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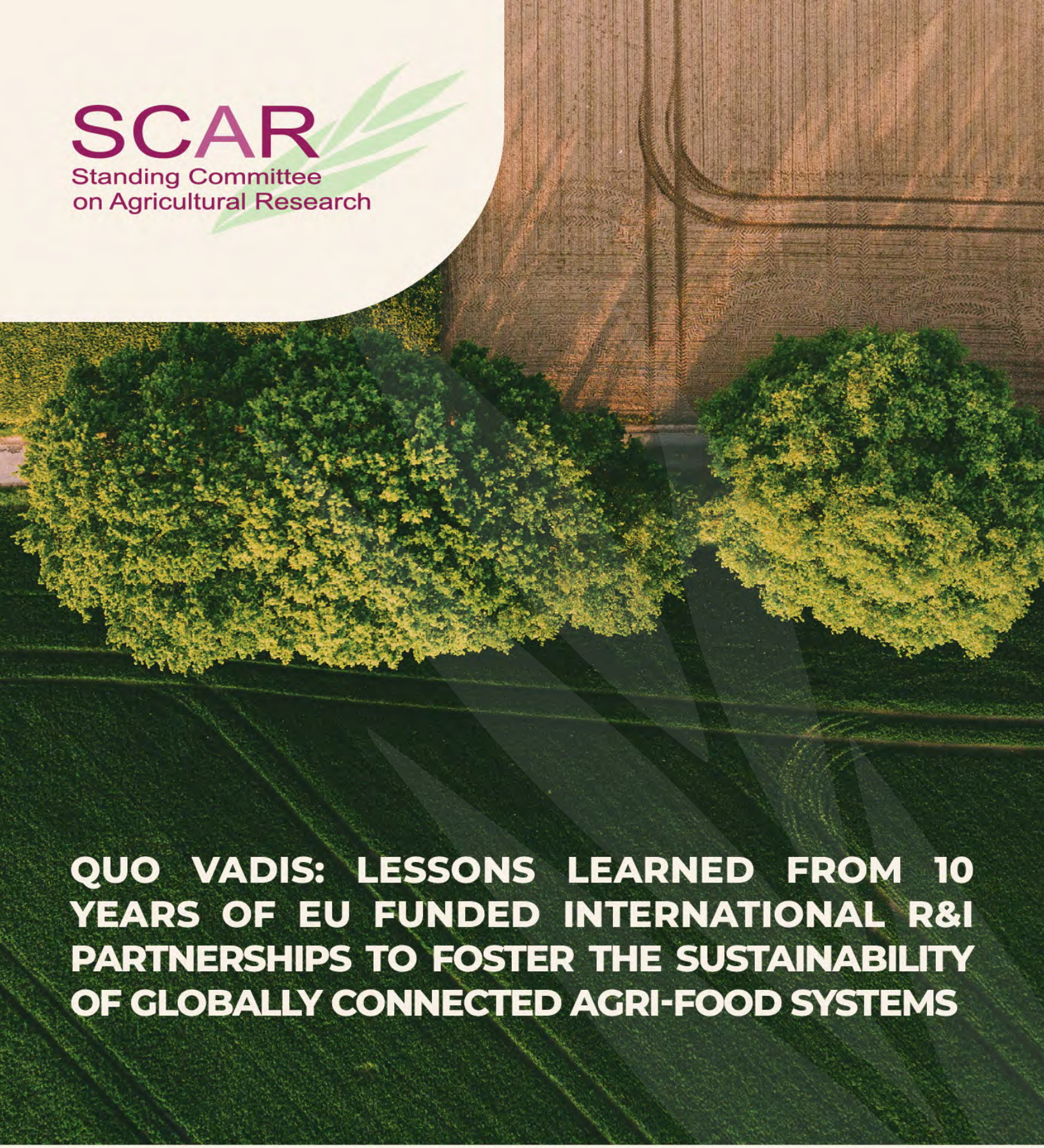

QUO VADIS: LESSONS LEARNED FROM 10 YEARS OF EU FUNDED INTERNATIONAL R&I PARTNERSHIPS TO FOSTER THE SUSTAINABILITY OF GLOBALLY CONNECTED AGRI-FOOD SYSTEMS

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Description Sheet

Goal: Recommendations on how future European Union-supported R&I programs should be shaped for improved international cooperation that address the transformation of agri-food systems beyond the European Union (EU).

Rationale: Taking stock and providing a critical review on the achievements of EU investments in international research and innovation (R&I) partnerships for the transformation of agri-food systems towards greater sustainability beyond the EU. This policy brief builds on a portfolio analysis (PA) that included a selection of completed projects of different partnerships, funded by the European Commission, that had a significant international dimension, i.e. including partners from low- and middle-income countries (LMICs), between 2014 to 2024. Without specifically analyzing the wider policy landscape, the focus on the project implementation level still provides useful learnings for ongoing activities, such as the renewal of the FNSSA roadmap or the Food Systems Africa pathway within Food 2030.

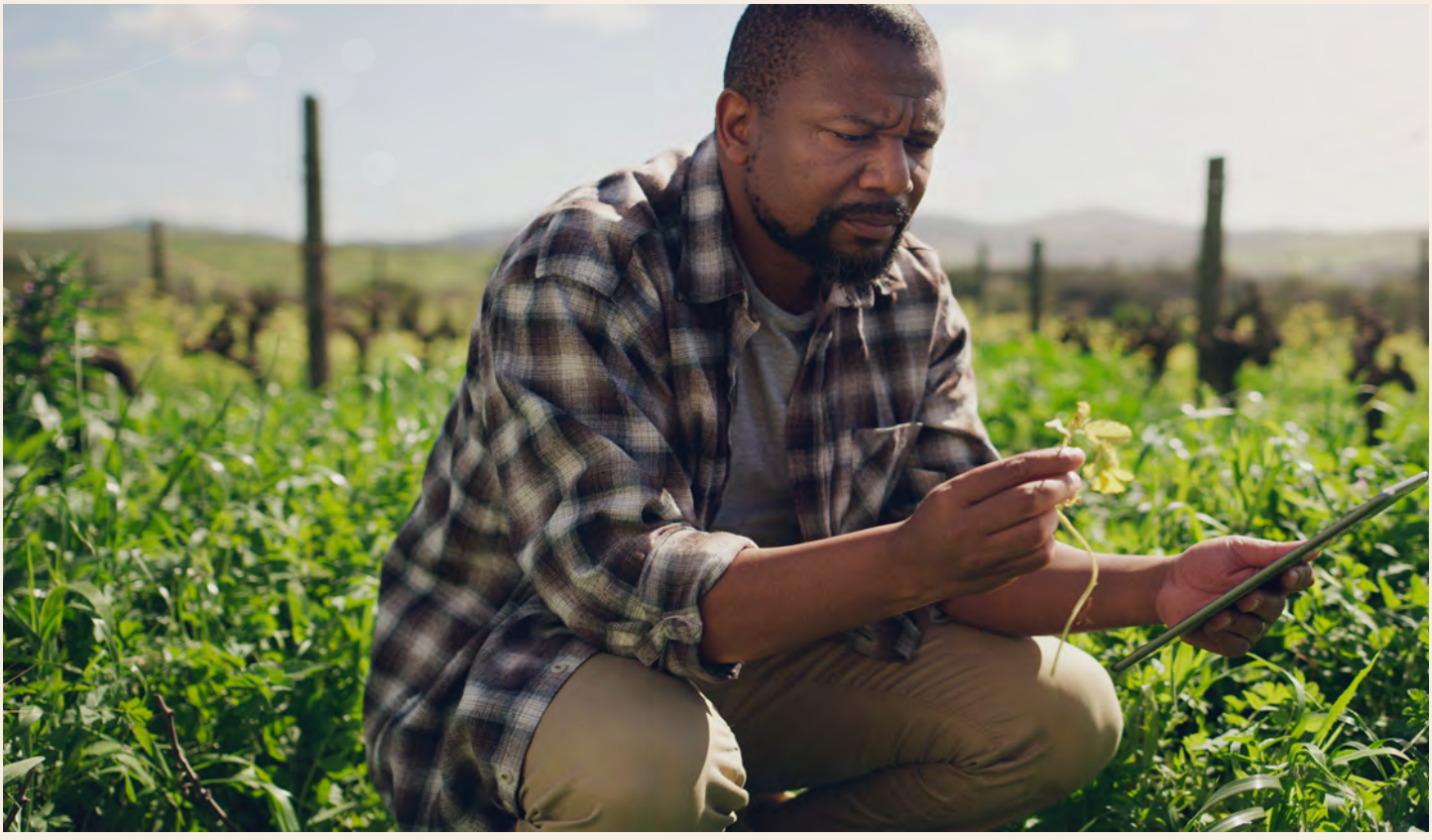
Target group: Actors, responsible for shaping new funding instruments at European Commission (EC) level.

Summary

This policy brief is built on a portfolio analysis [1] of 15 EU-funded research and innovation (R&I) projects conducted between 2014 and 2024, aimed at fostering sustainable agri-food systems beyond the EU, through international partnerships, particularly with low- and middle-income countries (LMICs). The projects contributed to strengthening local R&I ecosystems, promoting inclusive stakeholder engagement, and delivering innovative solutions to complex challenges such as climate change and food insecurity. However, the analysis identifies persistent gaps, including limited LMIC inclusion, short project durations, misalignment with national policies, and inadequate mechanisms for long-term impact evaluation. The brief recommends transitioning to multi-phase funding models, enhancing co-design and equitable programming, and investing in digital infrastructure and capacity-development. It advocates for stronger public-private partnerships, improved policy integration, and the creation of innovative funding mechanisms to support LMICs and increase their participation. Ultimately, the brief calls for a more inclusive, long-term, and impact-oriented approach to EU-funded agricultural R&I to drive global food system transformation.

1. Introduction

The EU has made substantial investments in research and innovation to support the transformation of agri-food systems beyond its borders. This policy brief is based on a portfolio analysis (PA) of 15 completed projects funded between 2014 and 2024, selected for their international dimension and inclusion of LMICs partners. These projects align with major EU policy frameworks such as the Green Deal and the Farm to Fork strategy. They are also consistent with the EU Global Gateway Strategy which is leading the EU interventions across the world with a strong focus on private investments and a pillar on education and research. For instance, the Global Gateway Strategy supports the African Union (AU) - EU innovation agenda that strengthens the AU-EU innovation cooperation and coordination. However, while the PA highlights how funded projects generated innovative solutions to complex challenges and strengthened local research capacities as well as European institutions as a center of scientific excellence, critical gaps and needs still exist. Hence, the objective of this brief is to provide evidence-based recommendations for shaping future EU R&I programmes, targeting policy-makers and funders.



2. Identified gaps in EU-funded international R&I projects targeting agri-food systems

2.1. Unbalanced inclusiveness in EU–global agri-innovation partnerships

The EU-funded projects have played a crucial role in strengthening cooperation between EU and non-EU research institutions, policymakers and local stakeholders. As the PA states, "*The EU's agri-food R&I funding must continue prioritising international collaboration, especially in low- and middle-income countries. Strategic partnerships with Africa, Latin America, and Asia are vital for global agricultural sustainability.*" Nevertheless, the report also reveals disparities in the level of inclusion of third-country partners — particularly those from LMICs — which vary depending on the specific EC instruments used. This is reflected in the large variation of the EU's net contribution to LMICs across the 15 projects analysed in the report, which ranged from 1% to 100%. Supporting data [2] from the 2014–2020 period shows that only 2.1% of the total EU net contribution to R&I actions was allocated to LMICs. In contrast, the Leap-AGRI partnership [3] (a H2020 ERA-Net Cofund initiative strengthening the AU-EU partnership) reached 23%, while other EU-led partnerships did not exceed 1.5%.

The situation has not improved significantly during the first four years of Horizon Europe (2021–2024) and so far, co-funded partnerships have remained largely EU-focused. The limited access to funding and leadership opportunities for third countries, especially LMICs, effectively restrict their participation in EU funded R&I partnerships and their capacity to address the global challenges facing agri-food systems.

Importantly, international collaborative R&I projects supported by the EU can generate substantial direct and indirect economic and social benefits for both EU and non-EU countries. These benefits have been quantified for LMICs [4, 5] and the economic return on global agricultural R&D investment is estimated to range between $9.5 and $13.7 per dollar invested. Although benefit returns for the EU have not been estimated, the PA reveals that across the 15 selected projects, 60% of the EU budget was allocated to EU organisations, with 2.1% going to the EU private sector. This distribution has supported a high level of EU science and innovation outreach, reinforcing the EU's contribution to addressing complex global challenges.

2.2. Short timeline of current research funding

Many of the projects analysed in the PA successfully delivered innovative outputs within their implementation period, contributing to increased agricultural productivity, improved livelihoods, diversified cropping systems, and enhanced resilience to climate change. In some cases, project extensions would have been beneficial to engage stakeholders more effectively and to integrate them more deeply into project activities, ultimately leading to improved results with long-term impact. Sustaining and scaling positive outcomes up, in many cases, require longer-term partnerships and continuous collaboration with local and regional stakeholders, which could not be achieved within the usual project timeline of 3 years.

2.3. Insufficient co-construction

The PA underscored the importance of aligning thematic priorities of the different partners as well as methodological approaches. However, when funding programs are not developed with the involvement of all legitimate stakeholders from the EU and non-EU targeted regions, corresponding R&I projects may not be well aligned with the national and regional priorities of the latter. Isolated programming often results into fragmentation, unclear expectations regarding outreach, capacity development, and return on investment, weak policy alignment, uncontextualized methodological approaches and challenging administrative requirements, hampering the relevance, effectiveness, and impact of R&I projects.

2.4. Limited support to research and innovation ecosystems

The collaboration between European and non-European researchers and innovators has significantly contributed to develop innovative agricultural models and technologies that respond to local needs and market demands in LMICs, serving as catalysts for further scientific advancement and the adoption of new tools and practices to improve food security and nutrition. Vibrant connections and inclusive sharing of knowledge between different initiatives and entities of the R&I ecosystems are needed to successfully integrate knowledge and pool resources. However, current funding programmes have not been successful in establishing long-term collaboration frameworks with global agricultural research networks such as CGIAR [6].

The integration of digitalisation and remote sensing technologies for real-time agricultural monitoring and decision-making holds great potential for increasing the sustainability of food

systems. However, their uptake remains limited in many regions due to poor access to digital tools and reliable internet. This hinders the scaling-up of climate-smart agricultural practices and resource management strategies aimed at improving productivity and resilience.

2.5. Insufficient connection between science and policy

Despite generating valuable research results, many projects struggled to translate their findings into actionable policy recommendations and applicable policies. A crucial gap is the insufficient connection between science and policy on a national and regional level. Food system transformation depends heavily on collaboration among different food system actors and decision-makers, where perceptions of fairness significantly influence willingness to cooperate.

2.6. Absence of mechanisms to monitor the long-term impact

Impact evaluation remains a major challenge in R&I projects and policies. While many initiatives yield valuable outcomes, their translation into measurable, long-term impacts is often hindered by short project cycles, fragmented monitoring systems, and limited post-project follow-up. Moreover, mechanisms for tracking innovation adoption, stakeholder engagement, and policy influence are underdeveloped, making it difficult to assess systemic transformation. The diversity of project scopes, multi-actor configurations, and international partnerships further complicates outcome attribution and long-term impact measurement, while factors such as funding delays, crises like the COVID-19 pandemic, and weak institutional capacities negatively affect data collection and stakeholder involvement.

In conclusion, fully integrated, collaborative, and long-term approaches to agricultural research and innovation are still missing. Strengthening international partnerships, promoting inclusive practices, supporting digitalisation, and aligning research with policy is strongly needed to significantly enhance the transformative potential of future agri-food initiatives.

3. Recommendations

EU agri-food R&I funding must continue to prioritise international collaboration, especially with LMICs in Africa, Latin America, and Asia, to support a fair and equitable transformation of globally connected agri-food systems. The following section presents recommendations to address the gaps identified in the previous section.

3.1. Enhancing international cooperation frameworks

There is an urgent need to support the systemic transformation of local and global agri-food systems and to effectively address pressing global crisis such as climate change, biodiversity loss, and soil degradation. To address this need and prepare the trade of the future in a safe and fair operating space, international cooperation frameworks in agri-food R&I between EU and non-EU partners must be more inclusive, equitable, and impact-oriented. Where appropriate, third countries with limited budget capacities should be further supported by the EU to participate in R&I partnerships.

An innovative funding model should be developed for EU R&I partnerships, incorporating alternative sources — such as philanthropic donors, banks or private stakeholders encouraged by fiscal instruments (e.g., research tax credits) — notably to specifically support the participation of LMICs. As proposed in other fora, a dedicated fund could be established to enhance LMICs' participation and research capacities, for example through the creation of an "International Partnership Trust" for agricultural research and innovation.

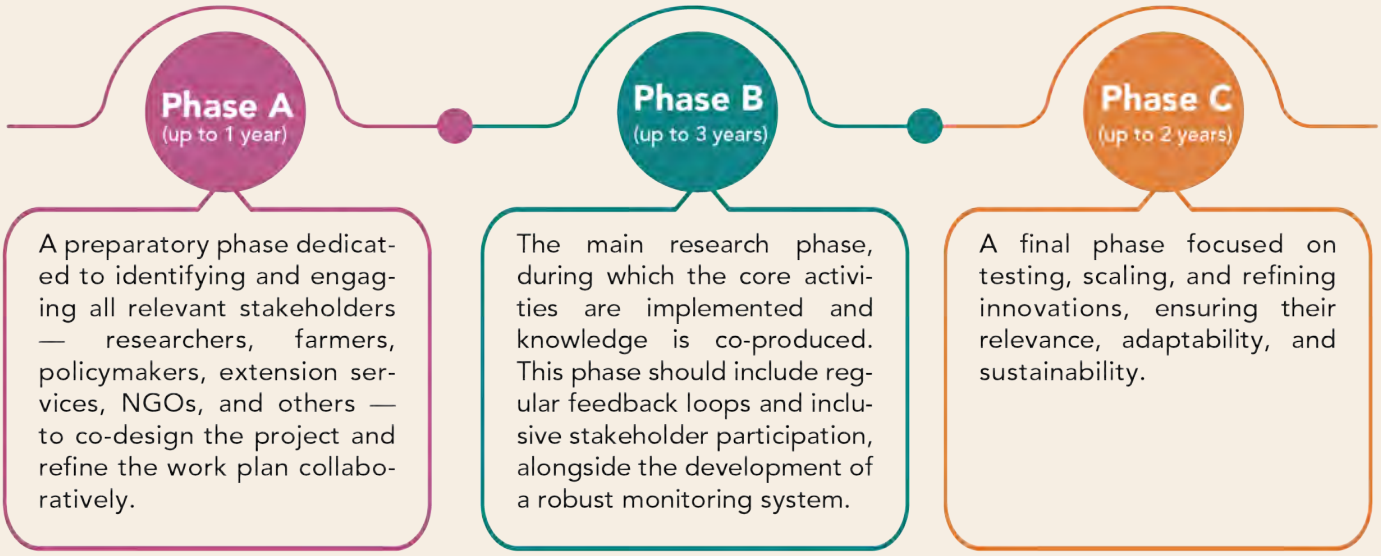
As a first step, a comprehensive mapping of potential public and private funders, including EU services and Member States, could be conducted alongside an assessment of the

absorption capacities of targeted LMICs. A high-level international conference or dialogue could be convened to co-design this innovative funding model with relevant stakeholders from Europe and beyond, including national, European, and international funding bodies, investment banks, foundations, NGOs, private sector actors.

Finally, public-private R&I partnerships should be facilitated through blended finance mechanisms, including public guarantees, risk mitigation and fiscal instruments to incentivise private investment.

3.2. Extending project duration and structuring multi-phase funding

To overcome the limitations of traditional three-year project funding cycles and enhance impacts, future R&I programmes should adopt a multi-phase project structure.



3.3. Inclusive co-design and equitable programming

Inclusive co-design of R&I programmes is critical to establish enabling conditions and funding modalities that genuinely reflect the needs and priorities of all stakeholders. At present, international collaboration programming is predominantly EU-driven. A strategic shift is required to ensure that non-EU partners — particularly those from LMICs — play a meaningful role in shaping R&I programmes that are mutually beneficial and contextually appropriate.

Such co-creation fosters shared ownership, enhances return on investment for both EU and non-EU actors, and ensures that local capacities are adequately integrated. It also facilitates the development of tailored funding mechanisms and equitable implementation frameworks. The International Research Consortium (IRC) [7] on Food, Nutrition Security and Sustainable Agriculture (FNSSA) shall provide a valuable model for operationalising the AU-EU Partnership on FNSSA [8]. Its structure — combining thematic priorities, dedicated working groups, and regional anchoring — should supports coordination, scalability, and inclusive participation in R&I programming. Moreover, it should address the imperative for alignment among funders

[9] and promote the effective engagement of LMICs' partners in impact-oriented collaboration [10]. Accordingly, the PA recommends that multi-actor and transdisciplinary research approaches be established as prerequisites for funding. R&I programmes must enable the meaningful participation of non-research stakeholders by making them eligible for funding and by strengthening institutional capacities to manage multi-actor processes effectively.

3.4. Strengthening research and innovation ecosystems

Funding programmes should be strategically designed to foster robust R&I ecosystems in target countries and build strong networks between European and international research institutions. Greater involvement of local research institutions, extension services, and innovation hubs is also needed to drive the agricultural transformation and enhance the scientific and technical capabilities of LMICs while also enhancing the European research excellence.

To foster innovation and effectively share knowledge and develop capacities between EU and non-EU institutions, capacity-development should prioritize technical training in digital literacy, climate-smart agricultural practices, and value chain management. Future initiatives should establish formal learning platforms to facilitate the exchange of best practices, data, and innovations across regions. Additionally, initiatives should foster collaboration with national governments, international organisations (e.g., FAO, IFAD), international research networks (e.g. CGIAR), and private sector actors to pool resources and scale successful models.

In this context, a systematic endorsement and reinforcement of a Team Europe Approach within EU R&I partnerships is necessary. This should involve both public and private sector actors and promote inclusive multi-stakeholder approaches that actively involve local communities, including marginalized actors, such as Indigenous people, women, and youth in both the design and implementation. to enhance impact and scalability. It is also recommended to allocate targeted incentives or bonuses to European research consortia that incorporate an international dimension and include partners from LMICs, thereby fostering inclusive and globally relevant innovation.

To specifically address gaps in digital access and facilitate investment in training and infrastructure, a technology-driven innovation alliance for digitalization in third countries should be promoted. This alliance should actively engage local authorities to invest in digital infrastructure, enhance digital literacy, strengthen cybersecurity, and create a conducive regulatory environment for digital agro-food trade. It could attract AU-EU shared and private investments and mobilize international cooperation through the EuroMed Cluster Forward.

To address the long-term continuation of R&I ecosystems, improving exit strategies in projects and sustainability plans are essential to capitalize on R&I investments.

3.5. Interconnecting science and policy

To ensure policy relevance, research projects should be designed to address specific policy gaps and generate results that support evidence-based decision-making. To do so, representatives of national and regional governments should be involved into project activities from an early stage. Also, dedicated policy liaison teams could be created to ensure policy alignment and flow of information (for example, the CDAIS project). Policy briefs and white papers should be produced and promoted to disseminate knowledge and support decision-making. Advisory boards including policymakers are another possibility to align research with national development plans and increase the likelihood of translating research results into actual policies. Finally, strategic investment in digital technologies, infrastructure, inclusive governance and long-term stakeholder engagement may further help in effectively bridging the science-policy gap.

3.6. Strengthening impact evaluation in R&I projects and policies

Future agri-food R&I programmes should adopt standardised, impact-oriented monitoring and evaluation frameworks with indicators consistent on project and program level and tailored to stakeholder needs. These indicators must support outcome measurement and enable comparison across projects. Additionally, improving impact evaluation requires investment in digital tools and data systems for real-time monitoring, active stakeholder participation, and alignment with relevant policy frameworks. Finally, dissemination of project results should be improved through supporting open access publications, and incentivising broader outreach.

In conclusion, in times of multifaceted crisis, strengthening international R&I cooperation is crucial to enhance resilience and sustainability of agri-food systems locally and globally. To fully unlock that potential, it is recommended to make EU funded agri-food R&I partnerships more inclusive and equitable, and accommodate the engagement of LMICs better. Further, it is important, to improve stakeholder participation and the eligibility of non-research actors for funding, to extend funding periods and support scaling activities, and finally, improve monitoring and impact evaluation, to generate relevant knowledge and policy products for both, European and international stakeholders.

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Publication Details SCAR ARCH, 2025. Research and Innovation Priorities for more Sustainable Food Systems in Europe and Globally.

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Funded by the European Union

Document formatting was supported by RefreSCAR project - Horizon Europe GA No. 101060553 under the work of Work Package 2, Sub-task 2.2.4 led by partner Foodscale Hub