Education, Research, and Innovation as Pillars of the EU's Global Gateway Strategy: Insights from Agrinatura

The Global Gateway Strategy is widely recognised as the EU's strategic framework for investment in infrastructure and connectivity - creating opportunities for private sector investment and its competitiveness while upholding environmental and labour standards, strengthening human capital, reinforcing knowledge systems, and protecting global commons. Education, research, and innovation are central pillars of the EU's Global Gateway Strategy, driving sustainable, inclusive, equitable, fair, and values-based global partnerships.

This position paper explores the potential contribution of the education, research, and innovation sphere to the Global Gateway Strategy, with particular attention to the agrifood sector. It is informed by, and reflects the perspectives of Agrinatura, the European Alliance on Agricultural Knowledge for Development.

Rationale

The EU's Global Gateway Strategy responds to the growing global demand for sustainable and trusted investments in infrastructure and connectivity. Recent strategic reflections, including the *Draghi Competitiveness Report* and *Niinistö Report*, underscore the need to place research and innovation (R&I) at the heart of Europe's competitiveness and international partnerships. A key pillar of the Global Gateway Strategy is its focus on Education and Research. It aligns with the 360-degree approach and the triptych approach adopted by DG-INTPA on Higher Education, R&I and skills for Green and Digital transitions.

Regarding agri-food systems, the Global Gateway Strategy places particular emphasis on private sector investments in strengthening productive, inclusive, and sustainable value chains that connect farmers, processors, and traders to national and international markets. Its 360-degree approach seeks to address economic, social, and environmental challenges in order to unlock innovation at scale.

While the Global Gateway is a global initiative, Africa is one of its main priority regions. This reflects several factors: a rapidly growing youth population entering the labour market, the continued importance of agriculture for rural livelihoods, the predominance of small-scale family farming, the limited development of the agrifood processing sector, and persistent gaps in infrastructure and market connectivity. These conditions underline the need for coordinated public and private investments focused on rural areas and food systems to support sustainable and equitable development across the continent.

The African continent through CAADP has charted a complementary vision for agri-food system transformation. The *Kampala CAADP Declaration* emphasises sustainable and inclusive agri-food systems, climate resilience, value-chain development and human capital development.

Given these parallel frameworks, the EU's Global Gateway Strategy and CAADP's agenda align on many fronts: infrastructure and connectivity must be complemented by investments in education, research and innovation (ER&I). The EU-AU Summit of 2022 acknowledged that scaled-up equitable collaboration in ER&I as a crucial vehicle to strengthen such partnerships. The AU-EU innovation agenda paves the way for research and innovation investments in Africa. The AU-EU Food and Nutrition Security and Sustainable Agriculture roadmap 2016-2026 indicates priority areas for research and innovation to support food systems transition.

Beyond Africa, the EU and the Community of Latin America and Caribbean States (CELAC) adopted in 2025 a New Agenda for Cooperation in R&I, recognizing the potential contribution of the EU-LAC Global Gateway Investment Agenda for identifying and delivering strategic investments. Furthermore, the ASEAN-EU Strategic Partnership (2023-2027) aims to promote cooperation in developing fair, sustainable, healthy and environmentally friendly food systems through a strong commitment on ER&I investments and enhanced cooperation between the various research and innovation stakeholders.

Agrinatura, the European alliance on agricultural knowledge for development, argues that the ER&I dimension is fundamental to building inclusive and sustainable innovations at scale based on equitable partnerships.

The conference "Boosting agrifood research and innovation cooperation for impact at scale", 11-13 March 2025, Brussels, organized by DG INTPA, DG AGRI and DG RTD, with the support of Agrinatura, drawn lessons on past and on-going EU funded projects to support innovation from start-up to scale-up with specific mentions to the Global Gateway strategy. To make more efficient ER&I investments, the conference recommends:

(1) Strengthen the international dialogue on ER&I cooperation to enhance mutual learning and build common agenda such as the AU-EU FNSSA Roadmap with its International Research Consortium to be aligned with long-term policy frameworks (e.g. CAADP in Africa, Global Gateway strategy),
(2) Provide innovative support to design and monitor future ER&I interventions and strengthen innovation ecosystems able to scale innovation through mechanisms such as multi-actors approach, living labs, incubators or accelerators,
(3) Improve the coordination and governance of R&I initiatives by strengthening the articulation between EU instruments (Horizon Europe and NDICI) to more effectively support innovation from knowledge production and partnership building to impact at scale,
(4) Building coherent funding mechanisms for innovation at scale with co-investments from partner countries and Team Europe, the mobilisation of private funding, and innovative funding at each phase of the innovation (from start-up to scale up).

The Standing Committee on Agricultural Research Working Group on Global Challenges (SCAR ARCH) analysed a portfolio of EU-funded agricultural R&I projects. Based on this analysis, the recent ARCH policy brief calls for a more impact-oriented approach to international EU-funded agricultural R&I to drive global food system transformation, including:

- transition to longer-term multi-phase funding models,
- creation of innovative funding mechanisms to support low- and middle-income countries and increase their participation,
- stronger support to innovation ecosystems, and enhanced co-design and equitable programming for better stakeholders' engagement and policy alignment.

Based on these foundations, Agrinatura provides recommendations on the three connected domains of ER&I, to address responsible changes at scale. These recommendations aim to increase long-term impact, coherence and sustainability of ER&I investments, in full alignment with the Global Gateway Strategy.

Recommendations

1. Education: Empowering Human Capital and Local Ownership, Attending to Labour Market Needs

Education, particularly higher education and vocational training, is core to enabling local actors to shape and drive their development. In the African context, CAADP's 2026-2035 strategy underlines the importance of **inclusive growth**, **youth employment** and **agro-industrialisation** - all of which depend on **robust educational foundations**. Global Gateway investments in infrastructure must therefore be systematically linked with investments in skills ecosystems to ensure sustainability and local social and economic spillovers. For achieving such objectives Agrinatura considers the following core elements:

- ***Capacity development***: Long-term investment in tertiary and technical education, including vocational training, builds the skills base for the agricultural sector. By 2030, about 20 million young people will enter the labour market in Africa each year, while the agrifood sector and rural areas will remain primary sources of livelihood. Enhancing the capacities and employability of this growing population is a prerequisite for economic growth and long-term progress toward sustainable development. Capacity development in areas such as **processing of food and non-food agricultural products, bioeconomy, marine and terrestrial nature-sourced products valorization, and the sustainable management of renewable natural resources** needs to be reinforced, expanded and accelerated. However, EU interventions on capacity strengthening should be better aligned with Global Gateway investments with specific focus on innovation (design, partnerships, funding), value chains (economics, risk analysis) or public policies (standards, regulations) and with more private sector participation to link education and job markets.
- ***Knowledge exchange***: Promoting knowledge transfer and experience sharing is essential. Mobility and joint programmes foster mutual learning, trust and institutional strengthening. ERASMUS+ is a well-adapted vehicle to address these challenges. However, to be fully aligned with both Global Gateway Strategy and CAADP principles there is a need to better **connect education to entrepreneurship, link public laboratories with private companies, and translate scientific outputs to marketable solutions working with private and non-private actors**.
- ***Gender and intersectionality***: Women are predominant actors in both the production and post-production subsectors of African agrifood systems, particularly through local processing initiatives. Targeted education initiatives should address how gender intersects with **structural inequalities and empowers women and youth** - emphasised in CAADP's gender transformation agenda.

A relevant example for innovative education programmes is the regional Team Europe Initiative Opportunity-driven Skills and Vocational Education and Training in Africa (TEI OP-VET). It must be fostered. It could benefit from actions like cross border learning, **inclusion of entrepreneurial skills** into curricula (e.g. marketing, and ethics), evidence building for policy influencing, linking education with living labs and incubators for innovation based on public-private partnerships. This strategy requires linking up with RUFORUM initiatives and setting up muti-stakeholder dialogue platforms on education.

To ensure that education effectively leverages and synergizes with the implementation of the Global Gateway Strategy, Agrinatura recommends that EU investments systematically embed education, capacity development, and institutional strengthening as integral components of agri-food and bioeconomy investments.

This should include support for co-owned partnerships, modernized curricula, mobility schemes, digital learning infrastructure, and targeted programmes that enhance youth employability and promote gender equity. Global Gateway investments in education should strengthen links with living labs, incubators, accelerators, and cross-border learning to help students and trainees to transform their skills into entrepreneurship and innovations that drive sustainable growth and job creation.

2. Research: Building Evidence, and Co-designing Credible, Relevant and Legitimate Solutions

Research is a cornerstone of sustainable and inclusive development when it is **credible** (grounded in robust knowledge and sound methodologies), **relevant** to key societal challenges, and **legitimate**, built through partnership for co-ownership and fair participation in implementation. When these conditions are met, they enable productive science–policy dialogue, and the co-creation of solutions that are tailored to local socio-ecological contexts. To support the Global gateway strategy, Agrinatura considers that key elements should include:

- ***Scientific collaboration*:** CAADP emphasises the needs for strengthening research and innovation capacities. Equitable international partnerships should reinforce national sovereignty in research across the Global South and enrich global knowledge systems. Strong EU and partner countries policy dialogue for research and innovation governance is requested to orient programmes, projects and investments aligned with the Global Gateway strategy and the national priorities. The EU-AU dialogue on the innovation agenda and the AU-EU FNSSA roadmap are clear examples.
- ***New partnerships for research*:** Stronger linkages between scientific and local knowledge to co-design technical and institutional innovations are fundamental for market-oriented solutions. It requires innovative approaches for doing research based on participatory approaches involving value chain actors (innovation platform, living labs), clear links with innovation ecosystems (innovation hubs, innovation services, incubators, accelerators), and strong science-policy and science-society (including industry) interfaces fostering an enabling environment for innovation and facilitating the alignment of policy priorities
- ***Specific research areas of interest*:** Within the Global Gateway Strategy, knowledge is needed on specific topics such as on **value chain performance** (economic growth, employment, equity and sustainable development); on agri-**food system transformations** (e.g. agroecology, labour productivity, women's roles, job quality in small-scale farming); on bioeconomy (biomass valorisation, bio-innovations) : on **evaluating investment impacts and risks** (both ex-ante and ex-post); and on **derisking investments and farmers' livelihoods** (e.g. analysis of financial instruments to mitigate risks). Further research is also required on balancing public (roads, electrification) and private (production, processing) investments in remote rural areas, and on **navigating trade-offs** related to reducing import dependency on key staple commodities or developing nationally profitable export value chains—including a deeper assessment of the land-sharing/land-sparing debate.

A relevant example is the EU DeSIRA initiative funding research and innovation projects with strong participation of Agrinatura members aiming at co-designing climate smart and agroecological innovation through transdisciplinary research, multi-actors approaches, capacity strengthening of actors to innovate, and science-policy dialogue. Several Horizon Europe projects also address complex challenges focusing on knowledge production and experiments with multi-actors' approaches. More synergies between these two complementary EU instruments would be beneficial to support innovation at scale.

To ensure that research effectively supports the implementation of the Global Gateway Strategy, Agrinatura recommends placing collaborative, multi-actor research at its core. Regarding EU funding there is a need to better articulate agenda and funding from Horizon Europe projects aiming at producing knowledge and prototypes and NDICI investments aiming at supporting value chains and territorial development.

By coordinating investments and reinforcing equitable scientific partnerships, particularly with institutions in the Global South, the EU can strengthen research and innovation capacities while advancing context-appropriate solutions. This approach would improve investment effectiveness, manage risk more strategically, and help ensure that food-system transitions are economically viable, socially legitimate, and environmentally sustainable.

3. Innovation at scale: an Ambition Interacting with Research and Education

We acknowledge that packages of innovation, be they technical, social, organizational or institutional, are essential to change at scale towards sustainability, competitiveness and profitability. Research is not the only source of innovation. In order to support the Global Gateway Strategy implementation, Education and Research must connect with established innovation ecosystems: agricultural innovation-support systems (e.g., agricultural advice and support services, farmers' training programmes, financing and derisking schemes, public-private research linkages, financial support schemes), public-private sectors' schemes (e.g., incubators, accelerators, linkages between public-private labs, between banks and farmers' organizations). According to Agrinatura the following concepts and tools must be core to the innovation focus:

- ***Scaling, as a permanent research and policy concern*****:** Scaling occurs across multiple dimensions: geographical or demographic (*scaling out)*, institutional by creating or mobilising institutions (*scaling up)* and transformative with new values and norms (*scaling deep)*. Evidence from recent Agrinatura initiatives shows that meaningful change results from combinations of these pathways, and that simply replicating successful yet context-dependent pilot projects cannot deliver systemic transformation. It requires addressing three dimensions: actors' capacity strengthening to innovate, public-private funding mechanisms for innovation at scale, policy changes for innovation.
- ***Contextual innovation*****:** Territories and value chains must be recognised as spaces of innovation. The local level is not only an entry point but a central lever for influencing national and international policy. Supporting "innovation networks" and "innovation champions" that amplify territorial perspectives, strengthening capacities of actors to innovate, creating multi-level dialogue spaces for coordination and synergies are all essential levers for more productive and sustainable investments. During this phase of innovation, research could also contribute by providing expertise, by facilitating mediation, or by addressing bottlenecks occurring during the innovation process.
- ***Innovation hubs and innovation ecosystems***: Agri-food innovation hubs involving SMEs, farmer organisations, and start-ups and innovation ecosystems providing services to innovators serve as platforms for strengthening capacities and for piloting and scaling innovations. These innovation hubs need to provide innovative services including finance and digital solutions.
- ***Synergies between funding mechanisms*****:** In fact, a diversity of funding mechanisms are needed to support innovation at different phases of development which requires a new financial engineering (e.g. equity, blending finance). Better alignment between Horizon Europe, NDICI, and Team Europe Initiatives, together with responsible private-sector engagement, would strengthen the production of relevant knowledge for priority agri-food value chains.
- ***Impact pathways and monitoring*****:** Innovation is a long journey which requires strategic thinking. Embedding theories of change, monitoring–evaluation–learning frameworks and considerations of scalability from the outset reinforces the entire research-to-impact chain and help adapt interventions and policies to scale innovation

To ensure that Innovation effectively leverages the Global Gateway Strategy, Agrinatura recommends that innovation be embedded as a crosscutting priority linking research, education, and development systems. Programmes should strengthen existing innovation-support systems and innovation ecosystems embedded in territorial and value chains contexts. It also should integrate robust impact pathways and scalability from the outset, in order to anticipate the necessary technical, organisational or institutional changes that are required. The participation of private actors (start-up, SME or large firms) at the local, national, and international level should be based on a long-term partnership with research and education to design and implement productive, inclusive and sustainable investments. By coordinating investments and fostering scientific and corporate partnerships that reinforce innovation capacities in the Global South, the EU can accelerate transitions towards bioeconomy and raise the private sector's interest in sustainable development solutions that are aligned with growth, profitability and competitiveness and that are based on EU values.

4. Conclusion: Education, Research & Innovation are interconnected pillars of equitable partnerships

Agrinatura emphasises that ER&I are interconnected pillars which are not peripheral but foundational to the success of major initiatives related to agri-food systems transformation. By investing in these domains, and aligning with partner institutions, the EU secures the Global Gateway investments and ensures that external engagement promotes productivity, equity, sustainability and resilience.

For the Global Gateway Strategy to deliver sustainable and trusted connections, it must go beyond infrastructure and private investments alone and place human and institutional development at its core. The African perspective through CAADP reinforces this view: transforming agri-food systems requires human capacity, research-innovation ecosystems, inclusive value chains and resilient institutions.

Agrinatura is ready to support the EU and partner institutions in operationalising this human-centred approach to support the Global Gateway Strategy - leveraging expertise, networks and long-standing partnerships across the Global South and Global North - to turn research, education and innovation into engines of agri-food system transformation. Beyond support to private investments Agrinatura also advocates for ER&I investments for public goods as they are prerequisite for productive, inclusive and sustainable investments.

5. Examples of Education, Research and Innovation-related interventions, as enablers of Global Gateway Strategy sectoral investments

The following examples illustrate the Agrinatura capacities to address innovation challenges related to private investments at value chain level or private firms' level.

VCA4D (since 2016) is funded by the European Commission. The service facility is operated by Agrinatura and analyses agricultural value chains on a case-by-case basis, using a standardized, multidisciplinary, and quantitative methodology, producing evidence-based recommendations—including for corporate actors and value chain investors—on value chains' development.

The analyses address key questions related to **inclusion and equity, sustainable growth, environmental and social performances, employment, and micro- to macro-economic indicators along the value chain**. The resulting evidence is requested by and delivered to EU Delegations and national partners, who use it to inform policy and investment decisions.

More than 65 studies have been conducted over the past 10 years, and the facility enters its third phase in the course of 2026.

DeSIRA LIFT (2021-2025) was funded by the European Commission, and operated by Agrinatura, as a support facility to the EC DeSIRA initiative. The DeSIRA initiative aims to contribute to climate-relevant, productive, and sustainable transformation of agrifood systems in the global South, with a focus on innovation processes and systems. DeSIRA LIFT delivers services to support 70 DeSIRA projects to design and implement research approaches fostering collective or individual innovations at farm, territorial or value chain level. For example, the Biostar project supports a group of SMES valorizing biomass to produce energy in rural areas by developing new technologies, strengthening SMEs capacities, and structuring a new energy sector. DeSIRA LIFT also supports policy decisions based on EC demands. In particular, a number of reports and briefs align with agribusiness needs, e.g. "The potential of the off-farm production, marketing and use of organic and biofertilisers in Africa", "Current developments in seed laws harmonisation in Africa", "Digitalisation for smallholder farmers", "Gender-responsive mechanisms for locally-based private sector engagement in strengthening capacity of seed systems in Africa".

The new phase of DeSIRA is DeSIRA+, focusing on Africa, the agroecological transition, the innovation and scaling factors and conditions to effective transitioning. A follow-up facility, DeSIRA **LIFT+** (2026-2029) aims at fostering synergies and added value among the 12 DeSIRA+ projects with a specific focus on scaling innovation especially in value chains. Two key ingredients are policy dialogue at national, regional and continental level and funding mechanisms for innovation through private sector mobilisation. A first study is aiming at developing the bio-inputs sector in Africa by involving EU and African private firms.

SASI-SPI

SASI-SPI (Sustainable Agri-Food Systems Intelligence – Science Policy Interface) supports transitions towards sustainable aquatic and agri-food systems in Africa, Asia, Latin America, and the Caribbean.

Operated by Agrinatura and funded by the European Commission, the facility provides rapid policy intelligence and systemic analyses on cross-cutting issues such as soil health, fertilizers, and consumer purchasing power. It also facilitates science-policy labs that foster dialogue and shared narratives on themes including aquaculture and pastoralism, which highlight the investments' needs towards sustainable development and growth.

Through country-level engagement, SASI-SPI supports institutional learning and policy reform processes, contributing to evidence-based and inclusive food systems transitions.

GENE-LINK (2026-2029) is funded by the European Commission. The project is co-operated by ICRAF-CIFOR, GIZ and Agrinatura. It fosters and strengthens dialogue and collaboration **between the scientific community and the private sector** by supporting the development of knowledge-, innovation-, and business-oriented ecosystems focused on the valorization of nature-derived substances, molecules, and products.

A specific focus lies on enhancing the capacity of public research laboratories in low- and middle-income countries (LMICs) to engage effectively with downstream industry and market actors at multiple levels—from local small, micro, and medium-sized enterprises (SMMEs) to international and European companies—and to develop and sustain viable collaboration models.

This capacity is multidimensional and includes:

- **Technical capacity** (gene and product identification and characterization),
- **Institutional capacity** (ABS regulations, standards, certifications, and compliance frameworks),
- **Financial capacity** (economic viability, risk mitigation, and investment readiness).

The project aims to strengthen capacities across all these dimensions while facilitating structured match-making between research, upstream actors (suppliers, producers) and industry actors. Building on context-dependent case studies and tailor-made solutions, the project also extracts transferable lessons and generalizable models to support scaling.

Support to coffee value chains

The coffee value chain in Africa involves a large range of actors (farmers, cooperatives, traders, processors and consumers). Coffee is an important value chain for EU interventions with specific points of interests such as zero deforestation and agroforestry production, pest and disease control such as the coffee rust without forbidden pesticides, decent living incomes for farmers, quality and secure coffee procurement for traders, private investments in the coffee industry in Africa and Europe. Different EU and EU Member States programmes and projects contribute to fostering the coffee value chain. Agrinatura is part of some of them through the DeSIRA initiative or Horizon Europe projects.

Recent exchanges between research and coffee sector private actors aim to design and implement an intervention aligned with the EU innovation investment hub supporting the Global Gateway strategy. The

objective is to secure coffee procurement based on coffee production with restricted use of pesticides including those forbidden in Europe. What could be the Education, research and innovation pillar supporting private investments in this coffee sector?

- Education: designing or fostering academic (youth) and vocational (technicians) curricula on value chains and agroecological production including for technicians making use of the existing knowledge
- Research: developing participatory research with living labs and academic research through EU-Africa partnerships among universities and research centres to address bio-physical topics (agroforestry, bio-solutions for pest management and soil health) and socio-economic topics (value chain analysis, risks analysis, institutional arrangements between value chain actors)
- Innovation: strengthening the innovation ecosystems with knowledge and capacity building to support start-ups and SMEs to develop and market bio-solutions. Strengthening the advisory services with relevant intervention methods to scale innovations at farm level. Fostering policy dialogue based on scientific evidence for the scale-up of innovations (regulations, taxes, subsidies, etc.)