

Foresight and Trade-off Implications for One CGIAR Launch ISDC Virtual Meeting Summary

June 15, 2020

(view the [meeting recording](#) and [reading materials](#))

ISDC Presenters:

ISDC chair Holger Meinke, foresight and trade-off focal point lead Chris Barrett, and foresight and trade-off focal point Lesley Torrance

External Guest Reaction Presenters:

SIMEC chair Michel Bernhardt, TAG 2 co-convener Martin Kropff, and co-spokesperson of Science Leaders Oscar Ortiz

Attendees:

CGIAR ISDC, TAG 2, Science Leaders, and Foresight Community of Practice

Key Messages

- Foresight and trade-off analyses engage stakeholders in meaningful discussions on the demand for the research, the type of impact that needs to be achieved, and suitable indicators for monitoring and evaluating progress toward those shared goals.
- Foresight and trade-off analyses are essential tools for developing and executing research strategies and therefore should be integrated in ongoing decision making, priority setting, and impact evaluation processes.
- The foresight literature reviewed gave less attention to three of the five One CGIAR impact areas (gender, nutrition, and poverty). Historically, agrifood system (AFS) foresight research focused on productivity, economic growth, and environmental concerns such as land use.

Goals of the Foresight and Trade-off Project

- Provide foresight and trade-off implications and recommendations to CGIAR leadership for the development of the CGIAR 2030 Research Strategy.

Process of Developing Outcomes

- Two foresight reviews commissioned specifically analyzing the five One CGIAR impact areas using both studies by external organizations that paid significant attention to AFS and previous CGIAR-sponsored ISPC foresight studies. See [Technical Note](#) p. 2 for table on foresight methods used in literature including trend and megatrend analysis, scenario planning, and visioning and backcasting.
 - Societal impact review focused on areas of nutrition and food security, poverty reduction, livelihoods, and jobs, and gender equality, youth, and social inclusion (author: Erin Lentz, The University of Texas at Austin).
 - Environmental impact review focused on areas of climate adaptation and greenhouse gas reduction and environmental health and biodiversity (authors: Monika Zurek, University of Oxford; Aniek Hebinck, Erasmus University Rotterdam; Odirilwe Selomane, Stellenbosch University).

- Trade-off analysis report commissioned that reviewed conceptual foundations of trade-offs analysis; described current data and modeling tools from farm to global scales; and identified their strengths and limitations (authors: John Antle & Roberto Valdivia, Oregon State University).
- At the ISDC semiannual (virtual) meeting the week of 20th April, the foresight reviews were presented, discussed and refined, as was the charge to the trade-off analysis consultants.
- In the days following its semiannual meeting, ISDC built a consensus of draft reflections that it delivered to TAG 2 using the foresight reviews' findings and meeting discussions.
- The trade-off analysis report built upon the foresight reviews and ISDC consensus.
- ISDC developed a consensus statement on critical questions and recommendations arising from the foresight and trade-off analysis reports jointly.

Publications include (links):

- [Foresight and Trade-off Implications for One CGIAR Technical Note](#)
- [Trade-offs: The Value of Understanding the Consequences of Choices Fact Sheet](#)
- [Food and Agriculture Systems Foresight Study: Implications for Gender, Poverty, and Nutrition](#)
- [Food and Agriculture Systems Foresight Study: Implications for Climate Change and the Environment](#)
- [Trade-off Analysis of Agrifood Systems for One CGIAR](#)

Gaps in AFS Foresight Literature Reviewed Related to Impact Areas

- Most of the literature reviewed originated from outside CGIAR. The four major gaps that became evident as part of the review process included (see [Technical Note](#) p. 3 for full list):
 - Impact areas that are currently under-represented in foresight studies: gender, nutrition, and poverty
 - Some notable exceptions existed in the literature but historically foresight research has focused on AFS productivity, economic growth, and environmental issues.
 - Megatrend analyses that include shocks
 - Megatrends are a method used in foresight research such as urbanization. Megatrends analyzed rarely included shocks such as global pandemics (i.e., COVID-19). This is critical because of the increase in food consumption away from home and therefore shocks have the potential to greatly affect AFS at various levels.
 - Governance and policy barriers insufficiently considered
 - Literature tended to focus on how policy may help AFS issues such as through tax incentives but the views lack policy enactment and fail to address governance-related issues, particularly those in multi-national settings.

- Adoption and adaptation pathways of technology and institutional innovations
 - These pathways are essential to understanding emerging trends among the impact areas. Although adoption patterns have been extensively studied by CGIAR, few AFS foresight studies incorporated the findings of that work.

The scope of the foresight reviews did not include identifying why these gaps existed in the literature, nor does ISDC infer that the presence of such gaps in foresight work implies a misdirection in the five impact areas that CGIAR has identified as important. On the contrary, this indicates an opportunity for One CGIAR to exercise thought leadership in helping to fill these gaps.

Trade-off Analysis Implications

The trade-off analysis report focused on the process of developing and managing AFS research strategies across the five impact areas. Such processes can help rectify the shortcomings of existing AFS foresight studies as One CGIAR embraces these impact areas. The trade-off analysis report provides tools that can be used to engage partners in weighing trade-offs, identifying impact priorities and suitable indicators in a streamlined way in programs with multiple objectives. Trade-off analysis can also be useful in projecting the possible impacts of shocks. Below are some of the key questions and insights that should be used operationally for stakeholder engagement (see also [Technical Note](#) p. 9).

- What are CGIAR's mechanisms and capacities to identify and engage key partners in weighing trade-offs?
- What opportunities exist in emerging research modalities and tools to streamline ongoing trade-off discussions?
- How will the trade-off analysis systems of CGIAR continually assess and weight the inevitable unintended consequences that new technologies spur?
- Studying and projecting the possible impacts of shocks will be critical in aligning and influencing emerging AFS trends.

Reflection Highlights

The following selected reflections were developed by ISDC through building consensus. See [Technical Note](#) p. 7 for all reflections.

- Success will depend on integrating foresight and trade-off analyses into ongoing co-design and decision-making processes.
- Foresight and trade-off analyses should prioritize attention to key barriers to adoption, adaptation, and diffusion of innovations for impact.
- Expanded attention to—and investment in—research concerning fruits, legumes (including pulses), nuts, and vegetables to broaden the System's commodity composition. (Note: this gap in the research portfolio might best be addressed via partnerships rather than direct CGIAR investment in building these capabilities.)

- Research needs to align and influence emerging AFS trends, especially with private sector partners in post-harvest value chains.
- Sustainable intensification and stronger agroecological systems approaches are synergistic pathways.

Trade-off Recommendations

Three recommendations stemmed from the project that focus on trade-off analysis being an efficient participatory process. Partners will need to understand trade-off analysis processes. See [fact sheet](#) for additional information.

- One CGIAR should integrate the two types of analytical approaches—foresight analysis and tradeoff analysis—into all its ongoing decision-making and priority-setting processes.
- To deal with complexity and uncertainty in AFS, foresight and trade-off analyses implementation should respect the principle of parsimony by using the simplest scientifically-sound approaches that fit the problem domain.
- One CGIAR needs a strategy for capacity building to ensure the effective use of foresight and trade-off analyses by all its governance, management, and research teams.

Reaction Summaries of Invited Guests

- *SIMEC Chair, Michel Bernhardt*
 - Important and timely work presented for research strategy development that is needed now because of the current COVID-19 crisis.
 - Funders need this information on foresight and trade-offs. Specific information is needed on what to invest in. What are the five big things that CGIAR can do to create impact on the ground for the next five to 10 years?
 - CGIAR is a relatively small business with approximately an \$800M budget. We need to know where the focus should be in the new research portfolio.
 - While funders appreciate the complexity of AFS, they want to focus on where the biggest impacts can be achieved. They want their money to go to what is most promising for success.
 - A compelling story is important for funders. Currently resources are available for action-oriented work in climate change and nature-based solutions. Agriculture links very closely to this agenda and this must be clearly articulated.
 - What is needed to achieve adoption at scale? How can we think bigger than the project level? How do we influence policy beyond a policy brief or workshop?
- *TAG 2 Co-convenor, Martin Kropff*
 - Much of the literature included in the foresight reviews are from a global perspective and therefore do not show the five CGIAR impact areas. CGIAR needs to look beyond the high-level analyses used in the reviews and include more specific country analyses.
 - The ISDC reflections are aligned with expectations.
 - We need to consider how this affects the lowest income populations.
 - Research support comes largely via a climate change agenda; agriculture is very important for mitigation and adaptation. CGIAR needs to align with that agenda and focus on getting the messaging right.

- CGIAR is not focused enough across the entire value chain, from farm to fork.
 - It is important to highlight that sustainable intensification and agroecological systems approaches are synergistic.
 - There should be more focus on the impact of shocks on AFS. The food system is fragile, and resilience is key.
 - As a research organization, CGIAR has gone far with adaptation and adoption of technology. CGIAR needs to go further with scaling.
 - A workable list of indicators is needed and ISDC may be able to help.
- *Science Leaders Co-spokesperson, Oscar Ortiz*
 - Along with building foresight and trade-off capacity within CGIAR, it is critical these concepts are part of the agenda for a new generation of scientists.
 - Foresight is important research where CGIAR should put more attention to fill the knowledge gaps, particularly in developing country contexts.
 - Trade-off analysis is also important in a complex organizational system that has implications at the regional, country and local level. Choices need to be made.
 - Complex systems have interactions where understanding trade-offs is essential to make decisions.
 - The emergence of converging goals across disciplines, sectors, and stakeholders should be better harnessed. Convergence calls for looking at innovation processes from as many viewpoints as possible to understand the drivers of adoption and the trade-offs.
 - Trade-off analysis is a way to examine interfaces that have not been sufficiently explored.
 - Systems include complex networks of partnerships. Understanding human behavior through youth and gender lenses is critical to move from foundational to translational research and to impact innovations at scale. However, there are knowledge gaps in the areas of foresight and trade-offs among the CGIAR five impact areas—particularly in less developed countries—and CGIAR can play a role in filling those research gaps.
 - The key is identifying the right entry points in foresight and trade-off analyses for CGIAR.

Discussion

- Institution-wide trade-off analysis is needed across CGIAR as well as a database that incorporates AFS and research management intervention options across disciplines in a consistent way. CGIAR needs to develop priorities in different regions. Once those are established, CGIAR edges closer to an extension paradigm, where other actors might take over the implementation of new practices or technologies. Is there a plan to have a cross-center foresight and trade-off team?
 - This question is an important point to raise and worthwhile for discussion because there is no answer at this stage.
 - The CGIAR foresight community of practice (CoP) works with ISDC. But the CoP is not an institutionalized body to help the entire organization work together to develop option databases and toolkits. Data gaps hampers local decision making.
 - This is important to TAG 2; implications for the Big Data Platform and link it to COVID-19 agenda need to be made more overtly.

- The foresight CoP agrees strongly with the need to have foresight and trade-off analyses as part of an ongoing process to support decision making.
- Where does CGIAR-driven foresight end and commercially-driven research start? The other question is on the dimension of bringing in fruits, legumes (including pulses), nuts, and vegetables; this requires further elaboration.
 - There are different purposes for foresight. Corporate entities use foresight to assess likely future trends to identify profitable business strategies. Note that the ISDC purposely did not use the term “predict,” which would be antithetical to foresighting. Instead, foresighting can project the possible pathways that can emerge and influence the CGIAR’s ability to deliver in each of the five impact areas. CGIAR must design innovations that can diffuse and scale under plausible future states, not just the present. But the impact areas differ fundamentally from commercial profit goals.
 - The foresight reviews heavily emphasized the essential role that women commonly play in crops under-represented in the CGIAR portfolio and the role of those crops in achieving healthy diets. ISDC is not recommending that CGIAR needs to reprioritize its own resources towards those commodities but rather it must engage with partners that have expertise in those commodities to embrace a broader portfolio of crops that affect each of the five impact areas.
- There is a lack of suitable data for modeling on topics such as gender and youth, so there is a need to use both qualitative and quantitative analyses, which is doable. But this requires CGIAR to prioritize and invest in these types of analyses. We also need to be aware of what is happening outside of agriculture, which impact AFS.
- The framing of adoption and diffusion of innovation could be changed. CGIAR has led adoption studies but that was when it was a farmer decision at the local level. With the new focus on SDG2, One CGIAR needs to consider the entire agriculture and food value chain, including consumer needs, multiple and complex interactions, national security, and others. The operating environment, expectations, and ambitions have changed.
- Foresight and trade-off analyses are very context-specific, so we need to explicitly consider the issue of scales (global, regional, country, and local). Scaling impacts is not straightforward, particularly when objectives and impact metrics are incompatible across these scales. This requires further discussion. It also raises the question if CGIAR has the capacity and data to do the type of analyses needed at the appropriate level.
- Trade-off decisions are usually political. We need to acknowledge this and remain alert to political agendas.
- A key point raised is the need to reduce the complexity in our communication with funders. This does not mean over-simplifying topics unnecessarily, but foresight and trade-off analyses are the types of tools that can help lower the complexity, creating a more compelling storyline.
- The lack of attention to some of the CGIAR impact areas in the foresight literature does not diminish the need for those impact areas. Some of those impact areas are relatively new and not easily quantifiable.