manufacture of food products and beverages accounted for 19% of food waste generated in the EU, while retail and other food distribution accounted for a further 8%, demonstrating that significant resource losses occur beyond primary production (Eurostat, 2025). Reducing these inefficiencies requires investment and adaptation by food-chain actors, yet agri-food small and medium enterprises (SMEs) in the EU face financial, technical and capacity-related barriers to investing in more sustainable practices (fi-compass, 2023). At the same time, the wider food-policy landscape remains complex and fragmented, with gaps and inconsistencies limiting more coherent approaches to food system transformation (Sanye Mengual et al., 2024; EEA, 2023). These challenges underscore the need for more integrated, systems-oriented approaches that address the multiple and interdependent dimensions of post-harvest systems within the broader food system in a coherent and coordinated manner.

The TrueFoodS project – *Transforming European Food Systems: Sustainability, Equity, Governance and Resilience as core elements* – addresses this challenge by taking a systemic and interdisciplinary perspective on the transformation of post-harvest systems as integral components of the broader food system. Recognising the interdependencies between environmental, economic, social and institutional dimensions, the project seeks to foster more sustainable, inclusive and resilient post-harvest systems through regulatory coherence, circular-economy approaches, capacity building and adaptive governance. Within this architecture, Work Package 3 (WP3) – *Legal and Regulatory Framework Analysis* – provides the project's legal and policy foundation by examining how existing EU and national frameworks shape post-harvest systems and the extent to which they support or constrain environmentally sustainable, resource-efficient, socially inclusive and resilient practices. On this basis, WP3 develops and validates actionable legal and policy recommendations, while providing the regulatory foundation for the project's work on circularity, inclusive business models and adaptive governance.

This deliverable D3.1 represents the first analytical step within WP3 and reports on the work undertaken under Task 3.1, which conducts a structured comparative legal and policy analysis of frameworks relevant to post-harvest food systems. The analysis focuses on the CAP (Common Agricultural Policy) Strategic Plans (CSPs) of the eight consortium countries, examining how and to what extent they address and support the transition towards more environmentally sustainable, resource-efficient and socially inclusive post-harvest systems. By comparing the strategic consideration of post-harvest food systems and the operational support provided through the CSPs, the analysis identifies common approaches and national differences, as well as gaps, overlaps, barriers and enabling conditions. In doing so, D3.1 provides the evidence base for subsequent WP3 activities on regulatory harmonisation, stakeholder dialogue, the development of policy recommendations and a regulatory alignment roadmap.

1.2 Objectives and Scope

The objective of the analysis is to assess whether and how the CSPs provide a policy framework for the sustainable transformation of post-harvest systems. More specifically, the analysis examines how post-harvest considerations are reflected in the strategic orientations of the plans and how these are translated into concrete operational support in the form of CAP interventions. The overarching question guiding the analysis is therefore:

To what extent and how do the CAP Strategic Plans of the TrueFoodS consortium countries recognise and support the transition towards more sustainable, inclusive and resilient post-harvest systems?

In line with the Food Systems Approach adopted by TrueFoodS, which recognises the complexity and interconnectedness of all elements in food systems, this report uses the term post-harvest systems to refer to the activities, processes, infrastructures and organisational arrangements within food systems that operate after harvest or primary production and connect primary production to subsequent stages of the food system. Their sustainability is considered from a multidimensional perspective, encompassing ecological, socio-economic, institutional, and adaptive dimensions.

As one of the EU's longest-standing and financially most significant common policies, the CAP is the Union's principal policy and funding framework for shaping agriculture and rural development across the Member States. Its scale and influence over investment priorities make it a key policy lever for advancing the transition towards more sustainable and resilient food systems. The CAP and its CSPs therefore constitute a particularly relevant object of analysis. While the CAP establishes a common EU-level framework, it gives Member States considerable scope within the objectives and requirements established at Union level to identify needs, define priorities and design support interventions according to their respective circumstances. Under the 2023–2027 CAP, the CSPs bring together the

intervention strategies and CAP instruments selected by Member States to pursue the common CAP objectives. Although anchored in agriculture and rural development, the CAP's objectives and intervention architecture encompass a range of value-chain functions directly relevant to post-harvest systems. Regulation (EU) 2021/2115 provides, inter alia, for investment, cooperation and knowledge-exchange interventions under rural development and, within the framework for certain sectoral interventions, for measures concerning the sustainability and efficiency of transport and storage, promotion and marketing, quality schemes and traceability and certification systems. Post-harvest relevance is therefore not merely incidental to the CAP framework: several of its objectives and intervention types concern activities, infrastructures and organisational arrangements situated beyond primary production and along agricultural and food value chains. The CSPs are therefore relevant not simply because post-harvest activities may fall within the scope of CAP support, but because they show how Member States make use of the possibilities offered by the common EU framework in their respective national and regional contexts. Their comparison can consequently reveal differences in the extent to which, and the manner in which, this policy space is used to address the sustainability of post-harvest food systems.

The analysis covers the CSPs of the eight TrueFoodS countries: Belgium, Bulgaria, Germany, Italy, Portugal, Romania, Spain and Sweden. While the country selection is not intended to constitute a statistically representative sample of EU Member States, it spans diverse geographical, agricultural, climatic and administrative contexts, providing a useful basis for comparative analysis. Belgium represents an exception to the general one-plan-per-Member-State structure of the CAP and has separate CSPs for Belgium-Flanders and Belgium-Wallonia. The resulting nine CSPs form the document corpus for the comparative analysis, with each CSP constituting a primary unit of analysis.

The comparison considers two interrelated levels of policy design:

- the **strategic consideration of post-harvest systems**, including how relevant challenges, needs and opportunities are reflected within the broader objectives and programming rationale of each CSP; and
- the **operational support for post-harvest systems,** made available through individual interventions and associated forms of support.

The strands are assessed separately and subsequently compared to identify thematic correspondences and differences in emphasis within documented CSP design. This assessment does not, on the basis of the plans alone, evaluate the uptake, implementation or impact of individual interventions.

1.3 Structure of the Report

The remainder of this deliverable is structured as follows: Section 2 provides background on the general architecture of CSPs and maps the specific CSP chapters used in this analysis onto the two analytical strands pursued in this report. Section 3 sets out the analytical framework by defining the post-harvest stages and sustainability dimensions used in the study. It further outlines the methodologies applied to assess strategic consideration and operational support within the CSPs and discusses the study's limitations. Section 4 presents the comparative findings from both strands of analysis and subsequently brings them together in an integrated assessment. Section 5 draws on both strands to develop a typology of barriers and enablers. Section 6 summarises the findings and sets out their relevance for the subsequent WP3 tasks and the TrueFoodS project.

2. CAP Strategic Plan Framework

2.1 General Architecture of CAP Strategic Plans

The CAP is the EU's principal policy framework for supporting agriculture and rural areas. Established in 1962, it has progressively evolved from a policy centred predominantly on price and market support towards a broader framework pursuing economic, environmental and social objectives. The current CAP framework accordingly addresses competitiveness, environmental and climate performance, rural vitality, food security and the sustainable development of farming, food and rural areas.

The CSPs are the principal instruments through which Member States programme support under the CAP for 2023–2027. Established by Regulation (EU) 2021/2115, they connect common EU objectives with the needs, priorities and intervention choices identified at national and regional levels. Each CSP brings together three main intervention families: direct payments, interventions in certain agricultural sectors and rural development interventions (Articles 1, 8 and 104). The European Agricultural Guarantee Fund (EAGF) finances direct payments and sectoral interventions, while the European Agricultural Fund for Rural Development (EAFRD) finances rural development interventions, with EAFRD expenditure generally combining Union and national public funding in accordance with the applicable contribution rates (Articles 85 and 91). Member States retain considerable responsibility for the design of their CSPs, but this flexibility is exercised within an EU regulatory and approval framework: CSPs are assessed and approved by the European Commission and amendments remain subject to the procedures laid down in Articles 118 and 119.

As a general rule, each Member State establishes a CSP for its entire territory, while elements of the plan may be established at regional level in accordance with national constitutional and institutional arrangements, provided that coherence between national and regional elements is ensured (Article 104(2)). The common template established by Commission Implementing Regulation (EU) 2021/2289 gives these requirements a shared documentary structure, connecting needs assessment and intervention strategy with detailed intervention descriptions, target and financial plans, governance and modernisation. This structure provides a common basis without implying identical national priorities or equivalent detail in every plan.

Within this architecture, CAP support is programmed through interventions. Regulation (EU) 2021/2115 establishes common EU-level types of intervention across the main CAP intervention families, including direct payments, sectoral interventions and rural development interventions. Within this regulatory framework, Member States specify the concrete interventions included in their CSPs and define their national or regional design, including their objectives, beneficiaries, eligible activities, conditions, forms of support and financial allocation (Articles 3(3) and 111).

In the remainder of this report, the term *intervention type* refers to the common EU-level legal category under which support may be programmed, whereas the term *intervention* refers to its concrete national or regional implementation within an individual CSP. Interventions sharing an EU legal basis may consequently differ substantially in their scope and design. They should also be distinguished from the individual operations selected for support (Article 3(4)).

Within the sectoral intervention family, Article 42 covers fruit and vegetables, apiculture products, wine, hops, olive oil and table olives and, where selected by a Member State, other eligible sectors. The regulatory status of these sectors differs under Article 43. Interventions in the apiculture sector are mandatory for every Member State; fruit and vegetable interventions are mandatory for Member States with recognised producer organisations in that sector; and wine interventions are mandatory for the Member States listed in Annex VII. Types of intervention concerning hops, olive oil and table olives and the other eligible sectors referred to in Article 42(f) may instead be selected by Member States, subject to the specific conditions laid down in Article 43. The precise sectoral coverage and the combination of interventions programmed under this intervention family of the CAP may therefore differ between CSPs.

The CAP framework is organised around nine Specific Objectives (SOs) established by Article 6(1), complemented and interconnected by the cross-cutting objective laid down in Article 6(2), as outlined in Table 1. These objectives provide an important organising structure for the present analysis because the needs assessment and intervention strategy of each CSP are structured around them.

Within the CAP's new delivery model, programming is linked to a common performance framework. Common output, result, impact and context indicators support monitoring and evaluation, while result indicators provide the basis for setting targets and assessing progress. This performance orientation operates alongside the substantive eligibility and implementation requirements governing individual interventions. For the present analysis, planned interventions and targets indicate policy design and intended contributions rather than demonstrated implementation outcomes (Articles 7, 104(3), 109 and 128).

The programming logic also requires careful interpretation of the relationship between diagnosis and support. Articles 108 and 109 require Member States to identify and prioritise needs arising from the analysis of strengths, weaknesses, opportunities and threats (SWOT), explain any needs left wholly or partly unaddressed, and establish a coherent intervention strategy with a justified allocation of financial resources. Accordingly, recognition of a post-harvest need does not necessarily entail dedicated CAP funding. Any apparent gap between needs and interventions must be examined against the plan's stated priorities, justifications and coordination with other policy instruments.

Table 1. CAP Specific Objectives (EU, 2021)

Objective	Short description
SO1	Viable farm income and resilience
SO2	Market orientation and farm competitiveness, including research, technology and digitalisation
SO3	Farmers' position in the value chain
SO4	Climate-change mitigation and adaptation and sustainable energy
SO5	Sustainable development and efficient management of natural resources
SO6	Biodiversity, ecosystem services, habitats and landscapes
SO7	Young and new farmers and sustainable business development in rural areas
SO8	Employment, growth, gender equality, social inclusion and local development, including the circular bioeconomy
SO9	Societal demands on food and health, including sustainable food, food waste, animal welfare and antimicrobial resistance
Cross-cutting objective	Knowledge, innovation and digitalisation in agriculture and rural areas

For post-harvest systems, the significance of this architecture lies in the fact that relevant support does not constitute a separate CAP intervention family, but is distributed across several objectives and intervention types. Improving farmers' position in value chains, responding to food-related societal demands and reducing food waste provide explicit entry points, alongside environmental, resource-efficiency and rural-development objectives. Sectoral interventions and rural development support for investment, cooperation and knowledge exchange provide corresponding operational routes, subject to their respective scope and conditions (Articles 6, 47, 58, 73, 77 and 78). The comparative analysis therefore distinguishes three analytical levels: the possibilities made available by EU law, the priorities and intervention logic expressed in each CSP, and the concrete support programmed through individual interventions. Examining the relationship between these levels makes it possible to assess whether, through which instruments and with what degree of coherence CSPs address post-harvest sustainability. Section 2.2 identifies the CSP provisions used for this assessment.

2.2 Relevant CSP Chapters for the Analysis

Building on the general CSP architecture outlined in Section 2.1, this analysis examines selected CSP provisions according to their function in the programming process. The selection distinguishes evidence of the strategic consideration of post-harvest systems from evidence of the operational support programmed through interventions. The common CSP template provides a shared documentary basis for this distinction, although relevant content may vary in detail across plans.

The analysis distinguishes between two complementary strands. The first examines the strategic consideration of post-harvest systems, drawing on selected provisions from CSP Chapters 1-4. The second examines the operational support for post-harvest systems, focusing primarily on the detailed intervention architecture established in CSP Chapter 5, complemented by financial information from the Agri-food Data Portal (EC, n.d.) and, where relevant, by enabling provisions concerning Agricultural Knowledge and Innovation Systems (AKIS) and digitalisation in CSP Chapter 8.

This distinction reflects the different functions of the CSP chapters. Strategic consideration concerns whether and how post-harvest systems are visible within the policy rationale and programming architecture of the plans. Operational support concerns the concrete CAP interventions through which relevant activities may be supported. The two strands are assessed separately and subsequently compared to examine how strategic consideration relates to planned operational support. Table 2 outlines the specific CSP provisions used in the analysis and their analytical role. Taken together, these provisions capture the main points at which post-harvest considerations may be reflected in the CSPs.

Note that in the remainder of this report, references to “Chapter” denote chapters and subsections of the respective CSPs, while references to “Section” denote sections of this report. The following Section 3 outlines the methodology, explaining how the selected provisions are analysed and compared across the nine CSPs.

Table 2. CSP Chapters and provisions used in the analysis

CSP provision	Relevant content	Analytical use in this report
Chapter 1 – Strategic Statement	Overall strategic vision, expected results and principal policy choices	Strategic framing of post-harvest systems
Chapter 2 – Assessment of Needs and Intervention Strategy	SO-specific SWOT evidence; identified and prioritised needs	Diagnostic grounding and translation into policy needs and priorities
Chapter 3 – Consistency of the Strategy and Complementarities	Chapter 3.1.1: Contribution of conditionality to the environmental and climate-related Specific Objectives	Sustainability consideration
	Chapter 3.1.4: Contribution of the CSP environmental and climate architecture to established long-term national environmental and climate targets	Sustainability consideration
	Chapter 3.5: Overview of sector-related interventions and their strategic complementarity	Sustainability consideration and strategic integration
	Chapter 3.6: Integrated approach to risk management	Sustainability consideration, particularly *resilience* and economic viability
Chapter 4 – Elements Common to Several Interventions	Chapter 4.5: Coordination, demarcation and complementarity between the EAFRD and other Union funds active in rural areas	Funding coordination and wider funding positioning
	Chapter 4.7.1: General list of non-eligible investments	General formal eligibility scope and funding boundaries
Chapter 5 – Description of Interventions	Detailed design, scope and conditions of individual CAP interventions	Primary evidence on operational support for post-harvest systems
Chapter 8 – Modernisation: AKIS and Digitalisation	AKIS, advisory and knowledge-exchange arrangements, innovation linkages and digitalisation strategy	Complementary evidence on enabling support for post-harvest systems where a substantive post-harvest link is identifiable

3. Methodology

3.1 Analytical Framework

In line with the Food Systems Approach adopted by TrueFoodS, this report defines post-harvest systems as the activities, processes, infrastructure and organisational arrangements that connect the outputs of harvest and other forms of primary production with subsequent stages of the food system.

The analytical framework identifies and compares two types of evidence within the CSPs: evidence comprising relevant textual material in the introductory, diagnostic, strategic and implementation-related sections; and evidence of the interventions defined within the CSPs' intervention framework or, where greater analytical precision is required, the relevant sub-intervention or closest operational measure.

Both types of evidence are assessed using a common analytical framework. The assessment considers, first, their relevance to post-harvest systems and, second, their potential contribution to different dimensions of sustainability. Post-harvest relevance therefore constitutes the central organising concept of the analysis: it determines whether and in what way the CSP evidence addresses activities, processes, infrastructure, organisational arrangements, or enabling conditions situated within the post-harvest system.

To operationalise this concept, post-harvest relevance is assessed by identifying the specific stages and functions addressed. For analytical purposes, these functions are organised into eight post-harvest stages, as set out in Table 3.

The classification distinguishes between core post-harvest stages, downstream stages and a cross-cutting stage. The first five stages – *handling and conditioning*; *storage and preservation*; *processing and transformation*; *packaging and traceability*; and *distribution and market organisation* – constitute the core post-harvest stages. They cover the principal functions through which post-harvest relevance can generally be identified most directly in the CSPs. *Retail and marketing* and *consumption and use* are treated as downstream stages. Their relevance to CSPs is often more indirect, for example through support for quality schemes, short supply chains, local and regional markets, producer–consumer linkages or the promotion of food products. *Waste management and circularity* is treated as cross-cutting, as food loss and waste prevention, surplus redistribution and the valorisation of residues or by-products may occur at several points across the value chain.

Table 3. Analytical classification of post-harvest stages

Post-harvest stage		Scope	Examples*
Core post-harvest stages	**Handling and conditioning**	Immediate preparation, stabilisation and basic conditioning of food products after harvest or primary production, prior to storage, processing or further use	Cleaning; sorting; grading; drying (initial moisture reduction); cooling; hygiene and food safety measures; initial quality control; basic on-farm or first-point handling
	Storage and preservation	Maintenance of food quality, safety, usability and shelf life of food products after production and first *handling and conditioning*	On-farm or collective storage; warehousing; silos; cold storage and refrigeration; controlled-atmosphere storage; freezing (as preservation); storage management systems
	Processing and transformation	Transformation of raw or primary products into food products, or enhancement of their durability, usability, value or marketability	Milling; pressing; freezing or drying (as part of a transformation process); fermentation; on-farm or collective processing; added-value processing
	Packaging and traceability	Protection, containment, identification and information provision for food products across the value chain	Sustainable, reusable or recyclable packaging; date marking; product information and labelling; batch identification; (digital) traceability
	Distribution and market organisation	Movement and aggregation of food products through the value chain and facilitation of access to markets	Logistics and transport; aggregation and bulking; producer organisations and cooperatives; short food supply chains; contractual and value chain coordination; market transparency
Downstream	**Retail and marketing**	Provision, promotion and sale of food products to end consumers	Farmers' markets; local and regional markets; direct marketing and sales platforms; product marketing and promotion; quality schemes and certification
	Consumption and use	Final use, acceptance and behavioural choices around food products by end consumers	Consumer information and education (linked to promotion or quality schemes); local and regional food initiatives; consumer-producer engagement
Cross-cutting	**Waste management and circularity**	Prevention of food loss and waste and recovery of value from surplus food, residues, by-products or other unavoidable waste streams	Food loss and waste prevention and reduction; surplus redistribution; by-product and residue valorisation; upcycling; composting; anaerobic digestion; recycling; industrial symbiosis; cascading use of resources

* Examples are listed as indicative themes or aspects rather than as exhaustive descriptions. Some apply across multiple stages; their placement does not imply exclusive relevance for a stage. For each entry, the full range of associated activities, practices, infrastructure, equipment and related support measures is implicitly included unless the context indicates otherwise.

The stages are analytical categories rather than a rigid or exclusively sequential representation of the food value chain. Individual activities may span several stages or perform different functions depending on their context. Storage, for example, may occur at multiple points in the chain; processing may incorporate preservation or packaging; and distribution connects production, storage, processing and market functions. The classification is therefore intended to reflect the principal function and relevance of activities in their specific context, rather than to impose rigid boundaries between stages.

Where the sustainability contribution of a post-harvest-relevant provision is assessed, the second analytical axis concerns the nature of that contribution. Consistent with the objectives of the TrueFoodS project, sustainability is understood as a multidimensional concept, capturing whether post-harvest provisions contribute to reducing environmental pressures and resource use; strengthening economic viability and value creation; improving participation, accessibility and inclusion; enhancing institutional and organisational capacity; and increasing the ability of food systems to withstand and adapt to disruptions. The dimensions and their principal contribution pathways are defined in Table 4.

The five dimensions are complementary analytical lenses. Taken together, they capture the different and potentially interrelated ways in which post-harvest activities and support measures can contribute to more sustainable, inclusive and resilient food systems.

The two components of the analytical framework jointly define the substantive boundaries of the analysis. The post-harvest stages determine which activities and value-chain functions fall within scope and provide a common basis for identifying which functions of post-harvest systems CSP evidence addresses. The sustainability dimensions then provide the basis for assessing the nature of their potential contribution to sustainability.

Table 4. Sustainability dimensions for assessing post-harvest provisions

Sustainability dimension	Meaning for the sustainability of post-harvest systems	Examples for contribution pathways
Environmental sustainability	Reduction of environmental and climate-related pressures associated with post-harvest activities and improvement of resource efficiency across the food value chain	Food loss and waste prevention; more efficient processes, technologies or infrastructures; reduced resource use; lower emissions; circular use of residues; sustainable packaging; reduction of avoidable waste streams
Economic viability	Strengthening the economic capacity and competitiveness of producers, producer groups, SMEs, cooperatives and rural food-system actors to retain value and access markets after production	Value addition through processing; improved storage and shelf life; market access and performance; short supply chains; competitiveness; rural employment; regional value creation
Social equity	Improvement of fair participation, accessibility and inclusion within post-harvest food systems, particularly for small producers, SMEs, cooperatives, rural actors, marginalised or underrepresented groups, or territorially disadvantaged areas	Inclusion of small farms, SMEs, women or young farmers in value chains; cooperative and other collaborative structures; local and regional markets; territorial food systems; access to quality schemes; support for rural communities; producer-consumer linkages
Governance	Improvement of the institutional, organisational, informational, or cooperative capacity needed to manage sustainable post-harvest systems	Producer organisations; cooperatives; EIP-AGRI operational groups; advisory services; knowledge exchange; digital tools; traceability; monitoring; certification; coordination between producers, processors, distributors, retailers and public actors
Resilience	Strengthening the ability of post-harvest food systems to resist, absorb, adapt to and (equitably) transform in response to economic, climatic, market, logistical, supply-chain and institutional or policy-related disruptions	Diversified processing and marketing channels; regional supply chains; collective infrastructure; crisis-resistant logistics; reduced dependency on single buyers or long supply chains; improved capacity to manage seasonal or climate-related variability; risk management; contingency planning and foresight approaches

3.2 Analysis of Strategic Consideration of Post-Harvest Systems

Building on the analytical framework set out in Section 3.1, this strand of analysis examines how post-harvest systems are considered within the strategic and programming architecture of the CSPs and how the sustainability dimensions are reflected within that architecture. The analysis covers the relevant CSP evidence of Chapters 1-4 identified as outlined in Table 2. It focuses on strategic framing, diagnosis and prioritisation, sustainability consideration and funding boundaries and coordination.

The analysis comprises three complementary analytical components, followed by an overall comparative assessment, as presented in Table 5. Within each component, relevant evidence is first assessed at the level of the individual CSP and subsequently compared across the nine plans.

Table 5. Components of the analysis of strategic consideration of post-harvest systems

Analytical component	CSP sections examined	Principal analytical focus
Strategic framing, diagnosis and prioritisation	Chapter 1 – Strategic statement; Chapter 2 – SO-specific SWOT analyses and identified and prioritised needs	Strategic framing of post-harvest systems; diagnostic grounding; translation into identified and prioritised needs
Sustainability consideration	Chapter 3 – Consistency of the strategy; Chapters 3.1.1, 3.1.4, 3.5 and 3.6	Extent and manner in which the five sustainability dimensions are reflected in relation to post-harvest systems
Funding boundaries and coordination	Chapter 4 – Elements common to several interventions; Chapters 4.5 and 4.7.1	Formal eligibility scope derived from general post-harvest-relevant exclusions and coordination with other relevant EU funding instruments
Overall comparative assessment	Synthesis across the above evidence	Overall strategic integration, cross-chapter consistency and comparison with the breadth and depth of sustainability consideration

Throughout the analysis, absence of evidence is interpreted conservatively. Where no relevant textual evidence is identified, this is treated as an absence of explicit evidence within that chapter rather than as evidence that the issue is irrelevant in the national context or unsupported elsewhere. The assessment concerns the policy design and programming architecture established in the CSPs and does not assess actual uptake, implementation, or impacts.

3.2.1 Strategic Framing, Diagnosis and Prioritisation

Research question: *To what extent and how are post-harvest systems reflected in the strategic framing of the CSPs, substantiated through the SO-specific SWOT analyses and translated into identified and prioritised needs; and what commonalities and differences emerge across the CSPs?*

The analysis follows the progression from strategic framing to diagnosis and prioritisation. CSPs' Chapter 1 is reviewed to identify the strategic importance, purposes and policy framing attributed to post-harvest systems as defined in Section 3.1 within the overall strategic statement. Chapter 2 is then assessed by SO (as outlined in Table 1), first, to identify post-harvest-relevant SWOT, and subsequently, to examine whether and how these are reflected in the identified and prioritised needs.

The resulting country-level assessments are compared across CSPs to identify recurring strategic themes, SO-level patterns and differences in the strength of the progression from diagnosis to prioritisation.

3.2.2 Sustainability Consideration

Research question: *To what extent and how are the five sustainability dimensions reflected in relation to post-harvest systems within the relevant provisions of Chapter 3; and what commonalities and differences emerge across the CSPs?*

The assessment covers Chapters 3.1.1 and 3.1.4 of the CSPs on the environmental and climate architecture, Chapters 3.5 on sector-related interventions and Chapters 3.6 on risk management. Relevant passages are assessed against the five sustainability dimensions defined in Table 4. A single passage may provide evidence for more than one dimension, provided that a distinct, substantively supported contribution pathway can be identified for each dimension. Evidence is retained for classification only where the CSP text establishes both a clear link to post-harvest systems and a sufficiently explicit contribution pathway to at least one sustainability dimension.

For each CSP, each sustainability dimension is assigned one of three qualitative classifications: *Not addressed*, *Partially addressed* or *Clearly addressed*. Rather than applying a fixed numerical threshold, the classification considers the specificity and substantive relevance of the evidence and the extent to which it is developed and reinforced across the relevant CSP passages and sectors. The classification of sustainability consideration is outlined in Table 6.

Table 6. Classification of sustainability consideration by dimension

Classification	Analytical interpretation
Not addressed	No sufficiently explicit and substantive post-harvest contribution pathway is identified; references are absent, generic, incidental or merely potential
Partially addressed	At least one explicit and substantive post-harvest-relevant contribution pathway is identifiable, but evidence remains limited in scope, specificity or reinforcement
Clearly addressed	The CSP contains explicit and substantive evidence for the dimension across multiple relevant aspects, provisions or sectoral contexts

Generic, incidental or merely potential effects are not treated as sufficient evidence for classification as *Partially addressed* or *Clearly addressed*. Potentially relevant references may be retained as contextual information where appropriate, but do not determine the dimension-specific classification unless the substantive link is sufficiently explicit.

In line with the sustainability dimensions outlined in Table 4, *resilience* is treated as a separate sustainability dimension. Nevertheless, relevant resilience pathways may overlap with the other sustainability dimensions, particularly where risk-management provisions address market, economic, or organisational disruption. CSP Chapter 3.6 is therefore an important source of resilience evidence, although relevant evidence may also be identified elsewhere in Chapter 3.

The dimension-specific classifications are then considered collectively to distinguish the breadth and depth of sustainability consideration. Breadth refers to the number of sustainability dimensions classified as at least *Partially addressed* within a CSP, while depth refers to the strength of evidence within those dimensions, as reflected in the distribution of *Partially addressed* and *Clearly addressed* classifications across those dimensions. Depth is not assigned a separate aggregate category. Overall sustainability breadth is classified as outlined in Table 7.

Table 7. Classification of overall sustainability breadth

Classification	Analytical interpretation
Narrow	None or one of the five sustainability dimensions is classified as at least *Partially addressed*
Partial	Two or three dimensions are classified as at least *Partially addressed*
Broad	Four or all five dimensions are classified as at least *Partially addressed*

Breadth therefore indicates the range of sustainability dimensions covered, not the strength with which they are addressed. A CSP may consequently display broad sustainability consideration even where several individual dimensions are classified only as *Partially addressed*.

3.2.3 Funding Boundaries and Coordination

Research question: *How do the analysed CSPs shape the formal scope and boundaries of post-harvest support through general investment exclusions and coordination with other relevant EU funds; and what commonalities and differences emerge across the CSPs?*

Two elements of Chapter 4 of the CSPs are examined. Together, they capture two complementary aspects of funding boundaries: exclusions from CAP support and coordination between the EAFRD and other EU funding instruments.

First, Chapter 4.7.1 is reviewed to identify general post-harvest-relevant investment exclusions. Identified exclusions are mapped to the post-harvest stages defined in Table 3 and any explicit qualifications or exceptions that restore eligibility under specific interventions are also recorded. The assessment is limited to general plan-level exclusions set out in Chapter 4.7.1 and therefore does not capture narrower eligibility conditions contained within individual interventions. Accordingly, if no relevant general exclusion is identified, this indicates only that the plan contains no such plan-level exclusion; it does not confirm that all post-harvest investments or costs are eligible for support.

Second, Chapter 4.5 is examined to identify post-harvest-relevant coordination, demarcation and complementarity between the EAFRD and other EU funding instruments. For each relevant instance, the analysis records the post-harvest area concerned, the complementary fund or instrument where specified as well as the nature and specificity of the coordination arrangement.

Where identifiable, the comparative assessment distinguishes between concrete coordination or double-financing safeguards, explicit demarcation of funding responsibilities, acknowledged coverage gaps or alternative funding routes and general or unspecific complementarity language. These categories serve as analytical descriptors rather than mutually exclusive classes, as a CSP may contain more than one type of arrangement. Internal coordination between CAP funds is distinguished from external coordination between the EAFRD and other EU funds. Country-level findings are then compared to identify common approaches and differences in the formal boundaries of post-harvest support and its position within the wider EU funding landscape.

3.2.4 Comparative Assessment of Strategic Consideration

Research question: *What overall patterns of strategic integration emerge when the evidence on strategic framing, diagnosis and prioritisation, sector-related provisions, funding boundaries and coordination with other relevant EU funds is considered jointly; how consistently is post-harvest consideration carried across the CSP architecture; and how do these patterns relate to the breadth and depth of sustainability consideration?*

The final stage synthesises the evidence from Sections 3.2.1 to 3.2.3 to assess the overall strategic integration of post-harvest systems within each CSP. Five evidence domains are considered:

1. **strategic framing** in the Chapter 1 Strategic Statement;
2. **diagnostic grounding** in the Chapter 2 SWOT analyses and identified and prioritised needs;
3. **post-harvest consideration** in Chapter 3, specifically Chapter 3.5 on sector-related provisions;
4. **formal eligibility scope** in Chapter 4, specifically Chapter 4.7.1; and
5. **coordination with other EU funding instruments** in Chapter 4, specifically Chapter 4.5.

The five evidence domains are each rated on a *Limited–Moderate–Substantial* comparative scale. The criteria represented by the scale vary by domain: For strategic framing, SWOT and needs, sector-related provisions and EU-fund coordination, the scale reflects the specificity, substantive coverage and consistency of post-harvest consideration. For formal eligibility scope, the scale reflects the extent to which general exclusions identified under Chapter 4.7.1 narrow the potential scope for post-harvest-related support: *Limited* indicates comparatively broad restrictions, *Moderate* indicates narrow or conditional restrictions, and *Substantial* indicates that no general post-harvest-relevant exclusion is identified in the reviewed section. A *Substantial* rating in this domain therefore indicates formal eligibility rather than evidence that funding is actively provided.

The overall strategic-integration classification is derived through interpretative synthesis rather than by calculating a mechanical average. Strategic framing and evidence from the SWOT and needs analysis are treated as the primary indicators of whether post-harvest systems are explicitly recognised, diagnosed and prioritised. Sector-related provisions and EU-fund coordination provide corroborating

evidence of whether this strategic consideration is carried through the wider CSP architecture, while the formal eligibility-scope domain shows whether general rules constrain the potential scope of post-harvest investment. A broad formal eligibility scope does not compensate for weak positive evidence of post-harvest integration in the principal strategic domains.

On this basis, overall strategic integration is classified as *Limited*, *Moderate* or *Substantial*. An intermediate *Moderate-to-Substantial* classification may be used where the evidence clearly falls between the latter two categories. This intermediate category applies only to the overall synthesis and not to individual domain ratings. Table 8 sets out the analytical interpretation of each overall strategic-integration classification.

Table 8. Classification of overall strategic integration

Classification	Analytical interpretation
Limited	Post-harvest consideration is sparse, generic or isolated across the principal strategic evidence domains and receives little substantive reinforcement elsewhere in the CSP architecture
Moderate	Post-harvest systems are substantively considered, but integration remains incomplete or uneven with clear strengths in some domains and significant gaps in others
Moderate-to-Substantial	Post-harvest systems are strongly integrated in at least one principal evidence domain and receive substantive reinforcement elsewhere in the CSP architecture, but one or more material gaps prevent a *Substantial* classification
Substantial	Post-harvest systems are explicitly, substantively and consistently integrated across the principal evidence domains with mutually reinforcing strategic, diagnostic, and programming evidence

In addition to the overall classification, the synthesis examines cross-chapter consistency, including cases in which strategic framing, diagnostic evidence, prioritisation, and subsequent provisions do not align. Differences between the visibility of post-harvest systems in the strategic statement and their treatment in subsequent CSP sections are described as vision–execution divergence. This terminology refers only to internal consistency within CSP policy design and does not indicate implementation performance.

Finally, the overall strategic-integration assessment is compared with the sustainability assessment developed in Section 3.2.2. Strategic integration and sustainability consideration remain analytically separate and are not combined into a composite score. The comparison examines whether CSPs in which post-harvest systems are more fully embedded across the policy architecture also display broader and deeper consideration of the five sustainability dimensions.

3.3 Analysis of Operational Support for Post-Harvest Systems

Building on the analytical framework set out in Section 3.1, this strand of the analysis examines how the regulatory possibilities for post-harvest support under the CAP are translated into planned support within the intervention architectures of the nine CSPs. It assesses whether individual interventions establish an explicit or substantively identifiable route to post-harvest activities or enabling conditions and compares the scale, functional coverage, sustainability orientation and composition of this support across the CSPs.

Throughout this section, *intervention type* refers to the common EU-level legal category established under the CAP regulatory framework, whereas *intervention* refers to its concrete national or regional implementation within an individual CSP. This distinction separates the support possibilities provided by the EU regulatory framework from the choices made in the design of the individual CSPs.

The evidence base combines the EU-level legal framework established by Regulation (EU) 2021/2115, the intervention descriptions contained primarily in Chapter 5 of the nine CSPs, financial information from the Agri-food Data Portal's catalogue of CAP interventions (EC, n.d.), and, where a substantive post-harvest link can be identified, complementary information on AKIS and digitalisation from CSP Chapter 8. The operational-support analysis comprises four components, as summarised in Table 9.

Table 9. Components of the analysis of operational support of post-harvest systems

Analytical component	Principal evidence base	Principal analytical focus
Regulatory scope and EU-level screening	Regulation (EU) 2021/2115	Identification and classification of CAP intervention types that provide a legally identifiable route to post-harvest support
CSP-level intervention screening, coding and descriptive analysis	CSP Chapter 5; updated intervention information; Agri-food Data Portal financial data	Identification of relevant interventions; coding of post-harvest stages and sustainability dimensions; analysis of scale, coverage and associated planned expenditure
Intervention-type use and national design	Validated intervention dataset; relevant Chapter 8 evidence	Comparison of how common intervention types are used and designed across CSPs and synthesis through operational-support clusters
Overall comparative assessment	CSP-level indicators derived from the validated intervention dataset	Relative assessment of the prominence, range and average integrative breadth of planned post-harvest support

Absence of evidence is interpreted conservatively throughout the analysis. Where an intervention description does not provide a sufficiently explicit post-harvest link, this is treated as an absence of identifiable evidence in the material reviewed. It does not demonstrate that the intervention could not support post-harvest activities during implementation. The assessment concerns the planned support architecture documented in the CSPs and does not assess uptake, actual expenditure, implementation, effectiveness or impact.

3.3.1 Regulatory Scope

Research question: *Which CAP intervention types are, by legal design, capable of supporting post-harvest systems, and what form of post-harvest relevance does their legal design provide?*

An EU-level regulatory screening is conducted before the country-level analysis to establish the analytical perimeter for operational support. The intervention types provided for under Regulation (EU) 2021/2115 are assessed against the definition of post-harvest systems and the eight post-harvest stages established in Table 3. This assessment is undertaken independently of whether or how individual CSPs made use of the intervention types.

The screening distinguishes between intervention types that provide an explicit route to post-harvest support, types that support relevant enabling capacities, types whose relevance depends on their national or regional design and types outside the analytical scope. Each intervention type is assigned to one of the categories outlined Table 10.

Table 10. EU-level classification of CAP intervention types by post-harvest relevance

Category	Interpretation
A – Direct relevance	The legal design explicitly provides for one or more post-harvest activities or functions.
B – Enabling relevance	The intervention type can directly enable post-harvest organisation, knowledge, coordination, quality governance or other relevant capacities, but does not necessarily finance a physical post-harvest activity
C – Potential/ conditional relevance	The legal design permits post-harvest support, but relevance depends on how the intervention is specified by the Member State.
D – Structurally excluded	The statutory function does not provide a legally identifiable route to food post-harvest support within the scope of this study, including intervention types confined to primary production, income support, or products and functions outside the defined food-system boundary.

Table 10 distinguishes four categories according to the legal basis of the connection identified. *Category A* captures provisions expressly covering a post-harvest activity or function. This includes non-physical functions, such as traceability or marketing and is not restricted to infrastructure or equipment. *Category B* identifies an enabling route through organisational, advisory, knowledge or coordination support. *Category C* covers broader provisions that permit post-harvest support but require further specification to establish its substantive connection. These categories describe different bases of relevance, not an ordinal scale of support intensity or sustainability performance. National design must be examined for all three. *Category D* covers types for which the statutory object and support mechanism do not provide an identifiable post-harvest route, including instruments confined to primary-production activities or land-based income support. General effects on farm liquidity, agricultural supply or market conditions are insufficient for inclusion. It further concerns interventions related to products or functions outside the food system boundary adopted in this study. These exclusions delimit the operational-support sample; they do not imply that the instruments lack economic significance or sustainability benefits in their respective fields.

Types classified as A, B or C are retained for the country-level screening described in Section 3.3.2, while types classified as D are excluded. Retention establishes regulatory capability, not evidence of national programming, project eligibility or actual uptake. The subsequent screening determines whether individual interventions contain a sufficiently identifiable post-harvest link and then assesses their stage coverage and sustainability contribution.

3.3.2 Scale and Composition of Operational Support

Research question: *To what extent do the interventions programmed in the analysed CSPs substantively support post-harvest systems, and which post-harvest stages and sustainability dimensions do they address?*

The CSP-level analysis is based on intervention data downloaded from the Agri-food Data Portal's catalogue of CAP interventions (EC, n.d.). For each CSP, the portal provides an inventory of programmed interventions together with harmonised information on intervention identifiers and types, titles, linked SOs and planned total public expenditure where available. The extracts for the nine CSPs were combined into a working database for screening, coding and comparative analysis. The portal inventory available at the time of data extraction defines the intervention population used in this report. Interventions included in the CSP versions reviewed but no longer listed in the portal inventory were excluded; such differences may reflect subsequent amendments, replacements or discontinuations. Newly listed interventions were assessed against the latest available CSP descriptions using the same inclusion and coding criteria. Detailed information on the exact CSP versions used is documented in Appendix A, Table A.2.

Each intervention in the database is linked to its intervention description in Chapter 5 of the relevant CSP. While the portal provides the common intervention inventory and the comparable quantitative fields, the CSP descriptions provide the principal evidence for assessing post-harvest relevance. On this basis, each intervention is classified as included or excluded from the post-harvest sample. Detailed screening applies to interventions belonging to the intervention types classified as directly, enabling, or conditionally relevant in Section 3.3.1. An intervention is retained where its description establishes an explicit or substantively identifiable link to at least one post-harvest activity, function, outcome or enabling condition. A conservative inclusion rule is applied to minimise false-positive classifications. An intervention is not retained solely because its intervention type is legally capable of supporting post-harvest activities. Generic references to cooperation, innovation, advisory services, training, digitalisation or rural development are insufficient unless the intervention description establishes a substantive post-harvest connection. Interventions concerned exclusively with primary production practices or non-food value chains are excluded.

The intervention constitutes the principal unit of analysis. Where a CSP divides an intervention into substantively distinct sub-interventions or operational components, the closest identifiable operational unit is used where necessary for accurate classification. Where only one component of a broader intervention is post-harvest relevant, the intervention is retained on that basis, but the subsequent coding is restricted to the relevant component.

Each retained intervention is coded against the eight post-harvest stages and five sustainability dimensions defined in Section 3.1, Table 3 and Table 4. Multiple codes may be assigned where the intervention addresses more than one stage or dimension. A post-harvest-stage code requires an identifiable operational or enabling function at the relevant stage. A sustainability-dimension code requires a sufficiently explicit contribution pathway. Generic, incidental or merely potential sustainability effects are not coded as substantive evidence.

The descriptive analysis examines, for each CSP and for the pooled sample, the number and share of all interventions retained as post-harvest relevant, their distribution across intervention types and intervention families, and the number and share of retained interventions addressing each post-harvest stage and sustainability dimension.

The financial analysis draws on planned total public expenditure reported in the Agri-food Data Portal. Comparable expenditure data are available only for a subset of interventions and are unavailable for the macro-intervention type *Other sectoral interventions*. Where a financially covered intervention supports both post-harvest and other activities, the available data do not allow the post-harvest share of its budget to be isolated. Expenditure figures are therefore used only as contextual indicators of the financial scale associated with post-harvest-relevant interventions and do not enter the comparative assessment.

3.3.3 Intervention Type Use and National Design

Research question: *How do the analysed CSPs use, design and combine comparable CAP intervention types for post-harvest support and what common operational-support pathways and national differences emerge?*

The validated dataset of post-harvest-relevant interventions forms the basis for the cluster analysis. The intervention types represented in the dataset are grouped according to their predominant support mechanism, understood as the principal function through which they support post-harvest systems. Each intervention type is assigned to one primary cluster, while individual interventions may address several post-harvest stages and sustainability dimensions.

For each resulting cluster, the analysis first characterises its functional profile by examining the number and share of interventions addressing each of the eight post-harvest stages and the five sustainability dimensions. The cluster-level profiles are derived from the intervention-level coding described in Section 3.3.2. The analysis subsequently compares how interventions within each cluster are used and designed across the CSPs. The comparison considers differences in the breadth and orientation of the supported activities, including whether interventions focus on a specific post-harvest function or combine several related functions. The CSP Chapter 8 on AKIS and digitalisation provides complementary information for the interpretation of the relevant cluster without adding interventions to the dataset.

To develop CSP-level profiles, the number and share of retained interventions assigned to each cluster are calculated for each CSP and for the pooled sample. For each CSP, the share is calculated relative to the total number of retained interventions in that CSP; the pooled shares are calculated relative to the complete post-harvest intervention sample. This shows how the composition of operational support is distributed across the clusters and allows the resulting profiles to be compared across CSPs.

3.3.4 Comparative Assessment of Operational Support

Research question: *What overall patterns of planned operational support for post-harvest systems emerge across the analysed CSPs?*

In a final step, the intervention-level findings are aggregated at CSP level to derive an overall comparative profile of planned operational support for post-harvest systems. The comparative assessment draws on different indicators: the relative prominence of post-harvest-relevant interventions within the CSP; the breadth of applicable intervention types covered; the average breadth of post-harvest stages addressed by the retained interventions; and the average breadth of sustainability dimensions incorporated into their design. Table 11 summarises the dimensions considered in the comparative assessment and their operationalisation. All indicators are expressed as percentages to support comparison across CSPs.

Table 11. Operationalisation of CSP-level assessment dimensions for operational support

Assessment dimension	Operationalisation
Post-harvest prominence	Relative prominence of post-harvest support within the CSP intervention portfolio, reflected in the share of all CSP interventions identified as post-harvest relevant.
Intervention-type breadth	Extent to which the CSP draws on the range of intervention types applicable to post-harvest support, reflected in the share of applicable intervention types represented by at least one post-harvest-relevant intervention.
Intervention-level post-harvest stage breadth	Extent to which individual post-harvest-relevant interventions span the post-harvest process, reflected in the average share of defined post-harvest stages addressed per intervention.
Intervention-level sustainability breadth	Extent to which individual post-harvest-relevant interventions incorporate different sustainability considerations, reflected in the average share of defined sustainability dimensions addressed per intervention.
Portfolio-level stage and sustainability coverage	Extent to which the portfolio of post-harvest-relevant interventions collectively covers the analytical framework, reflected in the respective shares of post-harvest stages and sustainability dimensions represented at least once across the portfolio.

For each of the indicators, CSPs are ranked and assigned to one of three relative assessment categories according to the observed distribution across the nine plans. CSPs in the upper relative group are classified as *Substantial*, those in the middle group as *Moderate*, and those in the lower group as *Limited*. Where equal values occur at a group boundary, tied CSPs are retained within the same category. As a result, the categories do not necessarily contain the same number of CSPs. These indicator-level classifications express relative positions within the assessed sample and do not constitute absolute performance thresholds.

The indicator-level classifications are translated into points, with a classification of *Substantial* assigned two points, *Moderate* one point and *Limited* zero points. Post-harvest prominence and intervention-type breadth are treated as the primary dimensions of planned operational support because they directly capture the relative presence and range of post-harvest support provided within a CSP. These two dimensions are therefore assigned a weight of two. Post-harvest stage breadth and sustainability breadth describe the average integrative scope of individual interventions and are assigned a weight of one. Higher values indicate a more integrative intervention design but do not constitute a normative benchmark in themselves, as a narrowly focused intervention may be appropriate where it responds to a specific need. The maximum possible score is twelve. The weighted score is translated into the overall comparative classification presented in Table 12.

Table 12. Classification of overall operational support

Classification	Weighted score	Analytical interpretation
Limited	0	All four assessed dimensions fall within the lower relative group. Post-harvest support is comparatively narrow across both primary dimensions and is not offset by broader functional or sustainability coverage at intervention level.
Moderate	1-5	Planned post-harvest support is identifiable, but the profile remains uneven. One or more dimensions provide evidence of relevant support, while the primary dimensions and/or the supporting breadth indicators remain comparatively limited.
Moderate-to-Substantial	6-8	The CSP demonstrates strong relative evidence in at least one primary dimension or a broadly balanced combination of support across several dimensions. Clearly identifiable limitations remain in one or more areas.
Substantial	9-12	The CSP demonstrates a consistently strong comparative profile across the primary dimensions or combines strong post-harvest prominence and/or intervention-type breadth with broad functional and sustainability coverage at intervention level.

The overall *Limited* category is deliberately restricted to a weighted score of zero. It therefore identifies only CSPs classified as *Limited* across all four dimensions rather than automatically assigning a *Limited* rating to the lowest-ranked plan. A CSP with evidence of at least *Moderate* support in one dimension receives an overall assessment of at least *Moderate*.

3.4 Integrated Comparison of Strategic Consideration and Operational Support

Research question: *How do the strategic consideration and planned operational support profiles relate across the analysed CSPs and where do substantive correspondences or divergences emerge?*

The integrated comparison brings together the strategic consideration profiles and the planned operational support profiles from the two strands of analysis. The comparison is conducted at two levels. First, the respective overall classifications are placed side by side to orient the CSP-level comparison. Second, the evidence underlying the classifications is compared to assess whether the main strategic priorities and gaps are reflected in the predominant support mechanisms, post-harvest stages and sustainability dimensions represented in the retained interventions. The underlying profiles are examined to distinguish between strategic consideration that is only partly reflected in planned intervention design and relevant operational support that is less visible in the higher-level strategic framing.

The strategic and operational assessments remain analytically distinct because they examine different components of CSP design and use different classification procedures. They are therefore not combined into a composite score and no separate alignment rating is assigned. Alignment is interpreted descriptively as correspondence within planned policy design and does not indicate the adequacy, implementation, uptake or impact of the support identified.

3.5 Typology of Barriers and Enablers

Research question: *Which recurring policy-design conditions may constrain or facilitate the coherent integration of post-harvest systems across the analysed CSPs?*

The final analytical step synthesises the insights generated through the strategic, operational and integrated analyses. Rather than assessing the CSPs again as separate cases, it compares the findings across the nine plans to explore recurring policy-design conditions that may constrain or facilitate the coherent integration of post-harvest systems.

The analysis examines the relationships between the different elements of CSP design covered by the preceding analytical steps. Particular attention is given to features that recur across several CSPs and to individual country cases that illustrate a wider issue within the policy-design chain. The identified features are grouped into cross-cutting policy-design conditions. For each condition, evidence of gaps, inconsistencies or limited specificity is formulated as a potential barrier, while contrasting practices that strengthen clarity, traceability, coherence, coverage or the formal accessibility of support are formulated as potential enabling features. CSP-level evidence is used to illustrate the analytical basis of each condition.

The resulting typology is therefore qualitative and interpretive, providing an indicative and hypothesis-generating framework for understanding the policy-design conditions that shape support for post-harvest systems and serving as a basis for the subsequent analytical steps within the WP.

3.6 Limitations

This analysis is subject to several limitations that should be borne in mind when interpreting the findings. The three principal limitations are outlined below.

The first limitation concerns the analytical scope. The assessment examines the policy design and support architecture established in the CSPs, specifically how post-harvest issues are strategically recognised and what operational support is set out in the plans. It does not assess the uptake, implementation, actual expenditure, effectiveness, or real-world impact of the plans. Planned expenditure data are available only for a subset of interventions, and some interventions support

objectives extending beyond post-harvest activities without the available data permitting the corresponding budget shares to be disaggregated. The analysis therefore cannot quantify total planned or actual expenditure on post-harvest activities. The presence and number of relevant interventions – and, where available, their planned allocations – are therefore used only as indicators of policy attention and operational support, not as evidence of actual spending, uptake or effectiveness.

The second limitation concerns the documentary basis and temporal coverage. The principal sources are the English-language CSP versions available to the authors and suitable for systematic cross-country analysis. These correspond to the versions at the start of the programming period, whereas the plans have since been amended several times; the exact versions used are documented in Appendix A, Table A.2. Both strands of the analysis relied on these initial versions. Only the operational support analysis includes a cross-check against the more recent intervention data extracted from the Agri-food Data Portal. Interventions that are no longer listed are excluded, while newly identified interventions are assessed using descriptions from the latest available original-language CSPs, translated for this study. This procedure improves the currency of the operational sample, but it does not constitute a full line-by-line update of the full analysis. Subsequent amendments to the plans and potential inaccuracies or loss of nuances arising from translation may therefore affect the identification or classification of some post-harvest-related content. Moreover, the two strands do not rest on an entirely identical documentary basis, which should be borne in mind when comparing them.

The third limitation concerns cross-country comparability and the role of qualitative judgement. Although all CSPs follow a common regulatory framework, they differ considerably in length, drafting style, level of detail and administrative context. A comparatively brief textual treatment should therefore not automatically be interpreted as an absence of relevant policy or activity: it may instead reflect national drafting practices or differences in how policies and activities are documented. The analysis consequently applies a conservative interpretation based on the evidence explicitly documented in the plans. Classification is guided by predefined criteria, a shared coding framework and alignment among coders. Nevertheless, some expert judgement remains unavoidable, particularly in borderline cases and where descriptions are sparse or ambiguous.

Taken together, these limitations constrain the analysis to what the CSPs document and the extent to which this material can be compared consistently across countries. Yet, they do not detract from its core contribution as a systematic mapping of policy attention and the support architecture for post-harvest systems across the CSPs.

4. Comparative Findings across the CAP Strategic Plans

4.1 Strategic Consideration of Post-Harvest Systems

This section presents the comparative findings on how post-harvest systems are considered within the strategic and programming architecture of the nine CSPs analysed. In line with the methodology set out in Section 3.2, the assessment covers three complementary aspects: strategic framing, diagnosis and prioritisation; sustainability consideration; and the formal boundaries and coordination of post-harvest-related support. The section concludes by integrating these findings into an overall assessment of strategic integration and sustainability consideration.

More detailed evidence underlying the findings is provided in Appendix B.

4.1.1 Patterns of Strategic Framing, Diagnosis, and Prioritisation

The analysis of Chapters 1 and 2 shows that post-harvest systems are recognised across the CSPs, but are framed mainly in terms of market organisation, producer cooperation and farmers' position in the value chain. The specificity of this framing varies considerably between CSPs: some Strategic Statements explicitly identify post-harvest structures, stages or challenges, while others remain at a broader level of agricultural competitiveness, resilience or food-system development.

Strategic framing

At the level of the Strategic Statements, cooperation and sectoral organisation constitute the most recurrent post-harvest theme, explicitly appearing as a strategic aim or instrument in six (Belgium-Flanders, Bulgaria, Italy, Portugal, Romania, Sweden) of the nine CSPs. Improving farmers' position in the value chain is similarly prominent, appearing explicitly in five (Belgium-Flanders, Bulgaria, Italy, Portugal, Romania) CSPs. By comparison, explicit references to individual post-harvest functions are less widespread: processing and value addition, short supply chains and local marketing are prominent in selected CSPs (Belgium-Flanders, Belgium-Wallonia, Bulgaria, Romania) but do not constitute common features across the sample.

The CSPs also differ substantially in the specificity of their strategic framing. Italy and Romania provide particularly explicit post-harvest narratives, respectively linking the agri-food sector to ecological and territorial transition and identifying the structural gap between domestic primary production and food-industry value addition. Portugal frames post-harvest challenges strongly around negotiating power and downstream market concentration, while Belgium-Wallonia explicitly links processing and value creation to food autonomy. By contrast, Germany and Spain provide comparatively general Chapter 1 framings, and Sweden explicitly positions the CAP as complementary to its broader national Food Strategy.

Diagnostic patterns across the Specific Objectives

The SWOT analysis reveals a considerably clearer cross-country pattern across the SOs (as outlined in Table 1). SO3 – farmers' position in the value chain – provides the most consistently substantial body of post-harvest-relevant diagnostic evidence across the sample. Weak bargaining power associated with fragmented primary production and concentrated downstream actors is particularly widespread, appearing in comparable terms across the CSPs. Other recurring issues include producer organisation, access to processing and marketing infrastructure as well as quality schemes.

Other SOs capture post-harvest issues much less consistently. The environmental and natural-resource objectives, particularly SO4–SO6 – concerning climate change, resources and biodiversity – provide a substantially thinner post-harvest diagnostic basis than SO3 across the sample, notwithstanding broader environmental ambitions expressed in several CSPs. SO1 – addressing viable farm income and resilience – is similarly weak from a post-harvest perspective in several plans, with no relevant reference identified for Bulgaria and Spain and only marginal reference identified for Germany. This indicates that, within the CSP architecture, post-harvest concerns are more readily articulated where they concern value-chain position and market organisation than where they relate to income-resilience or environmental and natural-resource objectives. An overview of the post-harvest patterns across all SOs is provided in Appendix B, Table B.1.

This does, however, not imply that post-harvest environmental issues are absent. Rather, they appear much more unevenly and frequently under other objectives or national policy frameworks. Food loss and waste is a particularly illustrative example as relevant evidence ranges from comparatively developed diagnoses and responses in some CSPs to cases in which an explicitly identified problem is not subsequently reflected in the needs assessment: while Belgium-Wallonia's CSP combines the REGAL programme's explicit 30% reduction target with corresponding SO9 needs concerning food quality, safety and waste, Sweden's SO9 SWOT explicitly identifies "large food waste and production losses in food production", but the plan contains no corresponding need.

Translation from diagnosis into identified and prioritised needs

A third finding concerns the coherence of the progression from SWOT diagnosis to identified and prioritised needs. SO3 again shows the strongest overall continuity: its needs tend to receive comparatively high priority, while support for producer organisations and cooperatives and investment in processing and marketing infrastructure recur widely in the corresponding needs architecture. Post-harvest needs associated with SO1, by contrast, are largely absent across the sample.

The strength of the SWOT-to-needs relationship nevertheless differs markedly between CSPs. Belgium-Wallonia, Italy and Spain provide examples of comparatively close translation of diagnosed weaknesses into subsequent needs or policy responses. Portugal displays the clearest proportionality gap: an exceptionally detailed post-harvest diagnosis, particularly under SO3, is followed by numerous needs that are predominantly assigned lower or intermediate priority rather than forming a concentrated set of high-priority responses.

Other cases reveal different forms of discontinuity. In Bulgaria, Spain and Sweden, some post-harvest-relevant needs cannot be clearly traced to corresponding evidence in the reviewed SWOT sections. A further difference concerns reliance on instruments outside the CAP: Germany relies partly on its National Strategy for Food Waste Reduction, and Sweden's needs profile more generally leans on its national Food Strategy.

Table 13 summarises the main CSP-level patterns in strategic framing and in the translation of post-harvest-relevant diagnostic evidence into identified and prioritised needs. More detailed country-level profiles are provided in Appendix B, Table B.2.

Overall, the comparative evidence points to a consistent structural pattern: post-harvest systems are most clearly visible where the CSP architecture addresses value-chain position and market organisation but are less systematically embedded in the diagnosis and prioritisation of income-resilience and environmental objectives. At the same time, the relationship between diagnosis and prioritisation varies sufficiently across CSPs that the presence of post-harvest evidence in a SWOT analysis cannot be assumed to translate automatically into an equivalent policy need or priority.

Table 13. Main CSP-level patterns in strategic framing, diagnosis, and prioritisation

CSP	Strategic framing	Main diagnostic and prioritisation pattern
Belgium-Flanders	Strong emphasis on cooperation, market positioning and processing	Post-harvest evidence concentrated around SO1–SO3; relatively strong translation under SO2/SO3, while environmental needs remain less consistently developed
Belgium-Wallonia	Explicit processing/value-addition framing linked to food autonomy	Particularly coherent SWOT-to-needs translation, with unusually developed environmental and food-loss/waste content
Bulgaria	Market-positioning, producer organisation, wine and quality schemes	Strong SO3 and SO9 evidence; several needs under other SOs are not clearly traceable to the corresponding SWOT evidence reviewed
Germany	Comparatively general strategic framing	Substantially richer SO3 and SO9 diagnosis than Chapter 1 suggests; strong SO3 translation, while part of the food-waste response relies on a national non-CAP strategy
Italy	Highly explicit agri-food, ecological and territorial framing	Extensive SO3/SO9 evidence and comparatively strong translation into needs; one of the most coherent strategic profiles
Portugal	Strong focus on producer organisation, negotiating power and downstream market concentration	Exceptionally deep SO3 diagnosis but comparatively diffuse prioritisation of the resulting needs
Romania	Explicit structural framing around low domestic value addition and processing capacity	Strong SO2/SO3 diagnosis and good SO3 translation, but weaker translation across several environmental and social objectives
Spain	Comparatively abstract Chapter 1 vision	Stronger post-harvest content emerges in SO3 and SO9; particularly close SO3 translation but narrower response to the broader SO9 diagnosis
Sweden	General framing; CAP positioned as complementary to the national Food Strategy	Thinnest overall diagnostic profile; explicit food-loss/waste problem under SO9 is not translated into a corresponding need

4.1.2 Patterns of Sustainability Consideration

The assessment of CSP Chapter 3 shows that sustainability-related consideration of post-harvest systems is unevenly distributed across both the CSP architecture and the five sustainability dimensions (as outlined in Table 4). Relevant evidence is concentrated primarily in sector-related interventions, while the depth and orientation of that evidence vary considerably across CSPs.

A clear structural pattern emerges across the four Chapter 3 provisions examined. Chapter 3.5 on sector-related interventions is the principal source of substantive post-harvest sustainability evidence across all five dimensions. Chapter 3.6 on risk management provides an important secondary source, particularly for *economic viability* and *resilience*. By contrast, Chapter 3.1.1 and 3.1.4 contribute comparatively little post-harvest-specific evidence, although isolated passages reinforce the

environmental assessment in individual CSPs. A sector-level overview of the identified post-harvest functions and sustainability pathways is provided in Appendix B, Table B.3.

Table 14 summarises the principal post-harvest contribution pathways identified for each sustainability dimension, together with the main cross-CSP pattern and limitation.

Table 14. Post-harvest sustainability pathways, cross-CSP patterns, and principal gaps

Sustainability dimension	Main pathways identified	Cross-country pattern	Principal limitation or gap
Environmental sustainability	Energy efficiency; renewable energy; sustainable storage/transport; circularity; waste and by-product valorisation	Identifiable in all CSPs, but substantive and reinforced mainly in a subset	Evidence is often sector-specific rather than systemic; climate-related resilience of post-harvest infrastructure is largely absent
Economic viability	Value addition; processing and storage; market access; diversification; producer organisation; quality and competitiveness	Strongest and most consistently addressed dimension	Generally few systemic gaps, although breadth and specificity vary
Social equity	Producer organisations; cooperative structures; short/local chains; quality-scheme access; selected territorial or target-group approaches	Widely present at a basic level, but comparatively shallow	Rarely extends beyond generic producer cooperation; very limited targeted inclusion
Governance	Certification; traceability; coordination; advisory services; knowledge exchange; EIP-AGRI; digital tools; monitoring	Diverse and substantive in selected CSPs, but uneven	Many provisions remain at a general producer-organisation or certification baseline
Resilience	Mutual funds; storage; diversification; market withdrawal; collective organisation; coordinated responses	Substantive in most CSPs, but predominantly economic and market-oriented	Climate-related disruption and differentiated access for vulnerable or marginalised actors are not explicitly developed

Table 15 complements this pathway-overview by presenting the classification of each CSP across the five sustainability dimensions and the resulting assessment of overall sustainability breadth. The full classification matrix and country-level rationales are provided in Appendix B, Table B.4.

Table 15. Main comparative findings across the sustainability dimensions

CSP	Environmental sustainability	Economic viability	Social equity	Governance	Resilience	Overall breadth
Belgium-Flanders	Partially addressed	Clearly addressed	Partially addressed	Partially addressed	Clearly addressed	**Broad**
Belgium-Wallonia	Partially addressed	Clearly addressed	Partially addressed	Clearly addressed	Clearly addressed	**Broad**
Bulgaria	Partially addressed	Partially addressed	Partially addressed	Partially addressed	Not addressed	**Broad**
Germany	Clearly addressed	Clearly addressed	Partially addressed	Clearly addressed	Partially addressed	**Broad**
Italy	Clearly addressed	Clearly addressed	Clearly addressed	Clearly addressed	Clearly addressed	**Broad**
Portugal	Clearly addressed	Clearly addressed	Partially addressed	Partially addressed	Clearly addressed	**Broad**
Romania	Clearly addressed	Clearly addressed	Partially addressed	Clearly addressed	Clearly addressed	**Broad**
Spain	Partially addressed	Clearly addressed	Partially addressed	Partially addressed	Clearly addressed	**Broad**
Sweden	Partially addressed	Partially addressed	Not addressed	Not addressed	Not addressed	**Partial**

Economic viability emerges as the strongest and most consistently developed sustainability dimension. It is evidenced in every CSP and is classified as *Clearly addressed* in seven of the nine CSP units; Bulgaria and Sweden are the only two classified as *Partially addressed*. The main pathways are closely aligned with the CAP's established intervention logic: value addition through processing, improved storage and product quality, stronger market access, producer cooperation, diversification and competitiveness.

Environmental sustainability is less consistent in depth. All nine CSPs contain at least some identifiable post-harvest-relevant environmental evidence, but only Germany, Italy, Portugal and Romania are classified as *Clearly addressed*. The strongest contributions relate to energy efficiency, renewable energy, circular-economy approaches and waste or by-product valorisation. In the remaining CSPs, relevant evidence is more limited or concentrated within individual sectors rather than reinforced across the plan.

Social equity is the least deeply developed dimension. Producer organisations and cooperative structures provide a broad baseline across the sample, but these passages generally do not differentiate between groups or explicitly address distributional outcomes. Only a limited number of CSPs extend to more specific territorial, inclusion-oriented or producer–consumer pathways and Italy is the only CSP classified as *Clearly addressed*. The detailed review identified no explicit reference to women within the post-harvest provisions assessed.

Governance is reflected through a wider range of institutional pathways, notably certification and traceability, producer and interbranch organisations, coordination mechanisms, advisory services, knowledge exchange, digital tools and monitoring. Nevertheless, this breadth is uneven across CSPs: Belgium-Wallonia, Germany, Italy and Romania are classified as *Clearly addressed*; Belgium-Flanders, Bulgaria, Portugal and Spain as *Partially addressed*; and Sweden as *Not addressed*. Certification and traceability constitute recurrent governance pathways beyond the general producer-organisation baseline.

Resilience is comparatively well represented, but its substantive orientation is narrow. Six CSP units are classified as *Clearly addressed*, primarily through mutual funds, storage, diversification, market withdrawal and collective risk-management mechanisms. Germany is assessed as *Partially addressed*, while Bulgaria and Sweden contain no substantive post-harvest-relevant resilience pathway under the provisions reviewed. Across the sample, resilience is therefore developed principally in relation to market, price and organisational disruption rather than the full range of sustainability risks.

Two limitations recur across otherwise diverse resilience approaches. First, no CSP explicitly connects the risk-management provisions reviewed to climate-related disruption of post-harvest infrastructure, logistics or storage capacity. Second, collective risk-sharing mechanisms are not explicitly differentiated according to the position of smaller, marginalised or territorially disadvantaged actors. *Resilience* is therefore more developed in its economic, market and organisational dimensions than in its climatic and equity-related dimensions.

Breadth and depth of sustainability consideration

The comparative assessment reveals a marked distinction between breadth and depth. Eight of the nine CSPs address at least four of the five sustainability dimensions and are therefore classified as reflecting broad sustainability consideration. Sweden is the only CSP with partial overall coverage. However, broad coverage should not be interpreted as uniformly strong integration: the distribution of *Clearly* and *Partially addressed* classifications varies considerably across the sample.

Italy combines both breadth and depth, being the only CSP classified as *Clearly addressed* across all five dimensions. Romania also shows comparatively high depth, with four dimensions *Clearly addressed*, followed by Belgium-Wallonia, Germany and Portugal, each with three dimensions *Clearly addressed*. Belgium-Flanders and Spain each have two dimensions *Clearly addressed*, while Bulgaria illustrates the opposite pattern: four of the five dimensions are addressed, resulting in broad coverage, but all four are only *Partially addressed*, while *resilience* is *Not addressed*. Sweden has the weakest overall profile, with *environmental sustainability* and *economic viability* only *Partially addressed* and the remaining three dimensions *Not addressed*.

This distinction is analytically important because the presence of several sustainability dimensions does not by itself indicate how substantively they are developed. Across the sample, broad coverage is considerably more common than consistently deep treatment. *Economic viability* is the clearest area of depth, while *social equity* is the least consistently developed; *resilience* is comparatively well represented but narrowly oriented, and *environmental sustainability* and governance occupy intermediate but uneven positions.

Overall, Chapter 3 therefore shows that the sustainability of post-harvest systems is widely recognised but unevenly developed. Substantive consideration is concentrated in sector-related interventions and is strongest where sustainability can be connected to value creation, market organisation and established CAP instruments. Environmental, social and resilience-related considerations become less consistent where they require broader cross-sectoral, distributional or climate-risk perspectives.

4.1.3 Funding Boundaries and Coordination Approaches

Chapter 4 provides two complementary perspectives on the formal positioning of post-harvest systems within the CSP funding architecture. Chapter 4.7.1 identifies general categories of non-eligible investment, while Chapter 4.5 describes coordination, demarcation and complementarity between the EAFRD and other relevant Union funds. These provisions therefore indicate where the CSP formally narrows the potential scope of CAP support and how post-harvest-related investment is situated in relation to other funding instruments. Detailed country-level evidence on general investment exclusions and coordination with other EU funds is provided in Appendix B, Tables B.5 and B.6.

Formal investment exclusions

General exclusions affecting post-harvest activities are the exception rather than the dominant pattern across the CSPs reviewed. In six of the nine CSPs (Belgium-Flanders, Belgium-Wallonia, Germany, Italy, Spain, Sweden) no general post-harvest-relevant exclusion is identified in Chapter 4.7.1. This finding is limited to the general plan-level exclusion lists reviewed: it does not demonstrate that all post-harvest activities are eligible for support, though narrower eligibility conditions may apply within individual interventions.

Explicit exclusions are identified in the CSPs of Bulgaria, Portugal and Romania, but their scope and design differ substantially. Bulgaria applies exclusions to retail costs, ‘Hazard Analysis Critical Control Point’ certification costs and vehicle purchases, while allowing exceptions where a specific intervention explicitly reopens eligibility. Portugal applies a considerably narrower exclusion to intangible promotional expenditure, including brand promotion and advertising messages. Romania has the broadest exclusion profile, covering collection or transport costs, storage costs and packaging costs, without equivalent carve-outs in the general exclusion list reviewed.

The exclusions therefore do not reveal a common cross-country understanding of which post-harvest costs should fall outside CAP support. No identical excluded cost category occurs across the three CSPs, and no post-harvest stage is affected by general exclusions in more than two plans. The evidence instead points to country-specific choices concerning the formal scope of support.

Coordination with other EU funds

Coordination with other Union funds shows considerably greater variation in both extent and specificity. Relevant Chapter 4.5 provisions range from concrete mechanisms for managing overlap and double financing through explicit demarcation of funding responsibilities to acknowledged coverage gaps and comparatively generic statements of complementarity.

Belgium-Flanders provides the clearest example of concrete administrative coordination. Its CSP identifies overlap between CAP and ERDF support for processing and marketing and describes the exchange of project and payment-claim information to prevent double financing; circular-economy investments are subject to an additional case-level coordination mechanism. Bulgaria likewise provides relatively explicit funding boundaries, including the assignment of fruit-and-vegetable preparation, marketing and storage infrastructure to its Recovery and Resilience Plan rather than to a dedicated CSP intervention. Italy and Romania also contain comparatively detailed links between CAP objectives and complementary investment through other Union or recovery instruments.

Other CSPs rely more strongly on demarcation or gap identification. Belgium-Wallonia distinguishes CAP support for agri-food SMEs from ERDF support for other SMEs and explicitly notes the absence of dedicated EAFRD measures for circular-economy investment. Germany similarly uses Chapter 4.5 primarily to clarify funding boundaries rather than to describe substantive joint investment. Portugal refers to post-harvest-relevant themes and Sweden to its national Food Strategy, but their coordination language remains comparatively general and does not specify equivalent administrative mechanisms.

Spain constitutes a distinct case. Its relevant Chapter 4.5 entry principally concerns coordination between the EAFRD and the EAGF, i.e., between two CAP funds, rather than coordination between the EAFRD and an external Union fund. No substantive post-harvest-relevant coordination with another external Union fund was identified in the section reviewed.

Overall, neither investment exclusions nor fund-coordination arrangements follow a common model across the nine CSPs. General post-harvest-related exclusions are relatively uncommon and, where they occur, differ markedly in scope and design. Coordination with other EU funds is more widespread but ranges from concrete administrative safeguards and explicit allocation of responsibilities to generic statements of complementarity.

4.1.4 Comparative Strategic Consideration Profiles

The preceding analyses show that strategic consideration of post-harvest systems cannot be inferred from any single CSP chapter. A plan may articulate post-harvest challenges strongly in its strategic vision or diagnosis but translate them only partially into subsequent provisions; conversely, substantive post-harvest content may emerge in later sections despite relatively general strategic framing. The final comparative assessment therefore brings together the evidence from Sections 4.1.1 and 4.1.3 to assess the overall degree of strategic integration of post-harvest systems and to relate this to the breadth and depth of sustainability consideration identified in Section 4.1.2.

Strategic integration

Strategic integration is assessed across five evidence domains, reflecting complementary elements of the CSP architecture: strategic framing in Chapter 1; diagnostic grounding and prioritisation in Chapter 2; relevant sector-related provisions in Chapter 3.5; general eligibility constraints identified under Chapter 4.7.1; and coordination with other EU funding instruments under Chapter 4.5. The resulting overall classification reflects the combined profile across these domains rather than any single component. Table 16 presents the comparative rating of each CSP across the five strategic-integration domains and the resulting overall classification. The country-level rationales for the overall strategic-integration classifications are provided in Appendix B, Table B.7.

The comparative assessment shows that strategic integration is substantive but incomplete across most of the sample. Seven of the nine CSPs are classified as *Moderate* or *Moderate-to-Substantial*. Italy is the only CSP classified as *Substantial*, combining explicit strategic framing, strong diagnostic grounding, extensive sector-related content and detailed coordination with complementary funding instruments. Sweden is the only CSP classified as *Limited*, reflecting consistently weak post-harvest consideration across the principal strategic evidence domains.

The intermediate profiles arise through different combinations of strengths and limitations. Belgium-Wallonia and Romania both reach *Moderate-to-Substantial* integration, but for different reasons. Belgium-Wallonia combines particularly strong diagnostic grounding and SWOT-to-needs translation with more moderate strategic framing and fund coordination. Romania combines an explicit strategic vision, strong sector-related provisions and detailed external-fund coordination with less complete needs translation and comparatively broad general eligibility constraints.

Table 16. Strategic integration across the five evidence domains and overall classification by CSP

CSP	Strategic vision	SWOT and needs	Sector-related provisions	Formal eligibility scope	Funding coordination	Overall
Belgium-Flanders	Moderate	Moderate	Moderate	Substantial	Substantial	**Moderate**
Belgium-Wallonia	Moderate	Substantial	Moderate	Substantial	Moderate	**Moderate-to-Substantial**
Bulgaria	Moderate	Moderate	Moderate	Moderate	Substantial	**Moderate**
Germany	Limited	Moderate	Substantial	Substantial	Moderate	**Moderate**
Italy	Substantial	Substantial	Substantial	Substantial	Substantial	**Substantial**
Portugal	Moderate	Moderate	Moderate	Moderate	Limited	**Moderate**
Romania	Substantial	Moderate	Substantial	Limited	Substantial	**Moderate-to-Substantial**
Spain	Limited	Moderate	Moderate	Substantial	Limited	**Moderate**
Sweden	Limited	Limited	Limited	Substantial	Limited	**Limited**

Note: For formal eligibility scope, a *Substantial* rating in this domain indicates a broad formal eligibility scope under the general exclusions reviewed; it does not constitute evidence that post-harvest investments are actively supported or funded.

The five CSPs classified as *Moderate* likewise display different internal patterns. Germany and Spain combine relatively general Chapter 1 framing with more substantive post-harvest evidence identified later in their CSPs. Portugal shows a different configuration: a particularly detailed diagnosis is followed by comparatively diffuse needs prioritisation and weakly specified fund coordination. Belgium-Flanders and Bulgaria present more consistently moderate profiles, with substantive post-harvest engagement but without equivalent depth across the full CSP architecture. Their *Substantial* ratings for fund coordination strengthen the corroborating evidence but do not compensate for the absence of a *Substantial* rating in the principal strategic domains.

Cross-chapter consistency

A central finding of the integrated assessment is that strategic visibility and subsequent policy translation do not always align. Germany and Spain illustrate a vision–execution divergence, in which relatively general Strategic Statements are followed by more substantive post-harvest diagnosis or sector-related provisions. Portugal illustrates a different form of discontinuity with unusually detailed diagnostic evidence followed by less concentrated prioritisation.

Romania illustrates the clearest potential tension across different parts of the CSP architecture. The plan strongly diagnoses deficits in collection, storage and processing capacity and contains substantive sector-related post-harvest provisions, while Chapter 4.7.1 simultaneously records general exclusions affecting collection or transport, storage and packaging costs. Because the exclusions concern specific cost categories and do not necessarily preclude capital investment in the corresponding infrastructure, the finding should be interpreted as a potential inconsistency rather than a direct contradiction.

The findings demonstrate that no single CSP chapter provides a reliable proxy for overall strategic integration. Assessing the strategic consideration of post-harvest systems therefore requires reading strategic framing, diagnosis and prioritisation, sector-related provisions and funding boundaries together.

Overall strategic and sustainability profiles

Strategic integration and sustainability consideration capture related but distinct characteristics of CSP design. To examine how these two perspectives relate to each other, Table 17 places the overall strategic-integration assessment alongside the breadth and depth of sustainability consideration identified in Section 4.1.2. The two assessments remain analytically separate and are not combined into a composite score.

Reading the two assessments together shows that broad sustainability coverage does not necessarily coincide with equally strong strategic integration. Eight of the nine CSPs show broad sustainability consideration, whereas only Italy reaches a Substantial overall strategic-integration classification. A CSP can therefore address a wide range of sustainability dimensions without embedding post-harvest systems equally strongly across its strategic framing, diagnosis, prioritisation and wider funding architecture.

Table 17. Overall strategic-integration and sustainability breadth by CSP

CSP	Overall strategic integration	Sustainability breadth
Belgium-Flanders	Moderate	Broad
Belgium-Wallonia	Moderate-to-Substantial	Broad
Bulgaria	Moderate	Broad
Germany	Moderate	Broad
Italy	Substantial	Broad
Portugal	Moderate	Broad
Romania	Moderate-to-Substantial	Broad
Spain	Moderate	Broad
Sweden	Limited	Partial

The distinction between breadth and depth is therefore particularly important. Italy combines substantial strategic integration with consistently deep sustainability consideration. Romania also combines relatively strong strategic integration with substantial depth across four of the five sustainability dimensions. Bulgaria illustrates a different configuration: sustainability coverage is broad, but its dimension-specific treatment remains predominantly partial. Sweden is the only CSP showing both limited strategic integration and only partial sustainability breadth.

More generally, post-harvest systems are most consistently embedded where they align with established CAP concerns around value-chain position, producer organisation, processing, market access and the *economic viability* dimension. Their integration becomes less systematic where it depends on explicit post-harvest environmental diagnosis, targeted social inclusion or broader climate-related resilience pathways. Of these, the *environmental sustainability* dimension stands out across the wider strategic architecture as the most consistent point of weakness across the sample, regardless of a CSP's overall strategic-integration rating. The comparative evidence therefore points not to a general absence of post-harvest consideration, but to selective and uneven integration across both the CSP architecture and the sustainability dimensions examined.

4.2 Operational Support for Post-Harvest Systems

This section presents the comparative findings on how the regulatory possibilities for operational post-harvest support within the CAP are translated into the intervention architectures of the nine CSPs analysed. In line with the methodology set out in Section 3.3, the assessment covers three complementary aspects: relevant CAP intervention types; the scale, functional coverage, sustainability orientation and financial composition of the interventions retained; and the principal operational-support pathways and Member States' use of regulatory discretion. The section concludes by integrating these findings into comparative country profiles and an overall assessment of operational support.

More detailed evidence underlying the findings is provided in Appendix C.

4.2.1 Relevant CAP Intervention Types for Post-Harvest Support

The EU-level screening identifies a differentiated set of legal routes for supporting post-harvest systems within the CSP intervention framework. Relevant provisions are concentrated in rural development and interventions in certain sectors, combining support for physical operations with market-related, organisational and knowledge functions. The principal distinction concerns how those functions are recognised in EU law: some provisions expressly identify post-harvest activities, while others provide broader powers of support whose post-harvest content depends on national or regional design. This distinction shapes the opportunities examined in the CSP-level analysis.

The direct payment instruments reviewed fall outside the operational-support perimeter since their support mechanisms do not establish a specific route for financing or enabling post-harvest functions. Their contribution to farm income or liquidity may indirectly affect farmers' capacity to process, store, or market products, but such effects do not satisfy the inclusion criterion defined in Section 3.3.1. Similarly, area-related compensation and interventions confined to production stage activities are excluded where their statutory scope provides no identifiable post-harvest route.

Within rural development, investment support under Article 73 offers a broad basis for tangible and intangible assets, subject to the applicable eligibility conditions and investment exclusions. Its scope can accommodate processing and storage facilities, packaging and traceability systems, logistics, marketing infrastructure and technologies for managing food-chain residues. The regulatory opportunity extends to relevant activities undertaken on farms as well as those of other eligible beneficiaries. However, the breadth of Article 73 leaves the selection of activities, beneficiaries and eligible expenditure substantially dependent on CSP design. Business start-up and diversification possibilities under Article 75 provide a further conditional route where the supported business activity has an identifiable post-harvest function.

Cooperation under Article 77 and knowledge exchange under Article 78 complement these investment possibilities. Support for producer organisations, quality schemes, innovation projects and other forms of cooperation can strengthen the organisation of post-harvest activities and the capacities needed to undertake them. Article 77(4) also permits support to cover associated operations, subject to the relevant rules, so cooperation is not limited to financing coordination alone. Advice, training and knowledge exchange can address processing, commercialisation or resource efficiency, although a generic reference to innovation or rural development does not establish a substantive post-harvest connection.

Environmental management commitments and risk-management tools require more qualified interpretation. Article 70 concerns voluntary management commitments supported through a compensatory payment structure. Any post-harvest relevance depends on the content of an eligible commitment and cannot be inferred from environmental benefits arising solely at primary-production level. Its inclusion among the potentially relevant types therefore does not imply that all agri-environment-climate interventions support post-harvest systems. Article 76, in turn, concerns production and income risks relating to the agricultural activity of active farmers. A post-harvest connection must remain within that scope; the provision does not establish a general insurance instrument for downstream food businesses.

The sectoral framework contains more explicit descriptions of post-harvest functions. For fruit and vegetables, hops, olive oil and table olives, and the other eligible sectors, Article 47 identifies transport and storage, promotion and marketing, quality schemes, and traceability and certification systems. Its crisis-management provisions also encompass collective storage, management of marketed volumes, and market withdrawals, including processing where necessary for storage or withdrawal. These instruments connect post-harvest capacity with the organisation of supply and responses to market disruption. Advisory services, training, coaching and actions facilitating compliance with third-country requirements provide complementary routes through technical capacity, coordination and market access.

Access to these possibilities is shaped by the sectoral delivery arrangements. In fruit and vegetables, Article 50 channels support through approved operational programmes of recognised producer organisations or their associations. For other sectors under Article 42(f), Articles 66 and 67 link support to the sectors selected by the Member State and to operational programmes of eligible producer organisations, associations or transitional producer groups. The presence of a post-harvest function in Article 47 therefore does not make support uniformly available across sectors, countries or operators. Sector selection and organisational eligibility form part of the legal explanation for differences subsequently observed between CSPs.

In the wine sector, Article 58 expressly accommodates processing facilities, winery infrastructure and marketing structures, alongside innovation in products, processes and technologies. Information activities within the Union and promotion in third countries create further connections with product differentiation, market access and consumption-related information. Sustainability investments under Article 58(1)(m) can address post-harvest functions where they concern eligible activities such as waste reduction and management. By-product distillation under Article 58(1)(g) provides a distinct route for managing residues from winemaking. Article 60(3) confines the supported alcohol to industrial or energy uses, illustrating why valorisation of food-chain by-products remains within the analytical scope even when the resulting product is not food. Vineyard restructuring, green harvesting and harvest insurance retain a production-stage focus and fall outside the post-harvest sample.

The apiculture framework combines product-oriented provisions with measures directed towards bees and primary production. Article 55(1)(c), (f) and (g) provides identifiable routes through analysis of apiculture products, promotion and market monitoring, and product-quality enhancement. Laboratory support under point (c) also covers bee losses and substances toxic to bees, making the distinction between product analysis and production-related activities necessary even within the same legal type. Investments, advisory services and research cooperation under Article 55(1)(a), (b) and (e) remain relevant where their concrete design connects them to post-harvest products or functions. Support confined to maintaining colonies or bee breeding does not establish that connection.

The regulatory opportunities also extend beyond economic and market functions. Article 47 includes resource efficiency, waste and by-product management, and employment and occupational-safety provisions alongside commercial objectives. This establishes scope for several sustainability dimensions, while leaving the contribution of individual interventions to be assessed against their substantive design. Neither a sustainability-related legal basis nor a waste-related activity, taken alone, demonstrates environmental performance, social inclusion or resilience. The distinction between post-harvest relevance and sustainability contribution therefore remains necessary when these regulatory possibilities are examined at CSP level.

Table 18 provides a condensed overview of the EU-level screening, showing how the principal CAP intervention families differ in their regulatory capacity to support post-harvest systems, the main post-harvest routes identified within each family, and the intervention types retained for CSP-level assessment. The full table with individual assessment per intervention type is presented in Appendix C, Table C.1.

Table 18. Summary of EU-level screening of CAP intervention families for post-harvest relevance

Intervention family	Overall regulatory pattern	Principal post-harvest routes identified	Intervention types retained (codes)
Direct payments	Structurally outside the post-harvest operational-support scope	No direct financing route identified; support remains area-, livestock- or income-based	none
Rural development interventions	Mixed; several flexible direct, enabling or conditional routes	Investments, cooperation, business development, knowledge exchange and selected risk-management functions	COOP, ENVCLIM, INSTAL, INVEST, KNOW, RISK
Sectoral interventions – fruit and vegetables and other eligible sectors	Extensive post-harvest relevance	Storage, transport, processing, quality, traceability, promotion, marketing, market organisation and crisis-management functions	3COUN, ADVI1, CLIMA, COACH, COMM, INVRE, INVVO, PROMO, QUAL, SETUP, STORE, TRACE, TRAINCO, TRANS, WITHD
Sectoral interventions – wine	Extensive post-harvest relevance alongside production-only types	Processing and winery infrastructure, innovation, marketing and promotion, quality, by-product management and circularity	ACTMKTKNOW, ACTREPUT, ADVWINE, DISTIL, INFOR, INOVWINE, INVWINE, INVWINESUST, PROMOWINE
Sectoral interventions – apiculture	Mixed direct and conditional relevance	Product analysis and quality, marketing and promotion, investments, advisory support and research cooperation	ACTLAB, ACTQUAL, ADVIBEES, COOPAPI, INVAPI, PROMOBEES

Overall, the EU-level screening retains 36 intervention types for country-level assessment. The results demonstrate that the CAP does not provide a single dedicated instrument for post-harvest systems. Instead, operational support can be delivered through a portfolio of direct, enabling and conditionally relevant intervention types. Regulatory capability does not, however, demonstrate that an intervention type is used for post-harvest support in every CSP.

4.2.2 Operational Support Scale and Composition

Building on the EU-level regulatory screening presented in Section 4.2.1, this section examines which of these regulatory possibilities are reflected in identifiable interventions across the CSPs analysed and describes the resulting scale, coverage and composition of operational support. The country-level screening and coding retained 273 of the 982 interventions recorded across the nine CSPs, corresponding to 27.8% of the total intervention population.

The complete database, compiled on the basis of data from the Agri-food Data Portal and including the full screening results for each CSP as well as a list of all interventions identified as relevant together with their corresponding coding of post-harvest stages and sustainability dimensions addressed, is provided in Appendix D [separate database].

Scale and cross-country coverage

The absolute number and relative proportion of retained interventions vary across the nine CSPs. Figure 1 shows the number of total and post-harvest-relevant interventions in each CSP, with labels indicating the share of interventions identified as post-harvest relevant. Italy and Belgium-Flanders contain the largest absolute numbers, with 56 and 53 post-harvest-relevant interventions respectively, while Germany and Belgium-Wallonia contain the smallest numbers, with 13 and 16. Relative to the total number of interventions contained in each CSP, the proportion classified as post-harvest relevant ranges from 17% in Portugal to 41% in Sweden.

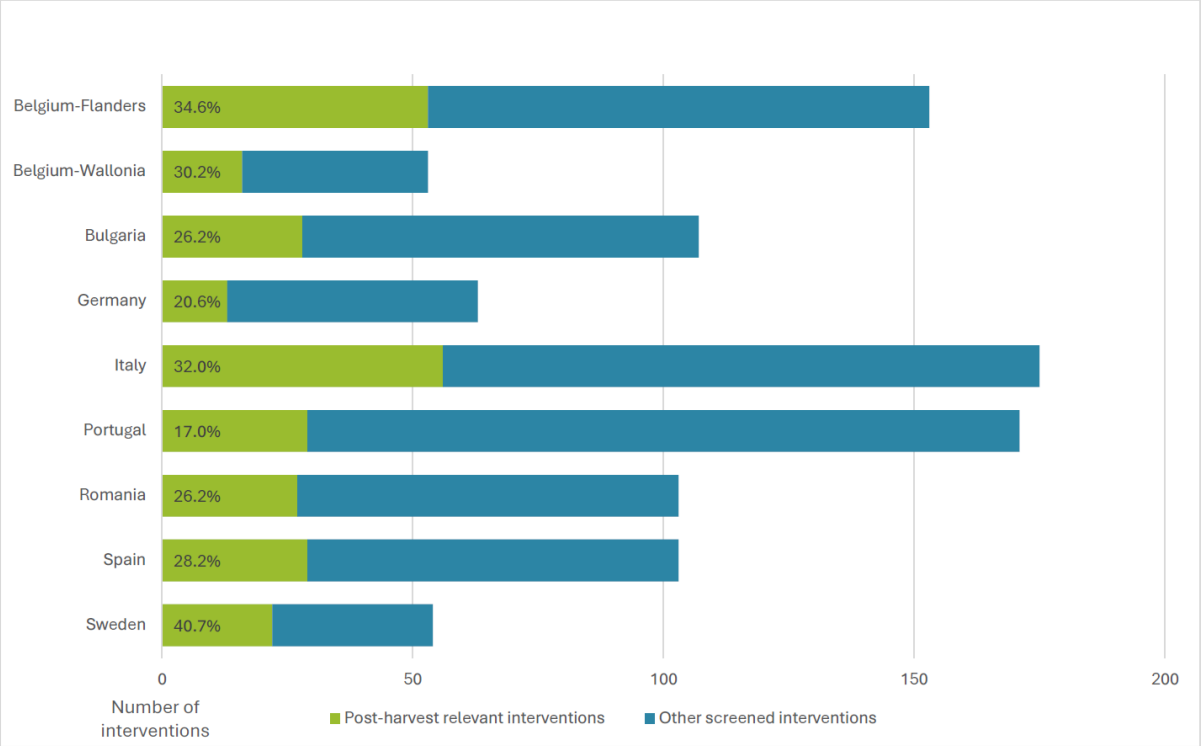


Figure 1. Number and proportion of interventions identified as post-harvest relevant by CSP.
Note: Shares are calculated relative to the total number of interventions recorded in each CSP.

Of the 36 intervention types classified as legally capable of supporting post-harvest systems in Section 4.2.1, 30 are represented by at least one intervention meeting the country-level inclusion criteria. For six intervention types – ACTMKTKNOW, ADVWINE, ENVCLIM, INOVWINE, RISK, and SETUP (as outlined in Table 18) – no intervention meets the required evidentiary threshold.

Figure 2 illustrates that the distribution of retained interventions across the 30 observed types is strongly concentrated. INVRE accounts for 47 interventions, INVEST for 46 and COOP for 30. Together, these three types represent 123 of the 273 retained interventions, or 45.1% of the operational support sample. 14 intervention types are represented by five or fewer interventions. The detailed numbers of interventions per intervention type and CSP are provided in Appendix C, Table C.2.

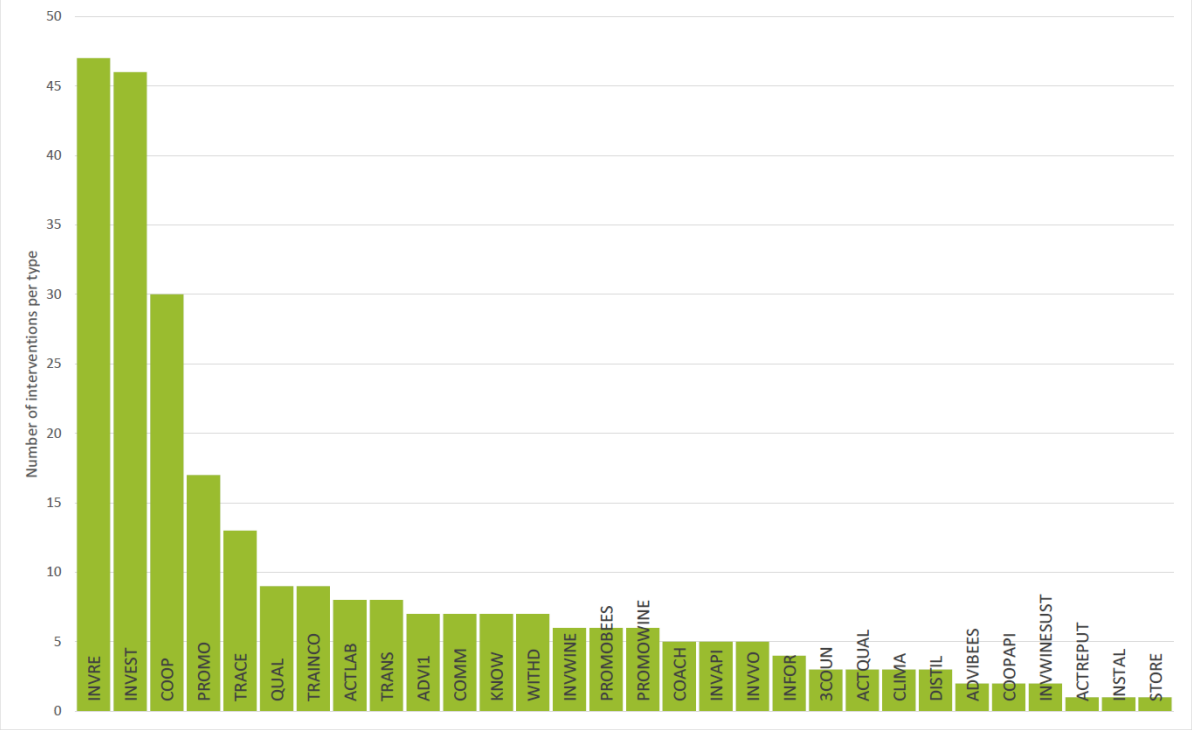


Figure 2. Distribution of interventions across the 30 observed intervention types.

Overall, post-harvest-relevant interventions are present in every CSP, but their relative prominence varies considerably, and the retained sample is concentrated in a small number of intervention types.

Overall functional and sustainability profile

Each of the 273 retained interventions was coded against the eight post-harvest stages (see Table 3) and the five sustainability dimensions (see Table 4) defined in Section 3.1. Figure 3 illustrates how the retained interventions are distributed across the different post-harvest stages. Across the full sample, operational support is most frequently directed towards market-facing and market-organising functions. *Retail and marketing* are addressed by 144 interventions, corresponding to 52.7% of the retained sample, while *distribution and market organisation* are addressed by 132 interventions, or 48.4%. *Packaging and traceability* are identified in 87 interventions (31.9%), *processing and transformation* in 82 (30.0%), and *storage and preservation* in 75 (27.5%). *Waste management and circularity* are addressed by 61 interventions (22.3%), *handling and conditioning* by 59 (21.6%), and *consumption and use* by 46 (16.8%).

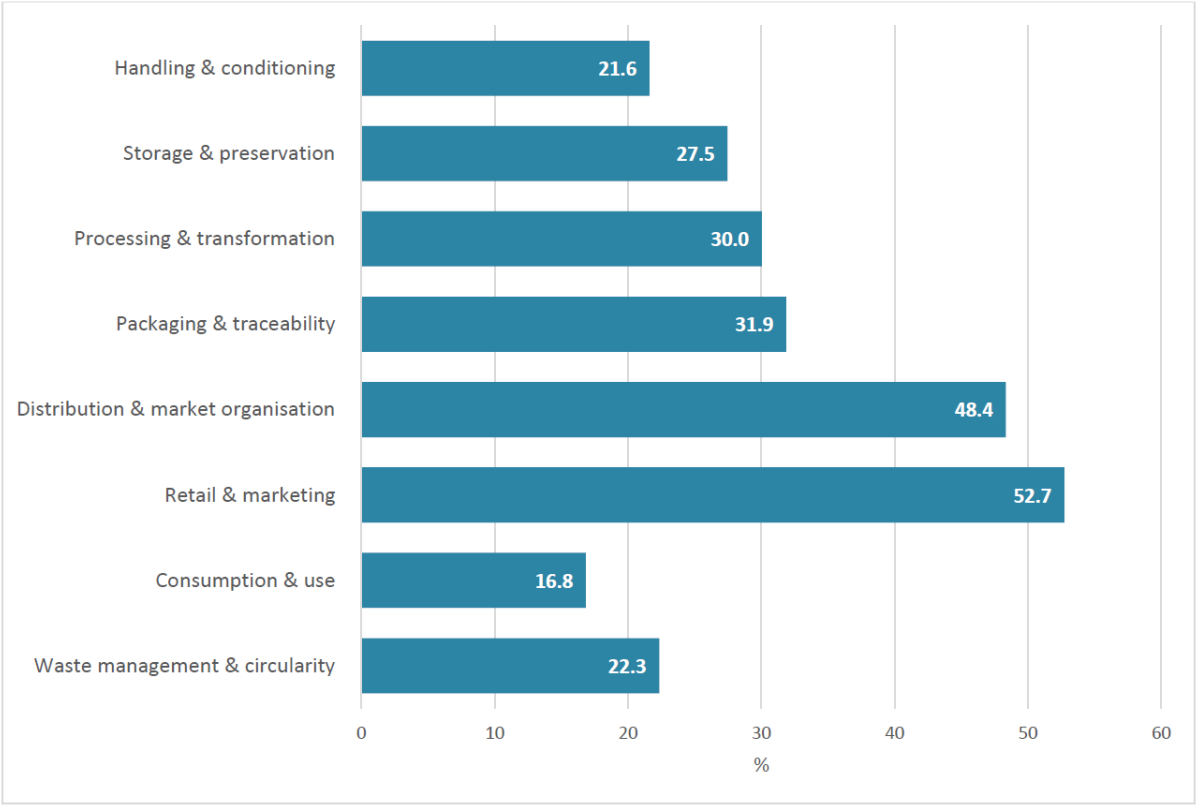


Figure 3. Share of retained interventions addressing each post-harvest stage.
Note: Percentages are calculated as a share of the 273 retained interventions. An intervention may address more than one post-harvest stage; percentages therefore do not sum to 100%.

The functional profile shows a strong orientation towards market access, commercialisation and value-chain organisation. At the same time, a substantial group of interventions supports physical post-harvest capacity through processing, storage, and packaging. Handling, consumption- and waste-management-related functions are less frequently specified. This does not mean that these functions cannot be supported through the CSPs; it indicates that they appear less often as explicit functions in the intervention descriptions reviewed.

The coding against the five sustainability dimensions reveals that the sustainability profile is similarly uneven. Figure 4 displays that *economic viability* is the most frequently identified dimension, appearing in 237 interventions (86.8%), followed by *governance* in 177 interventions (64.8%). *Resilience* is identified in 104 interventions (38.1%), *environmental sustainability* in 88 (32.2%) and *social equity* in 62 (22.7%).

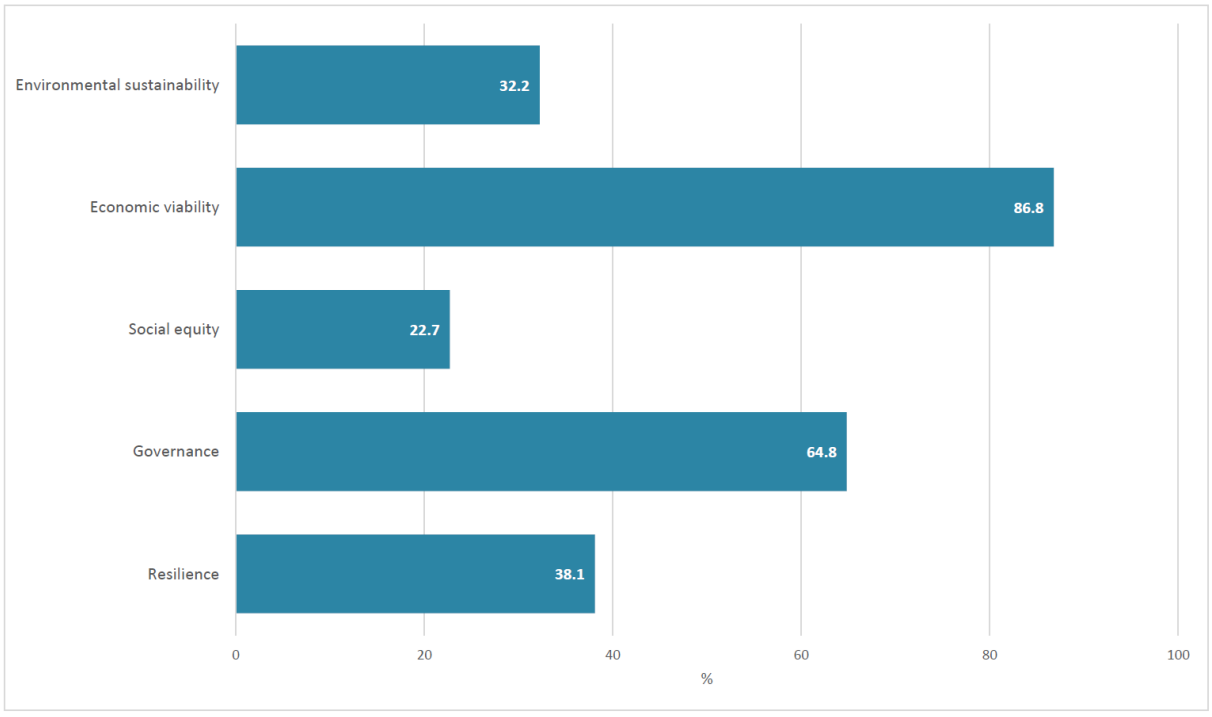


Figure 4. Share of retained interventions addressing each sustainability dimension.
Note: Percentages are calculated as a share of the 273 retained interventions. An intervention may address more than one sustainability dimension; percentages therefore do not sum to 100%.

The prominence of *economic viability* reflects the widespread use of interventions to support value addition, competitiveness, market access and product differentiation. *Governance* pathways are also strongly represented through producer cooperation, quality systems, certification, traceability, knowledge exchange and other organisational or informational mechanisms. *Environmental sustainability*, *resilience*, and particularly *social equity* are addressed more selectively.

Detailed breakdowns by intervention type of the shares addressing each post-harvest stage and each sustainability dimension are provided in Appendix C, Tables C.3 and C.4.

Taken together, the coding shows broad but uneven coverage: market-facing functions such as *retail and marketing* and *distribution and market organisation*, *economic viability* and *governance* are more frequently addressed than the other post-harvest stages and sustainability dimensions.

Associated planned public expenditure

Comparable financial information from the Agri-food Data Portal is available for 132 of the 273 retained interventions, corresponding to 48.4% of the intervention sample and covering 16 of the 30 intervention types identified. Notably, information on planned expenditure is not available for interventions falling under the macro-intervention type 'Other sectoral interventions' (i.e. sectoral interventions in fruit and vegetables, hops, olive oil and table olives, and other eligible sectors), whereas such information is available for rural development interventions and for sectoral interventions in the wine and apiculture sectors. Across all nine CSPs, the interventions for which financial information is available account for EUR 12.40 billion in planned total public expenditure over the 2023–2029 period.

Figure 5 presents the share of total planned expenditure allocated to post-harvest-related interventions across CSPs. The share of planned expenditure related to post-harvest interventions varies considerably across CSPs, ranging from 2.9% in Portugal to 15.3% in Bulgaria. Relatively high shares are also observed in Romania (12.9%), Belgium-Flanders (12.3%), and Italy (11.1%), while Germany (4.0%) and Portugal record the lowest shares.

The captured budget shares should, however, be interpreted with caution. For the interventions covered, the recorded amounts may overstate post-harvest-related expenditure, since these budgets are not necessarily used exclusively for post-harvest activities as outlined in Section 3.6. At the same time, financial data are unavailable for a considerable part of the retained interventions, meaning that substantial post-harvest-related support is not reflected in the figures at all.

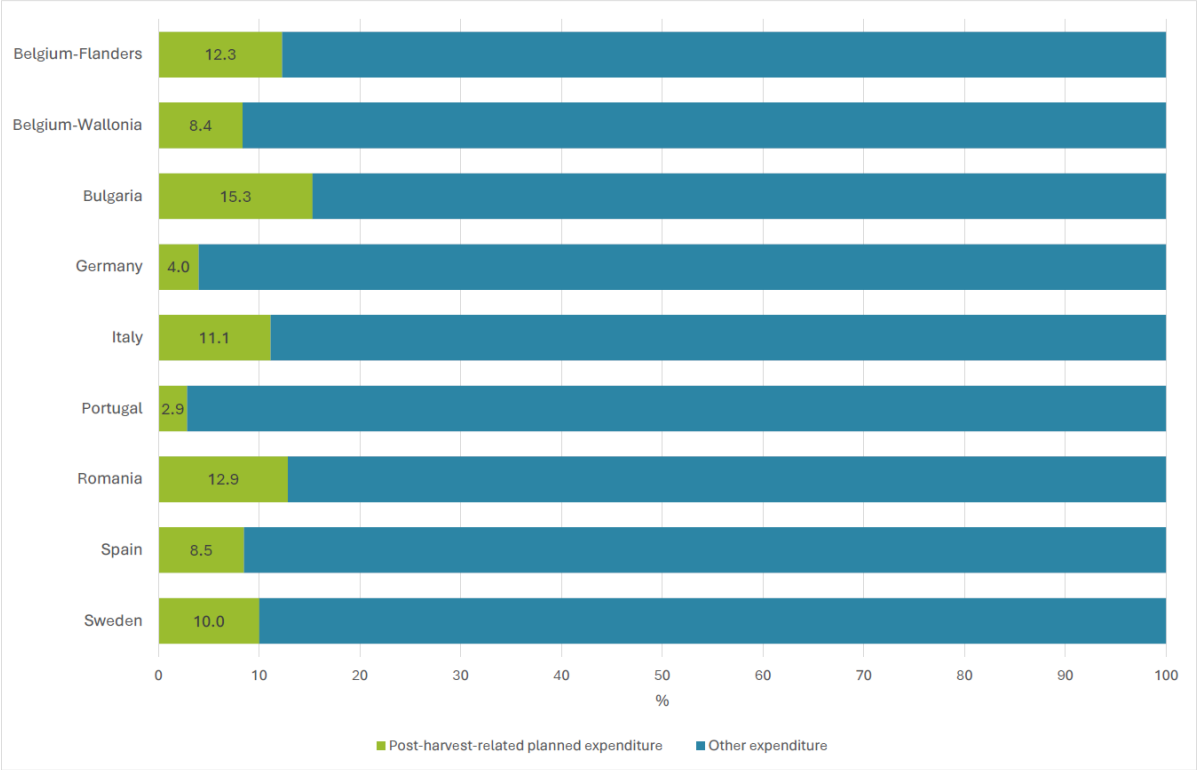


Figure 5. Post-harvest-related planned expenditure as a share of total planned expenditure by CSP. Note: Budget shares are calculated only for interventions for which financial information is available in the Agri-food Data Portal. No financial data are available for "Other sectoral interventions", a macro-intervention type that includes several post-harvest-relevant interventions. The actual share of planned post-harvest-related expenditure is therefore likely higher for all Member States.

Within the financially covered subset, planned expenditure is strongly concentrated, as illustrated by Figure 6. Across all nine CSPs, the intervention type INVEST accounts for EUR 8.22 billion, corresponding to 66.4% of the EUR 12.40 billion captured, while COOP accounts for EUR 2.17 billion, or 17.5%. INVWINE represents 6.0%, PROMOWINE 4.9%, KNOW 2.5% and DISTIL 1.9%. Together, these six intervention types account for 99.1% of the expenditure captured, with the remaining ten financially covered types – ACTLAB, ACTQUAL, ACTREPUT, ADVIBEES, COOPAPI, INFOR, INSTAL, INVAPI, INVWINESUST, PROMOBEES – jointly representing 0.9%. Detailed information on planned Expenditure by intervention type and CSP is provided in Appendix C, Table C.5.

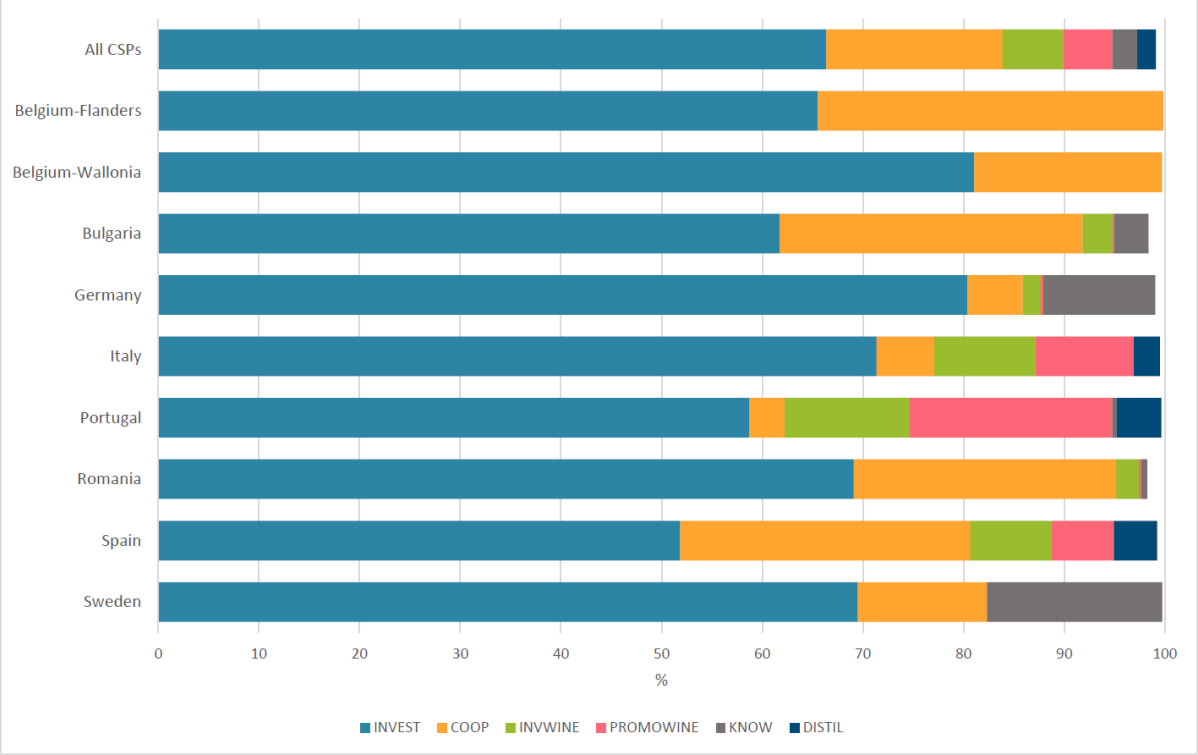


Figure 6. Composition of associated planned public expenditure within the financially covered intervention subset.

Note: "All CSPs" shows the pooled distribution of the EUR 12.40 billion recorded across the 132 retained interventions with planned expenditure information. The country bars show the composition of the captured expenditure within each CSP.

Investment support (INVEST) accounts for the largest share of captured expenditure in all nine CSPs, ranging from 51.9% in Spain to 81.1% in Belgium-Wallonia. Cooperation (COOP) represents a substantial secondary component in several CSPs, particularly Belgium-Flanders, Bulgaria, Romania, and Spain. Other intervention types become more prominent in specific national configurations. Wine-sector investment (INVWINE) and promotion (PROMOWINE) account for comparatively large shares in Italy, Portugal and Spain, while knowledge-exchange support (KNOW) is particularly visible in Germany and Sweden. The exact composition by intervention type and CSP is reported in Appendix C, Table C.6.

The financial results complement, but are not directly comparable with, the intervention-count analysis. Market-facing and market-organising functions are addressed by the largest number of retained interventions, whereas the expenditure captured is concentrated in investment measures supporting physical and technological capacity. This does not constitute a contradiction: intervention counts indicate how widely particular support functions occur, while expenditure data indicate the financial scale of the interventions for which comparable positive values are recorded.

Since financial information is unavailable for some intervention types and the amounts reported for covered interventions may also support activities outside the post-harvest scope, the exact post-harvest share of planned expenditure cannot be isolated. The figures are therefore used solely as contextual evidence and are not taken into account in the overall assessment of operational support for post-harvest activities under the CSPs.

4.2.3 Operational Support Clusters and National Design

This section examines the principal policy mechanisms through which support for post-harvest systems is provided. For the comparative analysis, the 30 intervention types represented in the final sample are assigned to five operational-support clusters according to their predominant support mechanism. Each intervention type is assigned to one analytical cluster. Individual interventions may nevertheless address several post-harvest stages and sustainability dimensions. The five clusters are summarised in Table 19.

Table 19. Analytical cluster and associated intervention types

Analytical cluster	Intervention types	Principal support mechanism
Physical post-harvest capacity and infrastructure	INVAPI, INVEST, INVRE, INVVO, INVWINE, STORE, TRANS	Direct support for physical assets and infrastructure related to processing, storage, packaging, logistics, transport and other post-harvest operations
Market access, commercialisation and demand development	ACTREPUT, COMM, INFOR, INSTAL, PROMO, PROMOBEES, PROMOWINE, WITHD.	Support for promotion, communication, market establishment, reputation-building, consumer information, product placement and market management
Quality, traceability and compliance	3COUN, ACTLAB, ACTQUAL, QUAL, TRACE	Support for quality assurance, testing, certification, traceability and compliance with product or market requirements
Knowledge, cooperation and organisational capacity	ADVI1, ADVIBEES, COACH, COOP, COOPAPI, KNOW, TRAINCO	Advisory services, training, knowledge exchange, cooperation, innovation and the development of collective or organisational capacity
Environmental and circularity-specific interventions	CLIMA, DISTIL, INVWINESUST	Targeted support for climate-related measures, environmental investments and the management, recovery or valorisation of production by-products

Cluster 1: Physical post-harvest capacity and infrastructure

This cluster comprises INVAPI, INVEST, INVRE, INVVO, INVWINE, STORE and TRANS. These intervention types provide direct support for physical assets, equipment, infrastructure, and related technological capacity. Their post-harvest relevance includes processing facilities, storage, and refrigeration, packaging systems, logistics, transport, and other infrastructure connecting primary production with subsequent value-chain stages.

Processing and transformation and *storage and preservation* form the principal functional core of this pathway. *Packaging and traceability*, *distribution and market organisation*, and *handling and conditioning* are also addressed where interventions support broader combinations of infrastructure and equipment. Retail and consumption-related functions are less prominent.

Economic viability is the dominant sustainability pathway, particularly through value addition, competitiveness, product quality and improved market access. *Environmental sustainability* is identifiable where intervention design explicitly supports energy efficiency, renewable energy, lower-emission logistics, sustainable packaging, wastewater treatment or the recovery of by-products and waste. *Resilience* and *governance* arise more selectively, for example where storage supports market management or where investments strengthen traceability, collective infrastructure or producer-organisation coordination.

National designs vary in their breadth. Some INVEST and INVRE interventions combine processing with storage, packaging, marketing, short supply chains or circularity, while others focus on a narrower investment purpose. Wine-sector and transport interventions also differ in the extent to which environmental performance, storage, logistics and marketing are integrated.

Overall, this cluster provides the principal route for strengthening the physical and technological capacity of post-harvest systems. Its contribution to wider sustainability objectives depends on the activities financed and on the environmental, organisational or social conditions attached to the investment.

Cluster 2: Market access, commercialisation and demand development

This cluster comprises ACTREPUT, COMM, INFOR, INSTAL, PROMO, PROMOBEES, PROMOWINE and WITHD. These intervention types primarily support the downstream and market-facing parts of post-harvest systems through promotion, communication, branding, market information, consumer engagement, business establishment and the development or stabilisation of market outlets.

Retail and marketing and *distribution and market organisation* are the dominant post-harvest stages. Consumer-facing interventions such as INFOR and COMM also address *consumption and use*. PROMOWINE supports access to third-country markets, while INSTAL may support rural businesses involved in processing, marketing or direct sales. WITHD follows a different mechanism by supporting market withdrawal, redistribution, and alternative uses of surpluses.

Economic viability is the strongest common sustainability pathway, particularly through market access, demand creation, product differentiation, value retention and market stabilisation. *Resilience* is identifiable where interventions diversify markets, manage surpluses or respond to market disruption. *Environmental sustainability* and *social equity* appear more selectively, for example through food redistribution, circular use of surpluses, post-harvest loss reduction or targeted access for smaller producers and rural businesses.

National differences mainly concern the breadth and orientation of the market-support instruments. Some CSPs retain relatively conventional promotional approaches, while others connect promotion and communication to a wider range of functions such as consumer information, market monitoring, quality, local supply chains or loss reduction. WITHD interventions also differ in whether they focus mainly on market removal or include handling, storage, processing, packaging, redistribution or circular destinations.

Overall, this cluster supports post-harvest systems by connecting products with markets and consumers and by helping value-chain actors manage demand, market access, and surplus products. Its sustainability contribution is strongest where market support is combined with explicit mechanisms for redistribution, diversification, inclusion or circularity.

Cluster 3: Quality, traceability and compliance

This cluster comprises 3COUN, ACTLAB, ACTQUAL, QUAL and TRACE. The common support mechanism is the use of quality systems, testing, certification, traceability, and regulatory compliance to facilitate market participation and product differentiation.

Packaging and traceability and *retail and marketing* are the most prominent post-harvest stages. *Handling and conditioning* is relevant where laboratory testing or initial product-quality controls are supported, while *distribution and market organisation* is particularly important where compliance enables access to external markets. Processing, storage, and circularity appear only in more broadly designed interventions.

Governance is the clearest shared sustainability pathway. It is supported through certification systems, product specifications, audits, laboratory testing, traceability, digital monitoring and compliance arrangements. *Economic viability* is also prominent where these mechanisms improve product differentiation, commercial value, competitiveness or market access. *Environmental sustainability*, *resilience* and *social equity* are identified only where the intervention establishes an additional explicit pathway; quality certification alone is not treated as sufficient evidence for these dimensions.

National differences concern the breadth of the quality and traceability systems supported. Some interventions focus narrowly on testing, certification or compliance, while others connect quality governance to consumer information, shared infrastructure, joint marketing, storage, packaging or waste management.

Overall, this cluster strengthens the informational and institutional infrastructure of post-harvest systems. Its main contribution lies in quality governance and market access rather than direct investment in processing or storage capacity.

Cluster 4: Knowledge, cooperation and organisational capacity

This cluster comprises ADVI1, ADVIBEES, COACH, COOP, COOPAPI, KNOW and TRAINCO. These intervention types support advice, training, knowledge exchange, cooperation, innovation and collective organisation.

Their post-harvest relevance depends on the content of the advice, training, cooperation project, operational group or local strategy supported. *Retail and marketing* and *distribution and market organisation* are the most frequently identifiable functions, particularly where interventions address commercialisation, quality assurance, logistics, traceability, sales channels or producer cooperation. Processing, packaging, waste management and other stages appear in more broadly designed knowledge and cooperation measures.

Economic viability and *governance* are the dominant sustainability pathways. Relevant mechanisms include improved marketing capacity, producer organisation, cooperation, knowledge exchange, quality systems and collective decision-making. *Resilience* is identifiable where advice or cooperation addresses diversification, market risks or crisis management. *Environmental sustainability* is recorded only where a specific post-harvest mechanism is present, such as the reduction of impacts from storage and packaging or the recovery of waste and by-products. *Social equity* remains comparatively limited and requires an explicit access or inclusion mechanism.

National differences arise from the level of specificity in the intervention descriptions. Some CSPs identify concrete post-harvest topics such as processing, logistics, packaging, local markets, direct sales or circularity. Other interventions remain open or project-based, meaning that post-harvest activities may be supported during implementation even though no specific function is identified in the CSP description. In these cases, stage-specific codes were assigned only where the intervention text provided sufficient evidence.

Complementary information on these mechanisms was obtained from Chapter 8 of each CSP, which sets out the national approach to AKIS and digitalisation. While the intervention descriptions form the basis of the operational-support assessment, the AKIS chapters provide broader system-level information on how knowledge, advice, innovation and cooperation are organised and delivered. Across the CSPs, recurring mechanisms include stronger links between research, advice and practice, innovation brokerage, advisory and digital platforms, skills development and multi-actor cooperation. Where post-harvest relevance is explicit, it concerns the uptake and diffusion of solutions for processing, traceability, logistics, market access, value-chain coordination, and new business models.

This broader AKIS context is particularly relevant for the assessment of this cluster because some interventions may support post-harvest systems without specifying particular post-harvest stages ex ante. This applies especially to open or project-based COOP interventions, such as the European Innovation Partnership for Agricultural Productivity and Sustainability (EIP-AGRI) and LEADER (Liaison Entre Actions de Développement de l'Économie Rurale; "Links between actions for the development of the rural economy")-type measures, whose relevance depends on the projects or local strategies selected during implementation. 15 such interventions were conservatively excluded from the operational-support sample during the screening and coding process because their descriptions did not establish a sufficiently explicit post-harvest link. Their exclusion, however, reflects insufficient intervention-level evidence, rather than an inherent inability to support post-harvest activities. The complementary AKIS information nevertheless provides evidence on the broader knowledge, advisory and cooperation structures through which such support may be delivered.

Overall, this cluster strengthens the knowledge, collaborative and organisational foundations through which post-harvest innovation, coordination and market development can be supported. Its assessed contribution is necessarily conservative because many open or project-based interventions do not specify post-harvest activities ex ante, even where the broader AKIS structures provide the capacity to support them during implementation.

Cluster 5*:* Environmental and circularity-specific interventions

This cluster comprises CLIMA, DISTIL and INVWINESUST. These intervention types provide targeted support for climate-related measures, environmental investment and the management, recovery or valorisation of residues and by-products. Their policy mechanisms range from physical environmental investment to regulated systems for residue recovery.

Waste management and circularity is the most characteristic post-harvest stage. INVWINESUST supports environmental investment in wine-sector activities, including waste treatment, composting, biomass recovery and renewable energy. DISTIL supports the controlled recovery of winemaking by-products through authorised distillation. CLIMA has a broader potential scope and may address packaging, logistics, storage, transport and other climate-related post-harvest infrastructure.

Environmental sustainability is the defining dimension for CLIMA and INVWINESUST where interventions explicitly target energy efficiency, lower-emission logistics, sustainable packaging, renewable energy, pollution control or circular use of residues. DISTIL presents a different profile: although it addresses *waste management and circularity* as a post-harvest function, its most explicit sustainability pathways concern *economic viability* and *governance* through compensation, authorised operators, controlled uses and documentary requirements. *Resilience* appears only where climate measures are linked explicitly to adaptation or shared post-harvest infrastructure. *Social equity* is not explicitly developed within this pathway.

National differences are most visible within CLIMA, where the breadth of supported technologies and infrastructure varies. DISTIL follows a more standardised residue-recovery model across the wine-producing CSPs, while INVWINESUST differs mainly in whether environmental post-harvest activities are addressed through a dedicated measure or within a broader environmental intervention.

Overall, this cluster shows that environmental and circular post-harvest support can be delivered through both investment and regulatory mechanisms. However, the classification of an activity as waste-related or circular does not automatically establish a broader environmental contribution; that contribution depends on the specific objectives and mechanisms contained in the intervention design.

Taken together, the five analytical clusters show that support for post-harvest systems is assembled through a combination of physical investment, market development, quality governance, knowledge and cooperation, and targeted environmental or circularity measures. As illustrated in Figure 7, interventions are concentrated in *physical post-harvest capacity and infrastructure*, which accounts for 43.2% of interventions identified as post-harvest relevant. *Knowledge, cooperation and organisational capacity* represent 22.7%, followed by *market access, commercialisation and demand development* (17.9%) and *quality, traceability and compliance* (13.2%). *Environmental and circularity-specific interventions* constitute 2.9%.

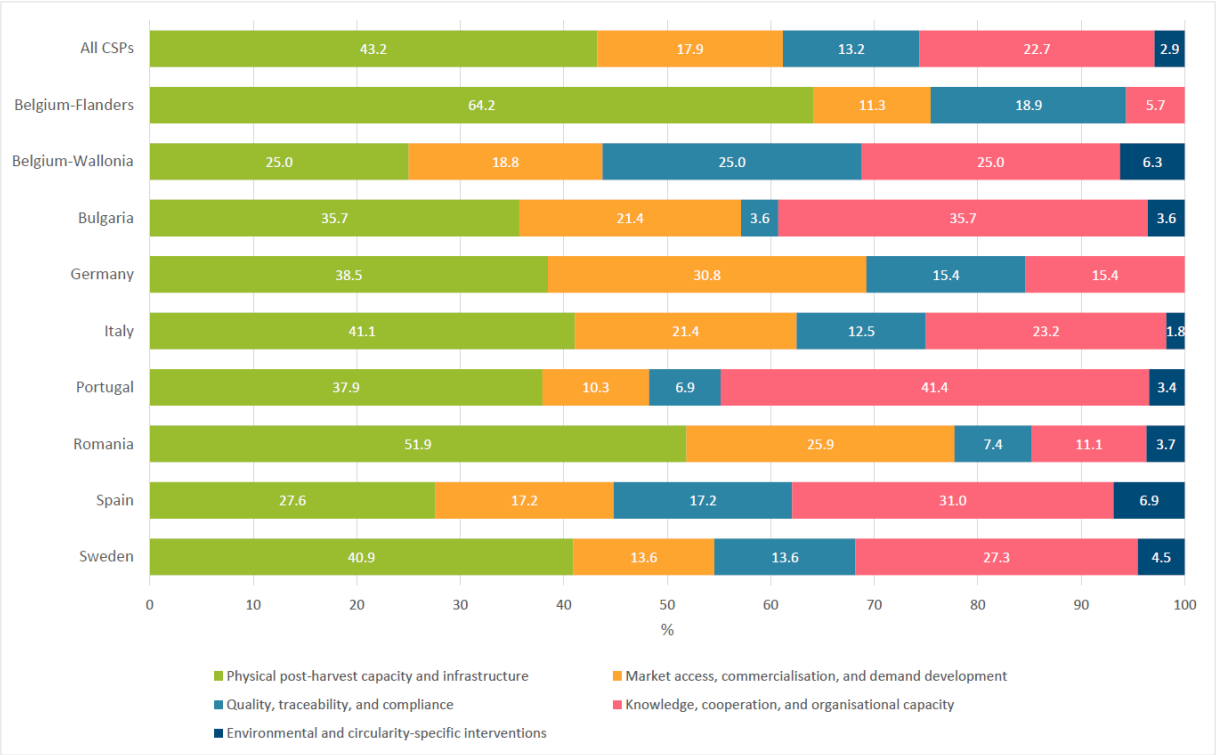


Figure 7. Share of total post-harvest-related interventions by cluster across CSPs.
Note: Shares are calculated relative to the retained interventions in each CSP. Each intervention type is assigned to one analytical cluster according to its predominant support mechanism. 'All CSPs' indicates the share of interventions based on the 273 interventions included in the final sample of post-harvest-relevant interventions.

CSPs differ markedly in how post-harvest-relevant interventions are distributed across the five support clusters. Belgium-Flanders and Romania show the clearest concentration on physical post-harvest capacity and infrastructure, which accounts for 64.2% and 51.9% of their respective portfolios. Germany, Italy and Sweden are also led by this category but display more mixed profiles. In Germany, physical capacity is accompanied by a comparatively strong market orientation, while Italy and Sweden combine their physical focus with larger shares of knowledge-, cooperation-, and organisational-capacity interventions. Other CSPs place greater emphasis on knowledge, cooperation, and organisational capacity. This category is the largest in Portugal (41.4%) and Spain (31.0%), although Portugal's profile also contains an almost equally large physical-capacity component (37.9%), whereas Spain distributes support more broadly across four categories. Bulgaria shows a clear dual focus, with physical capacity and knowledge-related support each accounting for 35.7%. Belgium-Wallonia has the most evenly distributed profile: physical capacity, quality and compliance, and knowledge and cooperation each represent 25.0%, complemented by an 18.8% share of market-oriented interventions. Environmental- and circularity-specific interventions remain a minor component in every CSP, reaching their highest shares in Spain (6.9%) and Belgium-Wallonia (6.3%).

Further details on the clusters, including the post-harvest stages and sustainability dimensions addressed, are provided in Appendix C, Table C.7. Detailed descriptions and examples of CSP-level differences are documented in Appendix C, Table C.8.

4.2.4 Comparative Operational Support Profiles

The preceding sections show that operational support for post-harvest systems is designed quite differently across the CSPs and that this support can be assessed from several complementary perspectives. Consequently, no single indicator or benchmark can adequately capture its overall scale, intensity and comprehensiveness.

Different aspects need to be taken into account when trying to assess the support for post-harvest food systems. A high number of retained interventions may reflect the subdivision of support into several narrowly defined measures, while a smaller portfolio may contain more targeted or broader and more multifunctional interventions. Similarly, intervention-type diversity indicates the range of support mechanisms used but does not by itself demonstrate the depth, specificity or reinforcement of support.

The overall assessment therefore considers four complementary indicators of CSP design: post-harvest prominence, measured as the share of all CSP interventions identified as post-harvest relevant; intervention-type breadth, measured as the share of applicable intervention types represented; intervention-level stage breadth, measured as the average share of the eight post-harvest stages addressed per retained intervention; and intervention-level sustainability breadth, measured as the average share of the five sustainability dimensions addressed per retained intervention.

Table 20 presents the resulting comparative assessment. The indicator-level classifications reflect the CSPs' relative positions within the analysed sample and should not be interpreted as absolute performance standards. In deriving the overall assessment, post-harvest prominence and intervention-type breadth receive double weight because they directly capture the prominence and range of planned post-harvest support. Stage breadth and sustainability breadth receive single weight as supporting indicators of the average integrative scope of individual interventions. The technical scoring rules are provided in the note to Table 20; more detailed information is reported in Appendix C, Table C.9.

The comparative assessment identifies two CSPs with *Substantial* planned operational support, five with *Moderate-to-Substantial* support and two with *Moderate* support. No CSP receives an overall *Limited* assessment. These classifications reflect relative positions within the analysed sample and do not imply that post-harvest support is comprehensive in any CSP.

Table 20. Comparative assessment of operational post-harvest support across CSPs

CSP	Post-harvest prominence	Intervention type breadth	Stage breadth	Sustainability breadth	Weighted total	Overall assessment
Belgium-Flanders	34.6%	48.1%	22.9%	37.0%	6	**Moderate-to-Substantial**
	Substantial	Moderate	Limited	Limited		
Belgium-Wallonia	30.2%	51.9%	22.7%	53.8%	8	**Moderate-to-Substantial**
	Moderate	Substantial	Limited	Substantial		
Bulgaria	26.2%	44.4%	35.3%	51.4%	7	**Moderate-to-Substantial**
	Moderate	Moderate	Substantial	Moderate		
Germany	20.6%	30.6%	41.3%	52.3%	3	**Moderate**
	Limited	Limited	Substantial	Moderate		
Italy	32.0%	55.6%	35.0%	49.6%	10	**Substantial**
	Substantial	Substantial	Moderate	Moderate		
Portugal	17.0%	38.9%	33.2%	44.8%	1	**Moderate**
	Limited	Limited	Moderate	Limited		
Romania	26.2%	47.2%	31.0%	54.8%	7	**Moderate-to-Substantial**
	Moderate	Moderate	Moderate	Substantial		
Spain	28.2%	63.9%	29.7%	48.3%	6	**Moderate-to-Substantial**
	Moderate	Substantial	Limited	Limited		
Sweden	40.7%	44.4%	38.6%	66.4%	10	**Substantial**
	Substantial	Moderate	Substantial	Substantial		

Note: *Post-harvest prominence* is reported as the share of all interventions in a CSP that were identified as post-harvest relevant. *Intervention-type breadth* is reported as the share of intervention types applicable to the respective CSP that are represented by at least one post-harvest-relevant intervention. *Intervention-level stage breadth* is reported as the mean share of the eight defined post-harvest stages addressed per retained intervention. *Intervention-level sustainability* breadth is reported as the mean share of the five defined sustainability dimensions addressed per retained intervention.
For each indicator CSPs were ranked and assigned to the relative categories *Limited, Moderate,* and *Substantial*; tied values at category boundaries were retained in the same category. The three categories correspond to 0, 1, and 2 base points, respectively. Points for post-harvest prominence and intervention-type breadth were multiplied by two, while points for stage breadth and sustainability breadth were assigned single weight. The resulting weighted total ranges from 0 to 12 and is classified as follows: 0 = *Limited*, 1–5 = *Moderate*, 6–8 = *Moderate-to-Substantial*, and 9–12 = *Substantial*.
Full calculations are reported in Appendix C, Table C.9.

Italy and Sweden both receive a *Substantial* assessment, with weighted totals of ten out of twelve, but reach this result through different configurations. Italy combines *Substantial* post-harvest prominence with *Substantial* intervention-type breadth, while its stage and sustainability breadth are *Moderate*. Sweden combines *Substantial* post-harvest prominence with *Substantial* stage and sustainability breadth, while its intervention-type breadth is *Moderate*. The same overall assessment can therefore reflect distinct approaches to CSP design.

The five *Moderate-to-Substantial* CSPs are similarly heterogeneous. Belgium-Flanders is distinguished primarily by *Substantial* post-harvest prominence, Belgium-Wallonia and Spain by *Substantial* intervention-type breadth, Bulgaria by *Substantial* stage breadth and Romania by *Substantial* sustainability breadth. Belgium-Wallonia additionally shows *Substantial* sustainability breadth. These profiles demonstrate that the overall category captures different combinations of prominence, intervention diversity and integrative breadth rather than a uniform model of support.

Germany and Portugal receive a *Moderate* overall assessment because both are classified as *Limited* in the two more heavily weighted dimensions of post-harvest prominence and intervention-type breadth. Germany nevertheless shows *Substantial* stage breadth and *Moderate* sustainability breadth, while Portugal shows *Moderate* stage breadth. The comparison between Germany and Spain illustrates the effect of the weighting: although Germany performs more strongly at the level of individual intervention breadth, Spain's stronger position in the primary dimensions results in a higher overall assessment. No CSP is classified as *Limited* because this category is reserved for a weighted score of zero, indicating *Limited* ratings across all four dimensions.

Each of the nine CSPs collectively covers all eight post-harvest stages and all five sustainability dimensions at least once. Portfolio-level coverage therefore does not differentiate between the CSPs and is not included in the weighted assessment. Nevertheless, this result provides an important qualification: complete coverage at portfolio level can coexist with limited average breadth at intervention level when different stages or sustainability dimensions are addressed through separate, specialised interventions. The complete portfolio-level results are reported in Appendix C, Table C.9.

Taken together, the assessments reveal no single model of planned operational support. Similar overall classifications may result from different combinations of policy prominence, intervention-type diversity and intervention-level breadth. Moreover, two features of the indicators should be borne in mind when interpreting these profiles: First, post-harvest prominence is calculated relative to all interventions in a CSP, including direct payments and area-based interventions that fall outside the post-harvest scope. It therefore also reflects how finely each CSP subdivides its intervention architecture, which ranges from 53 to 175 interventions across the sample. Second, because the indicator-level categories reflect relative positions within a small sample, some CSPs in adjacent categories are separated by only small differences in indicator values, particularly for intervention-level sustainability breadth. While alternative operationalisations could place different emphasis on particular aspects of support, the present framework provides a transparent basis for comparison across the nine CSPs.

4.3 Relationship between Strategic Recognition and Operational Support

This section examines how post-harvest-relevant concerns identified in the strategic parts of the CSPs relate to the functions and support mechanisms specified in their planned interventions. It places the strategic-integration and operational-support classifications side by side and considers the evidence underlying each profile. The two assessments address different aspects of CSP design and use different classification procedures. Their categories are therefore compared descriptively, without calculating a separate alignment score. Table 21 presents the resulting profiles for the nine CSPs.

The Member State profiles show selective rather than uniform correspondence between strategic recognition and planned operational support. Italy provides the clearest example of mutually reinforcing evidence with explicit strategic framing and strong diagnostic grounding matched by a large and diverse intervention portfolio. Sweden represents the opposite case: despite limited strategic integration it records the highest post-harvest prominence and intervention-level sustainability breadth in the sample. More generally, post-harvest functions may be specified in interventions despite relatively general strategic framing, while matching overall classifications can conceal different combinations of diagnostic detail, portfolio size and intervention breadth. Because the two assessments use different methods – and the operational *Limited* category is particularly narrow by design – matching or differing labels should not be interpreted as an alignment score.

Across the sample, the strongest functional correspondence concerns value addition, market access, producer organisation and cooperation. These themes are prominent in the strategic diagnosis, particularly under SO3 and recur in investment, market-related, quality, knowledge and cooperation support. *Economic viability* and *governance* are accordingly the most frequently identified sustainability dimensions in the operational interventions.

The relationship is less consistent for the wider sustainability profile. Broad consideration across strategic provisions does not mean that individual interventions integrate several sustainability dimensions. Environmental and resilience pathways depend more strongly on specified activities and mechanisms, while social inclusion requires explicit access or targeting provisions. Environmental contributions can also occur within mainstream interventions; they should not be inferred solely from the size of the dedicated environmental and circularity cluster.

Table 21. Integrated comparison of strategic and operational profiles

CSP	Strategic integration	Operational support	Relationship between strategic and operational evidence
Belgium-Flanders	Moderate	Moderate-to-Substantial	The strategic focus on processing, producer organisation and market positioning has counterparts in sectoral and investment measures. Physical capacity accounts for 34 of the 53 retained interventions, contributing to high operational prominence. However, the low average stage and sustainability breadth of individual interventions limits the evidence of integrated, multidimensional design.
Belgium-Wallonia	Moderate-to-Substantial	Moderate-to-Substantial	Strong diagnostic grounding and needs translation are accompanied by a varied portfolio of 16 retained interventions: physical capacity, quality and compliance, and knowledge and cooperation each account for four. Sustainability breadth is high relative to the sample, but average stage breadth is low. The acknowledged gap in dedicated EAFRD circular-economy support remains a qualification.
Bulgaria	Moderate	Moderate-to-Substantial	Strategic attention to value-chain position and producer organisation has operational counterparts in physical-capacity and knowledge-and-cooperation measures, with ten retained interventions in each cluster. Comparatively high stage breadth extends the functions addressed. Uneven diagnosis-to-needs translation across objectives and conditional general exclusions nevertheless qualify the wider strategic profile.
Germany	Moderate	Moderate	The general Chapter 1 framing is followed by stronger SO3 diagnosis and substantial sector-related content in Chapter 3.5, while fund coordination remains more limited. Only 13 interventions are retained, but they have the highest average stage breadth in the sample. Matching overall categories thus conceal uneven strategic visibility and a small, relatively multifunctional portfolio.
Italy	Substantial	Substantial	Explicit strategic framing, strong diagnosis and needs translation, sector-related provisions, and detailed fund coordination reinforce one another. Operationally, 56 retained interventions represent 20 of 36 applicable types across investment, market, and knowledge pathways. Average stage and sustainability breadth are moderate, so the common *Substantial* classification does not imply uniformly broad individual interventions.

CSP	Strategic integration	Operational support	Relationship between strategic and operational evidence
Portugal	Moderate	Moderate	An exceptionally detailed SO3 diagnosis is followed by comparatively diffuse needs prioritisation. Investment and cooperation provide identifiable support routes, but only 29 of 171 interventions are retained – the lowest proportion in the sample – and 14 of 36 applicable types are represented. The shared Moderate label therefore conceals a difference between diagnostic detail and relative operational reach.
Romania	Moderate-to-Substantial	Moderate-to-Substantial	The explicit diagnosis of collection, storage and processing deficits is reflected in investment-led support: 14 of 27 retained interventions fall within the physical-capacity cluster. Average sustainability breadth is comparatively high. General exclusions affecting certain collection or transport, storage and packaging costs create a potential scope tension, although they do not establish that corresponding infrastructure investments are ineligible.
Spain	Moderate	Moderate-to-Substantial	The Chapter 1 framing is general, but SO3 diagnosis and needs are more concrete. The operational sample represents 23 of 36 applicable intervention types, the widest range in the sample. Average stage and sustainability breadth remain in the lower relative groups, while external-fund coordination is limited; instrument diversity alone therefore does not establish an integrated support approach.
Sweden	Limited	Substantial	Strategic framing and needs translation remain limited, including the absence of an identified need corresponding to the explicit SO9 food-waste finding. By contrast, 22 of 54 interventions are retained, with high average stage and sustainability breadth. Multifunctional investment, knowledge, and climate-related measures make support visible at intervention level without resolving the gap in the strategic documentation reviewed.
Note: The classifications are taken from Tables 16 and 20. They assess different features of planned CSP design; matching or differing labels do not constitute an alignment rating and should not be interpreted as directly additive scores.			

Overall, the integrated comparison reinforces a central finding of this report: support for post-harvest activities is assembled through existing CAP priorities and instruments rather than through a distinct strategic agenda for post-harvest systems. The policy-design challenge is to make the relationship between diagnosed needs, intervention functions, eligibility boundaries and complementary funding more explicit. Section 5 explores these conditions as potential barriers and enabling features.

5. Indicative Typology of Barriers and Enablers

This section draws on the findings of Sections 4.1 to 4.3 to explore recurring conditions that may constrain or facilitate the integration of post-harvest systems. It distinguishes between different types of potential policy-design barriers and their corresponding enabling features, referring to features visible in the CSP documents that may weaken or strengthen clarity, coherence, coverage or accessibility. Table 22 groups these conditions along the policy-design chain and illustrates each with evidence from the CSPs.

Table 22. Cross-cutting typology of potential barriers and enabling features

Policy-design condition	Potential Barrier	Potential Enabler	Illustrative evidence
Diagnostic specificity and evidentiary basis	The diagnosis is generic or weakly evidenced and does not identify the affected stages, sectors or actors. Relevant problems may therefore be less clearly reflected in recognised needs or priorities.	A specific, evidence-based diagnosis identifies the bottleneck, its relevance and the affected parts of the post-harvest system.	Portugal identifies downstream market concentration and Romania the trade-balance gap. Evidence under SO1 and SO4–SO6 is comparatively limited in several plans.
Clarity and monitorability of commitments	General statements of intent do not define the expected result or provide a basis for assessing progress.	The intended result is explicit and, where appropriate, supported by a measurable target, indicator or timeframe.	Belgium-Wallonia's REGAL programme includes a 30% food-loss-and-waste reduction target.
Vertical coherence and traceability	The connection between diagnosis, needs, priorities and interventions is incomplete, or operational support lacks corresponding strategic visibility.	A traceable policy logic connects the diagnosis and needs with priorities and interventions. Cross-references explain which need each intervention addresses.	Germany and Spain contain more post-harvest substance in later plan sections than in their high-level framing. Sweden also has limited strategic visibility alongside relevant planned support at intervention level.
Specificity of intervention design	Intervention descriptions are too general to clearly identify which post-harvest functions or activities are explicitly supported. This can make the link between strategic needs and operational support difficult to trace.	Intervention descriptions provide sufficient detail on the supported activities and functions to show how identified post-harvest needs can be addressed, while still allowing implementation flexibility.	Differences in the level of detail affect several cross-country comparisons. Several Flemish interventions are clearly designed around specific post-harvest functions, rather than as broad, open-ended instruments. Some open cooperation interventions, by contrast, do not establish a specific post-harvest function in their CSP descriptions.

Policy-design condition	Potential Barrier	Potential Enabler	Illustrative evidence
Eligibility consistency and flexibility	General eligibility rules exclude costs linked to identified post-harvest needs, or leave their treatment unclear, without a clear rationale, exception or alternative funding route.	Eligibility rules reflect identified needs. Exclusions are justified and, where appropriate, accompanied by defined exceptions or an explicit alternative route.	Romania excludes certain collection or transport, storage and packaging costs despite related needs. These cost exclusions do not necessarily rule out investment in the corresponding infrastructure. Bulgaria uses conditional exceptions to retain eligibility under specified interventions.
Functional coverage	A diagnosed post-harvest function lacks a clearly documented support route, or connected stages are treated in isolation. Uneven coverage lacks a clear needs-based rationale.	Coverage corresponds to diagnosed needs and connects interdependent post-harvest functions. This does not require every CSP to support every stage.	Retail and marketing and distribution are covered more frequently than handling, waste management, and consumption. Italy illustrates a more integrated multi-stage design. *Handling and conditioning* are explicitly referenced in the Chapter 3 sector interventions of several countries, with Romania including it across all three covered sectors, while it is entirely absent from Chapter 4, Chapter 4.5 across all countries.
Instrument complementarity	Support relies mainly on one mechanism, or several instruments coexist without clearly complementary functions, despite multidimensional needs.	A coherent support package combines investment, cooperation, knowledge, quality development, and market support where relevant. Equal financial weight is not required.	Italy combines several support functions within its sector design. Section 4.2 identifies investment, market development, quality systems, and knowledge and cooperation as distinct support pathways whose combination varies across CSPs.

Policy-design condition	Potential Barrier	Potential Enabler	Illustrative evidence
Funding coordination	Responsibilities between CAP and other funds are unclear, or references to complementarity or demarcation do not explain how relevant activities are divided between funds, leaving gaps, overlaps, alternative delivery routes or double-financing risks insufficiently addressed.	Funding responsibilities and alternative delivery routes are explicit, and operational safeguards address overlap and double financing where relevant. The description makes clear which activities each fund covers and how potential overlap is managed.	Belgium-Wallonia, Bulgaria and Germany identify selected EAFRD coverage gaps and other relevant funds. Belgium-Flanders describes an information-exchange and double-financing control mechanism. Portugal refers to complementarity and avoidance of double financing without specifying an equivalent administrative mechanism.
Scope of funding-coordination provisions	The CSP describes coordination between CAP funds but leaves the relationship between EAFRD support and other EU funds for relevant post-harvest activities unspecified.	The plan distinguishes intra-CAP coordination from coordination with other EU funds and identifies the relevant programmes and activities.	Spain's Chapter 4.5 addresses EAFRD/EAGF (intra-CAP) coordination rather than external-fund coordination.
Integration of environmental and inclusiveness objectives	Environmental, resilience and social-equity objectives remain general, isolated or insufficiently translated into activities, criteria or target groups.	These objectives are integrated across mainstream interventions through explicit activities, selection criteria or beneficiary targeting, complemented where appropriate by dedicated measures.	Evidence under SO4–SO6 and on targeted social inclusion is comparatively selective. Operationally, *environmental sustainability*, *resilience* and especially *social equity* are less frequent than *economic viability* and *governance*. Environmental mechanisms also occur within mainstream investment measures, rather than only in dedicated environmental interventions.

Read along the policy-design chain, the conditions in Table 22 relate to four successive links: the formulation of diagnosis and commitments, the translation of needs into intervention design, the formal boundaries of support set by eligibility rules and funding coordination, and the composition of the resulting support portfolio. Most potential barriers identified concern the connections between these links rather than the links themselves. They arise where the relationship between a diagnosed problem, the corresponding need, the eligible activities and the available funding route is left implicit or unresolved.

The conditions are also interdependent. A weakness at an earlier link can limit what is visible or achievable at later ones: a generic diagnosis provides a weak basis for prioritisation, and general intervention descriptions make it difficult to establish whether diagnosed needs are addressed. Conversely, specific diagnosis and detailed intervention design make the policy logic traceable across the plan. At the same time, barriers and enablers do not characterise entire CSPs. The same plan may combine enabling features in one condition with potential barriers in another, as the coexistence of a specific diagnosis and broad general exclusions in the Romanian CSP illustrates.

Finally, the enabling features describe explicitness and justification rather than maximum scope. Coherent functional coverage does not require every CSP to support every post-harvest stage, and a complementary support package does not require equal financial weight across instruments. Similarly, eligibility restrictions are not problematic where they are justified or accompanied by alternative routes. The typology is therefore indicative. It identifies conditions visible in planned CSP design, whose practical relevance for access to and use of support requires further examination.

6. Conclusion

6.1 Summary of Findings

This report examined to what extent and how the CSPs of the TrueFoodS consortium countries recognise and support the transition towards more sustainable, inclusive and resilient post-harvest systems. The central finding of the analysis is that – across the nine CSPs analysed – relevant post-harvest considerations and planned interventions are identifiable, but post-harvest systems are rarely framed as a distinct policy area and their visibility, coverage and sustainability orientation vary considerably across the plans. The term "post-harvest" therefore serves primarily as an analytical lens for bringing together activities that are otherwise spread across the CSP architecture.

At the strategic level, post-harvest considerations are most consistently reflected where they align with established CAP concerns around farmers' position in the value chain, particularly producer organisation, processing and value addition, and market access. This is most evident under SO3, while post-harvest dimensions of other objectives are addressed less consistently. The progression from diagnosis to identified and prioritised needs also varies between CSPs, showing that recognition of relevant issues does not necessarily translate into corresponding strategic priorities. Sustainability consideration is generally broad but uneven in depth: *economic viability* is most consistently developed, *resilience* is frequently well developed, *environmental sustainability* and *governance* are integrated to some extent, while *social equity* receives the least systematic attention. Formal funding boundaries and coordination with other EU instruments add a further layer of variation, ranging from relatively broad eligibility and concrete coordination arrangements to more general approaches. Strategic consideration therefore depends on how consistently post-harvest needs and functions are reflected across the wider CSP architecture rather than in any single section. The extent of strategic treatment alone, however, does not indicate how firmly post-harvest systems are embedded: a detailed diagnosis or broad sustainability coverage may coexist with limited prioritisation or depth, while a more concise treatment may be well integrated if it is carried consistently from diagnosis to needs and priorities.

At the operational level, the CAP provides multiple legal routes for post-harvest support rather than a dedicated post-harvest instrument. Across the nine CSPs, 273 interventions covering 30 intervention types were identified as substantively relevant. Their use and design vary across countries, resulting in variation in the prominence, functional coverage and sustainability orientation of post-harvest support. The retained interventions most frequently address the post-harvest stages of *retail and marketing* and *distribution and market organisation*, while *handling and conditioning*, *waste management and circularity*, and *consumption and use* are addressed less often. *Economic viability* and *governance* are

also the most frequently reflected sustainability dimensions in intervention design, whereas *environmental sustainability*, *resilience* and especially *social equity* are incorporated more selectively. Grouping the interventions into five clusters according to their predominant support mechanism shows that the *physical capacity and infrastructure* cluster forms the largest support pathway, complemented by *market access and commercialisation*, *quality and traceability*, *knowledge and cooperation* and more targeted *environmental and circularity interventions*. Overall, the comparison shows considerable diversity in how CSPs combine and design the planned support for post-harvest systems. The number and mix of interventions alone, however, do not indicate how effective that support is likely to be: depending on country-specific needs and conditions, a smaller, well-targeted and coherent portfolio may be more effective than a larger but fragmented set of measures.

Reading the two strands of analysis together reveals selective correspondence. Alignment is strongest around value-chain position, value addition, market access and producer cooperation, where strategic diagnosis is clearly reflected in operational support. Correspondingly, economic viability is the most consistently reflected sustainability dimension in both strands, while social equity receives the least attention. Beyond these areas, the two strands do not necessarily correspond, and divergence runs in both directions: strong strategic recognition is not always matched by equally broad operational support, while relevant interventions may exist despite limited strategic visibility. Similarly, broad sustainability consideration at the strategic level is not necessarily matched by interventions that integrate several sustainability dimensions.

The indicative typology of barriers and enablers helps to explain where such discontinuities arise. Potential barriers rarely stem from a complete absence of support. Instead, they arise at the interfaces between different elements of CSP design. Relevant recognition and measures may exist, but their link to the diagnosis, identified needs, eligibility rules, other post-harvest stages, complementary instruments or other funding sources is not always explicit. The key distinction is therefore not between the presence and absence of support, but between more and less coherent policy-design pathways.

Taken together, the findings show that the CAP already offers multiple routes for supporting sustainable post-harvest systems, but these are not consistently connected into a clear post-harvest policy logic within individual CSPs. At Member State level, strengthening support requires a more coherent use of the existing policy space. Post-harvest systems need to be recognised as an integral component of sustainable food systems. This recognition should be reflected in the identification and prioritisation of needs and translated into complementary interventions across post-harvest stages and sustainability dimensions, supported by consistent eligibility conditions and clear coordination with other funding sources. At the level of the CAP framework, clearer and more enabling conditions for integrated post-harvest support and a more balanced consideration of sustainability objectives could reinforce these efforts. In this way, post-harvest considerations can become a more explicit and continuous part of CSP programming, providing a clearer basis for addressing post-harvest systems as a distinct dimension of the wider transition towards more sustainable, inclusive and resilient food systems.

6.2 Outlook

As the first analytical output of WP3, this report maps how the CSPs recognise and support the transition towards more sustainable, inclusive and resilient post-harvest systems. By examining how the CAP, as a key policy framework with substantial potential to support post-harvest systems, already addresses this area and where further opportunities could be developed within the current framework, it provides a starting point for subsequent work within WP3 and for the TrueFoodS project as a whole.

For the wider project, the findings help relate proposed solutions to the policy setting in which they would operate. They can inform WP4's circular-economy strategies by identifying relevant investment, resource-efficiency, and waste-management pathways; WP5's work on inclusive business models by showing how cooperation and market-support measures are designed and where there is scope to further strengthen the integration of social-equity considerations; and WP6's work on adaptive governance by documenting resilience pathways, risk-management provisions and funding-coordination arrangements. As the project progresses, the findings can increasingly be integrated with work across the project, allowing policy insights and proposed solutions to inform and refine one another.

Within WP3, the country profiles and intervention typologies will provide the basis for selecting case studies that represent different approaches to post-harvest support. Building on these cases, Task 3.2 will identify transferable tools, procedures and design principles and examine potential complementarities between interventions and the conditions needed for their coordination. Taking into account the legal and administrative conditions that shape applicability across countries, these findings will inform the development of methodological guidance for harmonisation.

The CSP-based findings will be further validated and refined through exchange with relevant stakeholders, including legal scholars, public authorities, civil-society organisations, producer representatives and other private-sector actors. This dialogue will provide insights into how the opportunities, constraints and support pathways identified in the plans are reflected in practice and where policy and regulatory frameworks could be further developed to better respond to post-harvest needs. By bringing policy analysis and practical experience together, this process will highlight practical ways to strengthen the visibility, accessibility and effectiveness of post-harvest support.

Ultimately, WP3 will translate the findings into policy-oriented recommendations and guidance for a more enabling policy framework for post-harvest systems. This guidance will be developed against the background of the ongoing negotiations on the post-2027 CAP, for which the European Commission proposed in July 2025 to integrate CAP support into National and Regional Partnership Plans with the aim of strengthening synergies with other Union funds. Several findings of this report bear directly on this reform, notably those on the coordination and demarcation of funding responsibilities, the traceability of the policy logic from diagnosis to support and the distribution of post-harvest support across intervention types. A policy paper will identify how existing CAP instruments can be used more effectively and where greater clarity, coordination and complementarity could enhance their contribution. The final WP3 roadmap will set out concrete actions, timelines and responsibilities for regulatory and policy alignment, while drawing lessons for future CAP programming and providing a pathway towards more sustainable, inclusive and resilient post-harvest systems.

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Appendix A. General Supporting Information

A.1 – Use of Generative AI Tools

Generative Artificial Intelligence (AI) tools were used as supporting instruments in the preparation of this deliverable for the specific tasks described below. Consistent with the human-centred approach set out in the project Data Management Plan, their use remained supplementary to human research and decision-making. The researchers developed the research questions, definitions, analytical frameworks, and methods. All AI-assisted outputs were treated as provisional working material and were incorporated into the analysis only after human review and validation.

Component	Tool and approximate period of use	AI-assisted task	Human review and validation
Strategic consideration analysis			
Information extraction and structuring	ChatGPT, GPT-5.6 Sol, OpenAI; approx. 1–31 August 2026	Extraction and structuring of relevant information from the specified sections of the CSPs	Researchers established the analytical framework and definitions; extracted information was checked against the original text of the relevant CSP sections; inaccurate, incomplete, or unsupported information was corrected on the basis of the original source documents
Cross-country analysis and comparative synthesis	Claude, Sonnet 5, Anthropic; approx. 1–31 August 2026	Processing and cross-referencing of the verified extracted information; identification of convergences and divergences across countries; support for comparative synthesis of findings	Analytical and comparative outputs were checked against the verified extraction tables and, where necessary, the original CSP documentation; researchers assessed their consistency with the project methodology and determined the final interpretation and findings
Operational support analysis			
Information extraction and coding	ChatGPT, GPT-5.6 Sol, OpenAI; approx. 1–31 August 2026	Extraction of relevant supporting passages from intervention descriptions of interventions identified as post-harvest-relevant; generation of initial binary coding proposals indicating whether each intervention addressed the predefined post-harvest stages and sustainability dimensions	Researchers identified the post-harvest relevant interventions, and established definitions and analytical framework, including coding rules; the prompt-based workflow was first piloted on a small subset of interventions to assess the accuracy of the extracted passages and the consistent application of the predefined coding rules; following the pilot, it was applied to the complete sample; every intervention-level extraction, rationale and proposed code was subsequently checked by a researcher, who determined the final coding and corrected the AI-assisted output where necessary

Component	Tool and approximate period of use	AI-assisted task	Human review and validation
General use across the deliverable			
Editorial refinement	ChatGPT, GPT-5.6 Sol, OpenAI	Linguistic and editorial refinement of selected passages to improve clarity, grammar, and readability; tools were not used in this context to introduce new evidence, analytical interpretations, or conclusions	All AI-assisted language edits were reviewed and approved by the responsible authors; the substantive meaning was checked against the underlying analysis and verified source material

The substantive analytical inputs processed with AI assistance consisted of publicly available CSPs and related official documentation. No personal data obtained through interviews, surveys or other primary research activities were submitted to the AI tools in the course of the analyses.

The final selection and interpretation of evidence, coding decisions, comparative findings, conclusions, and recommendations remain the responsibility of the authors. Exact prompts and related process documentation are retained by the responsible project partners and can be made available to project reviewers upon request.

A.2 – CAP Strategic Plan Versions Used in the Analyses

CSP	English-language version	Latest original-language version
Belgium-Flanders	1.0.2	7.1
Belgium-Wallonia	1.0.5	4.2
Bulgaria	1.0.4	6.2
Germany	1.0.5	7.1
Italy	1.0.2	7.1
Portugal	1.0.2	7.1
Romania	1.0.4	1.2
Spain	1.0.2	5.1
Sweden	1.0.2	7.2
Note: The English-language CSP versions (eligible from 1 January 2021; only Belgium-Flanders from 1 January 2023) provided the common source base for both strands of analysis, i.e., the strategic consideration analysis and the operational support analysis. For the latter, intervention coverage was additionally cross-checked against more recent information available through the European Commission's Agri-food Data Portal. Interventions that were no longer listed in the data were excluded. Newly identified interventions were assessed using descriptions from the latest available original-language CSP versions (all eligible from 1 January 2023), with the relevant passages translated for the analysis.		

Appendix B. Supplementary Material for the Analysis of Strategic Consideration of Post-Harvest Systems

B.1 – Cross-Country Evidence by Specific Objective

Specific Objective	Main post-harvest pattern identified
SO1 – Farm income and resilience	Limited post-harvest articulation, particularly at needs level. Six CSPs contain no relevant SO1 needs row, while Flanders and Wallonia likewise lack a stated post-harvest need; Portugal is the clearest exception
SO2 – Competitiveness and market orientation	Important in selected CSPs, particularly where processing, marketing, logistics or structural competitiveness are central; especially prominent in Romania
SO3 – Farmers' position in the value chain	Strongest and most consistent post-harvest evidence across the sample; recurring themes include bargaining power, producer organisation, market concentration, processing/marketing infrastructure and quality schemes
SO4–SO6 – Climate, natural resources and biodiversity	Considerably thinner and less consistent post-harvest diagnostic evidence than SO3; environmental post-harvest concerns are frequently weakly embedded in the formal SWOT structure
SO7 – Young farmers	Very limited post-harvest-specific evidence; Romania provides one of the clearer relevant signals through young people's participation in associative economic structures
SO8 – Rural development, employment and inclusion	Selected evidence relating to processing employment, bioeconomy and diversification, but highly variable across CSPs
SO9 – Food and health societal demands	Important secondary locus for post-harvest evidence, particularly quality schemes, consumer information, traceability, food waste and circularity; also shows some of the greatest cross-country variation in translation into needs

B.2 – Detailed Country Evidence Profiles

Analytical element	Evidence
Belgium-Flanders	
Strategic framing	Farm-level resilience, market positioning, farm modernisation, producer cooperation and fruit-and-vegetable operational programmes; distribution/market organisation and processing are particularly visible
Principal SWOT evidence	Evidence concentrated in SO1–SO3; strong producer-organisation and quality/traceability structures coexist with weak bargaining power and low market transparency. SO8 adds processing/employment evidence. SO4–SO6 are comparatively limited, while SO9 contains a concrete food-waste valorisation strength
Needs and prioritisation	Strongest translation under SO2 and SO3, with processing and marketing investment reflecting the diagnosis; SO8 bioeconomy needs also correspond relatively closely to the SWOT
Translation gaps / limitations	Limited follow-through under SO5–SO7; environmental considerations remain less consistently reflected in the needs' architecture than the economic core
Overall observation	Economically oriented cooperative and market-positioning profile with relatively coherent translation in its principal areas of emphasis

Analytical element	Evidence
Belgium-Wallonia	
Strategic framing	Processing, marketing, differentiated-quality products and food autonomy
Principal SWOT evidence	SO3 combines cooperation structures with weak bargaining power and price transparency; comparatively developed environmental evidence also appears across SO4–SO6 and SO9
Needs and prioritisation	Strong and specific translation under SO3; environmental findings are carried into needs through sustainable-food and bio-waste instruments
Translation gaps /limitations	Fewer major discontinuities than in most other CSPs
Overall observation	One of the strongest examples of coherent diagnosis-to-needs translation; food loss and waste is addressed particularly concretely
Bulgaria	
Strategic framing	Farmers' market position, producer organisation, wine-sector support, short chains and quality schemes
Principal SWOT evidence	SO3 provides the strongest evidence, particularly on limited processing capacity, low producer value share and weak producer organisation; SO9 is also substantial. SO1 and SO4–SO6 contain little or no identified post-harvest SWOT evidence
Needs and prioritisation	SO3 and SO9 needs generally track their diagnostic basis; wine-related needs are prominent
Translation gaps / limitations	Needs under SO4, SO5 and SO8 are identified despite no corresponding post-harvest evidence being found in the reviewed SWOT sections
Overall observation	Strong value-chain and quality orientation, but mixed coherence between formal diagnosis and needs across SOs
Germany	
Strategic framing	Broad competitiveness, resilience and high-quality-food framing; comparatively little explicit post-harvest-stage detail
Principal SWOT evidence	SO3 contains substantial evidence on food-industry competitiveness, producer cooperation, retail concentration and infrastructure gaps; SO9 includes the sample's explicit use of "post-harvest losses"
Needs and prioritisation	Strong SO3 translation through quality-scheme and processing/marketing infrastructure needs
Translation gaps / limitations	Food-waste response relies substantially on the National Strategy for the Reduction of Food Waste outside the CAP; SO8 bioeconomy evidence is not accompanied by listed interventions
Overall observation	Chapter 1 understates the degree of post-harvest engagement found later in the diagnostic architecture
Italy	
Strategic framing	Explicit agri-food-sector role, ecological transition, value-chain position, sectoral interventions and territorial cooperation through food and biodistricts
Principal SWOT evidence	Extensive SO3 evidence on fragmentation, processing capacity, value distribution and quality schemes; SO9 adds traceability, consumer trust and food-waste issues; distinctive evidence also appears under SO6 and SO8
Needs and prioritisation	One of the strongest SO3 SWOT-to-needs relationships, including traceability, unfair-trading-practice measures and territorial food-system instruments
Translation gaps / limitations	Some relevant signals are routed outside or not translated into needs, including logistics investment associated with Recovery and Resilience funding and limited needs translation under SO4/SO5
Overall observation	One of the most explicit and internally coherent strategic post-harvest profiles

Analytical element	Evidence
Portugal	
Strategic framing	Organisation, scale, producer negotiating capacity, downstream oligopsony, trade balance and bioeconomy
Principal SWOT evidence	Particularly extensive SO3 evidence on bargaining power, producer organisation and market structure, with strong outermost-region specificities; substantial SO9 evidence on food waste and quality schemes
Needs and prioritisation	Numerous post-harvest-relevant needs are identified
Translation gaps / limitations	The depth of diagnosis is not matched by equally concentrated prioritisation; many relevant needs remain Low-to-Medium priority and some SWOT evidence is not carried forward
Overall observation	Exceptionally strong diagnosis but comparatively diffuse prioritisation
Romania	
Strategic framing	Explicit structural gap between domestic agricultural production and food-industry value addition; raw-material exports versus processed-food imports
Principal SWOT evidence	SO2 and SO3 identify weak collection, storage and processing capacity, low producer value share, limited short-chain development and low producer-organisation density
Needs and prioritisation	Strong SO3 translation, particularly through short-chain and collection/storage-related needs
Translation gaps / limitations	SO2 needs are narrower than the diagnostic evidence; SO4–SO7 show limited needs translation despite some higher-level strategic ambitions
Overall observation	Strong diagnostic grounding but uneven translation across objectives
Spain	
Strategic framing	Broad sustainable-agriculture and competitiveness framing with little explicit post-harvest specificity
Principal SWOT evidence	SO3 provides extensive evidence on producer bargaining power, fragmented cooperation, digitalisation and short channels; SO9 adds labelling, organic retail access and packaging/food-waste issues
Needs and prioritisation	Strong SO3 translation through specific regulatory and organisational responses
Translation gaps / limitations	Broader SO9 diagnosis results in a comparatively narrow response; several needs are not clearly supported by corresponding evidence in the reviewed SWOT sections
Overall observation	Strategic Statement understates the more substantive post-harvest engagement visible at the diagnostic and needs levels
Sweden	
Strategic framing	General competitiveness and innovation framing; CAP explicitly positioned as complementary to the national Food Strategy
Principal SWOT evidence	Comparatively thin overall; relevant evidence includes geography-related transport costs, processing/distribution concentration and a direct SO9 finding on food waste and production losses
Needs and prioritisation	Limited and often generic; a producer-organisation intervention recurs under several objectives
Translation gaps / limitations	No corresponding need identified for the explicit SO9 food-waste and production-loss finding
Overall observation	Weakest overall strategic framing/diagnostic profile and clearest example of a diagnosed issue not carried into the needs architecture

B.3 – Sector-level sustainability evidence identified in CSP Chapter 3.5

Sector	CSPs with relevant evidence	Main post-harvest functions	Principal sustainability pathways identified
Fruit and vegetables	All nine CSPs	Conditioning; storage/cooling; processing; packaging/traceability; distribution and marketing	**Environmental:** energy-efficient refrigeration, renewable energy, waste/by-product management, sustainable transport. **Economic:** processing/value addition, storage, market access, competitiveness, diversification. **Social:** producer organisations, short/local chains, quality-scheme access, consumer linkages, working conditions. **Governance:** certification, traceability, EIP-AGRI, digital tools, monitoring and producer coordination.
Wine	Belgium-Flanders, Bulgaria, Germany, Italy, Portugal, Romania, Spain	Processing; storage; by-product management; marketing/export; retail/tourism	**Environmental:** renewable energy, energy efficiency, waste/effluent treatment and by-product valorisation. **Economic:** winery investment, value addition, third-country promotion, diversification and wine tourism. **Social:** territorial identity, tourism and consumer communication in selected CSPs. **Governance:** certification, quality-scheme communication, knowledge exchange and supply-chain coordination.
Olive oil and table olives	Italy, Spain	Storage; processing/milling; marketing; direct sales	**Environmental:** mill modernisation, by-product reuse and emission reduction in Italy. **Economic:** collective storage, mill efficiency, value addition, cooperative marketing and short chains. **Social:** traditional-producer targeting in Spain; quality-scheme and producer–consumer pathways in Italy. **Governance:** advisory services, certification/traceability, coordination and consumer-awareness mechanisms.
Protein crops	Belgium-Wallonia, Germany, Italy, Romania	Storage; processing; marketing; value-chain coordination	**Economic:** regional value creation, storage and integration between production and processing. **Social:** territorial branding and producer–consumer links. **Governance:** coordination, producer organisations, quality schemes and labelling. **Environmental** evidence is limited.
Hops	Germany, Romania	Conditioning/processing; joint marketing	**Economic:** joint marketing, competitiveness and value addition. **Social/Governance:** producer organisations and certification in Germany. **Environmental** and broader inclusion pathways are limited.
Sugar beet	Belgium-Flanders	Handling/conditioning; local marketing; certification; export-related marketing	**Economic:** local value creation, export opportunities and value enhancement. **Social:** cooperative structures and local/regional markets. **Governance:** interbranch coordination, Vegaplan certification/traceability and EIP collaboration.
Cereals	Italy	Storage; logistics; digital coordination	**Environmental:** more efficient storage and selected circular/resource-management elements. **Economic:** storage-centre expansion, alignment of supply and demand and competitiveness. **Social:** producer aggregation and consumer information. **Governance:** telematic networking and supply-chain contracts.

Sector	CSPs with relevant evidence	Main post-harvest functions	Principal sustainability pathways identified
Potato	Italy	Storage; logistics; processing/market organisation	**Environmental:** circular-economy and process-water management. **Economic:** supply concentration, logistics, product quality and value addition. **Social:** local/regional markets and producer–consumer transparency. **Governance:** quality schemes, monitoring/transparency and supply-chain coordination.
Note: The statement on relevant evidence refers only to the evidence presented in Chapter 3 of the CSPs and does not necessarily correspond to the sectors for which each country offers CAP interventions under Chapter 5. For a detailed overview of sectoral intervention coverage by country, please refer to the database provided in Appendix D.			

B.4 – Full Classification Matrix with Rationales

CSP	Assessment by sustainability dimension					Overall consideration
	Environmental sustainability	Economic viability	Social equity	Governance	Resilience	
	Extent; Justification	Extent; Justification	Extent; Justification	Extent; Justification	Extent; Justification	Extent; Justification
Belgium-Flanders	Partially addressed; Environmental content is concentrated in a single sector (fruit and vegetables) – energy-efficient refrigeration, energy savings and by-product/emissions research — without reinforcement elsewhere in the CSP.	Clearly addressed; Value addition, market diversification, export support and a rural-employment reference are evidenced in fruit and vegetables and sugar beet, reinforced by risk-management provisions supporting market resilience.	Partially addressed; Cooperative structures recur in fruit and vegetables and sugar beet; a working-conditions reference in fruit and vegetables is the only extension beyond the producer-organisation baseline.	Partially addressed; EIP-AGRI operational groups and digital marketing tools are evidenced in fruit and vegetables and sugar beet, without extension to a third location.	Clearly addressed; Risk-management provisions combine collective storage, mutual-fund support and market-diversification aims, evidencing several distinct resilience pathways confined to market and economic disruption.	Broad sustainability consideration; Post-harvest sustainability is addressed across all five dimensions, clearly for *economic viability* and *resilience* and partially for *environmental sustainability*, *social equity* and *governance*.
Belgium-Wallonia	Partially addressed; Content is confined to a marginal conditionality reference on quality schemes with a positive impact on natural resources, without specifying a post-harvest stage or mechanism, reinforced only by a single sector-level action in fruit and vegetables whose environmental aim is not explicitly stated, without extension elsewhere in the CSP.	Clearly addressed; Value addition and market-position pathways are evidenced in fruit and vegetables and protein crops (regional branding), reinforced by storage- and coordination-based risk-management provisions.	Partially addressed; Producer-consumer linkages and territorial branding are evidenced in the protein crops intervention, alongside quality-scheme content in fruit and vegetables.	Clearly addressed; Traceability and certification content in fruit and vegetables is reinforced by relational coordination in protein crops and explicit coordination in risk management.	Clearly addressed; Private storage, sectoral crisis-support flexibility and derogations enabling coordinated production decisions jointly evidence several resilience pathways addressing market disruption.	Broad sustainability consideration; Post-harvest sustainability is addressed across all five dimensions, clearly for *economic viability*, *governance* and *resilience*, and partially for *environmental sustainability* and *social equity*.

CSP	Assessment by sustainability dimension					Overall consideration
	Environmental sustainability	Economic viability	Social equity	Governance	Resilience	
	Extent; Justification	Extent; Justification	Extent; Justification	Extent; Justification	Extent; Justification	Extent; Justification
Bulgaria	Partially addressed; Environmental content is confined to the wine sector (ecological facilities, by-product treatment), without extension to other reported sectors.	Partially addressed; Economic content is limited to the fruit and vegetables and wine sectors, without reinforcement through risk-management provisions.	Partially addressed; Short-supply-chain content in fruit and vegetables and wine-tourism-based territorial branding extend modestly beyond the cooperative-structures baseline.	Partially addressed; Certification and knowledge-exchange content is confined to the wine sector, without extension to other reported sectors.	Not addressed; No post-harvest-relevant risk-management provisions are reported; the sole related reference, short supply chains in fruit and vegetables, is isolated and unreinforced.	Broad sustainability consideration; Post-harvest sustainability is addressed across four of the five dimensions, uniformly at a partial level, without reaching clearly addressed in any dimension and without a resilience pathway.
Germany	Clearly addressed; Environmental and climate content is articulated at strategic level (National Bioeconomy Strategy, Chapter 3.1.4) and reinforced at sector level in fruit and vegetables and wine.	Clearly addressed; Value addition, cost optimisation and competitiveness pathways recur across fruit and vegetables, wine and hops, reinforced by risk-management provisions strengthening market position.	Partially addressed; Producer-consumer linkages and quality-scheme content recur in fruit and vegetables and hops, without extension to a targeted-inclusion pathway.	Clearly addressed; Certification content recurs in fruit and vegetables and hops, reinforced by institutional capacity-building (producer-group creation) within risk management.	Partially addressed; Risk management is explicitly framed around strengthening farms' position in the food chain, reinforced by indirect producer-group creation, without extension to storage or mutual-fund pathways.	Broad sustainability consideration; Post-harvest sustainability is addressed across all five dimensions, clearly for *environmental sustainability*, *economic viability* and *governance*, and partially for *social equity* and *resilience*.

CSP	Assessment by sustainability dimension					Overall consideration
	Environmental sustainability	Economic viability	Social equity	Governance	Resilience	
	Extent; Justification	Extent; Justification	Extent; Justification	Extent; Justification	Extent; Justification	Extent; Justification
Italy	Clearly addressed; Environmental content spans multiple sectors (fruit and vegetables, wine, olive oil, cereals, potato), evidencing circular economy, by-product valorisation and waste-reduction pathways consistently.	Clearly addressed; *Economic viability* is the most extensively evidenced dimension in the Italian CSP, spanning value addition, short supply chains, quality certification and market access across the great majority of reported sectors.	Clearly addressed; *Social equity* content extends across the great majority of reported sectors, engaging cooperative structures, access to quality schemes, producer-consumer linkages and, in olive oil, advisory services.	Clearly addressed; *Governance* content extends across the great majority of reported sectors, evidencing certification, traceability, coordination and, distinctively, digital/telematic tools and advisory services.	Clearly addressed; Mutual-fund and insurance mechanisms under risk management are reinforced by extensive diversification (short supply chains, direct sales, online marketing channels) across sector-related interventions.	Broad sustainability consideration; Post-harvest sustainability is clearly addressed across all five dimensions, the sole CSP unit in the sample to achieve a uniformly clearly addressed profile across the full analytical framework.
Portugal	Clearly addressed; Circular bio-economy framing of waste management in fruit and vegetables is reinforced by by-product distillation and explicit sustainability support in wine; the CSP's agro-industry energy-efficiency narrative under Chapter 3.1.4 is not counted, as it addresses agro-industry generally rather than food systems specifically.	Clearly addressed; Market access and value addition pathways recur across fruit and vegetables and wine, reinforced by risk-management provisions framing diversification as an income-protection strategy.	Partially addressed; Access to quality schemes is evidenced in fruit and vegetables, reinforced by collaborative risk-sharing provisions, without extension to an explicit target-group content.	Partially addressed; Traceability, certification and monitoring content in fruit and vegetables is reinforced by advisory services and knowledge exchange within risk management.	Clearly addressed; Risk management combines farm diversification through processing and marketing with knowledge-related measures and fruit and vegetable mutual funds, evidencing several resilience pathways.	Broad sustainability consideration; Post-harvest sustainability is addressed across all five dimensions, clearly for *environmental sustainability*, *economic viability* and *resilience*, and partially for *social equity* and *governance*.

CSP	Assessment by sustainability dimension					Overall consideration
	Environmental sustainability	Economic viability	Social equity	Governance	Resilience	
	Extent; Justification	Extent; Justification	Extent; Justification	Extent; Justification	Extent; Justification	Extent; Justification
Romania	Clearly addressed; Sustainable transport and storage in fruit and vegetables is reinforced by energy-efficient technologies and waste-reduction investment in wine; the CSP's Chapter 3.1.4 narrative on waste valorisation and bioeconomy is not counted, as it addresses the circular economy and climate architecture generally rather than food systems specifically.	Clearly addressed; Value addition, market access and income-related pathways are evidenced across fruit and vegetables, wine and hops, reinforced by advisory- and producer-organisation-based risk management.	Partially addressed; Content extends modestly beyond the cooperative-structures baseline through territorial food systems, producer-consumer linkages and quality-scheme access in wine, alongside a producer-consumer-linkages reference in fruit and vegetables, without reaching a breadth of pathways (e.g., as evidenced in Italy).	Clearly addressed; Certification and traceability content in fruit and vegetables and wine is reinforced by explicit advisory-service provisions within risk management.	Clearly addressed; Market withdrawals, training and advisory services, and producer-organisation-based risk-management measures jointly evidence several resilience pathways.	Broad sustainability consideration; Post-harvest sustainability is addressed across all five dimensions, clearly for *environmental sustainability*, *economic viability*, *governance* and *resilience*, and partially for *social equity*.
Spain	Partially addressed; Environmental content is concentrated in the wine sector (waste recovery, energy efficiency), with only a marginal, non-specific reference in fruit and vegetables.	Clearly addressed; Competitiveness and export-market pathways are strongly evidenced in wine and olive oil, reinforced by the most extensive risk-management provisions in the sample.	Partially addressed; Traditional olive groves are explicitly targeted, evidencing the inclusion of smallholder-associated producers, alongside a modest producer-consumer reference in fruit and vegetables.	Partially addressed; Advisory-services content in olive oil is reinforced by monitoring and knowledge exchange in risk management, without extension to certification or traceability in the main fruit and vegetables sector.	Clearly addressed; The most extensive risk-management provisions in the sample combine mutual funds, collective storage and processing, market withdrawal, and compliance with third-country sanitary requirements.	Broad sustainability consideration; Post-harvest sustainability is addressed across all five dimensions, clearly for *economic viability* and *resilience*, and partially for *environmental sustainability*, *social equity* and *governance*.

CSP	Assessment by sustainability dimension					Overall consideration
	Environmental sustainability	Economic viability	Social equity	Governance	Resilience	
	Extent; Justification	Extent; Justification	Extent; Justification	Extent; Justification	Extent; Justification	**Extent; Justification**
Sweden	Partially addressed; The sole environmental reference occurs within conditionality (Chapter 3.1.1), linking climate action to producer-organisation energy measures, but is not reinforced at sector-intervention level.	Partially addressed; The sole economic reference is confined to a single fruit and vegetables intervention on strengthened producer-organisation cooperation.	Not addressed; *Social equity* content is confined to a single, undifferentiated producer-organisation-cooperation reference in fruit and vegetables, without reinforcement through risk management.	Not addressed; *Governance* content is confined to the producer-organisation baseline in fruit and vegetables, without extension to further institutional pathways.	Not addressed; No post-harvest-relevant risk-management provisions are reported, and no diversification or collective-infrastructure pathway is evidenced elsewhere in the CSP.	Partial sustainability consideration; Post-harvest sustainability is addressed across only two of the five dimensions, both partially (*environmental sustainability*, *economic viability*), with *social equity*, *governance* and *resilience* not addressed — the weakest profile in the sample.

B.5 – General Non-Eligible Investments Relevant to Post-Harvest Systems

CSP	General exclusion identified	Post-harvest stage(s) potentially affected	Nature of restriction / qualification
Belgium-Flanders	None identified	–	No relevant general exclusion identified in Chapter 4.7.1 reviewed. Intervention-specific eligibility conditions may nevertheless apply elsewhere.
Belgium-Wallonia	None identified	–	No relevant general exclusion identified in Chapter 4.7.1 reviewed. Intervention-specific eligibility conditions may nevertheless apply elsewhere.
Bulgaria	Retail costs; HACCP-certification costs; vehicle purchases	*Retail and marketing*; packaging/traceability; *distribution and market organisation*	Exclusions operate as a conditional default: eligibility may be reopened where a specific intervention explicitly provides for the respective activity or cost.
Germany	None identified	–	No relevant general exclusion identified in Chapter 4.7.1 reviewed. Intervention-specific eligibility conditions may nevertheless apply elsewhere.
Italy	None identified	–	No relevant general exclusion identified in Chapter 4.7.1 reviewed. Intervention-specific eligibility conditions may nevertheless apply elsewhere.
Portugal	Intangible promotional assets, including brand promotion and advertising messages	*Retail and marketing*	Narrow general exclusion focused on intangible promotional expenditure; other marketing-related investments are not covered by this exclusion.
Romania	Collection or transport costs; storage costs; packaging costs	*Distribution and market organisation*; *storage and preservation*; *packaging and traceability*	General exclusions are recorded without equivalent carve-outs in the section reviewed; packaging is explicitly included even where associated with new processes.
Spain	None identified	–	No relevant general exclusion identified in Chapter 4.7.1 reviewed. Intervention-specific eligibility conditions may nevertheless apply elsewhere.
Sweden	None identified	–	No relevant general exclusion identified in Chapter 4.7.1 reviewed. Intervention-specific eligibility conditions may nevertheless apply elsewhere.

B.6 – Coordination with Other EU Funds

CSP	Post-harvest-relevant area(s) identified	Other fund / instrument	Coordination arrangement identified	Overall characterisation
Belgium-Flanders	Processing and marketing; circular-economy investment and related activities	ERDF; Recovery and Resilience funding	Direct overlap between processing/marketing support and CAP investment is managed through exchange of selected-project and payment-claim information. Circular-economy support includes a named case-level double-financing check through the relevant coordination structure.	Concrete coordination / safeguards
Belgium-Wallonia	Agri-food SME support; circular economy	ERDF and other regional/EU programming	Sectoral demarcation assigns agri-food SMEs primarily to CAP support and other SMEs to ERDF. The CSP explicitly notes that the EAFRD contains no dedicated circular-economy measure, with possible support limited to ad hoc routes such as LEADER.	Demarcation / acknowledged coverage gap
Bulgaria	Fruit-and-vegetable preparation, marketing and storage infrastructure; digitalisation; waste management; sustainable agriculture	National Recovery and Resilience Plan; national/environmental programmes and related Union-supported instruments	Preparation, marketing and storage centres are explicitly assigned to the Recovery and Resilience Plan rather than to a dedicated CSP intervention. Digital support and waste-management responsibilities are also explicitly separated between CAP and other instruments.	Explicit demarcation / alternative funding allocation
Germany	Processing and marketing competitiveness; business support; circular-economy-related innovation	ERDF; Horizon Europe	Coordination is primarily framed through boundary-setting and mutual exclusion between funding scopes. Horizon Europe is mentioned in relation to broader circular-economy synergies.	Clear demarcation, with some general complementarity
Italy	Agri-food value creation; local development; knowledge and innovation; agri-food logistics; supply-chain and district investment	ERDF; ESF+; National Recovery and Resilience Plan/ Recovery Plan instruments	Multiple thematic links connect complementary funding to CAP objectives. Recovery-funded logistics and supply-chain/district investments are explicitly distinguished from, but aligned with, the CSP strategy, including direct links to SO3.	Detailed and systematic coordination

CSP	Post-harvest-relevant area(s) identified	Other fund / instrument	Coordination arrangement identified	Overall characterisation
Portugal	Trade-balance-related support; agricultural innovation network	Cohesion Policy Funds	Relevant activities are described as complementary to CAP support and subject to avoidance of double financing, but no detailed administrative coordination mechanism is specified.	General complementarity
Romania	Processing infrastructure; energy efficiency; circular economy; food-industry SME investment	National operational programmes and other complementary Union-supported programmes; LIFE	External programmes are explicitly linked to investment in processing units, energy efficiency and circular-economy activities, providing comparatively granular evidence of non-CAP co-investment.	Detailed external-fund coordination
Spain	Coordination between rural-development and agricultural-guarantee support	EAGF	The relevant entry principally addresses coordination between two CAP funds rather than between EAFRD and an external Union fund. No substantive post-harvest-relevant external-fund coordination was identified in the section reviewed.	Predominantly intra-CAP coordination / scope mismatch
Sweden	National food-strategy-related activity	Regional Fund programmes	The CSP makes a general reference to shared relevance between the national Food Strategy and regional funding but does not specify a particular post-harvest stage or concrete coordination mechanism.	General / unspecific coordination

B.7 – Rationale for Overall Strategic-Integration Classifications

CSP	Overall classification	Rationale
Belgium-Flanders	**Moderate**	Post-harvest considerations are substantively present in the strategic framing, SWOT/needs architecture and sector-related provisions, but depth remains uneven and the environmental dimension is less developed than the economic and market-oriented core. Concrete EU-fund coordination strengthens the profile without changing its overall moderate character.
Belgium-Wallonia	**Moderate-to-Substantial**	Particularly strong diagnostic grounding and SWOT-to-needs translation are combined with moderately developed sector-related provisions. The overall profile is moderated by a less explicit Chapter 1 framing and by identified limits in external-fund coverage, including the acknowledged circular-economy gap.
Bulgaria	**Moderate**	Strategic framing, diagnosis and sector-related provisions contain substantive post-harvest content, particularly around value-chain position, quality schemes and wine, but engagement remains incomplete across objectives. Explicit external-fund demarcation strengthens the profile, while conditional general exclusions qualify the formal support scope.
Germany	**Moderate**	A relatively general Chapter 1 vision is followed by more substantive, though uneven, content in later chapters. Stronger sector-related provisions compensate for limited initial strategic visibility, while fund coordination remains comparatively moderate and less developed.
Italy	**Substantial**	Explicit strategic framing, extensive diagnostic grounding, strong needs translation, broad sector-related provisions and detailed coordination with complementary funds are mutually reinforcing. No relevant general eligibility constraint was identified in the section reviewed.
Portugal	**Moderate**	The CSP contains one of the strongest diagnostic evidence bases, but this is followed by comparatively diffuse needs prioritisation and only moderate sector-related strategic content. Fund coordination remains comparatively generic, and a narrow promotional exclusion is recorded.
Romania	**Moderate-to-Substantial**	An explicit strategic vision, strong sector-related content and detailed fund coordination support a relatively high integration profile. This is qualified by uneven needs translation and comparatively broad general eligibility constraints affecting several post-harvest cost categories.
Spain	**Moderate**	The Chapter 1 vision is relatively general, but stronger SO3 diagnosis and subsequent strategic responses demonstrate substantive post-harvest engagement. The profile is moderated by uneven treatment outside SO3 and limited substantive coordination with external EU funds.
Sweden	**Limited**	Post-harvest considerations remain limited across strategic framing, diagnosis/needs and sector-related provisions, while fund coordination is general and unspecific. The absence of identified general exclusions does not compensate for limited positive evidence of strategic integration elsewhere in the CSP.

Appendix C. Supplementary Material for the Analysis of Operational Support for Post-Harvest Systems

C.1 – EU-Level Classification of CAP Intervention Types

Instrument / Intervention	Article in Regulation (EU) 2021/2115	Post-Harvest Relevance	Legal rationale and statutory function
I. DIRECT PAYMENTS			
BISS – Basic income support for sustainability	Article 21(1)–(3)	**D. NO – STRUCTURALLY EXCLUDED**	This is an income-support instrument paid annually per eligible hectare to active farmers. Its statutory function is to provide a decoupled income floor, irrespective of the product obtained or the subsequent handling, storage, processing or marketing of that product. Because eligibility and payment are land-based and no post-harvest operation can be financed through this type, it is structurally excluded.
Payments for small farmers	Article 28(1)–(4)	**D. NO – STRUCTURALLY EXCLUDED**	This optional simplified direct-payment intervention replaces other direct payments through a lump sum or amounts per hectare, subject to an annual ceiling per farmer. Its function is administrative simplification and income support for small farmers, not the financing of operations or value-chain arrangements. It therefore contains no legally identifiable route to handling, storage, processing, traceability, marketing or other post-harvest activity.
CRISS – Complementary redistributive income support for sustainability	Article 29(1)–(3)	**D. NO – STRUCTURALLY EXCLUDED**	CRISS redistributes income support from larger to smaller or medium-sized holdings through an annual decoupled payment per eligible hectare, available to farmers entitled to BISS. Its statutory function is distributive income support within the farm sector. The hectare-based top-up neither finances an operation nor establishes a legal connection to the treatment, organisation or marketing of products after primary production.
CIS-YF – Complementary income support for young farmers	Article 30(1)–(3)	**D. NO – STRUCTURALLY EXCLUDED**	CIS-YF is a temporary complementary income payment for young farmers newly established for the first time and entitled to BISS. Whether paid per eligible hectare or as a lump sum under the conditions selected by the Member State, its legal function is generational renewal through income support. It does not fund investments, services or arrangements concerning products after harvest or primary production.
Eco-schemes – Schemes for the climate, the environment and animal welfare	Article 31(1)–(7)	**D. NO – STRUCTURALLY EXCLUDED**	Eco-schemes remunerate active farmers for agricultural practices beneficial to climate, environment, animal welfare or antimicrobial-resistance objectives. The listed action areas concern land, farming practices, natural resources, biodiversity, pesticides and animal welfare; support is delivered as annual payments linked to eligible hectares or, under specified derogations, livestock units or beehives. Their legal design does not extend to storage, processing, packaging, distribution or other post-harvest operations.
CIS – Coupled income support	Articles 32(1)–(3), 33 and 34	**D. NO – STRUCTURALLY EXCLUDED**	Coupled income support is an annual payment per hectare or animal for specified sectors and productions facing competitiveness, sustainability or quality difficulties. Its statutory function is to sustain production or specific types of farming, and eligibility remains anchored to eligible hectares or identified animals. A possible effect on farm competitiveness or product supply does not convert this production payment into support for post-harvest operations.

Instrument / Intervention	Article in Regulation (EU) 2021/2115	Post-Harvest Relevance	Legal rationale and statutory function
I. DIRECT PAYMENTS			
CSPC – Crop-specific payment for cotton	Articles 36, 37(1)–(2) and 40	**D. NO – STRUCTURALLY EXCLUDED**	The cotton payment is a crop-specific, hectare-based production payment for cotton falling within CN code 5201 00, conditional on authorised land, varieties and actual harvest of marketable-quality cotton. Cotton is a non-food product and the intervention has no independent food-system function. It therefore falls outside the food post-harvest scope, in addition to being legally tied to primary cultivation.
II. RURAL DEVELOPMENT INTERVENTIONS			
ENVCLIM – Environmental, climate-related and other management commitments	Article 70(1)–(10)	**C. POTENTIAL / CONDITIONAL**	Article 70 primarily supports voluntary agri-environment-climate and other management commitments through compensation for additional costs and income foregone. Unlike area-constraint payments, however, it may cover other beneficiaries, units other than hectares and, in justified cases, lump sums. Its wording does not expressly target post-harvest operations, but is not exhaustively area-bound; only CSP commitments with a clear post-harvest content should be retained.
ANC – Natural or other area-specific constraints	Article 71(1)–(6)	**D. NO – STRUCTURALLY EXCLUDED**	ANC payments compensate active farmers for additional costs and income foregone arising from natural or other area-specific constraints in designated areas. They are granted annually per hectare of agricultural area. This is an area-based compensatory income function: neither the triggering disadvantage nor the eligible unit concerns the handling, storage, processing, quality management or marketing of agricultural products after primary production.
ASD – Area-specific disadvantages resulting from certain mandatory requirements	Article 72(1)–(6)	**D. NO – STRUCTURALLY EXCLUDED**	Article 72 compensates farmers, forest holders and other land managers for additional costs and income foregone caused by Natura 2000, nature-protection or Water Framework Directive requirements in delimited areas. Payments are annual and per hectare. The statutory function is compensation for land-use disadvantages created by mandatory environmental requirements, without a legal route to finance post-harvest assets, services, practices or market arrangements.
INVEST – Investments	Article 73(1)–(5)	**C. POTENTIAL / CONDITIONAL**	Article 73 supports investments in tangible and intangible assets contributing to CAP specific objectives. The provision is not confined to farm production and does not exclude storage, processing, packaging, traceability, direct-sale, logistics, digital or circular-economy assets. Because those operations are not automatically required by the EU legal basis, relevance depends on the eligible investments, beneficiaries and conditions selected in each CSP; this family must be screened.
INVEST – Investments in irrigation	Article 74(1)–(8), read with Article 73	**D. NO – STRUCTURALLY EXCLUDED**	Article 74 is a lex specialis for investments in new or existing irrigated areas and irrigation infrastructure. Its detailed conditions concern river-basin plans, water metering, water savings, reclaimed water, reservoirs and changes in irrigated area. The statutory function is water management for agricultural production. It does not authorise storage, processing or other post-harvest operations merely because irrigation may affect output or product quality.

Instrument / Intervention	Article in Regulation (EU) 2021/2115	Post-Harvest Relevance	Legal rationale and statutory function
II. RURAL DEVELOPMENT INTERVENTIONS			
INSTAL – Setting-up of young farmers and new farmers, rural business start-ups, and business development of small farms	Article 75(1)–(4)	**C. POTENTIAL / CONDITIONAL**	Article 75 provides lump sums or financial instruments for farm establishment, rural businesses linked to agriculture or forestry, farm-household diversification, LEADER-related non-agricultural start-ups and small-farm business development. This start-up and entrepreneurship function can accommodate food processing, direct marketing or other value-chain businesses, but does not require them. Inclusion therefore depends on the business categories and plans made eligible by the Member State.
RISK – Risk management tools	Article 76(1)–(7)	**C. POTENTIAL / CONDITIONAL**	Article 76 supports insurance, mutual funds and income-stabilisation tools helping active farmers manage production and income risks outside their control. Its function is farm risk governance rather than performance of a post-harvest operation. A legally sufficient post-harvest link is possible only where the CSP-defined coverage demonstrably includes losses or income risks arising from storage, product deterioration, marketing or another post-production stage; generic production-risk coverage is insufficient.
COOP – Cooperation: EIP operational groups	Article 77(1)(a), read with Article 127(3)	**B. YES – ENABLING**	Support may prepare and implement EIP operational-group projects. This is an enabling innovation and cooperation function: Article 127(3) requires interactive projects focused on practical needs and permits interactions across the whole supply chain where useful. The type is structurally capable of enabling post-harvest innovation, but only projects whose objectives and operations establish a clear connection to post-production activities should enter the substantive sample.
COOP – Cooperation: LEADER	Article 77(1)(b) and (4)	**C. POTENTIAL / CONDITIONAL**	Article 77 may support the preparation and implementation of LEADER community-led local development. Its territorially broad development function can encompass short supply chains, local processing, producer markets, logistics or food-waste initiatives, but none is inherent in the legal basis. Each CSP and, where available, the supported strategy or intervention description must therefore be screened for an explicit producer-, value-chain- or post-harvest orientation.
COOP – Cooperation: Union or national quality schemes	Article 77(1)(c) and (8)(a)	**B. YES – ENABLING**	This cooperation subtype expressly promotes and supports quality schemes recognised by the Union or Member States and their use by farmers; Article 77(8)(a) also regulates information and promotion support. Its statutory function is enabling quality governance, verification, differentiation and market access rather than carrying out processing or storage. It should be retained for CSP screening because it can organise certification and quality-linked post-harvest market relations.

Instrument / Intervention	Article in Regulation (EU) 2021/2115	Post-Harvest Relevance	Legal rationale and statutory function
II. RURAL DEVELOPMENT INTERVENTIONS			
COOP – Cooperation: producer groups, producer organisations and interbranch organisations	Article 77(1)(d) and (8)(b)	**B. YES – ENABLING**	The provision supports producer groups, producer organisations and interbranch organisations, including their establishment under the limits in Article 77(8)(b). Its function is collective organisation and value-chain governance, which can enable aggregation, market access, joint marketing, quality management and shared post-harvest infrastructure. Organisational support alone does not prove a post-harvest operation, so the CSP intervention must still show the relevant value-chain connection.
COOP – Cooperation: smart-village strategies	Article 77(1)(e)	**C. POTENTIAL / CONDITIONAL**	Smart-village cooperation has a broad place-based development function and no predetermined commodity or value-chain content. It can legally accommodate collective food logistics, processing hubs, digital market platforms, local retail arrangements or circularity projects, but it may equally concern unrelated rural services. Relevance therefore depends entirely on the objectives, operations and beneficiaries specified by the Member State; generic smart-village support is not automatically post-harvest relevant.
COOP – Cooperation: other forms of cooperation	Article 77(1)(f), (2)–(5)	**C. POTENTIAL / CONDITIONAL**	The residual cooperation category can cover new cooperative activities involving at least two actors, and Article 77 permits support for cooperation costs and, in some cases, implementation costs. That breadth can accommodate supply-chain coordination, short chains, certification, digital traceability or circularity. Since the Regulation prescribes no post-harvest subject matter, only CSP interventions with explicit eligible operations or outcomes in the defined post-harvest scope should be retained.
KNOW – Knowledge exchange and dissemination of information	Article 78(1)–(5)	**C. POTENTIAL / CONDITIONAL**	Article 78 may finance innovation, training, advice, plans, studies and other knowledge-exchange actions within AKIS and rural-business development. It is a broad capacity-building and dissemination instrument, not a post-harvest measure as such. It becomes relevant only where the CSP specifies knowledge content, target groups or advisory services addressing handling, storage, processing, quality, traceability, marketing, waste prevention or another defined post-harvest stage.
Crisis payments to farmers following natural disasters, adverse climatic events or catastrophic events	Article 78a(1)–(6)	**D. NO – STRUCTURALLY EXCLUDED**	Article 78a authorises crisis payments to active farmers after formally recognised events causing destruction of at least 30% of average annual production. Support rates compensate production loss and aim to ensure continuity of agricultural activity. The intervention is therefore a farm-level crisis-income and production-continuity instrument, not support for storage, processing, marketing or value-chain recovery; an indirect stabilising effect cannot establish post-harvest relevance.

Instrument / Intervention	Article in Regulation (EU) 2021/2115	Post-Harvest Relevance	Legal rationale and statutory function
III. SECTORAL INTERVENTIONS — FRUIT AND VEGETABLES, HOPS, OLIVE OIL AND TABLE OLIVES, AND OTHER ELIGIBLE SECTORS			
3COUN – Implementation and management of third-country sanitary and phytosanitary requirements in the Union to facilitate access to third-country markets	Article 47(2)(k)	**A. YES – DIRECT**	This intervention directly finances implementation and management of third-country sanitary and phytosanitary requirements within the Union for export-market access. Its statutory function is product compliance and market access, which can involve testing, certification, traceability, handling protocols and other post-harvest controls. It is directly relevant where applied to food products; operations concerning non-food sector products remain outside the analytical scope.
ADVI1 – Advisory services and technical assistance	Article 47(1)(b)	**C. POTENTIAL / CONDITIONAL**	The statutory function is sectoral advice and technical assistance. The provision highlights pest and disease control, plant-protection and animal-health products, climate adaptation, employment conditions and occupational safety, most of which may be production-oriented; the list is not exhaustive. It should be screened because Member States can give advice an explicit post-harvest content, but generic or solely upstream advisory services must not be retained.
CLIMA – Actions to mitigate, and to adapt to, climate change	Article 47(1)(i)	**C. POTENTIAL / CONDITIONAL**	This is a broad climate-action type within sectoral operational programmes. General climate purpose does not itself establish post-harvest relevance. The CSP intervention must identify eligible operations or outcomes at a post-production stage before it is included in the analytical sample.
COACH – Coaching for producer organisations, associations of producer organisations or individual producers	Article 47(2)(j)	**B. YES – ENABLING**	Coaching is listed among crisis-prevention and risk-management interventions and is directed to producer organisations, their associations or individual producers. Its statutory function is organisational capacity building and peer support, not a physical post-harvest operation. It is nevertheless structurally enabling for collective marketing, volume management and crisis governance; CSP-level screening must confirm that the coaching concerns a relevant post-harvest or market-organisation function.
COMM – Communication actions raising awareness and informing consumers	Article 47(2)(l)	**A. YES – DIRECT**	The Regulation expressly authorises communication actions aimed at consumer awareness and information within sectoral crisis-prevention and risk-management programming. Consumer information is a downstream connected stage under the working definition, not an autonomous CAP field. This intervention is directly relevant where the communication concerns CAP-supported food products, quality, market management or responsible use; non-food product campaigns must be excluded under category E.

Instrument / Intervention	Article in Regulation (EU) 2021/2115	Post-Harvest Relevance	Legal rationale and statutory function
III. SECTORAL INTERVENTIONS — FRUIT AND VEGETABLES, HOPS, OLIVE OIL AND TABLE OLIVES, AND OTHER ELIGIBLE SECTORS			
GREEN – Green harvesting	Article 47(2)(g)	**D. NO – STRUCTURALLY EXCLUDED**	Green harvesting consists in removing unripe, non-marketable products from a given area before normal harvest. Its statutory function is crisis prevention through production and supply adjustment, even though it influences market volumes. Because the supported act takes place before completion of primary production and does not concern handling, storage, processing, distribution or waste management of harvested food, it is structurally outside the post-harvest phase.
HARIN – Harvest and production insurance	Article 47(2)(i)	**D. NO – STRUCTURALLY EXCLUDED**	This insurance intervention safeguards producers' income against losses caused by natural disasters, adverse climatic events, disease or pests and requires risk-prevention measures. Its legal object is harvest and production risk, not deterioration or loss during storage, processing, transport or marketing. The fact that income protection may stabilise a producer organisation does not create a sufficiently identifiable post-harvest function, so the type is structurally excluded.
INVRE – Investments in tangible and intangible assets, research and experimental and innovative production methods, and other actions	Article 47(1)(a), especially points (iv), (v), (vii) and (xi)	**A. YES – DIRECT**	The investment type expressly includes energy efficiency, ecological-packaging research, emissions and waste reduction, use and valorisation of by-products, waste management and product-quality improvement. These are identifiable post-harvest operations or outcomes, although the same point also covers upstream investments. The family is therefore directly capable of post-harvest support; CSP screening must select the operations actually addressing food products and post-production stages.
INVVO – Investments making management of volumes placed on the market more efficient, including collective storage	Article 47(2)(b)	**A. YES – DIRECT**	This crisis-prevention investment type expressly concerns volumes already placed on the market and specifically includes collective storage. Its statutory function is operational market and supply management through tangible or intangible assets. Because storage and management of marketed volumes are core post-harvest activities, the type is directly relevant, subject only to confirming that the CSP operation concerns food products rather than a non-food eligible sector.
NOHAR – Non-harvesting	Article 47(2)(h)	**D. NO – STRUCTURALLY EXCLUDED**	Non-harvesting terminates the current production cycle on the area concerned while the product remains sound, fair and marketable; it expressly excludes destruction caused by climatic events or disease. The intervention manages market supply by preventing completion of harvest, not by managing harvested products. Its effects on price or availability are indirect market consequences and do not transform this production-stage measure into post-harvest support.
ORCHA – Replanting of orchards or olive groves	Article 47(2)(d)	**D. NO – STRUCTURALLY EXCLUDED**	This intervention finances replanting following mandatory grubbing-up for health or phytosanitary reasons or to adapt to climate change. Its statutory function is restoration or adaptation of productive plantings at field or orchard level. It neither operates on harvested products nor supports handling, storage, processing, quality systems or market organisation; any future effect on supply or quality is too remote to establish post-harvest relevance.

Instrument / Intervention	Article in Regulation (EU) 2021/2115	Post-Harvest Relevance	Legal rationale and statutory function
III. SECTORAL INTERVENTIONS — FRUIT AND VEGETABLES, HOPS, OLIVE OIL AND TABLE OLIVES, AND OTHER ELIGIBLE SECTORS			
ORGAN – Organic or integrated production	Article 47(1)(d)	**D. NO – STRUCTURALLY EXCLUDED**	The legal type concerns organic or integrated production as an agricultural production method within sectoral operational programmes. It regulates or supports how primary products are produced, not what happens to them after harvest. Organic labelling or market premiums that may later attach to the product do not alter the function of this specific intervention type; separate quality-scheme, certification, promotion or traceability measures cover those downstream functions.
PROMO – Promotion, communication and marketing	Article 47(1)(f)	**A. YES – DIRECT**	The Regulation expressly covers promotion, communication and marketing, including consumer awareness of Union quality schemes and healthy diets and the diversification and consolidation of markets. These are direct market-organisation and downstream communication functions connected to CAP-supported products. The type is therefore directly post-harvest relevant for food-sector operations, while retail or consumption remains relevant only as an outcome connected to producer or value-chain support.
QUAL – Implementation of Union and national quality schemes	Article 47(1)(g)	**A. YES – DIRECT**	This type directly supports implementation of Union and national quality schemes. Its statutory function is product-quality governance and market differentiation, ordinarily requiring specifications, controls, verification and communication along the value chain. These are identifiable post-harvest enabling and operational arrangements, so the intervention is directly relevant. CSP screening should nevertheless confirm that the supported scheme concerns food products and includes a sufficiently specified sustainability contribution.
RESTOCK – Restocking with livestock after compulsory slaughter or natural-disaster losses	Article 47(2)(e)	**D. NO – STRUCTURALLY EXCLUDED**	Restocking restores livestock numbers after compulsory slaughter for health reasons or losses caused by natural disasters. It is a crisis-management intervention directed at rebuilding primary-production capacity. The eligible act concerns acquisition or replacement of animals, not handling, processing, storage, marketing or by-product management after primary production. A later increase in products supplied to the market is only an indirect production effect and is legally insufficient.
SETUP – Setting-up, filling and replenishing mutual funds	Article 47(2)(a)	**B. YES – ENABLING**	The intervention supports producer organisations and their associations in establishing and financing mutual funds for sectoral crisis prevention and risk management. It does not itself carry out a post-harvest operation, but it is legally designed to enable collective risk governance around market disturbances and producer-organisation activity. It should be screened for a demonstrable connection to post-harvest market, storage, logistics or product risks rather than assumed relevant in every case.

Instrument / Intervention	Article in Regulation (EU) 2021/2115	Post-Harvest Relevance	Legal rationale and statutory function
III. SECTORAL INTERVENTIONS — FRUIT AND VEGETABLES, HOPS, OLIVE OIL AND TABLE OLIVES, AND OTHER ELIGIBLE SECTORS			
STORE – Collective storage, including collective processing needed to facilitate storage	Article 47(2)(c)	**A. YES – DIRECT**	The provision expressly supports collective storage of products produced by the producer organisation or its members and, where necessary, collective processing that facilitates storage. Both storage and ancillary processing are core post-harvest operations. The statutory function is crisis prevention and volume management through collective infrastructure or services, making the type directly relevant for food products without relying on a general CAP objective or an indirect income effect.
TRACE – Implementation of traceability and certification systems	Article 47(1)(h)	**A. YES – DIRECT**	This intervention expressly supports traceability and certification systems, particularly monitoring the quality of products sold to final consumers. Its statutory function is product identification, verification, quality assurance and information continuity across the value chain. Those arrangements are directly within the post-harvest scope and can support packaging, labelling, market access and consumer confidence. Food-sector applications should be retained for CSP-level sustainability assessment.
TRAINCO – Training, coaching and exchange of best practices	Article 47(1)(c)	**B. YES – ENABLING**	The type enables sectoral knowledge exchange and capacity building and expressly includes use of organised trading platforms and spot and futures commodity exchanges, alongside production-related subjects. It is therefore structurally capable of enabling post-harvest market organisation, but training is not automatically relevant. CSP-level screening must identify content on storage, processing, quality, traceability, trading, marketing or another defined post-harvest function.
TRANS – Actions increasing sustainability and efficiency of transport and storage	Article 47(1)(e)	**A. YES – DIRECT**	The Regulation expressly identifies transport and storage of products and requires actions to improve their sustainability and efficiency. These are direct post-harvest logistics and preservation functions, potentially involving energy use, refrigeration, routing, handling and loss prevention. The type is therefore directly relevant where applied to food products. No separate inference from general environmental objectives is needed because the operational connection appears in the statutory wording itself.
WITHD – Market withdrawal for free distribution or other destinations	Article 47(2)(f)	**A. YES – DIRECT**	Market withdrawal operates on products removed from normal marketing channels for free distribution or other destinations and may include processing needed to facilitate withdrawal. Its statutory function is crisis and volume management after production, involving handling, processing, packaging, transport or redistribution. It is directly post-harvest relevant, particularly where it prevents food loss or supports redistribution, subject to the destination and operations specified in the CSP.

Instrument / Intervention	Article in Regulation (EU) 2021/2115	Post-Harvest Relevance	Legal rationale and statutory function
IV. SECTORAL INTERVENTIONS — WINE			
RESTRVINEY – Restructuring and conversion of vineyards	Article 58(1)(a)	**D. NO – STRUCTURALLY EXCLUDED**	This type covers varietal conversion, vineyard relocation, replanting after mandatory grubbing-up and improvements to vineyard-management techniques. Its statutory function is structural adaptation of grape production and vineyard cultivation. Although it may improve future wine quality, climate resilience or market fit, all supported operations precede harvest and concern the productive vineyard. It therefore cannot be classified as post-harvest support.
INVWINE – Investments in winegrowing systems, processing facilities, winery infrastructure, and marketing structures and tools	Article 58(1)(b)	**A. YES – DIRECT**	The wine investment type expressly covers processing facilities, winery infrastructure and marketing structures and tools, including wine-tourism marketing, alongside winegrowing assets. Processing, storage-capable winery infrastructure and marketing are direct post-harvest functions. The type is therefore directly relevant, but CSP-level screening must distinguish downstream investments from vineyard-only assets and must identify the sustainability contribution of the selected operation.
GREENWINE – Green harvesting in the wine sector	Article 58(1)(c)	**D. NO – STRUCTURALLY EXCLUDED**	Wine green harvesting is the total destruction or removal of grape bunches while immature, reducing the yield of the relevant area to zero. It is a pre-harvest supply-control and crisis-prevention measure undertaken in the vineyard. Its market-balancing purpose does not alter the stage at which it operates, and it provides no legal support for handling, winemaking, storage, distribution or management of harvested grapes.
HARINWINE – Harvest insurance in the wine sector	Article 58(1)(d)	**D. NO – STRUCTURALLY EXCLUDED**	Wine harvest insurance protects against income losses caused by climatic events, animals, plant diseases or pests. Its statutory function is insurance of harvest and production income, reinforced by the specific financing rules in Article 59(5). It does not cover a legally identified post-harvest operation or product risk. The intervention is therefore excluded notwithstanding its contribution to the financial resilience of wine producers.
INOVWINE – Investments in innovation in wine products, processes and technologies	Article 58(1)(e)	**A. YES – DIRECT**	This intervention expressly supports innovative wine products, products and by-products of winemaking, innovative processes and technologies, digitalisation, and other investments adding value at any stage of the supply chain. Its statutory function directly encompasses processing, by-product valorisation, quality and digital innovation after grape production. It is therefore directly relevant, although individual CSP operations must still be screened for food-chain content and sustainability contribution.
ADVWINE – Advisory services in the wine sector	Article 58(1)(f)	**B. YES – ENABLING**	Wine advisory services expressly include direct sales, environmental sustainability and diversification from wine production, in addition to employment and occupational-safety matters. The intervention enables knowledge, capacity and market access rather than itself performing processing or marketing. Because direct sales create an identifiable downstream connection, the type is enablingly relevant; CSP screening should retain only advice that concerns post-harvest or value-chain functions.

Instrument / Intervention	Article in Regulation (EU) 2021/2115	Post-Harvest Relevance	Legal rationale and statutory function
IV. SECTORAL INTERVENTIONS — WINE			
DISTIL – Distillation of by-products of winemaking	Article 58(1)(g), read with Article 60(3)	**A. YES – DIRECT**	The intervention directly supports collection and distillation of winemaking by-products into alcohol for industrial or energy use. Although the resulting alcohol is non-food, the measure has an independent food-system circularity function: it manages residues generated by wine processing, protects wine quality and reduces environmental burdens. It therefore falls within the working definition's management and valorisation of post-harvest residues and by-products.
INFOR – Information actions concerning Union wines in Member States	Article 58(1)(h)	**A. YES – DIRECT**	The statutory type expressly supports information actions encouraging responsible wine consumption or promoting Union quality schemes for designations of origin and geographical indications. These are downstream connected consumer-information and quality-market functions tied to CAP-supported wine products. The intervention is directly relevant under the project definition, while consumption itself remains an outcome of producer- and value-chain-oriented information rather than an autonomous CAP policy field.
ACTREPUT – Actions enhancing the reputation of Union vineyards through wine tourism	Article 58(1)(i)	**A. YES – DIRECT**	This intervention supports recognised sectoral organisations and other eligible professional bodies in promoting wine tourism in production regions. Its statutory function is product and territorial reputation, marketing and producer-level diversification connected to Union wine. These are direct downstream market and promotion activities. The updated provision is broader than actions by interbranch organisations alone and should be screened for the concrete supported marketing and sustainability content.
ACTMKTKNOW – Actions by recognised wine-sector interbranch organisations improving market knowledge	Article 58(1)(j)	**B. YES – ENABLING**	The provision enables recognised interbranch organisations to improve wine-market knowledge. Its statutory function is market intelligence and coordination rather than a physical post-harvest operation. It is enablingly relevant because better information can support placement, distribution, demand planning and crisis resilience across the wine value chain. CSP screening should confirm that the action concerns market organisation or post-harvest decision-making rather than generic sectoral research.
PROMOWINE – Promotion and communication in third countries	Article 58(1)(k)(i)–(vi)	**A. YES – DIRECT**	The intervention expressly covers public relations, advertising, fairs, quality-scheme campaigns, market studies, evaluation and technical files needed for third-country market access, including laboratory, oenological, phytosanitary and hygiene requirements. These are direct promotion, compliance and export-market functions after production. The type is therefore directly post-harvest relevant for eligible wines, subject to the statutory product and duration conditions and CSP-level sustainability assessment.

Instrument / Intervention	Article in Regulation (EU) 2021/2115	Post-Harvest Relevance	Legal rationale and statutory function
IV. SECTORAL INTERVENTIONS — WINE			
Temporary and degressive assistance for administrative costs of setting up mutual funds	Article 58(1)(l)	**B. YES – ENABLING**	This wine-sector type supports the administrative establishment of mutual funds and thus performs an enabling risk-governance function. It does not finance winemaking, storage or marketing directly, but can organise collective resilience against market fluctuations, an express wine-sector objective under Article 57(k). It should be retained for CSP screening only where the fund or supported arrangement has a sufficiently clear connection to post-harvest market or value-chain risks.
INVWINESUST – Investments enhancing the sustainability of wine production	Article 58(1)(m)(i)–(vii)	**A. YES – DIRECT**	The listed investments mainly address production sustainability, but point (vii) expressly covers reducing waste production and improving waste management. That statutory wording supplies a direct post-harvest circularity route, while other subpoints may remain vineyard-focused. The type is therefore directly capable of post-harvest support; only operations concerning processing waste, residues or other post-production functions should be retained rather than the whole category automatically.
Monitoring, diagnostic, training, communication and research actions preventing specified vine pests	Article 58(1)(n)	**D. NO – STRUCTURALLY EXCLUDED**	The newly listed intervention coordinates monitoring, diagnostics, training, communication and research to prevent the spread of specified plant pests. Despite using enabling instruments, its legally defined object is phytosanitary protection of vines and grape production. The statutory function remains upstream plant-health management; no independent connection to handling, processing, storage, marketing or wine-product quality management after harvest is established by the provision.
Permanent grubbing-up of productive vineyards	Article 58(1)(o)	**D. NO – STRUCTURALLY EXCLUDED**	The newly listed intervention consists in complete elimination of vine stocks on the relevant area, with restrictions on future planting authorisations. Its statutory function is structural reduction of productive vineyard capacity and market-supply adjustment. The supported operation occurs entirely at production-asset level and does not concern grapes or wine after harvest. Market-balancing effects alone are insufficient to create post-harvest relevance.
V. SECTORAL INTERVENTIONS — APICULTURE			
ADVIBEES – Advisory services, technical assistance, training, information and exchange of best practices	Article 55(1)(a)	**C. POTENTIAL / CONDITIONAL**	This broad apiculture intervention supports knowledge and capacity for beekeepers and their organisations, including networking. The legal wording does not specify whether the content concerns hive management, honey handling, product safety, processing, quality or marketing. It is therefore not automatically post-harvest relevant, but must be screened because Member States may lawfully orient the advice or training towards apiculture-product handling, quality management or market access.

Instrument / Intervention	Article in Regulation (EU) 2021/2115	Post-Harvest Relevance	Legal rationale and statutory function
V. SECTORAL INTERVENTIONS — APICULTURE			
INVAPI – Investments in tangible and intangible assets and other actions	Article 55(1)(b)(i)–(iv)	**C. POTENTIAL / CONDITIONAL**	Article 55(1)(b) authorises apiculture investments and other actions, while expressly illustrating hive diseases, climate damage, restocking and transhumance. The non-exhaustive investment wording is broad enough to accommodate equipment or systems for handling, extraction, storage or digital management of apiculture products, but none is required by the EU provision. Relevance depends on the eligible assets and operations specified by the Member State.
ACTLAB – Support for laboratories analysing apiculture products, bee losses, productivity drops and toxic substances	Article 55(1)(c)	**A. YES – DIRECT**	The intervention expressly supports laboratory analysis of apiculture products, alongside analyses concerning bee losses, productivity and toxic substances. Product testing is a direct quality, safety and certification-support function following primary production and can enable traceability and market access. The type is therefore directly capable of post-harvest support, although CSP screening should distinguish product-analysis operations from activities concerned solely with bee health or production losses.
PRESBEEHIVES – Actions preserving or increasing the number of beehives, including bee breeding	Article 55(1)(d)	**D. NO – STRUCTURALLY EXCLUDED**	This intervention preserves or increases the number of beehives and expressly includes bee breeding. Its statutory function is maintenance or expansion of primary apiculture production capacity, measured through colonies and breeding activity. It does not concern honey or other apiculture products after primary production and contains no route to handling, storage, processing, packaging, certification or marketing. It is therefore structurally excluded.
COOPAPI – Cooperation with specialised bodies for research programmes in beekeeping and apiculture products	Article 55(1)(e)	**B. YES – ENABLING**	The legal type supports cooperation with specialised bodies for research programmes covering both beekeeping and apiculture products. Research does not itself perform a post-harvest operation, but the express reference to products makes innovation on product quality, handling, processing, preservation or traceability legally possible. It is therefore enablingly relevant, subject to CSP-level confirmation that the supported research concerns a defined post-harvest function rather than hive production alone.
PROMOBEES – Promotion, communication, marketing and market monitoring	Article 55(1)(f)	**A. YES – DIRECT**	This intervention expressly covers promotion, communication, marketing and market monitoring, with particular attention to consumer awareness of apiculture-product quality. These are direct market-organisation, product-information and downstream promotion functions connected to food products such as honey. It is therefore directly post-harvest relevant. Individual CSP operations should still be tested for sustainability contribution and excluded where they concern non-food apiculture outputs without an independent food-system function.

Instrument / Intervention	Article in Regulation (EU) 2021/2115	Post-Harvest Relevance	Legal rationale and statutory function
V. SECTORAL INTERVENTIONS — APICULTURE			
ACTQUAL – Actions enhancing apiculture-product quality	Article 55(1)(g)	**A. YES – DIRECT**	The statutory object is enhancement of apiculture-product quality. This directly encompasses product-quality management after primary production and can support handling, testing, preservation, grading, certification or other operations specified by the Member State. Because the product-level connection is explicit, the type is directly post-harvest relevant. CSP-level analysis should identify the actual quality operation and verify that it concerns food products and a recognised sustainability dimension.

C.2 – Number of Interventions by Intervention Type and CSP

Type of Intervention Code	Belgium-Flanders	Belgium-Wallonia	Bulgaria	Germany	Italy	Portugal	Romania	Spain	Sweden	Total per type
3COUN	1	0	0	0	1	0	0	1	0	**3**
ACTLAB	1	1	1	1	0	1	1	1	1	**8**
ACTQUAL	0	1	0	0	0	0	0	1	1	**3**
ACTREPUT	0	0	0	0	0	0	1	0	0	**1**
ADVI1	0	1	0	0	3	1	0	0	2	**7**
ADVIBEES	0	0	1	0	0	0	0	1	0	**2**
CLIMA	0	1	0	0	0	0	0	1	1	**3**
COACH	0	0	1	0	3	0	0	1	0	**5**
COMM	1	1	0	0	3	0	1	1	0	**7**
COOP	2	2	5	1	4	8	2	5	1	**30**
COOPAPI	0	0	1	0	0	0	0	1	0	**2**
DISTIL	0	0	0	0	1	1	0	1	0	**3**
INFOR	0	0	1	1	1	0	1	0	0	**4**
INSTAL	0	0	0	0	1	0	0	0	0	**1**
INVAPI	0	0	1	1	0	1	2	0	0	**5**
INVEST	4	2	4	2	14	5	9	3	3	**46**
INVRE	26	1	4	1	3	4	1	1	6	**47**
INVVO	1	0	0	0	3	0	0	1	0	**5**
INVWINE	0	0	1	1	1	1	1	1	0	**6**
INVWINESUST	0	0	1	0	0	0	1	0	0	**2**
KNOW	0	0	2	1	0	2	1	0	1	**7**
PROMO	4	1	2	2	3	1	1	1	2	**17**
PROMOBEES	0	1	1	0	1	0	1	1	1	**6**
PROMOWINE	0	0	1	1	1	1	1	1	0	**6**
QUAL	2	1	0	1	3	1	0	1	0	**9**
STORE	0	0	0	0	0	0	0	1	0	**1**
TRACE	6	1	0	0	3	0	1	1	1	**13**
TRAINCO	1	1	0	0	3	1	0	1	2	**9**
TRANS	3	1	0	0	2	0	1	1	0	**8**
WITHD	1	0	1	0	2	1	1	1	0	**7**
Total per CSP	**53**	**16**	**28**	**13**	**56**	**29**	**27**	**29**	**22**	**273**

C.3 – Share of Interventions Addressing Each Post-Harvest Stage, by Intervention Type, across All CSPs

Type of Intervention Code	n	Handling & conditioning	Storage & preservation	Processing & transformation	Packaging & traceability	Distribution & market organisation	Retail & marketing	Consumption & use	Waste management & circularity
3COUN	3	33,3	0,0	0,0	0,0	100,0	0,0	0,0	0,0
ACTLAB	8	100,0	0,0	0,0	25,0	12,5	0,0	0,0	0,0
ACTQUAL	3	0,0	0,0	0,0	33,3	66,7	100,0	0,0	0,0
ACTREPUT	1	0,0	0,0	0,0	0,0	100,0	100,0	100,0	0,0
ADVI1	7	0,0	14,3	0,0	28,6	42,9	71,4	0,0	28,6
ADVIBEES	2	0,0	50,0	50,0	0,0	100,0	50,0	0,0	0,0
CLIMA	3	66,7	66,7	33,3	100,0	100,0	0,0	0,0	66,7
COACH	5	0,0	0,0	0,0	0,0	0,0	100,0	0,0	0,0
COMM	7	0,0	0,0	0,0	14,3	0,0	100,0	100,0	0,0
COOP	30	23,3	13,3	30,0	23,3	56,7	86,7	23,3	23,3
COOPAPI	2	0,0	0,0	0,0	0,0	100,0	0,0	0,0	0,0
DISTIL	3	0,0	0,0	0,0	0,0	0,0	0,0	0,0	100,0
INFOR	4	0,0	0,0	0,0	0,0	0,0	100,0	100,0	0,0
INSTAL	1	0,0	0,0	100,0	0,0	0,0	100,0	0,0	0,0
INVAPI	5	80,0	20,0	40,0	60,0	0,0	0,0	0,0	0,0
INVEST	46	26,1	45,7	84,8	32,6	32,6	47,8	0,0	32,6
INVRE	47	29,8	48,9	25,5	36,2	53,2	23,4	14,9	31,9
INVVO	5	0,0	60,0	40,0	40,0	100,0	0,0	0,0	0,0
INVWINE	6	33,3	66,7	100,0	66,7	33,3	83,3	0,0	33,3
INVWINESUST	2	0,0	0,0	0,0	0,0	0,0	0,0	0,0	100,0
KNOW	7	14,3	0,0	42,9	14,3	42,9	85,7	0,0	14,3
PROMO	17	5,9	11,8	5,9	35,3	82,4	82,4	58,8	11,8
PROMOBEES	6	0,0	0,0	0,0	0,0	66,7	83,3	83,3	0,0
PROMOWINE	6	0,0	0,0	0,0	0,0	100,0	100,0	33,3	0,0
QUAL	9	11,1	0,0	0,0	33,3	33,3	88,9	22,2	0,0

Type of Intervention Code	n	Handling & conditioning	Storage & preservation	Processing & transformation	Packaging & traceability	Distribution & market organisation	Retail & marketing	Consumption & use	Waste management & circularity
STORE	1	0,0	100,0	0,0	0,0	0,0	0,0	0,0	0,0
TRACE	13	23,1	7,7	7,7	69,2	15,4	76,9	0,0	7,7
TRAINCO	9	0,0	22,2	0,0	44,4	66,7	44,4	0,0	22,2
TRANS	8	12,5	100,0	12,5	37,5	75,0	0,0	0,0	0,0
WITHD	7	28,6	14,3	42,9	57,1	100,0	0,0	14,3	100,0

Note: Reported percentages should always be interpreted together with the number of interventions represented by each type (*n*). Since multiple post-harvest stages and sustainability dimensions could be assigned to the same intervention, percentages within an intervention type do not necessarily sum to 100%.

C.4 – Share of Interventions Addressing Each Sustainability Dimension, by Intervention Type, across All CSPs

Type of Intervention Code	n	Environmental sustainability	Economic viability	Social equity	Governance	Resilience
3COUN	3	0,0	100,0	0,0	100,0	0,0
ACTLAB	8	0,0	62,5	12,5	100,0	12,5
ACTQUAL	3	0,0	100,0	33,3	100,0	66,7
ACTREPUT	1	0,0	100,0	0,0	0,0	0,0
ADVI1	7	28,6	85,7	0,0	100,0	0,0
ADVIBEES	2	0,0	100,0	0,0	100,0	0,0
CLIMA	3	100,0	0,0	0,0	0,0	66,7
COACH	5	0,0	100,0	0,0	80,0	100,0
COMM	7	0,0	100,0	0,0	14,3	85,7
COOP	30	23,3	93,3	70,0	100,0	46,7
COOPAPI	2	0,0	50,0	0,0	50,0	0,0
DISTIL	3	0,0	100,0	0,0	100,0	0,0
INFOR	4	0,0	100,0	0,0	0,0	0,0
INSTAL	1	0,0	100,0	100,0	0,0	0,0
INVAPI	5	0,0	100,0	0,0	40,0	0,0
INVEST	46	63,0	91,3	39,1	54,3	56,5
INVRE	47	42,6	85,1	10,6	34,0	21,3
INVVO	5	0,0	100,0	0,0	80,0	100,0
INVWINE	6	100,0	100,0	33,3	66,7	0,0
INVWINESUST	2	100,0	0,0	0,0	0,0	0,0
KNOW	7	14,3	100,0	28,6	100,0	28,6
PROMO	17	11,8	100,0	23,5	82,4	70,6
PROMOBEES	6	0,0	100,0	33,3	100,0	83,3
PROMOWINE	6	0,0	100,0	0,0	50,0	100,0
QUAL	9	0,0	55,6	0,0	100,0	11,1
STORE	1	0,0	100,0	0,0	0,0	100,0
TRACE	13	7,7	69,2	7,7	100,0	7,7
TRAINCO	9	33,3	88,9	0,0	100,0	11,1
TRANS	8	62,5	50,0	0,0	37,5	12,5
WITHD	7	100,0	100,0	57,1	0,0	42,9

The reported percentages should always be interpreted together with the number of interventions represented by each type (*n*). Since multiple post-harvest stages and sustainability dimensions could be assigned to the same intervention, percentages within an intervention type do not necessarily sum to 100%.

C.5 – Planned Expenditure by Intervention Type and CSP for Post-harvest-related Interventions with Available Financial Data

Type of Intervention Code	Belgium-Flanders	Belgium-Wallonia	Bulgaria	Germany	Italy	Portugal	Romania	Spain	Sweden
ACTLAB	284,931.68	285,650.28	228,320.90	1,634,115.16		100,000.00	1,399,000.00	1,405,712.00	270,000.00
ACTQUAL		111,337.68						3,606,200.00	475,450.00
ACTREPUT							3,000,000.00		
ADVIBEES			89,484.19					13,050,660.00	
COOP	69,311,115.65	29,050,999.00	356,489,734.51	74,405,784.73	222,173,515.11	7,069,000.00	524,420,706.00	815,046,800.94	74,761,904.80
COOPAPI			127,826.70					2,545,373.60	
DISTIL					100,000,000.00	9,000,000.00		121,288,200.00	
INFOR			1,888,368.12	4,000,000.00	3,000,000.00		3,000,000.00		
INSTAL					7,308,333.55				
INVAPI			8,410,873.71	7,302,433.68		600,000.00	15,724,788.00		
INVEST	132,241,117.14	126,242,343.20	730,712,102.50	1,091,695,363.95	2,764,007,922.41	118,420,736.67	1,390,637,707.00	1,465,668,034.19	404,964,057.40
INVWINE			35,072,696.14	24,124,167.40	388,000,000.00	25,000,000.00	45,600,000.00	228,637,228.54	
INVWINESUST			8,274,354.00				11,104,800.00		
KNOW			40,459,503.00	150,655,007.70		800,000.00	12,070,458.00		101,594,397.10
PROMOBEES		22,333.52	196,835.00		8,378,046.00		1,107,000.00	931,500.00	720,000.00
PROMOWINE			1,851,109.68	4,000,000.00	380,000,000.00	40,600,000.00	4,400,000.00	174,033,201.83	
Total post-harvest related planned expenditure	**201,837,164.47**	**155,712,663.68**	**1,183,801,208.45**	**1,357,816,872.62**	**3,872,867,817.07**	**201,589,736.67**	**2,012,464,459.00**	**2,826,212,911.10**	**582,785,809.30**

Note: All values are expressed as Euro. The table reports planned expenditure by CSP and intervention type for those intervention types for which financial information is available in the Agri-food Data Portal. Intervention types without available financial data, including “Sectoral other interventions”, are not included. The reported total amounts therefore do not represent the full planned expenditure of each CSP.

C.6 – Share of Available Planned Expenditure by Intervention Type and CSP

	ACTLAB	ACTQUAL	ACTREPUT	ADVIBEES	COOP	COOPAPI	DISTIL	INFOR	INSTAL	INVAPI	INVEST	INVWINE	INVWINESUST	KNOW	PROMOBEES	PROMOWINE
All CSPs	0.0	0.0	0.0	0.1	17.5	0.0	1.9	0.1	0.1	0.3	66.4	6.0	0.2	2.5	0.1	4.9
Belgium-Flanders	0.1	0.0	0.0	0.0	34.3	0.0	0.0	0.0	0.0	0.0	65.5	0.0	0.0	0.0	0.0	0.0
Belgium-Wallonia	0.2	0.1	0.0	0.0	18.7	0.0	0.0	0.0	0.0	0.0	81.1	0.0	0.0	0.0	0.0	0.0
Bulgaria	0.0	0.0	0.0	0.0	30.1	0.0	0.0	0.2	0.0	0.7	61.7	3.0	0.7	3.4	0.0	0.2
Germany	0.1	0.0	0.0	0.0	5.5	0.0	0.0	0.3	0.0	0.5	80.4	1.8	0.0	11.1	0.0	0.3
Italy	0.0	0.0	0.0	0.0	5.7	0.0	2.6	0.1	0.2	0.0	71.4	10.0	0.0	0.0	0.2	9.8
Portugal	0.0	0.0	0.0	0.0	3.5	0.0	4.5	0.0	0.0	0.3	58.7	12.4	0.0	0.4	0.0	20.1
Romania	0.1	0.0	0.1	0.0	26.1	0.0	0.0	0.1	0.0	0.8	69.1	2.3	0.6	0.6	0.1	0.2
Spain	0.0	0.1	0.0	0.5	28.8	0.1	4.3	0.0	0.0	0.0	51.9	8.1	0.0	0.0	0.0	6.2
Sweden	0.0	0.1	0.0	0.0	12.8	0.0	0.0	0.0	0.0	0.0	69.5	0.0	0.0	17.4	0.1	0.0

Note: All values are expressed as percentages. The table reports the planned expenditure for each intervention type as a share of the total planned expenditure for which financial information is available in the Agri-food Data Portal within each CSP. Intervention types without available financial data, including "Sectoral other interventions", are excluded from both the numerator and the denominator. The percentages therefore refer to the available budget only and not to the full CSP budget. The "All CSPs" value shows the aggregate, budget-weighted share of each intervention type in total post-harvest-related planned expenditure across all CSPs (EUR 12.4 billion).

C.7 – Distribution of Interventions across Post-harvest Stages and Sustainability Dimensions by Cluster

Cluster	Interventions	Handling & conditioning	Storage & preservation	Processing & transformation	Packaging & traceability	Distribution & market organisation	Retail & marketing	Consumption & use	Waste management & circularity	Environmental sustainability	Economic viability	Social equity	Governance	Resilience
	Share (Count)													
1. Physical post-harvest capacity and infrastructure	43.2 (118)	28.0 (33)	51.7 (61)	52.5 (62)	37.3 (44)	44.9 (53)	32.2 (38)	5.9 (7)	27.1 (32)	50.8 (60)	87.3 (103)	21.2 (25)	45.8 (54)	36.4 (43)
2. Market access, commercialisation, and demand development	17.9 (49)	6.1 (3)	6.1 (3)	10.2 (5)	22.4 (11)	65.3 (32)	77.6 (38)	61.2 (30)	18.4 (9)	18.4 (9)	100.0 (49)	22.4 (11)	49.0 (24)	65.3 (32)
3. Quality, traceability, and compliance	13.2 (36)	36.1 (13)	2.8 (1)	2.8 (1)	41.7 (15)	30.6 (11)	58.3 (21)	5.6 (2)	2.8 (1)	2.8 (1)	69.4 (25)	8.3 (3)	100.0 (36)	13.9 (5)
4. Knowledge, cooperation, and organisational capacity	22.7 (62)	12.9 (8)	12.9 (8)	21.0 (13)	22.6 (14)	53.2 (33)	75.8 (47)	11.3 (7)	19.4 (12)	21.0 (13)	91.9 (57)	37.1 (23)	96.8 (60)	35.5 (22)
5. Environmental and circularity-specific interventions	2.9 (8)	25.0 (2)	25.0 (2)	12.5 (1)	37.5 (3)	37.5 (3)	0.0 (0)	0.0 (0)	87.5 (7)	62.5 (5)	37.5 (3)	0.0 (0)	37.5 (3)	25.0 (2)
Note: Values for post-harvest stages and sustainability dimensions are within-cluster shares, with counts in parentheses. Interventions may cover multiple stages and dimensions; therefore, shares do not sum to 100.														

C.8 – Post-harvest Stages and Sustainability Dimensions by Cluster and Intervention Type

Intervention type	Macro-intervention type	Number of interventions	Post-harvest stages	Sustainability dimensions
Physical post-harvest capacity and infrastructure				
INVAPI	Sector: Apiculture	5	*Handling and conditioning* is the narrowest recurring use. Portugal combines handling, *storage and preservation*, *processing and transformation*, and *packaging and traceability*; Germany also links handling with processing and packaging. Bulgarian and Romanian measures are narrower, with Romanian support split between primary treatment and packaging.	*Economic viability* is the main pathway: equipment can improve preparation, quality and marketability of apiculture products. *Governance* is identified in selected collectively organised designs. No specific environmental or resilience pathway is documented for the post-harvest components.
INVEST	Rural development	46	*Processing and transformation* is the common core. Sweden, Bulgaria, several Italian measures and parts of Portugal focus relatively closely on processing; German, Madeiran, Romanian and Flemish designs combine it with storage, cooling, sorting, packaging, marketing or short chains. *Waste management and circularity* is also coded in about one-third.	*Economic viability* predominates through value addition and improved outlets. Environmental measures and *governance* arrangements are each identified in over half of the interventions. *Resilience* is also common through diversification or more robust value chains (26/46); *social equity* appears in 18/46 where access or farmer benefit is explicitly supported.
INVRE	Sector: Other	47	Across the type, interventions reach all eight stages, most often *storage and preservation* and *distribution and market organisation*. Italy and Bulgaria bundle processing, logistics, sales and traceability; Flanders divides similar functions among specialised modules. Swedish and German designs are multifunctional, while several Portuguese, Spanish and Romanian variants are narrower.	*Economic viability* is prominent through value addition, quality and market access. Specific technologies establish environmental pathways such as efficient refrigeration, packaging or residue recovery. *Governance* and *resilience* arise selectively through traceability, shared assets or climate-adapted capacity; Sweden explicitly opens joint facilities and sales to smaller producers.

Intervention type	Macro-intervention type	Number of interventions	Post-harvest stages	Sustainability dimensions
INVVO	Sector: Other	5	*Distribution and market organisation* is common to all designs through management of marketed volumes and release timing. Italian potato and fruit-and-vegetable measures additionally support storage, processing, packaging, logistics equipment and software. Spanish and Flemish descriptions identify quantity management without equally specific support for those additional stages.	*Economic viability* and *resilience* are shared pathways: controlling volumes and release can stabilise prices and reduce market exposure. *Governance* is documented in Italian coordination of facilities and flows and in Flemish producer-organisation management; the Spanish description does not establish a comparable mechanism.
INVWINE	Sector: Wine	6	*Processing and transformation* occurs in every national design. Germany extends furthest into handling, storage, packaging, market organisation and marketing; Italy is more concentrated on processing and marketing. Bulgaria, Portugal and Romania add different storage and packaging functions, while Spain also supports by-product recovery.	*Economic viability* and *environmental sustainability* are common, combining winery competitiveness with specified energy, wastewater or residue measures. *Governance* appears in Bulgarian, German, Italian and Spanish collective or cooperative arrangements; Bulgarian and Italian priorities provide selective social-equity pathways. *Resilience* is not separately established.
STORE	Sector: Other	1	Only Spain is represented. *Storage and preservation* is the documented stage: producer organisations temporarily hold products during low-price periods and release them later. The national description does not specify a separate processing, logistics or marketing operation.	*Economic viability* and *resilience* follow from more favourable release prices, producer income and continuity during market disturbance. The available Spanish design does not establish a separate environmental, *governance* or social-equity contribution from the funded storage activity.

Intervention type	Macro-intervention type	Number of interventions	Post-harvest stages	Sustainability dimensions
TRANS	Sector: Other	8	*Storage and preservation* is addressed throughout, with *distribution and market organisation* also widespread. Selected Flemish, Italian and Spanish measures add *packaging and traceability*; Wallonia alone explicitly extends into handling and processing. Spain specifies cold chains, low-emission vehicles and energy-saving warehouses, while Flanders uses more specialised measures.	*Environmental sustainability* is recurrent through efficient storage and lower-emission transport. *Economic viability* and *governance* arise selectively where storage improves market concentration or collective systems coordinate logistics and traceability. *Resilience* is explicit in the Flemish climate-adaptation measure.
Market access, commercialisation, and demand development				
ACTREPUT	Sector: Wine	1	Only Romania is represented. Wine tourism connects *distribution and market organisation* with *retail and marketing* through territorial promotion, fairs and publicity. Tastings, cellar visits and introductory courses also address *consumption and use*; the described support does not finance winery operations themselves.	*Economic viability* is the documented pathway, using vineyard reputation, quality and territorial experience to improve competitiveness and stimulate demand. No distinct post-harvest pathway is established for the other four sustainability dimensions.
COMM	Sector: Other	7	All designs combine *retail and marketing* with *consumption and use* through campaigns and consumer information. Belgian measures respond to crisis-period purchasing; Romania and Spain promote fruit-and-vegetable consumption, while Italy stresses quality, nutrition, origin and seasonality. One Italian olive measure also funds QR-based labelling.	*Economic viability* occurs in all seven designs through demand or product value, while *resilience* is identified in six through demand maintenance or market recovery. The Italian potato measure lacks a distinct *resilience* pathway. *Governance* is documented only for the Italian olive measure through QR information and traceability capacity.
INFOR	Sector: Wine	4	The intervention is consumer-facing: information directed to buyers and final users links *retail and marketing* with *consumption and use*. The available comparison does not distinguish specific national variants or additional post-harvest operations.	*Economic viability* is linked to consumer awareness and demand for wine. The available comparison does not substantiate another distinct sustainability pathway for this type or a substantive country-level difference.

Intervention type	Macro-intervention type	Number of interventions	Post-harvest stages	Sustainability dimensions
INSTAL	Rural development	1	Only Italy is represented. Rural business start-up support can fund *processing and transformation* of products and *retail and marketing* through new points of sale. The measure is linked to LEADER local development strategies and covers eligible non-agricultural rural businesses.	*Economic viability* is supported through new processing and sales businesses. *Social equity* is addressed through access for rural individuals and micro and small enterprises. No further post-harvest sustainability pathway is specified for the Italian measure.
PROMO	Sector: Other	17	*Retail and marketing* and *distribution and market organisation* dominate through branding, fairs, online sales and market research; tastings or consumer messages also address *consumption and use*. German hop support reaches processing and storage, while Sweden adds sorting, storage, packaging, joint distribution and loss management.	*Economic viability* is the shared market-access rationale. *Governance* and *resilience* depend on concrete networks, digital sales, market intelligence or diversified outlets. Sweden links shared facilities and loss management to environmental performance; targeted access for smaller producers or less organised regions appears in selected Swedish, Bulgarian and Spanish designs.
PROMOBEES	Sector: Apiculture	6	The profile is downstream. Belgian market analysis concerns *distribution and market organisation*; Bulgarian and Romanian designs emphasise promotion and collective access. Italy and Spain combine market monitoring with promotion, and most designs also address *retail and marketing* and *consumption and use*.	*Economic viability* and *governance* are documented across all six through market information, demand creation and coordinated promotion. *Resilience* is identified in five designs, particularly shorter chains in Bulgaria and monitoring linked to risk management in Italy. Bulgarian and Romanian access provisions add *social equity*; Spain lacks a distinct *resilience* pathway.
PROMOWINE	Sector: Wine	6	*Distribution and market organisation* and *retail and marketing* are consistently linked through wine promotion in third-country markets. *Consumption and use* are additionally coded in two of six national interventions. The available comparison identifies this convergent market-access design without specifying those consumer-facing activities by country.	*Economic viability* and *resilience* arise through access to and diversification of third-country markets. *Governance* appears in selected coordinated-promotion designs, although the country-by-country basis is not described in the available comparison.

Intervention type	Macro-intervention type	Number of interventions	Post-harvest stages	Sustainability dimensions
WITHD	Sector: Other	7	*Distribution and market organisation* and *waste management and circularity* are common through withdrawal, redistribution and alternative uses of surplus. Bulgaria additionally spans handling, processing and packaging; Romania and Italy add some handling or packaging, Portugal processing and consumption, and Flanders storage.	*Economic viability* and *environmental sustainability* are shared through supply management, compensation and redistribution or recovery of surplus. Free distribution provides social-equity pathways in Bulgaria, Romania and Italy. *Resilience* is explicit in Bulgarian, Portuguese and Spanish crisis or price-management designs; *governance* is not separately established.
Quality, traceability, and compliance				
3COUN	Sector: Other	3	Belgium-Flanders, Italy and Spain all address *distribution and market organisation* by managing sanitary and phytosanitary requirements for third-country exports. Flanders alone explicitly adds *handling and conditioning* through product-quality checks and preventive analyses. The Italian and Spanish descriptions do not substantiate additional stages.	*Economic viability* and *governance* are shared: export access depends on testing, monitoring, authority coordination and compliance. The Spanish mention of difficult markets is treated as market access, without a separate resilience mechanism; no concrete environmental or social-equity pathway is documented.
ACTLAB	Sector: Apiculture	8	Laboratory analysis of honey and other apiculture products places the common activity in *handling and conditioning* as post-production quality control. Flanders and Bulgaria explicitly add *packaging and traceability* functions; Wallonia/Brussels links analyses to market information and organisation. Storage, processing and consumption are not directly supported.	*Governance* is common through testing and quality-information systems; *economic viability* is documented where analyses improve market placement or value. Romania explicitly links quality certification to protection from low-priced imports. *Social equity* is coded in only one of eight interventions through a specific access mechanism; testing alone does not establish an environmental pathway.

Intervention type	Macro-intervention type	Number of interventions	Post-harvest stages	Sustainability dimensions
ACTQUAL	Sector: Apiculture	3	*Retail and marketing* is common to the Belgian, Spanish and Swedish quality measures. Belgium adds quality and price monitoring and promotion; Spain stresses labels, certification, traceability and collective marketing; Sweden links product characterisation to differentiated pricing and market potential. *Distribution and market organisation* is explicit in Belgium and Sweden.	*Economic viability* and *governance* are common through product differentiation, market information and verification. *Resilience* is also coded in two of the three designs, including Spain; *social equity* is more selective in the Spanish design. None establishes a concrete environmental contribution tied to post-harvest activity.
QUAL	Sector: Other	9	*Retail and marketing* is the principal stage for schemes, certification and labels. Portugal emphasises technical traceability, Spain connects quality systems with joint marketing and handling, and German measures add consumer information and new outlets. Italian measures concentrate more closely on specifications, certification and product labels.	*Governance* is dominant through standards, audits, controls and verification. *Economic viability* appears where quality assurance supports commercial value or market access, rather than from scheme membership alone. Germany provides a selective resilience pathway through diversified outlets; no specific environmental or social-equity mechanism is established.
TRACE	Sector: Other	13	*Packaging and traceability* and *retail and marketing* form the core of certification, monitoring and labelling. Italy, Spain, Romania and Wallonia focus on one or two post-harvest stages (e.g., *retail and marketing* and packaging), while Flanders distributes support across several stages. Sweden embeds certification in sorting, storage, packaging, distribution, joint sales and post-harvest loss management.	*Governance* is central through standards, audits and digital monitoring. *Economic viability* depends on a specified route to value or market access. Sweden additionally connects shared facilities and waste management to environmental performance, adaptation and opportunities for smaller producers; such wider pathways are not established by certification alone elsewhere.

Intervention type	Macro-intervention type	Number of interventions	Post-harvest stages	Sustainability dimensions
Knowledge, cooperation, and organisational capacity				
ADVI1	Sector: Other	7	*Retail and marketing* is frequent in commercial, quality and sales advice. Italian measures also address producer-organisation mergers and market organisation; Portugal explicitly supports traceability. Swedish environmental advice covers impacts from storage and packaging and surplus or waste, while an Italian olive measure includes by-product recovery.	*Governance* occurs throughout via advice, quality systems and collective coordination. *Economic viability* is common but absent from the Swedish environmental variant. *Environmental sustainability* is explicit in that Swedish advice and Italian olive by-product work; no specific *resilience* or social-equity mechanism is documented.
ADVIBEES	Sector: Apiculture	2	*Distribution and market organisation* is addressed in both interventions through advice on sector organisation and chain communication. Bulgaria additionally specifies storage, processing and *retail and marketing*; Spain describes its market orientation in less detail. The shared advisory mechanism therefore has a broader documented post-harvest scope in Bulgaria.	*Governance* is the strongest shared dimension through organisational capacity and cooperation. Both designs also support economic capability in the apiculture chain. Environmental topics are not tied to a concrete post-harvest mechanism, and neither description establishes *social equity* or *resilience*.
COACH	Sector: Other	5	*Retail and marketing* is the only coded stage across Bulgarian, Italian and Spanish coaching: commercial models, placement, sales channels and market risks. Italy repeats a similar package across three sectors; Bulgaria adds organisation-related advice, while the Spanish fiche specifies less operational detail.	*Economic viability* and *resilience* are common through competitiveness, market-risk management and sales diversification. *Governance* is also documented in Bulgaria and Italy through organisation formation or member relations, but not separately in Spain. No environmental or social-equity pathway is specified.

Intervention type	Macro-intervention type	Number of interventions	Post-harvest stages	Sustainability dimensions
COOP	Rural development	30	*Retail and marketing* is the most frequent stage, with *distribution and market organisation* also recurrent in producer groups, local chains and joint sales. Some designs extend into processing, packaging, consumer education or residue recovery; handling and storage are less consistent. Open EIP-AGRI and LEADER descriptions can leave stages unspecified.	*Economic viability* and *governance* recur through joint marketing, cooperation and coordinated standards. *Social equity* is also frequent (21/30) through place-based inclusion or collaborative access. *Resilience* is less uniform through local or diversified chains, while environmental contributions depend on specified circular or residue activities in national designs.
COOPAPI	Sector: Apiculture	2	Research cooperation and knowledge transfer support *distribution and market organisation* indirectly: Bulgaria addresses organisation of honey and bee-product markets, while Spain refers to new techniques for product valorisation. Neither description establishes a direct storage, processing or packaging operation.	*Governance* is documented in one intervention through the Bulgarian mechanism that forms and operates beekeeper cooperation. *Economic viability* is also coded in one of the two interventions alongside market-oriented research or product valorisation. *Environmental sustainability*, *social equity* and *resilience* are not coded.
KNOW	Rural development	7	Knowledge support ranges from Sweden's integrated training in small-scale processing, packaging, logistics, local markets and direct sales to Portuguese training in processing and short chains. Bulgarian and Romanian descriptions connect more narrowly to marketing, information or advice.	*Economic viability* and *governance* occur in all seven through skills, market access and knowledge systems. *Resilience* and *social equity* are each coded in two interventions; Romania's crisis-resilient supply training illustrates the former. *Environmental sustainability* is identified in one intervention, without a uniform mechanism across national designs.
TRAINCO	Sector: Other	9	Training most often addresses *distribution and market organisation* and *retail and marketing*, with Portuguese and Spanish content also covering quality or traceability. Italian potato and fruit-and-vegetable measures include direct marketing and waste recovery; Swedish measures specifically cover storage and packaging.	*Governance* is shared through knowledge and organisational capacity; *economic viability* is widespread in logistics, quality and sales training. Italian waste and by-product content and Swedish storage or packaging advice add environmental pathways. *Resilience* is explicit in Italian potato crisis-management training.

Intervention type	Macro-intervention type	Number of interventions	Post-harvest stages	Sustainability dimensions
Environmental and circularity-specific interventions				
CLIMA	Sector: Other	3	*Packaging and traceability* and *distribution and market organisation* are common through greener packaging and logistics. Spain additionally specifies handling, storage, processing and residue-related activities; Sweden includes shared sorting, refrigeration, storage, transport and loss management. Wallonia presents a narrower packaging-and-logistics framework.	*Environmental sustainability* is common through lower emissions, material substitution, efficiency and renewable energy. *Resilience* is explicit only in Wallonia and Sweden where post-harvest measures are linked to climate adaptation. The Spanish post-harvest actions are chiefly mitigation and efficiency measures; other dimensions lack a distinct documented pathway.
DISTIL	Sector: Wine	3	Italy, Portugal and Spain consistently address *waste management and circularity* by sending grape marc and wine lees to authorised distillers for alcohol used in industry or energy. Collection of residues is part of that recovery mechanism, rather than distribution of food to markets.	*Economic viability* arises from aid and collection-cost compensation and from protecting wine value. *Governance* follows from authorised operators, restricted end uses, delivery records and controls. The circular destination alone does not establish a separately documented environmental pathway.
INVWINESUST	Sector: Wine	2	*Waste management and circularity* is the sole documented stage in Bulgaria and Romania. Bulgaria funds dedicated winery facilities for wastewater treatment, composting, residue processing and renewable energy; Romania locates composting, biomass recovery and wine by-product reuse within a broader environmental measure.	*Environmental sustainability* is the explicit pathway through pollution control, resource efficiency and circular use of residues. The descriptions do not establish distinct post-harvest economic, social-equity, *governance* or resilience mechanisms, despite possible indirect business benefits.

C.9 – Indicator Values and Derivation of the Overall Comparative Assessment

CSP	Entry	Post-harvest prominence	Intervention-type breadth	Intervention-level stage breadth	Intervention-level sustainability breadth	Portfolio-level coverage	Weighted total	Overall assessment
		Relevant/total interventions (%)	Covered/applicable types (%)	Mean stages/8 (%)	Mean dimensions/5 (%)	Stages; sustainability dimensions		
Belgium-Flanders	Indicator value	53/153 (34.6%)	13/27 (48.1%)	1.83/8 (22.9%)	1.85/5 (37.0%)	8/8 (100%); 5/5 (100%)	**6/12**	**Moderate-to-Substantial**
	Rating and points	Substantial (4)	Moderate (2)	Limited (0)	Limited (0)	Not scored		
Belgium-Wallonia	Indicator value	16/53 (30.2%)	14/27 (51.9%)	1.82/8 (22.7%)	2.69/5 (53.8%)	8/8 (100%); 5/5 (100%)	**8/12**	**Moderate-to-Substantial**
	Rating and points	Moderate (2)	Substantial (4)	Limited (0)	Substantial (2)	Not scored		
Bulgaria	Indicator value	28/107 (26.2%)	16/36 (44.4%)	2.82/8 (35.3%)	2.57/5 (51.4%)	8/8 (100%); 5/5 (100%)	**7/12**	**Moderate-to-Substantial**
	Rating and points	Moderate (2)	Moderate (2)	Substantial (2)	Moderate (1)	Not scored		
Germany	Indicator value	13/63 (20.6%)	11/36 (30.6%)	3.30/8 (41.3%)	2.62/5 (52.3%)	8/8 (100%); 5/5 (100%)	**3/12**	**Moderate**
	Rating and points	Limited (0)	Limited (0)	Substantial (2)	Moderate (1)	Not scored		
Italy	Indicator value	56/175 (32.0%)	20/36 (55.6%)	2.80/8 (35.0%)	2.48/5 (49.6%)	8/8 (100%); 5/5 (100%)	**10/12**	**Substantial**
	Rating and points	Substantial (4)	Substantial (4)	Moderate (1)	Moderate (1)	Not scored		
Portugal	Indicator value	29/171 (17.0%)	14/36 (38.9%)	2.66/8 (33.2%)	2.24/5 (44.8%)	8/8 (100%); 5/5 (100%)	**1/12**	**Moderate**
	Rating and points	Limited (0)	Limited (0)	Moderate (1)	Limited (0)	Not scored		
Romania	Indicator value	27/103 (26.2%)	17/36 (47.2%)	2.48/8 (31.0%)	2.74/5 (54.8%)	8/8 (100%); 5/5 (100%)	**7/12**	**Moderate-to-Substantial**
	Rating and points	Moderate (2)	Moderate (2)	Moderate (1)	Substantial (2)	Not scored		
Spain	Indicator value	29/103 (28.2%)	23/36 (63.9%)	2.38/8 (29.7%)	2.42/5 (48.3%)	8/8 (100%); 5/5 (100%)	**6/12**	**Moderate-to-Substantial**
	Rating and points	Moderate (2)	Substantial (4)	Limited (0)	Limited (0)	Not scored		

CSP	Entry	Post-harvest prominence	Intervention-type breadth	Intervention-level stage breadth	Intervention-level sustainability breadth	Portfolio-level coverage	Weighted total	Overall assessment
		Relevant/total interventions (%)	Covered/applicable types (%)	Mean stages/8 (%)	Mean dimensions/5 (%)	Stages; sustainability dimensions		
Sweden	Indicator value	22/54 (40.7%)	12/27 (44.4%)	3.09/8 (38.6%)	3.32/5 (66.4%)	8/8 (100%); 5/5 (100%)	**10/12**	**Substantial**
	Rating and points	Substantial (4)	Moderate (2)	Substantial (2)	Substantial (2)	Not scored		

Note: ***Post-harvest prominence*** is reported as the share of all interventions in a CSP that were identified as post-harvest relevant**.** ***Intervention-type breadth*** is reported as the share of intervention types applicable to the respective CSP that are represented by at least one post-harvest-relevant intervention**.** ***Intervention-level stage breadth*** is reported as the mean share of the eight defined post-harvest stages addressed per retained intervention. The denominator is based on the 36 post-harvest-relevant intervention types identified in Section 4.2.1. For Belgium-Flanders, Belgium-Wallonia, and Sweden, nine wine-sector-specific intervention types were not applicable and were therefore excluded, reducing the denominator to 27. ***Intervention-level sustainability breadth*** is reported as the mean share of the five defined sustainability dimensions addressed per retained intervention. ***Portfolio-level coverage*** indicates whether each stage and sustainability dimension was represented at least once across the complete portfolio of retained interventions.

Weighted total is reported as the sum of the weighted base points assigned across four scored dimensions, yielding a score from 0 to 12. For each dimension, CSPs are ranked and classified as ***Limited, Moderate, or Substantial***, corresponding to 0, 1, and 2 base points, respectively; ties at category boundaries are retained within the same category. *Post-harvest prominence* and *intervention-type breadth* are weighted by a factor of two, while *stage breadth* and *sustainability breadth* receive a weight of one. Weighted totals are classified as *Limited* (0), *Moderate* (1–5), *Moderate-to-Substantial* (6–8), or *Substantial* (9–12). An overall *Limited* assessment therefore applies only when all four dimensions are classified as *Limited*. *Portfolio-level coverage* is reported descriptively but excluded from the score because it does not differentiate among the analysed CSPs.

Appendix D. Database of Interventions

Appendix D is included as a separate document accompanying this report.

Consortium

Consortium coordinator

Consortium

Consortium (associated)

Consortium (affiliated)

Funding

The project TrueFoodS is co-funded by Research Foundation - Flanders [SBO project S012925N/FWOEUAR4], UEFISCDI - Executive Agency for Higher Education, Research, Development and Innovation Funding [167/2026 and 168/2026], Federal Ministry of Research, Technology and Space [031B1715], Ministro dell'Università e della Ricerca [J53C26000890005], Vinnova [2025–00106], Agencia Estatal de Investigación [PCI2026-177431-1], Fundação para a Ciência e a Tecnologia [FutureFood/0008/2024], Bulgarian National Science Fund [КП-06-ДО02/5] and the European Union's Horizon Europe research and innovation programme via FutureFoodS, the European Partnership for a Sustainable Future of Food Systems, co-funded under Grant Agreement No. 101136361.