Forest, Agriculture and Commodity Trade (FACT) Dialogue

Research, Development and Innovation suggestions to the Chairs Proposal draft

(v.5/Jul/21)

The purpose of this document is to:

1. Propose concrete and actionable ideas, drawing from the "Areas for Action" on Research, Development and Innovation included in the FACT Chairs Proposal.

2. Provide a basis for further discussions to the FACT government-to-government Research, Development and Innovation Working Group that could be incorporated into a roadmap.

Additional background on the document:

- Through this Research, Development and Innovation Working Group, the FACT Dialogue delivers on the broader goals of the COP26 campaign on *Transforming Agricultural Innovation for People, Nature and Climate*. Policy recommendations set out in this document are indeed closely aligned with the campaign's objectives to unlock the level of investment, engagement and collaboration that is needed for research and innovation to meet future demand for food, tackle climate change and protect nature.

- This document will also form the basis of exchanges with other FACT Working Groups (Smallholder Support; Transparency & Traceability; Trade & Markets) to ensure that the recommendations are aligned, given the overlapping nature of various issues.

Context

The working groups are tasked with developing a roadmap with short, medium, and long-term indicative actions, which will be combined to form a single FACT Dialogue Roadmap. The goal of each working group is to provide "a succinct set of action-orientated ideas that can be translated into ambitious government-to-government principles, commitments and roadmaps for COP26".

To support this development, working groups will identify areas for action, and the specific actions therein, that can be taken between all, or some, FACT countries.

Actions are intended to deliver collective impact at scale, to be practical and specific, to be coherent with existing policies and agreements, and to facilitate collaboration at international level.

Objectives for the Research, Development and Innovation Working Group

The FACT Dialogue Joint Statement assigned the Research, Development and Innovation Working Group the task to "*strengthen and enhance our research, development, and innovation efforts to support and scale up productivity improvements within agricultural commodity systems to avoid expansion of unsustainable practices and maintain sustainability of terrestrial ecosystems.*"

To achieve this goal, **several areas for action** have been identified:

- **Accelerating deployment of existing technologies:** mechanisms to explore and accelerate the deployment of existing cost-effective, demonstrated technologies, business models or best practices through coordinating and convening partners around specific challenges to support scale and avoid the need to expand agriculture practices into forests and other terrestrial ecosystems through improving productivity and supporting livelihoods.

- **Enabling information to support farmers' decision making**: Utilising digital platforms and data to support innovation and productivity improvement, including dissemination of best practices and technologies to farmers, particularly smallholders, to allow them to access information, finance and markets.

- **Research and collaboration:** stocktaking and coordination of research across jurisdictions to support new technologies, models or processes, including pilot programmes. Technologies and establishment of partnerships to share lessons, findings and experiences.

DRAFT RECOMMENDATIONS

In response to the areas of action identified, we have identified three key recommendations for commitments and action:

1) A global platform to accelerate the pace and scale of innovation

The challenge:

Innovation in agriculture can be slow and uneven. While some technologies take decades from development to deployment at scale, others do not get adopted as the very end-users of innovation and technology often lack the knowledge and resources to adopt them. Given the growing need to accelerate climate action in the agricultural sector, these systemic issues need to be addressed.

Beyond developing and deploying research and innovation, sharing best practices on technology tools proven to work in various contexts is essential, as it allows to provide concrete, locally relevant solutions to end-users and farmers. Key institutions should therefore engage in an inclusive dialogue and share lessons and best practices on what works, with a view to bring innovation to scale.

How to address it:

Establishing a **global platform to accelerate the pace and scale of innovation** would enable and support the coordination, sharing and scaling of best practices and technologies in targeted areas / jurisdictions to support sustainable practices and productivity improvements. It will allow countries with shared climate and common production systems to reduce duplication of efforts and to share learnings for extension and implementation across countries (North-South, South-South and triangular models).

An example of existing initiative is the *100 Million Farmers* platform, which draws on the ambition of leadership groups within and beyond the World Economic Forum, and aims to align and scale efforts to help 100 million farmers transition towards net-zero, nature positive production practices by 2030. It will facilitate collective action by driving ambition on a set of objectives, priorities, and tools, thereby allowing for greater alignment of innovation efforts between stakeholders. Its action-focused agenda is anchored in regional and national 'lighthouse' projects. Each lighthouse is led by a regional multi-stakeholder coalition, with solutions tailored to local food systems and the natural ecosystems they depend on. Leveraging lessons from these 'lighthouse' projects, the platform will ultimately allow to feed broader recommendations into formal markets, government policymaking and global frameworks.

Another example is the World Bank's *Food Systems, Land Use and Restoration* (FOLUR) global platform, which operates with support from multiple partners and targets large scale production landscapes for sustainable integrated landscapes and food value chains.

Key steps:

- **Short-term**: Build political support from countries and other stakeholders for a global platform to accelerate the pace and scale of innovation, and announce this as part of the FACT roadmap. Success of the accelerator will depend on stakeholder buy in, therefore building on existing platforms is an attractive option.
- **Medium-term:** Develop regional lighthouses and models which enable cooperation across stakeholders, to share best practices with others facing similar challenges, i.e. serving as hubs for cooperation models.
- **Long-term**: Unlock investment and finance into the innovative tools and technologies which have proven to work to foster the transition to net-zero, nature-positive agricultural practices.

2) Common metrics

The challenge:

Defining a common set of metrics and improving measurement are key to comparing what works across different regions, to identify best practices and unleash breakthrough solutions. Yet, the lack of common and robust metrics stands as a major challenge for both implementers and investors in innovation. For public funders of agricultural innovation to ensure that their funds are appropriately used to support sustainability goals, and for managers and implementers of innovation programs to plan their work and track progress against sustainability objectives, better metrics are needed.

How to address it:

To tackle this challenge, countries need to agree on a clear set of outcomes for innovations and innovation processes that promote sustainable agriculture, together with guidance and metrics supporting those outcomes. These can be used to inform policy decisions, to plan, guide, and monitor progress against sustainable agriculture objectives, and to share lessons between countries on what works, how to support implementation and how to accelerate the pace and scale of innovation across different contexts.

Several existing initiatives have started tackling this issue. The Commission on Sustainable Agriculture Intensification (CoSAI) has thus established a *Taskforce on Principles and Metrics for Innovation in Sustainable Agri-Food Systems*, with the objective of developing and recommending a set of principles and metrics for guiding and monitoring innovation for sustainable agriculture based on existing evidence. Another example includes the *CSA Programming and Indicator Tool*, designed by CGIAR's Research Programme on Climate Change, Agriculture and Food Security (CCAFS) to develop better instruments for programming, and better metrics for tracking outcomes and impact. Supported by a database of over 378 indicators from various international development agencies and institutions, this tool allows to create a common framework to address climate-smart agriculture (CSA), thereby facilitating the delivery of not only productivity outcomes, but also positively tracking adaptation and mitigation impacts.

The *Global Research Alliance on Agricultural Greenhouse Gases* (GRA) has also started supporting countries (mostly in Latin America, Africa and ASEAN) in the monitoring, reporting and verification of agricultural GHG emissions but also in the roll-out of new systems, technologies and practices. This initiative allows participating countries to monitor progress on the adoption of innovative low emission and productivity enhancing technologies and practices, as well as to better quantify their agriculture sector GHG emissions.

Other examples include the *Innovative Methods and Metrics for Agriculture and Nutrition Actions* (IMMANA) programme, which accelerates the development of innovative and interdisciplinary metrics and tools to better inform policy decisions on agriculture and food systems for better health and nutrition outcomes in LMICs, as well as the *Agriculture, Nutrition & Health* (ANH) Academy, which focuses on building a community of practice around the existing evidence base and sets a forward facing agenda.

There are also several sector-wide guidance and assessment frameworks to promote sustainable agriculture production and investments (e.g., *IFC Environmental, Health, and Safety Guidelines* (IFC-EHS), *World Bank Investing in Sustainable Livestock Guide* (ISL), *Global Roundtable for Sustainable Beef* (GRSB), *Dairy Sustainability Framework* (DSF) and the *Climate Bonds Initiative* (CBI)). These frameworks provide a comprehensive guidance and a list of recommendations, with criteria and indicators, on how crop and livestock value-chains can address sustainability issues and become eligible for low emissions investments, encouraging stakeholders to implement all recommendations to the extent possible.

Key steps:

- **Short-term**: Join a group of volunteer users to map guidance and metrics that exists, and to help identify major gaps in available metrics for further investment.
- **Medium-term**: Agree on a focused set of outcomes and metrics for agricultural innovation, which address innovation in policies, social institutions and finance, as well as science and technology, and develop a mechanism for tracking and accountability that will ensure transparent reporting on progress.
- **Long-term**: Scale up the use of common metrics by raising capability and capacity for measuring, and nurturing partnerships with key implementing organisations.

3) <u>Research partnerships between governments, research institutions and academia</u>

The challenge:

Research and innovation efforts remain often fragmented and fail to link activities from foundational science to delivery within a single institutional framework, which prevents effective integration across the innovation pipeline. Yet, fostering institutional capacity and capability focused on delivery is essential to scaling up effective innovation models – and this means having the right collaboration and partnerships in place. Countries and partners would greatly benefit from coming together in research collaborations and partnerships, knowledge sharing, use of best practices, and capacity building among

scientists and other practitioners, to support new technologies, models or processes, and share lessons, findings and experiences.

How to address it:

Establishing research partnerships between governments, research institutions and academia would allow to identify, support, share and pilot innovative technologies, business models and approaches and thus to enable lessons and best practices to be identified and replicated across regions.

Joining and revitalising existing multi-stakeholder initiatives and partnerships in agricultural research could allow to scale up efforts already underway. The *Global Research Alliance on Agricultural Greenhouse Gases* (GRA) is a good example of research partnerships between governments and research institutions. Gathering 64 member countries from all regions of the world, the GRA also involves 24 partner organisations – among which regional research institutes, farmer organisations, development banks and multilateral fora including the FAO and IPCC. Working to increase international cooperation and investment in solutions to reduce the emissions intensity of agricultural production systems and improve efficiency, productivity, resilience and adaptive capacity, the GRA enables cross-country, multi-stakeholder action to scale up mitigation efforts, while helping meet food security objectives.

Another example is the CGIAR – international system for agricultural research, supporting innovation across more than 50 countries – which is currently undergoing a phase of reform to better address emerging challenges.

Other initiatives include multi-stakeholder platforms such as the Agriculture Innovation Mission for Climate (AIM for Climate), the Tropical Agriculture Platform (TAP), the Global Forum for Agricultural Research (GFAR), the Global Alliance for Climate-Smart Agriculture (GACSA), 4 pour 1000 (launched at COP21), Adaptation of African Agriculture to climate change (AAA) (launched at COP22), the Latin American and Caribbean Platform for Climate Action in Agriculture (PLACA) (launched at COP25). All these platforms can benefit from member support in accelerating collaboration and partnerships to strengthen and enhance our research, development, and innovation efforts.

However, while many of these platforms exist, it is essential to have a focus on transformational research priorities, which is a role that the FACT members can catalyse.

Key steps:

- **Short-term**: Facilitate a discussion with relevant organisations and platforms in this area to agree on a set of research priorities (Annex 2) with a focus on underpinning a transformation in food systems through strengthened research, development and innovation efforts.

- **Medium-term**: Support and revitalise, as appropriate, relevant organisations and platforms, to deliver research partnerships around the priorities identified.

- **Long-term**: Foster efforts to bring research and innovation across the priorities to scale, including with governments, private sector actors and entrepreneurs, fostering end-to-end innovation across these priorities. This results in an innovation system characterised by principles of the *Global Action Agenda on Transforming Agricultural Innovation for People, Nature And Climate* (Annex 1).

ANNEX 1

Annex 1. Principles of the *Global Action Agenda on Transforming Agricultural Innovation for People, Nature And Climate*

A set of collaborative principles as well as areas of common purpose and action are being defined as part of the *Transforming Agricultural Innovation for People, Nature And Climate* work of the sustainable agriculture campaign, that can inform FACT members actions on innovation. These are:

- **Alignment:** aligning innovation priorities with current needs and opportunities across key areas – including nature, adaptation and resilience, and mitigation – and working on a set of shared standards, investments and incentives;

- **Integration:** developing integrated institutional frameworks across the innovation pipeline and better linking foundational science to delivery and downstream deployment at scale;

- **Demand-driven, end-to-end:** fostering demand-driven approaches working across the innovation system for agriculture, and putting end-users at the centre of the research and development process;

- **Partnership and collaboration:** addressing fragmentation among research institutions and donors, fostering partnerships and collaboration across the innovation ecosystem and adopting an open innovation model;

- **Contribution to international commitments:** helping achieve international commitments and agendas – including the SDGs, the Paris Agreement under the UNFCCC, and the Convention on Biological Diversity.

ANNEX 2: Emerging research priorities for transformation in food systems

Transformative actions	Priority research questions
Zero agricultural land expansion in high carbon landscapes	What are the methods, tools and policies to incentivise better transparency and accountability in commodity supply chains? How can these be scaled?
Enable markets and public sector actions to incentivise climate-resilient and low emissions practices	What are the factors that can support rapid scaling out of climate-resilient practices and technologies, taking into consideration context-specific needs?
Support prosperity through mobility and rural reinvigoration	What are the opportunities for livelihoods development in rural areas when farming is no longer viable under climate change?
Secure resilient livelihoods and value chains through early warning systems and adaptive safety nets	How can the 'last mile' challenge in the delivery of climate services be overcome?
Help farmers make better choices	How can farmers leapfrog traditional agricultural development pathways through digitalisation?
Shift to healthy and sustainable climate-friendly diets	What mechanisms are most effective (and in which contexts) to transition towards healthy and sustainable diets, including taxes, subsidies, labelling, awareness campaigns etc.?
Reduce food loss and waste	What are the bottlenecks that deter reduction of food loss and waste, how can these bottlenecks be overcome?
Implement policy and institutional change that enable transformation	How can entrenched views and political realities be addressed to catalyse reform in the agriculture and food sectors in countries?
Unlock billions in sustainable finance	What are the best practices to develop bankable projects for food systems transformation?
Drive social change for more sustainable decisions	What are the behavioural factors for replicating and scaling social change?
Transform innovation systems to deliver impacts at scale	What are the best practices to improve knowledge generation processes to support the transformation agenda?

Source: Steiner A, Aguilar G, Bomba K, Bonilla JP, Campbell A, Echeverria R, Gandhi R, Hedegaard C, Holdorf D, Ishii N, Quinn K, Ruter B, Sunga I, Sukhdev P, Verghese S, Voegele J, Winters P, Campbell B, Dinesh D, Huyer S, Jarvis A, Loboguerrero Rodriguez AM, Millan A, Thornton P, Wollenberg L, Zebiak S. 2020. Actions to transform food systems under climate change. Wageningen, The Netherlands: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). https://hdl.handle.net/10568/108489