Independent Advisory and Evaluation Service

CGIAR

Resilient Agrifood Systems Science Group: Evaluation Report

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You can explore various knowledge products on the CGIAR dedicated portal on Science Group evaluations [link].

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Acronyms

AFS	Agricultural and Food Systems
AMD	Asian Mega-Deltas
CAS	CGIAR Advisory Services
CBBD	community-based breeding programs
CFSVA	Comprehensive Food Vulnerability Analysis
CIAT	International Center for Tropical Agriculture
ClimBeR	Climate Resilience
CRPs	CGIAR Research Programs
CSIR	Council for Scientific and Industrial Research
CWANA	Central and West Asia and North Africa
DE	Developmental Evaluation
EA	Evaluability Assessment
ESA	East and Southern Africa
ECA	East and Central Africa
EiA	Excellence in Agronomy
F2R-CWANA	Fragility to Resilience in Central and West Asia and North Africa
FLW	Food Loss and Waste
FRESH	Fruit and Vegetables for Sustainable Healthy Diets
FTE	Full Time Equivalent
GESI	Gender Equality and Social Inclusion
GTIs	Global Thematic Initiatives
HER+	Harnessing Equality for Resilience in the Agri-food System
IA	Internal Audits
IPGs	International Public Goods
IAES	The Independent Advisory and Evaluation Service
IPSR	Impact Package and Scaling Readiness Report
ISDC	Independent Science for Development Council
KM	Knowledge Management
LAC	Latin America and the Caribbean
LMICs	Low- and Middle-Income Countries
MARD	Ministry of Agriculture and Rural Development
MD	Managing Director
mDSR	mechanized direct seeding technology
M&E	Monitoring and Evaluation
MEL	Monitoring, Evaluation, and Learning
MELIA	Monitoring, Evaluation, Learning and Impact Assessment
MER	Monitoring, Evaluation, and Research
MFS	Mixed Farming Systems
MONROE	Ministry of Natural Resources and Environment
MoU	Memorandum of Understanding
MYEP	Multi-Year Evaluation Plan
NARES	National Agricultural Research and Extension Systems
NDCs	Nationally Determined Contributions
NRM	Natural Resource Management
OH	One Health
OHI	One Health Initiative
OHP	One Health Partnership for Zoonoses
PCU	Project Coordination Unit
PPU	Portfolio Performance Unit

PRMF	Performance and Results Management Framework
PRMS	Performance and Results Management System
QoS	Quality of Science
QoR4D	Quality of Research for Development
RII	Regional Integrated Initiatives
RTE	Real-Time Evaluation
RCTs	Randomized Control Trials
SDG	Sustainable Development Goal
SG	Science Group
SHIFT	Sustainable Healthy Diets Through Food System Transformation
SIMEC	Strategic Impact, Monitoring and Evaluation Committee
SME	small- and medium-sized enterprise
SMEs	Subject Matter Experts
SP	SharePoint
ST	Systems Transformation
TAFSSA	Transforming Agrifood Systems in South Asia
TAFS-WCA	Transforming Agrifood Systems in West and Central Africa
ToC	Theory of Change
ToR	Terms of Reference
UFE	Utilization-Focused Evaluation
UNEP	United Nations Environment Programme
WCA	West and Central African Food Systems Transformation
WEAI	Women's Empowerment in Agriculture Index
WELI	Women Empowerment Livestock Index
WELBI	Women's Empowerment in Livestock Business Index
WOAH	World Organization for Animal Health
WP	Work Packages

Executive Summary

The CGIAR 2030 Research and Innovation Strategy sets priorities to deliver solutions for development through 33 initiatives across three interlinked action areas: Systems Transformation (ST), Resilient Agrifood Systems (RAFS), and Genetic Innovation (GI). The RAFS SG delivers on research priorities aimed at transforming agri-food systems to enable the most vulnerable to access affordable, sufficient, safe, and healthy diets through 15 initiatives. This evaluation report of the RAFS Science Group (SG) is one of three SG evaluation reports, adopting a forward-looking perspective in view of the next Portfolio 2025-30 [see diverse knowledge products and the SG Evaluation Terms of Reference (ToR) on the SG landing page (here).

Evaluation Purpose and Users, Scope and Methodology

The **purpose** of the SG evaluations is to contribute to the steering of evidence-based decisions, to support CGIAR's institutional learning and accountability. The **key users** of evaluation results are the CGIAR System Council, the SG and forthcoming Science Program management, senior leadership team, CGIAR centers and external partners. The evaluation provides 1) An overall independent assessment of the performance of the SG pooled funding portfolio; and 2) Key lessons learned and recommendations to foster organizational learning and enhance the design of the next portfolio through early findings. The evaluation **scope** covers the implementation of the RAFS SG Portfolio (15 initiatives) from January 2022 to February 2024.

The evaluation adopted a **mixed methods design;** and quantitative and qualitative information and data from primary and secondary sources were constantly triangulated to ensure consistency and credibility of results. The methods included: desk document review and portfolio analysis, 183 key informant virtual and face-to-face interviews towards 2 case studies and 2 deep dives, field visits to Colombia and Vietnam; focus group discussions, participatory workshops, and an online survey. Aligned to the Quality of science (QoS) evaluation guidelines, key informant interviews, 2 country case studies and 2 thematic deep dives were complemented by review of a total of 101 individual research outputs.

Evaluation Findings by Criteria

Relevance: The RAFS Action Area aligns well with global and regional priorities in improving productivity in agriculture. It integrates national research agendas and influences policies, although it could better incorporate national research institutes into its framework. Consultations on initiative design were broad but rushed, limiting effective stakeholder engagement and coordination.

Coherence: While the SG structure promotes research integration and collaboration across centers, leadership in guiding cross-center cooperation is lacking. The interaction between Global Thematic Initiatives (GTIs) and RIIS is insufficiently planned, missing potential scaling opportunities and deeper integration at national and regional levels.

Effectiveness: CGIAR reported numerous high-quality outputs from 2022-24, though distinguishing these from earlier CRP-era work is challenging due to a lack of accessible comparative data and clear target indicators. Frequent budget cuts have notably hindered the achievement of planned results.

Efficiency: Funding delays and inefficiencies critically impact initiative execution and outcomes, damaging CGIAR's trust and reputation externally. Operational challenges due to budget constraints and disparate legal statuses across centers complicate efficiency, with essential roles often unfunded and staff efforts spread thin.

Quality of Science (QoS): The research portfolio addresses relevant global and regional challenges, with generally high methodological standards. However, rapid development cycles and heavy reliance on

existing partnerships may dilute the sense of joint ownership. Budget cuts negatively affect scientific quality, and there's a notable lack of QoS oversight at the SG level.

Cross-cutting themes: Partnerships mainly continue from the CRP era, with limited new engagements, especially in scaling capacities like the private sector. Gender considerations are integrated into designs and activities, but budget cuts threaten these efforts. Climate change initiatives lack a cohesive conceptual framework for effective progress tracking and impact assessment.

Recommendations

For the RAFS Science Group

1. Where founding research has been started by RAFS initiatives (e.g., baselines), **this investment needs to be completed** so that the results can be capitalized in the new science programs. A systematic review of unfinished experiments should be carried out to advise future plans and consolidate scientific gains.

For the CGIAR system

2. **Better anchor CGIAR work to national research and development agendas**. This would require a more meaningful involvement of NARES in the design and implementation of CGIAR Portfolio 2025-30. Developing country level strategies and results frameworks, aligned with national priorities and strong connections with NARES, would strengthen and lay the ground for CGIAR country-level relevance and coordination capacity. The partnership strategy currently being designed (CGIAR, 2024) should specify how CGIAR will ensure an inclusive agenda setting with national and international partners, including by developing a framework strategy for a multi-level consultation and decision-making mechanism with partners. Country-level strategies should be informed by this approach and include comprehensive rolling engagement plans to ensure that the national research programs are constantly part of the dialogue.
3. **Strengthen the crucial role of country conveners** by allocating adequate budget and establishing clear coordination mechanisms and communication lines with CGIAR Regional leadership and Science Programs/Accelerators' coordinators. A single coordination point would enhance and institutionalize cooperation at country level across centers and between partners and will be at the forefront of raising CGIAR's profile in countries.
4. **Operationalize** **CGIAR's Integration Framework Agreement (2022)** through financial and human resources, administrative policies, to streamline and harmonize procedures across centers to avoid unnecessary duplications, administrative burdens and excessive bureaucracy.
    a. Clarify the role of centers in program and budget management of science programs resources.[1]
    b. In the absence of a unified human resource platform, enhance CGIAR's cross-coordination abilities to mobilize expertise across centers and regions, based on emerging needs and opportunities, thus demonstrating unified value proposition to national partners.
5. **Operationalize the combination of pooled and bilateral funding by providing specific guidelines to streamline complementarity between the two modalities**, with clarifying reporting modalities, both in terms of funding and results. While initiatives have reported only the pooled funded portion of the Portfolio (CGIAR, 2024), it is necessary to undertake a review to identify solutions to this problem and provide improved guidance on integrated planning, implementation and reporting.

[1] Provided in SC 20-drop in materials in Eval Insight 3- Rec. 12.

6. **Formalize and systematize the PhD student experience and enhance post-graduate researcher contributions to the delivery of the research portfolio based on review.**[2] Changing from a three-year to six-year implementation cycle should facilitate the effectiveness and quality of the PhD experience, which is currently variable across centers and SGs. The way that Doctoral studies are supported and quality controlled is inconsistent and, in some cases, not appropriate nor conducive to student success. Conducting an independent review of this important aspect of capacity building is suggested with the aim of developing a consistent, system-wide, approach, possibly through a CGIAR Doctoral Training College.
7. Reiterating recommendation from the 2021 Synthesis Review, there is still a need **to further broaden the internal skills set** to include more social scientists, gender, partnerships and communication experts. Apparently, these have increased during the Portfolio 2022-24 but their presence is not yet adequate for increased efforts towards scaling pathways. It is also important to **strengthen internal capacities** on topics related to partnerships, policy, and development work through dedicated training.

For Science Programs Portfolio 2025-30

8. **Improve strategic and operational guidance towards cross-center collaboration, interactions between science programs, and between science programs and accelerators**. Mechanisms for accountability on cross-center cooperation and cross-programs synergies should be designed and implemented, as well as incentives and rewards for joint work. Intentional planning of synergies is recommended from the design phase, especially by building on commonalities at thematic or geographic levels and through participatory planning exercises with programs coordinators. Once defined, these synergies should be systematically guided and reported.
9. **The evaluation team believes that scaling innovations and managing scaling partnerships should be concentrated in a single scaling program**[3] **for better coordination. An enhanced decision tool should be developed to help match innovation readiness with resources and scaling partners at country level** with a focus on marketable solutions. A deliberate, consistent and coordinated approach across all science programs is needed for this to work. The feedback loops between the Scaling for Impact Program and the rest of the science programs should be clarified and the pathways towards reciprocal engagement should be articulated. The mechanisms on how the achievements of Scaling Program would contribute to impact at national and regional levels should also been made explicit.[4]
10. **Develop unified guidelines and procedures on performance indicators** for staff assessment and quality control mechanisms within science programs. Since programs involve many centers, performance assessment should be clearly framed and go beyond individual centers systems.
11. **Reassess the current expectation of convening and meeting** across the science delivery structure to set governance and communication norms from the outset of science program implementation. Establish the frequency of meetings within and between science programs. This was fairly inadequate during the implementation of the Portfolio 2022-24, with repercussions on ownership to the SG and on the implementation of synergies.
12. **Strengthen the focus on impact areas in the context of medium and long-term processes across and under science programs** within a six-year business cycle, to avoid mixing too many topics, while ensuring continuity of research from initiatives (2022-24).
    a. **Address the possible isolation of important sub-themes (e.g., food safety, One Health (OH), plant health and postharvest) by improved cross-programs coordination and design.** Important

[2] Provided in SC 20-drop in materials in Eval Insight 3- Rec. 8.
[3] The 2025-30 Portfolio Narrative proposes one dedicated Scaling Program (Scaling for Impact Program).
[4] The same was already indicated in the 2024 Synthesis of Evaluability Assessments of RIIs (link).

topics are spread across science programs (e.g., OH, Resilient Cities, Nature Positive Solutions, Plant Health) and need to be coordinated. **Appoint thematic leads to support coordination across science programs** to prevent isolation and the loss of current scientific gains.

b. **Appoint a single point of thematic leadership for issues of strategic importance to Improve coordination thematically across science programs,** for example, food loss and waste or postharvest losses. The challenges and questions related to the theme of the deep dive on Food, Feed, and Waste were fragmented across the design of several initiatives. This suggests that, in future re-designs of the thematic research of CGIAR, a stage of cross-assessment of research questions should be included to ensure consistency and reduce the possibility of duplication.

c. **Where initiatives show early promise**, for example the One Health Initiative (OHI), **it is important to protect these gains** when designing science programs and to encourage more widespread adoption of the approach.

d. **Target processes** while not being excessively guided by an 'ideal' number of programs and their 'form' and be realistic on expectations; avoid an excessive number of outputs and deliverables to be achieved in short timeframes.

e. **During planning, consider that research needs adequate time to produce results**. In this respect, CGIAR should promote donors' and external partners' awareness to allow **science quality to determine the pace of the programs.** In this respect, MELIA mid-term reviews should support evidence-based targeting and steering.

13. **The Chief Scientist should be responsible for measurable improvement in QoS and alignment to QoR4D across all science programs. An action plan to implement this should be developed and implemented within a year.** This plan should aim to generate the highest quality of scientific outputs and innovations in the next planning cycle. A focus on improving quality and encouraging greater engagement in QoS improvements from NARES partners should form part of this plan to promote improving legitimacy over time.

14. **Science programs should systematically design and implement Monitoring and Evaluation (M&E) frameworks and plans**, including development of baselines, for real time monitoring to support result-based timely decisions. M&E frameworks, plans should be constantly updated with cumulative values achieved for output and outcome indicators.

15. **Align the work on gender, equity and social inclusion**, recognized as accelerators in the 2025-30 Portfolio, **with the Gender Strategy being developed** (see the Gender Platform, CGIAR, 2023)**.** While related conceptual frameworks, action plans and M&E systems should be designed at system level, also including issues related to youth and social inclusion of marginalized groups, the Gender Accelerator should translate them into actions within science programs:

    a. Ensure that **gender-responsive and gender-transformative research continue underpinning science programs** through the designated accelerator and that these cross-cutting themes (accelerators) are not dropped by future budget cuts;

    b. Building on the above-mentioned strategy document and frameworks, science programs **should develop their own position papers** explaining how they contribute to gender and social inclusion endeavors and on how gender empowerment and inclusivity support advancements towards programs' outcomes. They should also develop **action plans and M&E systems** supporting implementation and accountability to stated gender and social inclusion objectives;

    c. **Internal and partners' capacities on gender** social inclusion and intersectional analysis should be enhanced (see Rec.7) and the **engagement with partners working on gender** should be expanded;

d. **Social inclusion of marginalized groups and inclusion of youth** should be clearly stated and accompanied by definitions and standard indicators to support operationalization**.**

1 Introduction

1.1 Background and Evaluation Context

This Evaluation Report is prepared for the independent external evaluation of the Resilient Agrifood Systems (RAFS) Science Group (SG), under the Terms of Reference (ToR) framework of the CGIAR SG Evaluations. The evaluation is commissioned by the CGIAR System Council and executed by the CGIAR Independent Advisory and Evaluation Service (IAES), with the support of external evaluation consultants and Subject Matter Experts (SMEs). The evaluation is anchored to the IAES 2022-24 evaluation plan. The CGIAR management is responsible for the management response.

In line with the CGIAR Evaluation Framework and Policy (CGIAR, 2022; CGIAR, 2022a), the evaluation purpose combines formative and summative aspects, with the aim to support learning, steering and accountability among key users. Additionally, the evaluation aims to support evidence-based efforts by CGIAR to adapt the portfolio design to reach the vision of the 2030 Research and Innovation Strategy (CGIAR, 2021-01).

1.2 Purpose and Scope of the SG Evaluation

In accordance with the CGIAR-wide Evaluation Framework (CGIAR, 2022), in accordance with the SG Evaluation ToR (CGIAR, IAES. 2023) and the Evaluation Inception Report, the purpose of the evaluation is to contribute to the steering of evidence-based decisions, to support CGIAR's institutional learning, and provide accountability. The evaluation provides the following: 1) an overall independent assessment of the performance of the 2022-24 SG pooled funding portfolio; and 2) key lessons learned, and recommendations to foster organizational learning and to inform and enhance the design of the next portfolio through early findings.[5] The evaluation has the following specific objectives: 1) Assess the relevance of the SG portfolio to the needs of countries covered by the RAFS initiatives, as well as the relevance to regional and global concerns; 2) Analyze the coherence and value-added of the SG work; 3) Assess the effectiveness of the SG work in terms of achievement, and/or likelihood of achievement, of expected end-of-the-initiative outcomes; 4) Examine the efficiency of the SG organizational setup; 5) Assess the Quality of Science (QoS), in terms of scientific credibility and legitimacy; 6) Analyze the mainstreaming of cross-cutting issues (partnerships, gender and social inclusion, climate change); and 7) Identify lessons learned and provide recommendations to improve future programming. The list of evaluation questions can be found in the evaluation matrix (see Annex 4).

The evaluation scope covers the implementation period of the SG Portfolio from January 2022 to February 2024, and the 15 initiatives hosted under the RAFS SG. The key users for the evaluation are the CGIAR System Council (which will be supported in the decision-making process), SG management (which will gain evaluative evidence to reinforce the evolution of the current portfolio and the design of the new one), senior leadership team and centers for learning and steering, and external partners (such as policymakers, national governments and NARES).

1.3 Evaluation Report Structure

Following this introduction, section 2 of the report presents an overview of the RAFS SG. Section 3 describes the evaluation approach and methodology. Section 4 presents the main findings for each evaluation question and sub-question. Conclusions, lessons learned, and recommendations are in section 5. The report is accompanied by the following Annexes: Annex 1: Methodology, Annex 2: Case studies–Executive Summaries, Annex 3: Deep Dives–Executive Summaries, Annex 4: Evaluation Matrix, Annex 5: Key informant interview Guide, Annex 6: Profile of Stakeholders consulted in interviews, Annex 7: Online Survey Results,

[5] The design of the new portfolio is a process underway from November 2023 to May 2024.

Annex 8: Evaluation of Quality of Science, Annex 9: Partnerships type, Annex 10: Update on Recommendations from 2021 Synthesis and Lessons Learned from a Decade of CGIAR Research Programs, Annex 11: List of Documents consulted, and Annex 12: Evaluation Team Background and Declarations of Conflict of Interest (CoI).

2 Overview of CGIAR's RAFS SG

2.1 Context (Objectives, Research Areas)

The CGIAR 2030 Research and Innovation Strategy sets priorities to deliver solutions for development through 33 initiatives across three interlinked Action Areas: Systems Transformation (ST), RAFS, and Genetic Innovation (GI). CGIAR scientists working on these initiatives have bene organized into three corresponding SGs. The RAFS SG delivers on research priorities aimed at transforming agri-food systems to enable the most vulnerable to access affordable, sufficient, safe, and healthy diets. The RAFS overarching goal is to improve the ability of farming and food systems to mitigate, adapt to, and recover from shocks and stresses, and to ensure decent livelihoods for marginalized groups.

The RAFS SG leverages a broad range of internal expertise to address interconnected farm-level challenges affecting crop, livestock, and aquatic systems. The work under the RAFS SG is interrelated to the research activities carried out under the SGs on ST and GI. The SG collaborates with ground-level (local and national) and regional/international partners through a customized portfolio of Global Thematic Initiatives (GTIs) and Regional Integrated Initiatives (RIIs). RIIs address complex regional problems and are designed to scale-up innovations in cooperation with local and regional partners.[6] All RAFS initiatives deliver research and innovation across the five CGIAR Impact Areas, particularly on the following domains housing GTIs: 1) crop-based systems; 2) livestock-based systems; 3) aquatic food systems; and 4) biodiverse agroecosystems. Table 1 presents an overview of RAFS initiatives from 2022-24.

Table 1. Resilient Agrifood Systems Initiatives

Global Thematic Initiatives	
Plant Health	Develop and scale fit-for-purpose innovations to combat established, emerging, and invasive pests and diseases and mycotoxin contamination, which are collectively responsible for over USD 10 billion worth of annual losses.
Excellence in Agronomy (EiA)	Develop and deliver crop, soil, water, and nutrient management solutions that intensify smallholder farming systems while adapting to, and mitigating climate change, restocking or conserving soil health, and ensuring that inputs are used efficiently.
Sustainable Animal Productivity	Transform livestock sectors in Ethiopia, Kenya, Mali, Nepal, Tanzania, Uganda, and Vietnam to make them more productive, resilient, equitable and sustainable.
One Health	Demonstrate how OH principles and tools integrated into food systems can help reduce and contain zoonotic disease outbreaks, improve food and water safety, and reduce anti-microbial resistance, benefitting human, animal and environmental health.
Livestock and Climate	Partner with public and private actors to develop and deliver actionable innovations that measurably help producers, businesses, and governments adapt livestock agrifood systems to climate

[6] See 2024 Synthesis of Evaluability Assessments of 4 RIIs (here)

Global Thematic Initiatives	
	change and reduce greenhouse gas emissions, contributing to sustainability and development goals across livestock systems.
Nature-Positive Solutions	Combine technical learning with the indigenous knowledge gathered over time by smallholder farmers, to make science relevant, context-appropriate and more likely to be adopted.
Aquatic Foods	Transform the aquatic food system to be healthier, fairer, more sustainable and benefit consumers and producers of aquatic foods.
Mixed Farming Systems (MFS)	Understand the diversity of farming systems and their ability to interact across crop-livestock components, and develop, adapt, and scale sustainable intensification options suitable to mixed farming systems in different agroecologies.
Resilient Cities	Gain insight into how agrifood systems need to change to meet humanity's food, economic and environmental needs. Working with partners, Resilient Cities will address urban challenges and opportunities, specifically those facing the urban poor.
Regional Integration Initiatives	
Transforming Agrifood Systems in South Asia (TAFSSA)	Deliver a coordinated program of research and engagement across the food production to consumption continuum to improve equitable access to sustainable healthy diets, improve farmer livelihoods and resilience, and conserve land, air, and groundwater resources.
Diversification in East and Southern Africa (ESA)	Support climate-resilient agricultural livelihoods and agribusiness ecosystems in 12 east- and southern-African countries to help smallholders transition from maize-mixed systems to sustainably intensified, diversified, and de-risked agrifood systems.
Fragility to Resilience in Central and West Asia and North Africa (CWANA)	Build resilient agrifood systems in the CWANA region, primed to withstand the effects of climate change and generate better livelihoods for rural communities.
West and Central African Food Systems Transformation (WCA)	Bundle sustainable intensification and diversification innovations for use and impact at scale, while informing policies.
Transforming Agrifood Systems in South Asia (TAFSSA)	Deliver a coordinated program of research and engagement across the food production to consumption continuum to improve equitable access to sustainable healthy diets, improve farmer livelihoods and resilience, and conserve land, air, and groundwater resources.

2.2 RAFS SG Management Structure and Funding

The RAFS SG is led by a managing director who is part of CGIAR's leadership team. Each thematic area is headed by a senior director and includes several thematic units which collaborate on initiatives, as shown in Figure 1. The SG has a Monitoring and Evaluation (M&E) officer.

Figure 1. RAFS Management and Governance

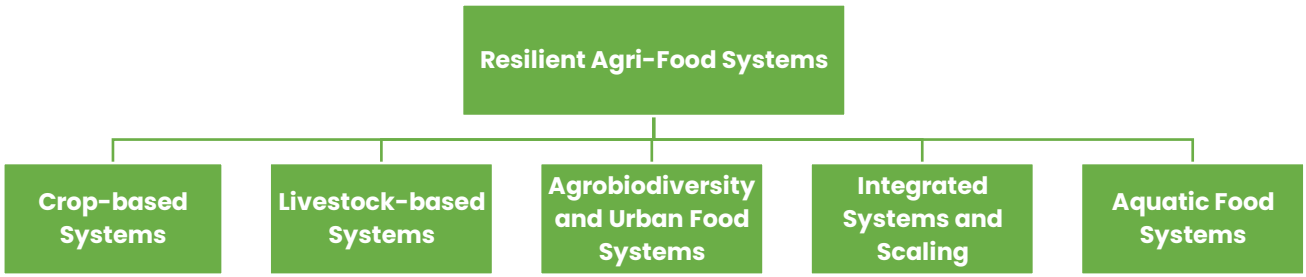
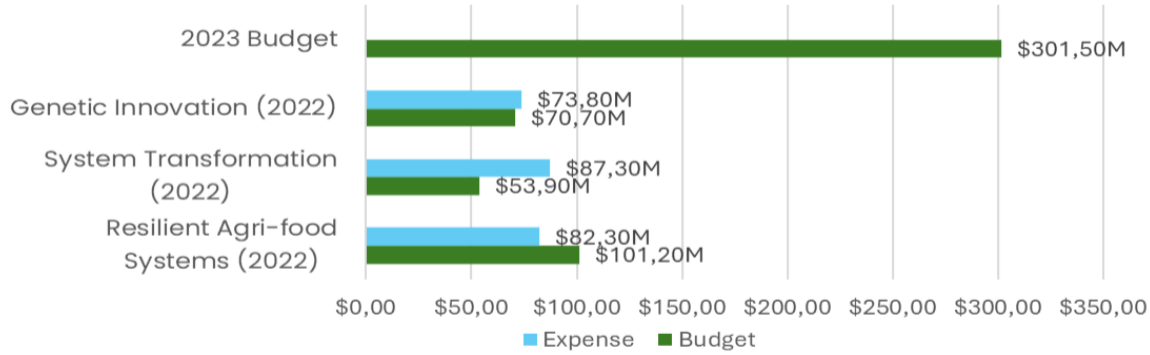


Figure 2 shows the 2022 budget and expenditure for each SG, as well as their 2023 planned budget. It shows that funding for the RAFS SG has increased compared to 2022.

Figure 2. Science Groups 2022 Expenditures and 2023 Budget (in USD)



Source: CGIAR Financing Plan Dashboard (accessed November 2023)

3 Evaluation Approach and Methodology

3.1 Evaluation Approach

The evaluation team has acknowledged that this evaluation exercise plays the role of **supporting decision-making processes** related to future programming and, as such, it is a part of a continuous learning process in which all actors involved contribute and are able to use the findings in their work. Per TORs (link)[7], the evaluation merged **developmental evaluation** (DE) and **utilization-focused evaluation** (UFE) approaches- most suitable for the CGIAR Portfolio's implementation since 2022. The evaluation also included elements of **real-time evaluation (RTE**), which stresses monitoring and real-time adjustment. RTE is adopted to ensure that authors of CGIAR science program proposals, as well as members of the Independent Science for Development Council (ISDC), can benefit from early-stage evaluative evidence in time to inform the development and review of 2025-27 research proposals for the new 2025-30 Research Portfolio and CGIAR management, and ISDC reviewers. Namely, the following steps were undertaken under RTE:

[7] See SG evaluation page https://iaes.cgiar.org/evaluation/science-groups-evaluations.

- Evaluation portal was set up https://iaes.cgiar.org/evaluation/science-groups-evaluations.
- Since March, monthly Evaluation Insights were shared with SG teams and key stakeholders, offering methodological insights and updates on early learnings and findings on key topics. The bulletins also kept stakeholders informed about the evaluation process and key events.
- Meetings with SIMEC and SC (3 June 2024) were conducted, where strategic findings and recommendations were presented.
- Two presentations were made to ISDC members, during which lessons learned and findings were shared by subject matter experts. These presentations fostered interactive discussions, offering insights through specific case studies and deep dives. Furthermore, three reports with 11 case studies were shared with review teams commissioned by ISDC to conduct *ex-ante*.
- Three meetings with management of each Science Group (SG)-Genetic Innovation, Resilient Agrifood Systems, and Systems Transformation-were held to launch evaluations, present preliminary results and validate recommendations prior to submitting of reports to SIMEC.
- Two meetings were held with the 2025-30 Portfolio writing teams, and permission obtained and exercised to share SG evaluations reports and case studies/deep dives by request.
- Regional/Country Briefs and thematic briefs and reports (i,e., QoS, and a report on the survey results were developed and links widely shared. The briefs summarized the learnings across the three SG evaluations around the priority topics. The synthesis of cross SG-learning and additional briefs (on partnerships, climate change, and MELIA) were being developed at the time of endorsing the SG-level evaluation reports.
- Several blogs were made public and shared with key stakeholders, highlighting strategic observations from country visits, particularly from the perspective of external partners.

The evaluation adopted a **participatory approach** based on a constant consensus-building process. to engage with a variety of stakeholders to identify critical issues and good practices. The evaluation team considered the SG and initative-level **theories of change** (ToCs) to analyze their soundness and validity.

3.2 Data Collection Methods

The evaluation adopted a **mixed methods design**, combining the strengths of quantitative methods with those of qualitative approaches. Of particular note, QoS evaluation criterion, was addressed through: key informant interviews, two country case studies, two thematic deep dives and review of a sample of scientific outputs, and against the Quality of Research for Development (QoR4D) criteria. A total of 101 individual research outputs (journal articles, technical publications, innovations and communications materials) were assessed. The main findings from this analysis are summarized in this report. The full QoS report and assessment matrix can be found in Annex 8.

The data collection included the following activities: desk research, key informant virtual and face-to-face interviews for a total of 183 interviewees, two case studies on the One Health Approach and Climate Change Mitigation/Adaptation across Different SG Initiatives and WPs, two deep dives into Social Inclusion and Participatory Research Processes, and Food, Feed, and Waste – Livestock in Peri-Urban Settings, field observations, focus group discussions, participatory workshops, portfolio analysis and an online survey (see, in Annex 1 and over SG report here). Quantitative and qualitative data from primary and secondary sources were constantly triangulated to ensure consistency and credibility of results. The profile of 183 stakeholders consulted in interviews can be found in Annex 6. Figure 3 above shows the distribution of interviewees by country and gender, and Figure 4 illustrates the distribution of the types of stakeholders interviewed.

Figure 3. Distribution of RAFS SG Interviewees by Country and Gender, N= 183[8]

Figure 3.1. Interviews by Modality and Location

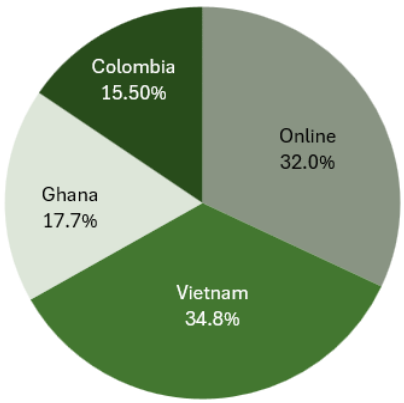
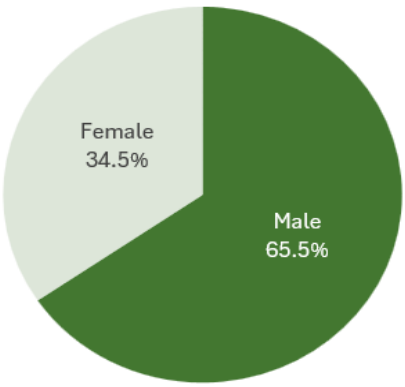
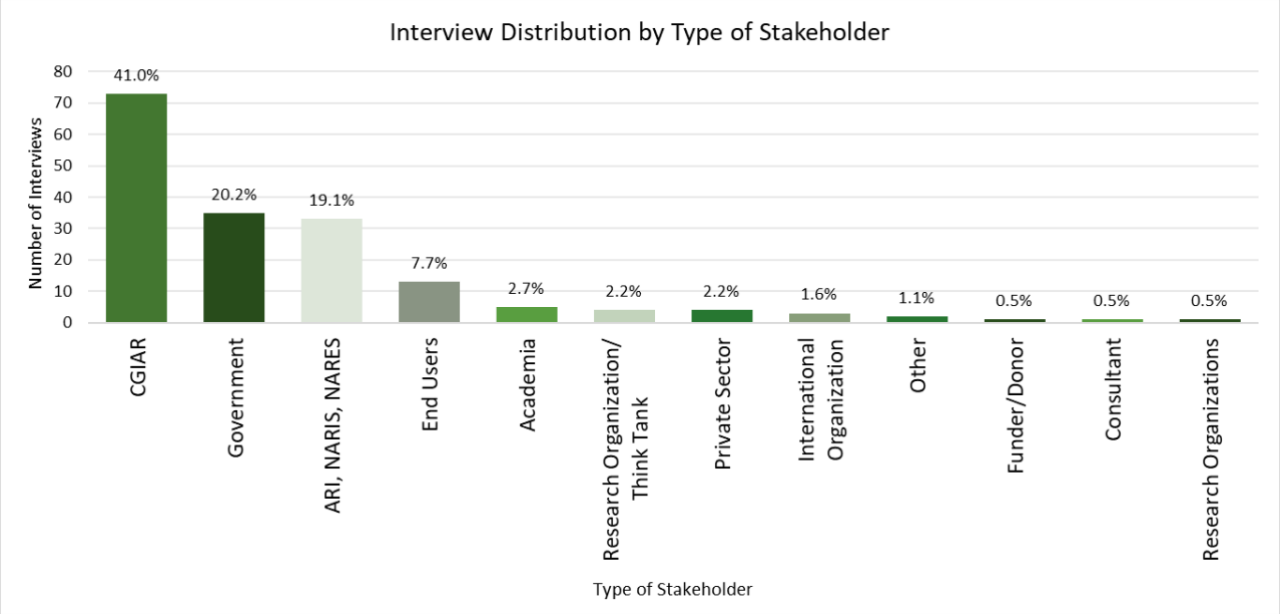


Figure 3. Interviewees by Gender



The IAES conducted an online survey with primary stakeholders of the three SGs (GI, RAFS and ST) to collect both quantitative and qualitative data on relevance, coherence, effectiveness, efficiency, quality of science (QoS), and cross-cutting themes of gender, climate change and partnerships (see report online[9]). The online survey was open from 26 April to 15 May 2024. There were 78 respondents to the online survey affiliated with RAFS; Table 2 presents the profile of these respondents in terms of gender, role, and period of involvement with CGIAR.

Figure 4. RAFS Interviewees by Type of Stakeholder, N= 183



[8] Figure 3 data: Total Interviews conducted 183. Distribution of Interviews by Modality and Location: Online 32%; Vietnam 34.8%; Colombia 15.5%; Ghana 17.7%. Distribution of interviews by Gender: Female 34.5%; Male 65.5%.

[9] https://iaes.cgiar.org/evaluation/science-groups-evaluations.

Table 2. Online Survey–Profile of RAFS SG Respondents (N= 78)

	Profile of respondents	No. of respondents	Percentage
Gender	Male	48	62%
	Female	27	35%
	Rather not say	3	4%
Role	Scientist/Researchers/PhD student	39	50%
	Initiative/Work package Lead/ co-Lead	24	31%
	MELIA/Coordinator/PPU	11	14%
	Support Global Group (P&C, Finance, PCU, D&D, other)	6	8%
	Science Group/Platform Managing Director	4	5%
	Other	4	5%
Period of involvement with CGIAR	Less than 2 years	5	6%
	2 to 5 years	17	22%
	5 to 10 years	17	22%
	More than 10 years	39	50%

3.3 Limitations and Mitigation

The main limitation to this evaluation is that the exercise took place only two years after the launch of the SG initiatives in 2022, making it challenging to assess performance against planned outcomes. Another limitation is that the evaluation team could not access aggregated summary data on outputs and outcomes achieved at both initiative and SG levels against the corresponding Results Frameworks. On the one hand, information collected on outputs and outcomes is mainly qualitative from interviews and narrative reports, on the other hand, the Results Dashboard did not allow comparison for what is achieved against what was planned in the ToC; nor does the structure of the technical report facilitate conducting such a comparative exercise.

A limitation for the case studies, was that neither CGIAR, nor the SGs, have a country strategy and/or a Results Framework that could have guided the inquiry, and against which to assess achieved results. Against this backdrop, the country level assessment relied mostly on qualitative analysis. The tight timing for data collection and completion of the report compared to the wide geographical and thematic coverage of the SG's work was another important limitation.

4 Evaluation Findings by Criteria

4.1 Relevance

E.Q.1 - To what extent does the SG research portfolio respond to the needs and priorities of its external stakeholders, and to what extent is the SG ToC based on CGIAR's comparative advantage and suited to deliver results?

FINDING 1 - The RAFS SG portfolio appears to be relevant to the key criticalities affecting livestock, fish, crop, and farming system productivity at global level and in the targeted regions and countries. There is significant evidence that national plans and agendas were considered and that, in few cases, the initiatives were influential towards national policies. However, despite general alignment of broad research topics, several stakeholders argued that CGIAR should undertake greater efforts to integrate its work into the national research agendas, by assigning a more prominent role to national research institutes and agendas.

Overall, high consistency of the SG's work with priority needs at global, regional and country level emerged from the evaluation exercise. RAFS contributes to tackling global food system issues by conducting systems research to deliver on knowledge and solutions enhancing sustainable productivity, safe food availability, land/soil health, and environmental sustainability (CGIAR, 2023b), in line with the food system transformation agenda envisaged by the 2021 UN Food Systems Summit.[10]

Under the **crop-based systems thematic area**, RAFS Initiatives[11] tackle global agronomic priorities, such as fertilizer recommendations, planting date advisories and variety choice, yield gap analysis, climate adaptation services, sustainable intensification[12] and mechanization, and crop pest management.

The opportunities and challenges addressed by the initiatives hosted under the **livestock thematic area**[13] include changing diets, the need for nutrition, the opportunities for mass livelihood creation and the potential for improved household resilience against shocks and climate hazards (Grace, et al, 2018; World Bank, 2020; Herrero, 2016). This work strongly aligns with national and regional priorities, particularly where productivity gains and the challenges of zoonotic disease are center stage.[14] Examples of successful innovations and potential future impact at scale show the promise in delivering these initiatives. For example, the early detection of African Swine Fever and genetic improvements to feed sources, such as Napier grass and community-based breeding programs (SAPLING Initiative), are influencing relevant national climate policies and engaging the private sector in scaling solutions (Livestock and Climate Initiative). New issues taken up in RAFS, such as livestock waste and the bioeconomy and livestock related food safety, have extended the traditional CGIAR agenda of livestock research challenges.

The impact of the Covid 19 pandemic on livestock research, which over-arched the transition from previous CGIAR Research Programs (CRPs) to CGIAR initiatives, was substantial. New work on zoonotic diseases in several Initiatives (SAPLING and OH initiatives) responds to a new global urgency to address future outbreaks of animal born disease. From this perspective, the research and collaboration in place has responded to important global and contextual factors linked to the OH approach[15] , thus aligning well with the 2022-25 OH Joint Plan of Action launched by the Quadripartite–the Food and Agriculture Organization of the United Nations (FAO), the United Nations Environment Program (UNEP), the World Health Organization (WHO), and the World Organization for Animal Health (WOAH, founded as OIE).

[10] https://www.un.org/en/food-systems-summit/action-tracks.
[11] The RAFS initiatives under the crop-based systems thematic area are EiA, MFS, and Plant Health.
[12] According to the CGIAR initiative proposal, sustainable intensification means "the production of more food on the same piece of land while reducing the negative environmental impact".
[13] RAFS initiatives under the Livestock Thematic area are Livestock and Climate; Sustainable Animal Productivity (SAPLING); OH.
[14] For example, the strong alignment between Vietnam's national and regional livestock policies and aspects of OH. See Dung, P., Savelli, A, Tu, M, Hung, N., Huyen L and Douxchamps, S. (2020), "Livestock Policies in Son La Province, Vietnam: A Review", https://cgspace.cgiar.org/server/api/core/bitstreams/2fc46b16-49b8-421a-bc45-0752175aea5f/content
[15] The OH Approach is defined as "an integrated, unifying approach that aims to sustainable balance and optimize the health of people, animals, and ecosystem" (World Bank Group, 2022:4).

Other initiatives under the RAFS **biodiverse agroecosystem** thematic area[16] attempted to address the complex and interwoven challenges of developing and implementing circular economy solutions, with a particular focus on urban contexts. The global challenge faced by the impact of urbanization is extremely relevant as there is evidence that the growth of cities will have profound impacts on our environment, health and society, and that this issue needs to be researched[17] (Newman, 2006; Bulkeley, 2021).

Six **RIIs**[18] are hosted under the SG with a clear mandate to address the priorities and challenges within the six operating regions. Desk review and interviews confirmed these initiatives were built on decades of previous CGIAR research work on agrifood systems, which contributed to their high regional relevance.

A review of national policies and plans in country case studies indicates that the initiatives have well aligned with **national priorities** and, in few cases, are relevant to inform their approaches. In the **Socialist Republic of Vietnam**, the initiatives implemented were well aligned with partner policies, priorities and programs.[19] The **AMD Initiative** was particularly relevant to the climatic challenges the country faces[20], with particular regard to the rice production sub-sector in the Mekong River Delta.[21] The initiative was highly influential in shaping the One Million Hectares Program for high-quality and low-emission rice associated with green growth in the Mekong River Delta by 2030 by the Ministry of Agriculture and Rural Development (MARD)[22], which is particularly important for the dissemination of sustainable intensification production practices in the region.[23] In this framework, the technical guidelines and manual on high-quality and low-emission rice production, delivered under the initiatives AMD and EiA, are among the strategies officially endorsed by the MARD. Furthermore, AMD contributes to achieve Vietnam's Strategy for Sustainable Agriculture and Rural Development from 2021-30, with a vision to 2050, aiming to build a commodity-

[16] RAFS initiatives under the biodiverse agroecosystem thematic area are Nature Positive Solutions (Nature+) and Resilient Cities.
[17] See for example Newman (2006) on environmental impact and Bulkeley (2012) on climate impact.
[18] The RIIs hosted under RAFS are AMD, Fragility to Resilience in Central and West Asia and North Africa (F2R-CWANA), Resilient Agrifood Innovation Systems Driving Food Security, Inclusive Growth, And Reduced Out-Migration in LAC region (AgriLac Resiliente), Transforming Agrifood Systems in West and Central Africa (TAFS-WCA), TAFSSA, Ukama Ustawi: Diversification for Resilient Agrifood Systems in East and Southern Africa.
[19] In Vietnam, five out of nine initiatives are implemented under the RAFS SG: AMD, EiA, Sapling, Plant Health, OH, and Nature+. Except for the Plant Health initiative, all the others were examined by the evaluation team during the field visit.
[20] Vietnam is one of the most vulnerable countries to the effects of climate change, ranked by the Global Climate Risk Index 2021 as the 13th most affected country. https://www.germanwatch.org/sites/default/files/Global%20Climate%20Risk%20Index%202021_2.pdf.
[21] In the area of the Mekong River Delta, rice commodity has recently experienced an extraordinary growth, reaching more than 24 million tons in 2023 (IRRI, 2023). However, most farmers solely commit to harvest rice, without processing or utilizing straw and rice husks. Estimations refer that only 30% of the 24 million tons of rice straw annually discharged in the area are collected and processed, with the rest being incorporated into the soil or burned, the latter highly contributing to greenhouse gas emissions and environmental degradation. According to IRRI (2023), the combustion of rice straw releases toxic substances, such as CO, CH4, and NOx. In addition, it depletes soil nutrients, thus requiring a proportional amount of fertilizer as compensation.
[22] The evaluation team attended the launching workshop of the technical guidelines and manual on high-quality and low-emission rice production in Mekong River Delta, co-organized with the MARD and the Department of Crop Production, with the participation of the MARD vice-minister. The workshop was held in Long Xuyen City, An Giang Province, in April 2024.
[23] The relevant criteria in the one million hectares are the development of high-quality rice areas through the application of synchronized mechanization and digital technology and the development of a model of circular cultivation of rice, exploiting the residues for production purposes, thus increasing the value and reducing negative environmental impacts. The program is currently implemented in 12 provinces of the Mekong Delta and the aim is to reach one million hectares by 2030. https://www.mard.gov.vn/Pages/cac-so-nong-nghiep.aspx.

producing agriculture based on local advantages, towards high productivity, efficiency, and environmental sustainability.[24]

Similarly, the **EiA** Initiative was relevant and influential to the sustainable development of One Million Hectares Program by developing a mechanized direct seeding technology (mDSR) to increase rice productivity while reducing greenhouse emissions. In 2023, EiA and AMD were awarded by the MARD for their contribution to the sustainable development of the national agricultural sector.[25]

Stakeholders in Vietnam believe the **OHI** tackles valid core problems and is relevant to national needs and agenda. Its consistency with the national context is well exemplified by several strides that the government has made to implement a OH approach since 2013.[26] The initiative aligns with several national strategies linked to this topic (see for example: MARD, 2021). Food safety, which is strongly embedded in the initiative, for instance, features as a strong national objective under crops, livestock, aquaculture and electromechanization themes (Government of Vietnam, 2022a). Biosecurity is in the national objectives aligned with animal production, with specific reference to protection against future pandemics, but has not yet been formalized as a national policy (Auplish et al, 2024). In 2016, various founding committees and programs coalesced into the Vietnam OHP, with associated Strategic Plan.[27] In 2021, the OH approach was further enhanced with the implantation of a national OH policy and national partnership bringing together the key functional Ministries[28] with a broad coalition of national and local institutions[29] and international partners (e.g., FAO, USAID).[30] The Vietnam National OH policy aligns to a whole gamut of other related national directives, policies and programs, such as the national Food Systems Transformation Action Plan[31] (The Anh, 2021). Relevance to national priorities seems to be strongest in the agriculture and public health realms, with less convincing ties to stakeholders in the environment area. Gaining an equal balance between these three actors is clearly one of the challenges faced by the approach.

Other initiatives implemented in the country aligned with national priorities. In line with Vietnam's Action Plan for Food System Transformation, Nature+ Initiative promotes nature positive solutions in the mountain

[24] https://mard.gov.vn/en/Pages/strategy-for-sustainable-agriculture-and-rural-development-in-the-2021-2030-period-has-been-approved.aspx.

[25] https://www.cgiar.org/news-events/news/cgiar-irri-and-eia-honored-for-transforming-vietnams-agriculture/; https://www.cgiar.org/news-events/news/vietnam-mard-awards-the-asian-mega-deltas-initiative-and-irri-for-supporting-the-countrys-sustainable-development-2/.

[26] In 2013, the national guidelines for coordinated prevention and control of zoonotic diseases were issued, thus providing a legal basis to support the implementation of the approach through multi-sectoral programmes on avian influenza, rabies, and Antimicrobial Resistance (FAO, 2021; Berthe et all, 2022).

[27] The Vietnam OH Network has a long pre-history. It seems to have started in association with a project called 'Pig-risk' between 2013-17, which evolved into an inter-ministerial and institutional committee associated with another project 'Safe Pork' between 2018 and 2020. From 2021 onwards it included a food safety sub-committee. Advantages reported by some respondents to the national committee approach to coordination are it promotes links between government and donors and encourages inter-disciplinary problem solving. Draw-backs reported from the current formulation of this network are: 1) Uneven engagement from the relevant key ministries (Health, Agriculture and Environment); 2) Over-dependence on donor drive and agendas (e.g., projects); and 3) Challenges with the identification and measurement of impacts (Source: interviews).

[28] The MARD, the Ministry of Health (MOH), the Ministry of Natural Resources and Environment (MONROE).

[29] In particular, the National Institute for Veterinary Research (NIVR), Hanoi Institute of Public Health, Department of Forestry (in MARD), and provincial representatives.

[30] The OHP refers to the Framework Agreement on Zoonoses Prevention Partnership Phase 2021-25, which was signed among government's agencies and development partners in March 2021.

[31] Note that the contribution made by CGIAR to Vietnam's Sustainable Food Systems policy was repeatedly mentioned by senior government officials as an example of high-level benefit and impact from CGIAR support. It was strongly felt by several actors that this has strongly promoted Vietnam as a leader in food systems policy.

areas where agrobiodiversity is threatened[32] (CGIAR, 2023c). The SAPLING initiative aims at addressing low productivity in the livestock sector and poor animal husbandry, thus contributing to the 2021-30 National Livestock Development Strategy.

In **Colombia**, Nature + and the Livestock and Climate Initiatives promote good practices to increase pasture productivity while giving less incentives for deforestation, therefore aligning with national policies and laws.

The objectives of the RAFS initiatives implemented in **Ghana[33]** are relevant to the criticalities that limit efficient use of land, soil, and water resources. The three initiatives analyzed are implemented in the northern region, where the majority of jobs, income, and food security are provided by smallholder agriculture.[34] The Irrigation and Water Management (One-Village-One-Dam, 1V1D) is a governmental program in which the **Aquatic Foods Initiative** and partners incorporated aquaculture for improved nutrition, income, and employment, which exemplifies the initiative's relevance to country priorities. Investing in **Sustainable Intensification of MFS**, which is another RAFS initiative implemented in the country, mitigates many challenges occurring at an increasing rate exceeding the adaptive capacity of small farmers and households in the Northern Region. MFS is the most common type of farming system in the country and helps to improve overall farm productivity, biodiversity, and ecosystem health (Ofusu et al., 2023).

Work in RAFS is often drawn from pre-RAFS research that continues in the current initiatives, e.g., in the areas of rice productivity and animal and feed/fodder genetic improvements. This continuity ensured relevance and contributions to national research and development agendas, being topics of consolidated national interest. However, despite the overall alignment of broad research areas, several stakeholders noticed that the initiatives did not put enough emphasis in integrating the work into national research programs and that the role of national research institutes should have been more prominent. While in Ghana, a more promising scenario was found.[35] In some cases, it was noticed that the role of national research institutes was confined to specific research components, without having the overall picture of the initiatives. In Vietnam, this observation was also underlined during the listening sessions, in which the need to build stronger linkages with national agricultural centers and to encourage local adoption, including through community extension services, was stated. In Colombia, few stakeholders reported that the initiatives' research agenda was, to some extent, donor-driven, and that few of their CGIAR peers may not view them as equal partners, capable of delivering a similar and scientifically credible contribution.

FINDING 2 - Mixed opinions emerged concerning the extent to which internal and external stakeholders were consulted on initiatives' designing and planning. While there is evidence of broad consultation meetings with external partners in countries involved, the most important highlight is that the design process was too rushed, thus hindering meaningful participation from both internal stakeholders and external partners. The design process also lacked strong coordination, sometimes resulting in weaknesses in approaching country partners. In addition, for the initiatives under the scope of the deep

[32] Vietnam's National Action Plan for Food System Transformation recommends the widespread implementation of nature-positive solutions, with reference to areas of particular agrobiodiverse interest.
[33] The following RAFS initiatives are implemented in Ghana: Aquatic Foods, EiA, MFS, Nature+, Plant Health, Resilient Cities, and TAS-WCA Transforming Agrifood Systems in West and Central Africa. The evaluation focused on the first three listed.
[34] The 2020 World Food Programme Comprehensive Food Vulnerability Analysis (CFSVA) for Ghana indicated high incidence and prevalence of food insecurity and poverty in the northeast region. The region is primarily rural and accounts for 25% of the country's 3.6 million food insecure people.
[35] In Ghana, the Initiatives' research was integrated into national research programs of the partnering research institutes while role or extent of participation varied, primarily according to the mandate. https://ari.csir.org.gh/divisions/farm-animal.php; https://wri.csir.org.gh/images/New/fad%20-brochure.pdf;http://www.insti.csir.org.gh/research.php; https://www.crig.org.gh/division-sub-stations.

dive on social inclusion, there was not sufficient emphasis and capacity to involve vulnerable populations in research design processes.

In **Vietnam, Colombia and Ghana,** country consultations for designing and planning the initiatives were referenced in most cases. While in Vietnam[36], there was evidence of broad consultation meetings held, in Colombia, there were more individual interactions. The three RAFS initiatives implemented in Ghana employed demand-driven national stakeholder consultation surveys or procedures, to co-design research with stakeholders and partners. However, a general perception is that there was not enough time to be able to adequately coordinate the broad consultation process. For instance, the same partners were approached several times, in different moments, to contribute to the design of several initiatives, often without understanding the logic that linked these initiatives. The process has therefore been particularly confusing in some countries and the benefits of the participatory approach were not fully exploited.

At a more **global level**, country consultation workshops were referenced for several Initiatives (OH, Aquatic Food, SAPLING) by many interviewees. However, assessing the degree to which national actors were brought into the proposals and their ToC is a challenging task. During the field visits, unless prompted, national actors did not mention the ToC for an Initiative. Additionally, few stakeholders noticed that large consultation meetings may not have elicited high-quality inputs if compared to bilateral discussions allowing for more concrete feedback to tailor the activities at country level. These processes are generally steered by central management authorities and may have left behind some of the partners at ground level.

Internally, most stakeholders were not satisfied with the design process. Despite several consultations, the general feeling was that the design process was too rushed, without meaningful engagement with scientists, partner specialists and country staff. There was a feeling that having the proposals completed was the priority. The latter was also noticed in the 2021 PIM Partnership Evaluation (Krister et all, 2021). In **Colombia**, for example, some internal stakeholders felt that scientists on the ground were not asked to provide inputs to the initiatives' design process. In **Vietnam**, the preparation and launch of the initiatives was not accompanied by adequate communication and the staff lacked a clear picture of what was going on. *"Eventually initiatives came, and we were asked to implement"* (Interviewee).

Another aspect relates to the extent of co-design with end-users or final beneficiaries. Allowing end-user institutional participation at all stages of the research process is a critical step in the transition to demand-driven research (Klerkx and Leeuwis, 2009). In the three initiatives under the scope of the case study implemented in Ghana, it seemed that co-design processes excluded smallholders, rural women, youth, indigenous people, and other marginalized groups. Although farmers' associations may be implied, there is no substantial evidence to indicate that peasant farmers and vulnerable groups were represented during research planning. Most farmers in Northern Ghana, for example, are not members of any farmer-based organization (which hinders participation and influencing agricultural research decisions). While farmers generally are experiential learners who prefer peer-to-peer learning, participation in formal planning procedures requires considerable skills. If end-users are not sufficiently empowered, they cannot act as equal partners of researchers, which may downplay their role (Klerkx and Leeuwis, 2009).

FINDING 3 – The RAFS rationale is relevant to global concerns and coherent with the CGIAR comparative advantage in research for development. However, according to consulted stakeholders, the Action Area narrative was weakly articulated and its value proposition within CGIAR not fully clarified. The SG ToC

[36] In Vietnam, within the framework of the EiA Initiative, a participatory workshop with policy makers and national scientists to design specific activities under the different WPs was referenced. Under AMD, the longstanding IRRI's collaboration with the Department of Crop Production under the MARD ensured meaningful participation in the design process through several meetings. People from the OHI reported about having been involved in the design phase of the initiative.

needs to be strengthened through the identification of indicators, a clear pathway and timeline for success and supported by a companion narrative document.

Internally, staff agreed on the relevance of the **RAFS rationale**, focused on improving resilience and productivity of agrifood systems. The Action Area is well connected with all CGIAR impact areas and crucial in linking research to development. It is therefore placed at the core of CGIAR work and built on its **comparative advantage** in research and applied research.[37] However, while CGIAR's comparative advantage on science is acknowledged, most of the partners would appreciate CGIAR's work to be more development oriented. While dissemination and uptake are recognized to depend primarily on external stakeholders, the CGIAR approach should be informed by greater consideration of uptake and scalability issues and should be closely linked to scaling partners' work.

While there is recognition that research for development is a continuum, interviewees often refer to a need for clarification on who the players are, as well as their respective responsibilities. Many respondents declared themselves scientists without the necessary skills to engage with external partners for the upscaling work. Others commented that the initiatives' rationale does not clearly establish boundaries between research and development. Therefore, scientists find themselves working with ToCs that predict many outcomes at the level of vulnerable populations, without knowing who is responsible for this work. This finding coincides with that of the EA Synthesis Review of four RIIs, which detailed the lack of coherence in ToCs with regard to uptake of research results by partners, particularly related to new knowledge leading to behavior change, and decision-making in political contexts.

Despite recognizing the relevance of RAFS rationale, CGIAR was not able to develop a coherent narrative and a strong value proposition for the action area. Several stakeholders argued that RAFS was opportunistically designed and accommodated a mix of expectations from donors. For example, the OHI appeared well placed under RAFS for dealing with animal production, but less for its work on food safety, which leads to healthy diets and policy development, where the ST SG also works.

In the end, RAFS resulted in an overcomplicated rationale and incoherent cluster of initiatives. "*Being in that middle space, RAFS tends to gather a mix of topics that don't fit neatly elsewhere*" (Interviewee). It was observed that not enough emphasis was put, nor were efforts made, in articulating internal (between RAFS initiatives) and external connections (between SGs and between GTIs and RIIs). Among contributing factors, the turnover at the level of SG directors was identified as affecting the continuity of the initial rationale and the planning of internal and external synergies. The RAFS rationale was re-drafted at different times (July 2023, December 2023) without being officially published.

Another contributing factor was the fragmentation of the portfolio into a great number of initiatives, including RIIs. Some stakeholders also underlined that, when launching the new portfolio, excessive emphasis was put on the initiatives, rather than on programmatic areas and research integration. "*Success was often measured by comparing Initiatives against each other, rather than focusing on how they contribute to the larger research objectives. This approach was not conducive to a successful launch of the entire portfolio*" (Interviewee).

Initiative design is overall well-constructed, logical and offers pathways to solutions to clearly articulated problems. However, the result architectures appeared too ambitious for most of the stakeholders interviewed, especially for those novelty initiatives (Nature+, Resilient Cities and, to some extent, OHI) that had to build partnerships and to delve into new areas of research. Additionally, the initiative timeframe was not clear to many internal stakeholders. In many cases it was reported that the planned duration for these

[37] According to interviewees, CGIAR is perceived to be at the forefront to generate high quality scientific findings to be used by policy makers to shape relevant policies. The organization's international exposure and its capacity to mobilize high quality international expertise are also perceived as an added value. Some stakeholders also referred to independence as additional added value, as well as to the ability to convene relevant national stakeholders.

initiatives would have been nine years, with three-year phases. However, the predominant feeling is that these Initiatives will end after the first three years, therefore the expected results were deemed unrealistic. An initial overarching ToC was developed for the SG (see Figure 3). In this respect, the evaluation team has the following observations:

- The ToC diagram is not accompanied by a companion **narrative document** which explains the impact pathways, the underlying hypotheses and assumptions, the internal and external contextual factors influencing impact, the consultation process undertaken for the ToC elaboration, the timeframe to achieve expected results, and the credible research evidence that supports the logic of intervention. Eventually, this document, as recommended in the EA Synthesis Report, should be regarded as a living document detailing the program logic and updated in case of major shifts, as well as an overall approach to monitoring and evaluation.
- While the ToC diagram does not contain **indicators**, RAFS has elaborated a results framework at the SG level in which outcome level indicators are described. However, the evaluation team could not find clear target values for these indicators, nor output level indicators. It is advisable to always design both outcome and outputs indicators with target values, as well as to include them into the ToC logic model to allow immediate understanding of what success will look like.
- The ToC diagram does not clearly depict the **solution pathway** to address the stated problems/challenges. Initiatives are depicted as the link between the problems and the expected outcomes, without further explanations. On the contrary, the actions and outputs needed to achieve the results should be explained in the logical model itself, to see if linkages between problems, outputs, outcomes and impact are logical and plausible. This again coincides with a finding of the EA Synthesis Report of 4 RIIs, which discusses the need for further development of ToCs as part of an overall monitoring and evaluation framework, to better enable analysis of underlying assumptions and focusing of MEL activities.
- The **spheres of control, influence and interest** are not fully clarified. This could have been done through a companion narrative document. Three out of six outcomes[38], seemingly under the sphere of influence of the SG, to reached out to smallholder farmers and marginalized groups. This type of outcome creates confusion about what actually is under the initiatives' sphere of influence, what is under CGIAR responsibility, and what external partners are expected to do.
- Overall, the ToC appears **ambitious** and the timeframe for achieving results is not fully clarified. This, again, coincides with a finding of the EA Synthesis Report of four RIIs.

4.2 Coherence

E.Q.2 - How coherent and compatible has the design been and the implementation of the SG Portfolio with the CGIAR Integration Framework Agreement towards CGIAR's 2030 Research Strategy?

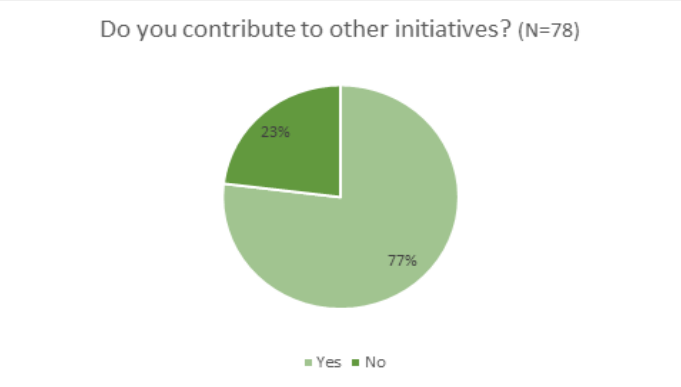
FINDING 4 - To some extent, the SG organizational setup based on the initiatives has enhanced research integration and cross-center collaboration. This came quite naturally with the establishment of joint initiatives gathering scientists from different centers who shared a common, or complementary, research mandate. However, evidence from interviews showed that many respondents considered that the guidance from SG leadership to plan and implement cross-center cooperation, synergies (at SG level and across SGs), and interactions with Impact Platforms was weak. Consequently, they were

[38] The three outcomes are: 1) Smallholder farmers and their organizations adopt resource-efficient and climate-smart technologies and practices and use digital services to enhance their capacity and skills; 2) Smallholder farmers have increased capacity to cope with climate risks and extremes through diversification, access to climate information, insurance and credit products and services; and 3) Women, youth, and marginalized groups participate in and benefit from improved value chains, farming systems and Agricultural and Food Systems (AFS).

sporadic and relied too much on the leads and the staff employed within the initiatives. With respect to the ONE CGIAR process, importance to countries visited emerged, but only a few major external stakeholders are aware of it, which hampers the CGIAR profile in countries.

According to most of the internal stakeholders, the Initiative setup made the corporate commitment towards enhanced research integration and cross-center cooperation more explicit.[39] The latter came quite naturally with the establishment of joint initiatives gathering scientists from different centers sharing a common, or complementary, research mandate; assigning clusters of activities to be managed by different centers within the same initiative; and deploying the same scientists to more than one initiative, as shown in Figure 6, in which 77% of RAFS respondents to the evaluation online survey, primarily engaged in 21 distinct initiatives, reported to also contribute to other initiatives. According to People and Culture Dashboard[40], all staff assignments to RAFS Initiatives are distributed in 11 CGIAR centers; 100% of RAFS Initiatives bring together scientists from at least three centers; and 73% of RAFS Initiatives bring together scientists from at least six centers.

Figure 5. Contribution to Other Initiatives among RAFS SG Respondents



Source: IAES Evaluation online survey

In addition, many initiative-leads and co-leads stated that they were well encouraged by the SG in seeking collaboration opportunities within and across Initiatives while performing their role. While previous CRPs also involved more than one center, in that case research integration was conceived more at country level and less at a programmatic one.

Despite the mandate and some successful examples, in practice, collaborations between centers were felt as relying too much on the leads and co-leads and on relationships among colleagues. Few stakeholders noted that in the absence of a clear corporate mechanism guiding internal coordination, similarly to the past, "good or bad internal coordination" depends on the initiatives' leads.

Initiatives that performed better in terms of **cross-center internal coordination** were found to have strong commonality of interests fostering integrated research. This is the case of the RII AMD, where delta geography represents a strong connection across the countries and centers. When integrations are clearly planned from the design phase, enhanced collaboration during implementation is also supported. The initiative Nature+, for example, is designed with interlinked work packages (WPs)-Conserve, Manage, Restore, Recycle, Engage-managed by different centers and taking place simultaneously in the different countries involved.

Among several **synergies** reported at RAFS SG level[41], many took place due to ad-hoc opportunities and scientists' interests and relationships across initiatives. Although the CGIAR 2030 Strategy recognizes that

[39] The CGIAR Framework Agreement recognizes that collaboration should be "more than the sum of its parts" and aims at "shared ways of working", across centers and action areas (CGIAR, 2022c).
[40] https://www.cgiar.org/how-we-work/accountability/gender-diversity-and-inclusion/dashboards/ (data May 2024).
[41] For instance, synergies were referenced between EiA and MFS in Ghana; between Ukama Ustawi, EiA and Livestock and Climate initiatives; between TAFSSA and Resilient Cities initiatives; between AMD and EiA in Vietnam.

the work of SGs should be interconnected[42], the evaluation found that interactions between SGs quite limited.[43] The general impression is that the failure to plan for synergies from the design phase, the budget cuts and the rush to complete the initiatives hindered complementarity actions and synergies. Similarly, synergies with Impact Platforms were quite limited. It is worth noting that, though established in 2021 with the One CGIAR transition (except for the pre-existing Gender Platform[44]), Platform leads were appointed at a later stage (from November 2022 to September 2023), which, to a certain extent, hampered the development of synergies. Interactions with the Gender Platform were those most frequently reported and there were cases of small grants delivered to initiatives to stimulate work on gender related topics. The Gender Platform was also highly valued by interviewees, as it galvanized a community of practice on social inclusion.

Many interviewees felt that initiatives and SGs became siloed structures, with cross-synergies taking place without proper design or strategic guidance from the SGs. A significant hinderance was that the SG and the overall One CGIAR structure were not yet consolidated to provide the needed guidance on synergies when the portfolio was designed and launched.[45] Other factors were reported, namely the high turnover in the leadership positions within RAFS, the lack of regular meetings at SG level, the lack of incentives, and the absence of a clear accountability mechanism for cross-collaborations. "*We should be asked explicitly difficult questions on how we are devoting time to work more effectively together with our colleagues and with other initiatives and programs. So far, this has not been the case"* (Interviewee). The issue of a weak collaborative culture was also raised by several interviewees referencing the predominance of affiliation to centers over CGIAR membership. The latter became even more evident when financial resources began to decrease.

The ONE CGIAR reform process was praised by external stakeholders both in Vietnam and Colombia and was seen as a move towards enhanced collaboration and coordination between centers. Some interviewees confirmed that the initiatives setup helped the organization in being more visible to external stakeholders. "*In the past, each center was explaining that it was under CGIAR, but nobody understood what this implied, as CGIAR was quite like an empty box*" (Interviewee). During the listening sessions in Colombia (2024), although stakeholders were mainly engaged with the Alliance of Biodiversity International and the International Center for Tropical Agriculture (CIAT), it was mentioned that there is a need to know more about the work done by other CGIAR centers and bring their experiences to collaborate in the country.

Nevertheless, only certain key partners understand CGIAR and the initiatives, namely those with a long history of cooperation, and some of those based nationally. In the countries visited, knowledge of the SG was almost non-existent among external stakeholders, and awareness of RAFS aims was minimal, even among CGIAR actors. This means that, despite overall appreciation of ONE CGIAR from knowledgeable stakeholders, it was not possible to assess the importance of the new setup for most of the people met.

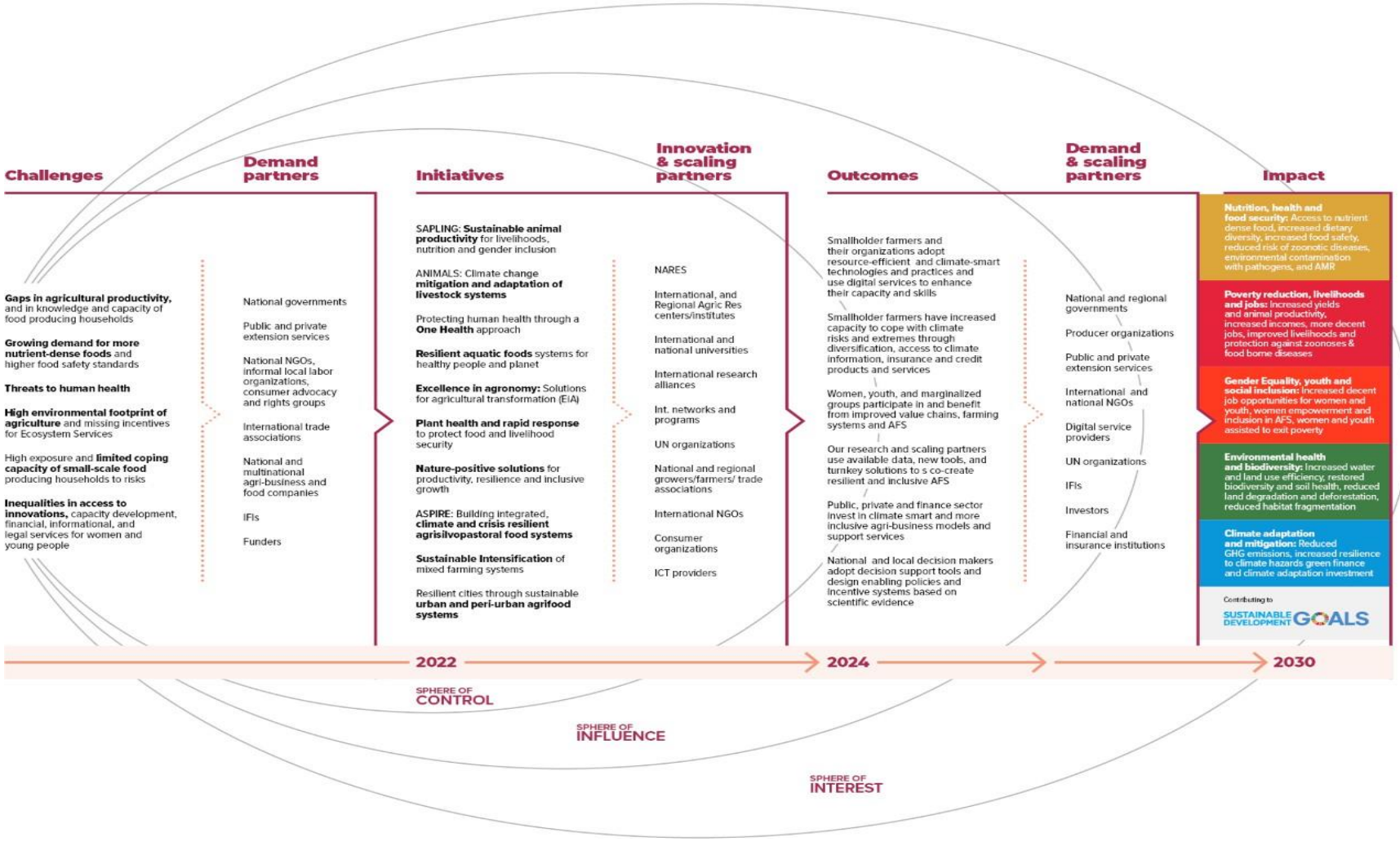
[42] The research under RAFS should connect with ST SG work, linking efforts to enhance resilience of agrifood systems with those to revert forest loss, as well as connecting food system research with challenges in the areas of food supply, market, and consumers. Similarly, research under RAFS should build on, and inform, the Action Area on GI.

[43] According to the 2023 Technical Report, SAPLING reported a quarter of its outputs as jointly published with other initiatives and bilateral projects. The initiative is also interacting with the HER+ initiative hosted under ST SG to study the impact of gender norms on women's resilience to climate change in the livestock sector (SAPLING 2023 Technical Report).

[44] The Impact Area Platform on Gender equality, youth and social inclusion took forward the agenda of the Generating Evidence and New Directions for Equitable Research (GENDER) Platform that was approved by the CGIAR System Council in November 2019.

[45] According to information collected, for example, the RAFS management team was not fully in place until the second half of 2023.

Figure 6. RAFS SG Theory of Change



Source: CGIAR 2022–24 Investment Prospectus

FINDING 5 – The partnership model envisioned between GTIs and RIIS did not reach its potential for offering scaling opportunities and improved integration between the national and regional levels. Interactions between the two types of initiatives were scarcely planned and guided, resulting in a missed opportunity to advance internal coherence.

The six RIIs housed under the RAFS SG have the mandate to function "as a key vehicle for the co-designing and co-delivery of innovations, for capacity development, and for policy change, with local and regional partners".[46] While conducting applied research and responding to specific national and regional needs, RIIs leverage scaling opportunities with an intentional mandate to function as a springboard for CGIAR's innovations, including those generated under GTIs. On the other hand, through strong engagement with local and regional stakeholders, RIIs are intended to articulate demand from external partners for relevant research to be conducted by GTIs, and across SGs and Impact Platforms. RIIs act as innovation brokers and, as envisioned by the CGIAR 2022-24 Investment Prospectus (CGIAR, 2021a), *"they have the potential, to become the main direct channel for impact, interacting closely with regional stakeholders."*

The focus on scaling innovations, for example, was well articulated under the Ukama Ustawi Initiative, through the establishment of a Food System Accelerator Program[47], designed to empower agribusinesses with climate-smart innovations and to provide technical assistance and de-risked grants to agrobusinesses through competitive processes. Additionally, the initiative has an internal mechanism, the Scaling Fund, established to provide funding and technical advisory support to other CGIAR initiatives. At the time of the evaluation, three initiatives, one per SG, had each been awarded with USD 125,000 to scale their innovations.[48]

Despite positive experiences, most of the interviewees argued that a very clear distinction between GTIs, conducting research, and RIIs, piloting solutions developed under GTIs and offering scaling opportunities, is not fully coherent. GTIs under RAFS have also been concerned with applying and disseminating the solutions developed, and regional initiatives have been developing research. The rationale of each type of initiative, the concrete pathways for reciprocal engagement, and how interactions would have taken place, were never fully clarified. For example, when the proposals were drafted, RIIs had to use the same template as GTIs, which was focused on research questions and innovation. This overshadowed the emphasis on networking, applied development, and scaling efforts theoretically envisaged for RIIs.

As a result, regional initiatives ended up having their own research projects located in specific regions, overlapping with thematic research initiatives in similar geographic areas. This led to an over-lap rather than interacting in a cohesive way. Despite some positive examples of reciprocal engagement (e.g., AMD with EiA), concrete interactions were weakly designed and guided, and the envisaged partnership model did not work as expected. The main hindering factors cited were the absence of a clear mechanism for reciprocal engagement, little time to develop strong proposals for interactions, and poor guidance from the SG and the Regional Directions. Additionally, while a clear impact pathway at WP level was described in the RIIs' ToCs, there was minimal analysis at the regional level, as underlined in the RIIs Evaluability Assessment (EA) (CGIAR, 2023d). This resulted in a missing rationale on how the end-of-initiative outcomes and the WPs' achievements would trigger the desired impact at regional level.

[46] Regional Integrated Initiatives - CGIAR.
[47] https://cgspace.cgiar.org/server/api/core/bitstreams/9c5fe401-0405-40bd-b967-aa847f2d6fd6/content.
[48] https://www.cgiar.org/news-events/news/announcing-the-winners-of-a-first-round-of-funding-to-take-agricultural-innovations-to-scale-in-africa/.

4.3 Effectiveness

EQ. 3- To what extent have the SG initiatives achieved, or are expected to achieve, their objectives in their respective areas of work, including any differential results across subgroups of users/clients?

FINDING 6- Numerous good quality outputs and outcomes were reported in the period 2022-24. However, it is difficult to differentiate from CRP-era work and, as for novel initiatives, the period of implementation is too short to assess effectiveness. Overall, the magnitude of results achieved has been significantly reduced by frequent and reiterated budget cuts. Finally, it is not possible to conduct a comparative analysis between the results achieved against what was planned as the evaluation team was not able to access the aggregated data either at the initiative or SG level nor were target values set for indicators (as described in Finding 10).

In the Results Dashboard, in 2023 RAFS initiatives reported the outputs and outcomes described in the Figures 7-8 below.

Most stakeholders found it challenging to identify specific results emerging from the initiatives in the period covered by the evaluation, as research is an overall process and results may depend largely on legacy work. Much of the work in RAFS is drawn from pre-RAFS research that continued in the current initiatives, and results emerge from long-lasting research programs, only recently embedded into the initiatives. The AMD rice seed work is a good example of several research programs bringing a package of innovations as a result of long-term investment in breeding, agronomy, and agricultural engineering. On a different note, as far as new lines of research under the Initiatives are concerned, all interviewees mentioned that it is premature to look at outcomes and impact after two years of implementation. Acknowledging these challenges, the evaluation team was able to identify some results through country visits and online interviews, though it remains difficult to identify a clear boundary between the initiatives and previous research.

In **Vietnam,** various types of outcomes were observed. As far as innovation use is concerned, an agribusiness model for rice straw management and mushroom production was developed under the EiA Initiative and adopted by one cooperative visited during the field mission. "*We are not burning rice straw anymore, and we buy additional straw from farmers. We mix it with cocoa to make organic fertilizer*" (Interviewee). The development and dissemination of Agroclimatic Bulletins in seven Vietnamese provinces, with the involvement of the Department of Crop Production and local partners, was recognized as a "technical innovation" from the MARD. The solution has been further scaled with a budget allocation from the MARD which has also issued a directive letter in 2023 to implement the bulletin in all 13 provinces, reaching out to approximately 221,061 farmers. A new approach using the Zalo messaging app in the An Giang Province is also being piloted.

Initiatives also fostered some policy improvements, as was the case of the roadmap and criteria for the One million Hectares for high-quality and low carbon rice National Program developed under AMD.[49] Additionally, under a joint effort between AMD and EiA, the technical guidelines and manual for rice straw management towards circular and low emission agriculture in the Mekong Delta were produced and endorsed by the MARD. The guidelines are currently being disseminated to the provinces for their adoption and further uptake of low-carbon gas emissions practices from farmer communities and cooperatives. Under the EiA Initiative, the Protocol on Mechanized Direct Seeding for Increased Effectiveness and Reduced GHG emissions in rice production in the Mekong River Delta was developed and the solution-expected to reduce the use of seeds and fertilizers, to improve productivity and to protect the environment-was

[49] https://www.cgiar.org/news-events/news/vietnam-launches-the-one-million-hectares-program-specializing-in-high-quality-low-emission-rice-production/.

showcased during several on-farm demonstrations reaching out to more than 4,000 farmers in the Mekong Delta Region.

In **Colombia**, under the Livestock and Climate Initiative, CGIAR and its partners were successful in improving cattle-raising practices for both meat and milk. The initiative partnered with a large private seed company to sell the forage seeds produced and with a large fertilizer company to better inform ranchers on improved pasture production.

Constant budget cuts represented the most important challenge in implementing the initiatives. Significant repercussions were reported by almost all the internal and external stakeholders interviewed. In some initiatives, entire WPs or countries were cut out. "*The initiative was initially organized into five WPs. But last year we decided to eliminate WP5 due to budget cuts. It was a hard decision since WP5 was supposed to do the scaling work, thus linking our research to developmental outcomes*" (Interviewee).

Managing budget cuts ranged from cutting WPs or countries, to proportional reduction of the budget allocated to WPs and centers. Sometimes for randomized control trials (RCTs) under OHI the sample size within research activities were reduced or intermediate impact assessments between the baseline and the end-line data collection were skipped. A more common approach was to reduce core CGIAR staff budgeted time, which resulted into overwork and burn-out. Another practice has been to utilize spare staff capacity and more junior levels. Examples include using post-docs to lead WP activities and utilizing a doctoral student to effectively lead activities. In few cases, a decreased engagement of national research assistants was reported.

Evaluation found that budget cuts have frequently affected the gender components of the initiatives. For example, under SAPLING, budget cuts have highly affected WP4 dedicated to gender, with on-the-ground interventions not having been implemented. Similarly, under OHI, gender related surveys were planned but not fully implemented due to budget cuts.[50]

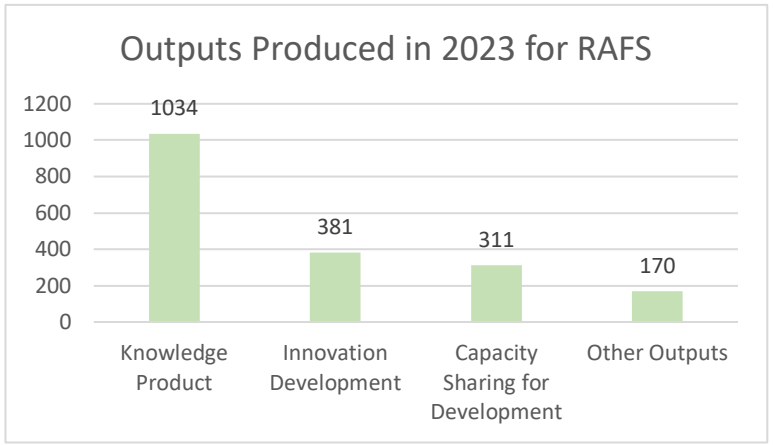
In general, nevertheless. CGIAR respondents reported that efforts have been made to minimize budget cuts to external partners, several of them have reported many cuts in their activity expenditures, which created the feeling of interventions left halfway through. In several cases, the financial turbulence was reported as a constraint for the continuity of the research areas supported through the initiatives, unless those were clearly embedded into the national research agenda. "*We were initially encouraged to think ambitiously to achieve transformative impact. Consequently, our engagements with partners led to overpromising*" (Interviewee).

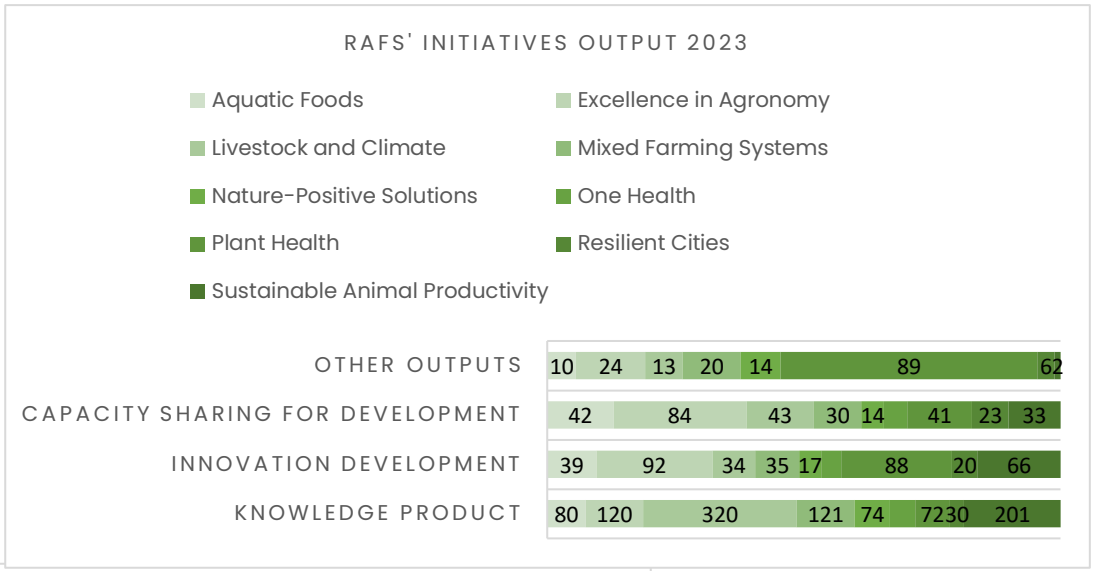
Foreshortened implementation periods were reported as another important and unpredicted challenge. As mentioned in Finding 3, the original ToC was designed with a nine-year period in mind. The present revised three-year term horizon is considered incongruent with the transformative ambition contained in the ToCs of the initiatives. Suddenly, the initiatives were faced with growing pressure to achieve more results in less time and with fewer resources. As the EA Synthesis Review found, ToCs were not always revised to take into account the reality of actual funded work.

Frequent structural changes, the disruption of initiatives and the recent intensified focus on the new science programs are other challenges mentioned by many interviewees. The state of uncertainty is creating internal demotivation in explaining the new upcoming, and still unclear, changes to partners. Overall, despite the number of results delivered, given the difficulties linked to budget cuts and short duration of the initiatives, as well as considering the highly ambitious initiative ToCs, most of the stakeholders believe it is unlikely that the expected outcomes will be achieved in the brief time left before the end of the three-year cycle.

[50] Surveys to identify gender market dynamics among pork vendors in Vietnam, gender-related hygiene behaviors in Kenyan slaughterhouses, and women's roles in livestock production and caregiving costs in zoonotic interventions.

Figures 7. RAFS SG's 2023 Outputs: General Overview and Initiative-Specific Highlights





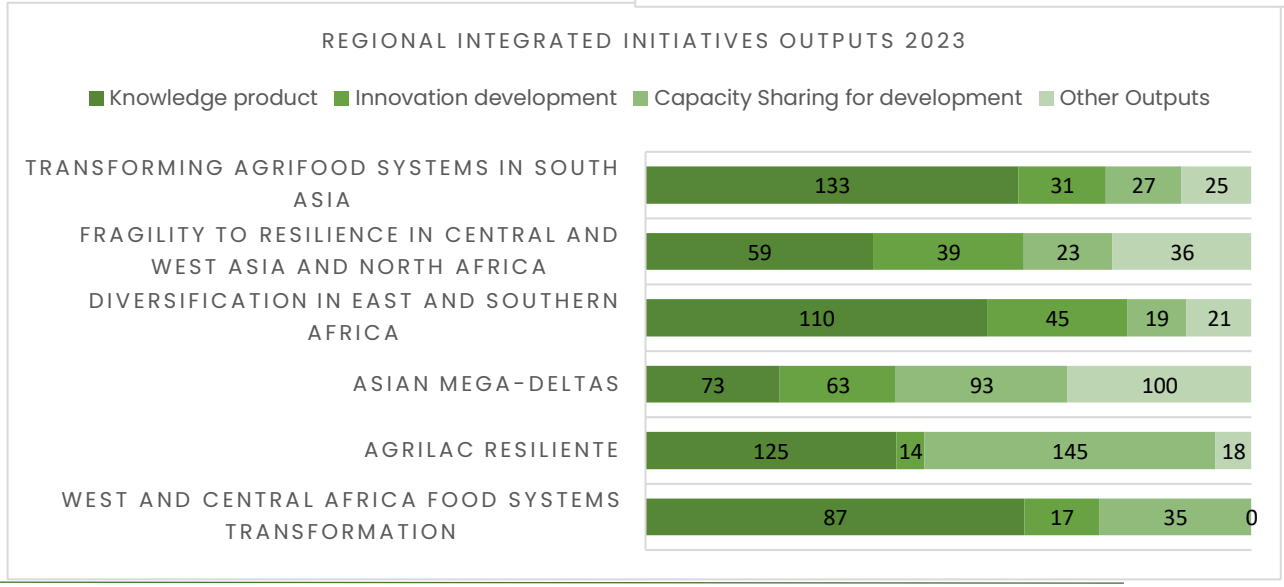
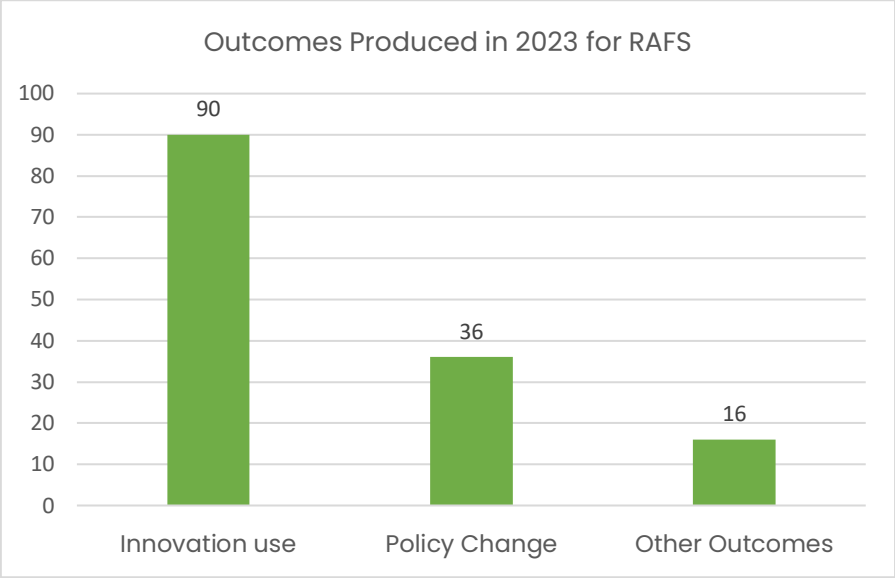
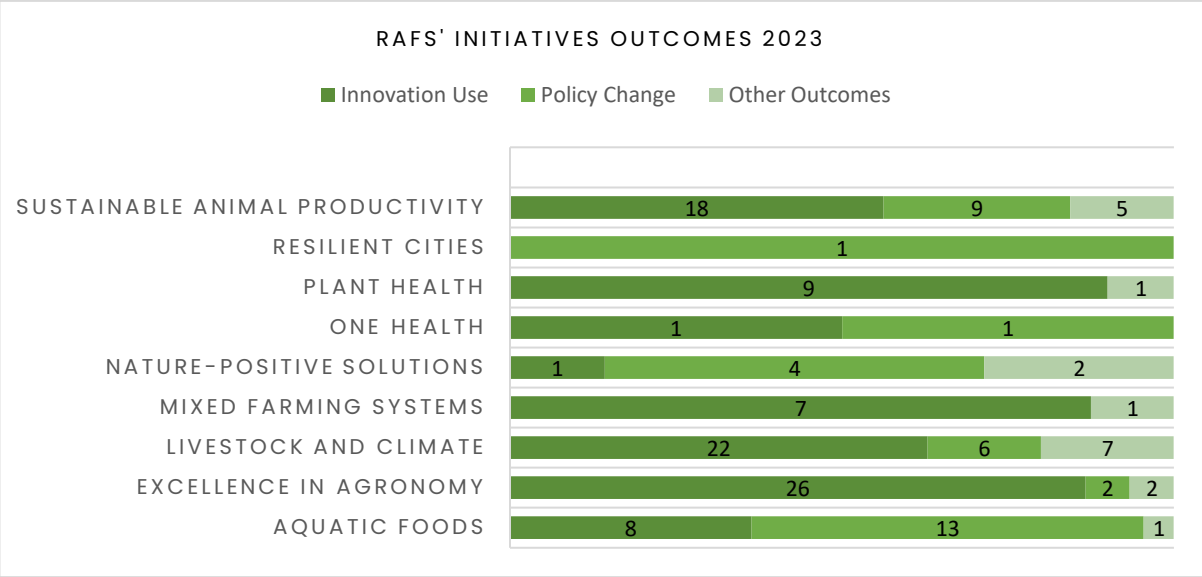
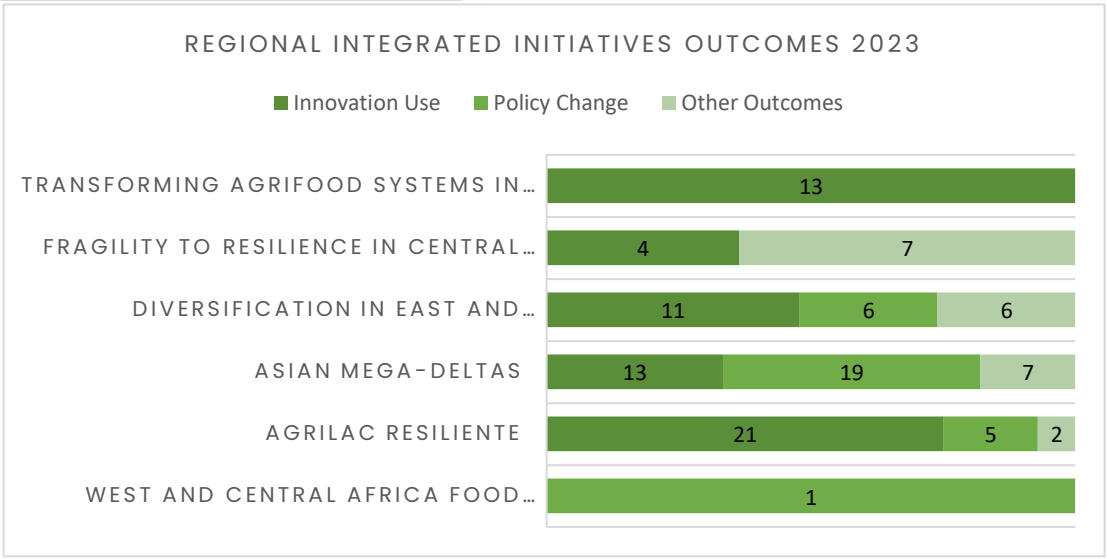


Figure 8. RAFS SG's 2023 Outcomes: General Overview and Initiative-Specific Highlights







4.4 Efficiency

EQ 4 - To what extent is the governance, management and internal coordination of the SG deemed suitable for achieving its objectives?

FINDING 7 – Financial resources have not been made available in a timely way nor efficiently, critically affecting the implementation of the initiatives, the achievement of results, corporate trust and reputation towards external stakeholders. While designated funds from bilateral negotiations were consistent, contribution from bilateral funding to the Initiatives is not clearly framed.

The set of initiatives submitted in 2021 was accompanied by a three-year target budget proposal. The premise stated in the Companion Document to the 2022-24 Investment Prospectus (CGIAR, 2021b) was that the initiative design teams had been asked to develop "accordion proposals" susceptible of potential scaling up or down, depending on the initiative potentialities and according to funding availability. Although the principle appears clear from the document review, the evaluation team found gaps in the communication processes and overall transparency, as staff had little understanding or awareness of the budget reduction rationale, reasons and modalities. Furthermore, the ways in which financial planning and budget reductions took place, usually with short or no notice and often announced during the year, were considered highly detrimental to the implementation of the initiatives, the achievement of results, the reputation of CGIAR towards external partners, and the motivation of internal staff and corporate trust. "In 2023 we had to face additional budget cuts, which were announced only in July. This uncertainty makes planning and implementation incredibly challenging" (Interviewee).

Table 3. RAFS RIIs Planned and Actual Budget in 2022 and 2023

Regional Integrated Initiatives	2022 Proposal budget from initial submission (USD)	Approved 2022 budget (USD)	% of deviation 2022	2023 Proposal budget from initial submission (USD)	Approved 2023 budget[51] (USD)	% of deviation 2023
INIT. 10 – Fragility to Resilience	9,084,848	4,058,895	55%	10,040,000	4,000,000	60%
INIT. 14 - AgriLAC Resiliente	9,309,000	4,001,154	57%	10,080,000	3,690,000	63%
INIT. 18 - Asian Mega-Deltas	8,000,000	3,988,250	50%	11,000,000	6,920,000	37%
INIT. 20 - Transforming Agrifood Systems in South Asia	11,382,678	4,242,914	63%	14,100,000	4,160,000	70%
INIT. 21 - Diversification in East and Southern Africa	11,573,625	5,045,459	56%	13,940,000	11,090,000	20%

[51] All these amounts include carry-over and commitments.

Regional Integrated Initiatives	2022 Proposal budget from initial submission (USD)	Approved 2022 budget (USD)	% of deviation 2022	2023 Proposal budget from initial submission (USD)	Approved 2023 budget[51] (USD)	% of deviation 2023
INIT. 22 - Transforming Agrifood Systems in West and Central Africa	6,327,600	4,139,557	35%	12,400,000	4,560,000	63%

Evaluation found that despite the premise, initiatives were allowed the scenario bases planning, corresponding to the initially foreseen budget. Overall, all initiatives were highly affected by budget cuts at their start and throughout implementation. The initiatives were designed with an estimated budget that was about twice as large as the actual budget at the start in 2022, as shown in the tables below. Confirmations on financial commitments, as well as on the approval of carryovers, were often delayed, posing additional challenges. "*Last year, carryovers were approved in July or August, too late to let people organizing expenditures. We had to rush to spend those carryovers, this negatively impacted the initiative*" (Interviewee).

The 2022-24 Investment Prospectus mentions that "the full portfolio of RAFS work will include pooled and bilateral funding" (CGIAR, 2021a). Although there were several cases in which bilateral funds, or other types of funds, were raised to contribute to specific activities within the initiatives, the evaluation team could not find evidence neither of the existence of a structured co-funding mechanism, nor of a database accounting for the non-pooled contributions raised. "*Initially, we were instructed that the initiative should remain standalone, but later, we were advised to leverage bilateral funding. This inconsistency was confusing and hindered planning*" (Interviewee).

Evidence of efforts undertaken to raise internal funds for the Initiatives was found by evaluation.[52] Centers were also efficient in carrying out bilateral negotiations to raise designated funds from traditional donors to contribute to pool funding (Window 1). These funds are allocated through yearly budgeting cycles and mapped in PORBS and Type 1 Report. In this respect, several initiatives, such as AMD, Ukama Ustawi and AgriLAC, were particularly successful.[53]

Another modality to be more systematically explored is to leverage NARES resources from agricultural development grants, through a stronger involvement of NARES in the design of initiatives (see Finding 1) and channelling part of these resources to agricultural research.

[52] Nature +, for instance, raised additional funds from the ASEAN-CGIAR program (https://www.cgiar.org/news-events/news/asean-and-cgiar-launch-joint-program-on-accelerating-innovation-in-agri-food-systems/) to organize a national agrobiodiversity consultation in Vietnam; to participate to a regional consultation in the Philippines; and to conduct nutritional analyses of landraces found in NATURE+ sites.

[53] The following contribution agreements were reached for the period 2023-25 for three RIIs:

- AMD: New Zealand Ministry of Foreign Affairs and Trade USD 6.2M yearly (2023-25)
- Ukama Ustawi: New Zealand Ministry of Foreign Affairs and Trade USD 24.05M (2023-25)
- AgriLAC: NOK 10M yearly (2023-25).

Table 4. RAFS GTIs Planned and Actual Budget in 2022 and in 2023

Global Thematic Initiatives	2022 Proposal budget from initial submission (USD)	Approved 2022 budget (USD)	% of deviation 2022	2023 Proposal Budget from initial submission (USD)	Approved 2023 budget[54] (USD)	% of deviation 2023
INIT. 7 - One Health	11,498,778	5,915,852	49%	11,740,000	6,120,000	48%
INIT. 11 - Excellence in Agronomy	17,000,000	15,450,656	9%	26,880,000	23,330,000	13%
INIT. 12 - Nature Positive solutions	6,618,670	4,430,996	33%	8,570,000	6,380,000	26%
INIT. 13 - Plant Health	11,000,000	9,334,443	15%	13,000,000	8,490,000	35%
INIT. 15 - Aquatic Foods	7,500,000	5,654,858	25%	12,500,000	5,840,000	53%
INIT. 16 - Resilient Cities	5,000,000	4,059,120	19%	10,000,000	3,970,000	60%
INIT. 17 – SAPLING	16,000,000	15,184,203	5%	20,000,000	11,871,486	41%
INIT. 19 –Mixed Farming Systems	11,462,080	7,799,199	32%	14,470,000	9,020,000	38%
INIT.34 - Livestock and Climate	10,000,000	7,923,298	21%	19,100,000	6,970,000	64%

FINDING 8 – Several operational challenges, linked to the implementation of initiatives' activities by different legally independent centers and to budgetary constraints, have affected efficiency both at initiative and SG level. Some crucial positions are unbudgeted; the working time allocated to the initiatives and to the SG was considered inadequate compared to the effort needed; and the initiative lacks a clear hierarchy and performance assessment mechanism. In addition, the staff composition appears unbalanced in terms of disciplinary background and area of expertise. Budget allocations were 'locked-in' to initiatives from the outset limiting management's ability to adapt to changed circumstances. Overall, the new setup has significantly increased the complexity of the administrative work and related transaction costs.

The CGIAR reform process has included **new divisions and roles** (SG managing directors, thematic area directors, regional directors, country conveners). In addition, each initiative has its lead, co-lead, WP manager, and project manager. The evaluation has found that, despite clarity on roles, tasks and responsibilities at initiative level, the arrangements used to formalize the assignments within the initiatives created ambiguity with respect to the supervision channels and to the performance assessment

[54] All these amounts include carry-over and commitments.

mechanisms. While the selection of the staff hired within an initiative relies on a combination of selection procedures, under the supervision of the Initiative supervisor, and approval processes, handled by the center to which the person belongs, there are no contractual modifications when a person is assigned from the center to an initiative. Thus, each individual center asks its staff members to devote a certain amount of time to an initiative (time-based assignment). Against this backdrop, there is a lack of clear hierarchy within the initiative and the initiative leads' authority is weak. The situation is more complicated by the fact that each center has its own human resources performance assessment systems in place. For many interviewees, it was a paradox to be employed within an initiative, to have to report to the lead and to their own center at the same time and, in the end, to be assessed for the work performed exclusively by the center, and not by the initiative leads.[55]

Few interviewees reported that they were not appointed to the initiative through clear ToR: "*I find myself leading the initiative without being formally assigned, assessed or compensated for it*" (Interviewee). "*I don't report to anyone in CGIAR, I report to my Director-General. This ambiguity creates challenges because I was not employed specifically for this role; it's an additional responsibility on top of my existing duties*" (Interviewee). This lack of clarity also emerged from the evaluation online survey, with 40% of respondents reporting experiencing adjustments in their roles in agreement with management, 12% of respondents reporting having experienced role changes without proper documentation or consultation, and 10% of respondents expressing uncertainty about whether their roles had changed during the transition, as shown in Figure 9 below.

At SG level, it seems that management teams and support functions are under-resourced, with unrealistic time allocations and, in few cases that were documented, with no formal expectations due to the absence of a clear ToR. Several interviewees pointed out that, as work done under the SG is not part of **staff performance appraisal,** there is very little incentive to contribute to it. This implies that contribution to the SG is mostly dependent both on people's personal attitudes and directions from their individual centers. Generally, these people perform several other duties aside from those linked to the SG.

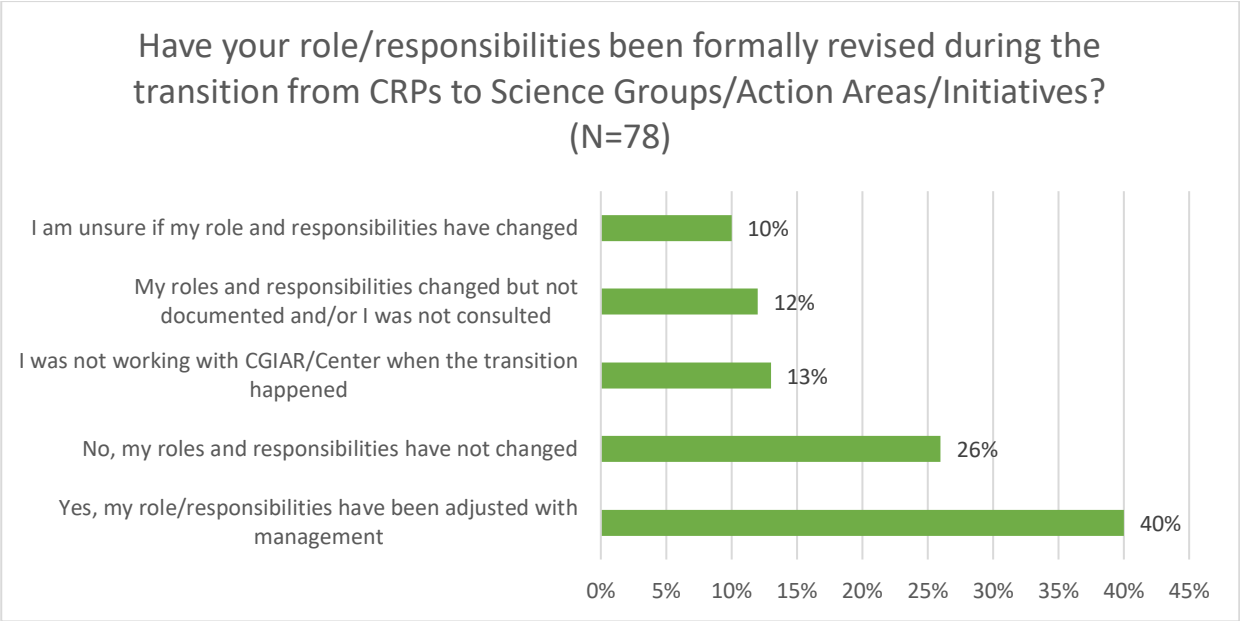
The **team composition** was found to be rather balanced in terms of gender (see Finding 16) and location of the assignments.[56] It was not possible to access data on the staff composition by nationality and by area of expertise. This hindered the evaluation team from assessing the quantitative and qualitative adequacy of the human resources hired. Information on the presence of social scientists, or the extent of engagement of PhD students, for example, was not readily available. According to many stakeholders, the engagement with social scientists, partnership, gender, and communication experts is still markedly less compared with the technical bio-physical scientific capacity internally available, which affects CGIAR capacity to address the socioeconomic, political and cultural factors that may hamper uptake and replication of technical solutions developed, as it was underlined in the 2021 Synthesis Review (CGIAR, 2021). Despite several positive examples that can be made,[57] it seems that there is still little appreciation for stakeholder engagement being a specialized skill set, different from scientific research.

[55] According to information gathered, some pilots are underway to address these weaknesses, with some centers trying to develop a complementary performance management tool to capture and assess the contributions of the people assigned to the initiatives.

[56] 96% of the assignments for the initiatives are in the following regions: East & Southern Africa (35%), Latin America and the Caribbean (17%), South Asia (13%), West Central Africa (13%), Southeast Asia & the Pacific (11%), and Central & West Asia & North Africa (7%). Source: People and Culture Dashboard Report provided to the evaluation team, May 2024.

[57] In Vietnam, the inclusion of IFPRI social science skills in WP5 of OHI was a strong and important design feature.

Figure 9. Transition from CRPs to SGs/Action Areas: Effect on Roles (RAFS SG)



Source: IAES Evaluation online survey

Other weaknesses were reported, notably the insufficient **percentage of work time formally allocated to the initiatives** by the leads, co-leads and project managers (in some cases it was 25%), which often resulted in overwork, also considering that almost all interviewees were performing other duties within their respective centers. According to the People and Results Dashboard, 80% (113) of initiative leadership assignments are allocated up to 50% Full Time Equivalent (FTE). 27 out of the 140 Leadership assignments are allocated with a FTE from 50% to 100%.

The **unbudgeted role of country convener and initiative country focal points**[58] is another important aspect. Though performing crucial roles in fostering cross-center collaborations, research integration, and cross-initiative synergies, there were no incentives for these positions, which were mostly based on voluntary work.

Despite ONE CGIAR reform and Integration Framework, each center operates under its own agreements and organizational structures, making coordination and reporting cumbersome and increasing administrative workload and the transaction costs. If compared to the past, the involvement of many centers within the same initiative has significantly increased the **complexity of the administrative work and related transaction costs**. Each center is still following its own administrative procedures. Some centers, for example, pay allowances to the government while others do not; there could be multiple agreements with the same partner within the same initiative-and sometimes for the same activity-one per each center involved in the specific activity. Transferring funds among centers within an initiative is difficult. If a center was not contracted to be in an initiative from the outset, staff could not contribute later, which prevented the selection of the best staff for certain roles and agile program management. It seems that this locked everyone into their initial roles, without much flexibility towards evolving needs.

[58] Initiative country focal points are typically funded through specific WPs within the initiative's budget. However, there is not a specific budget allocated for their cross-cutting tasks as focal points.

FINDING 9 – While internal communication was performed satisfactorily at initiative level, the information flow between the SG management and the initiative leadership was limited. This influenced the extent of cross-initiative synergies and ownership to the SG.

The initiative internal communication system was satisfactory for most interviewees, who reported regular bi-weekly, weekly or monthly internal meetings with WP leaders. However, general meetings involving all the initiative leaderships and the SG management were limited, which could also have contributed to the weak strategic guidance received from the SG and to the not systematic cross-initiative synergies (see Finding 4). Overall, the flow of information across initiatives was deemed insufficient to foster knowledge sharing, joint planning, and the development of synergies. The evaluation could find evidence of two SG retreats involving the SG management: June and September 2023,[59] and one SG general meeting of the entire RAFS team in November 2023.[60] This means that only one general meeting was held in more than two years. An undetermined number of online meetings was also referenced, but apparently these were mainly organized for presentation and reporting purposes, not allowing for a real exchange among participants.

As described in Finding 4, communication with the RAFS SG was almost absent at country level, with many internal stakeholders with little or no knowledge of their SG. One significant contributing factor was attributed to the leadership vacuum within RAFS, which affected the continuity of coordination[61] and to the RAFS management team not being fully in place until the second half of 2023.

FINDING 10 – Adequate results architectures have accompanied the initiatives and the new setup. Although these seem conducive to appropriate monitoring and evaluation, the Monitoring, Evaluation, Learning and Impact Assessment (MELIA) plans were weakly implemented, and the evaluators grappled with accessing a comprehensive overview of cumulative values for output and outcome indicators. This prevented monitoring from being a tool supporting result-based decisions and real time oversight.

The 2030 Strategy 2022-24 CGIAR Portfolio was accompanied by an overarching Results Framework aligned to the five CGIAR Impact Areas and to Sustainable Development Goals (SDGs).[62] Three different result types (outputs, outcomes[63] and impacts) are mapped to the spheres of control, influence and interest, respectively (CGIAR-SIMEC, 2022d).[64] The Results Framework includes a set of indicator categories[65], updated on a three-year base, allowing the aggregation of results and indicators reported by individual Initiatives. The Performance and Results Management Framework (PRMF) encompasses

[59] CGIAR RAFS Management Retreat, Montpellier, 7-9 June 2023, and CGIAR RAFS Management Retreat Amsterdam 15–17 September 2023.
[60] CGIAR RAFS 2023 Annual Workshop, Amsterdam 16-17 November 2023.
[61] In 2023 there has been a significant turnover in the directorate, with four out of six directors which were newly appointed in mid-2023.
[62] As specified in the CGIAR Technical Reporting Arrangement 2022 (CGIAR-SIMEC, 2022d), the ambition is to progressively include non-pooled results and indicators into the common system of the CGIAR Results Framework.
[63] As specified in the CGIAR Technical Reporting Arrangement (CGIAR-SIMEC, 2022d), "Outcomes can occur within the lifespan of an Initiative/project, culminating in end-of-Initiative outcomes, as well further into the future, in which case the outcome is housed at the Action Area level".
[64] As specified in the CGIAR Technical Reporting Arrangement (CGIAR-SIMEC, 2022d), "the sphere of control is our operational environment, and we have direct control over it. The sphere of influence is where interactions with other food, land and water systems participants occur, and we exert direct influence over it. The sphere of interest houses social, economic, and environmental status and trends and we exert indirect influence over it via partners".
[65] Indicator categories at the outcome level are Innovation use, capacity change, policy change. Indicator categories at the output level are knowledge products, innovation development and capacity sharing for development.

"planning, monitoring, and reporting" and provides the system for "measurement, learning and accountability from performance and results" (CGIAR, 2021a). This overarching conceptual framework is translated into specific results architectures at SG and initiative levels. In this context, CGIAR initiatives should systematically measure and be accountable for their outputs and outcomes in order to demonstrate progress against their ToCs, at initiative and WP levels, as well as against the SG and the overall CGIAR Results Frameworks (CGIAR, 2020a).

Regarding the **M&E design**, while at SG level there is not a specific Monitoring, Evaluation, and Learning (MEL) system in place, though an M&E officer is part of the staff, the initiatives have structured MELIA plans. These plans are structured to present results and indicators, baseline and target values, indicator geographic scope, data source, as well as methods, frequency, roles and responsibilities for data collection. They also include a plan for impact assessment studies. As such, they appear conducive to results-based management and to adequate monitoring and evaluation. They include both efficiency indicators, which make it possible to measure progress, and effectiveness indicators, allowing to look at the societal and behavioral changes triggered by the initiatives. However, plans reviewed by the evaluators obtained little or no baseline data, which does not make it possible to measure the progress against the initial situations. As reported by the RIIs EA (CGIAR, 2023d), for several RIIs, monitoring tools were incomplete in their development with missing indicators and unclear baselines. AMD and TAFS-WCA RIIs were building their baseline at country level in 2023[66], while activities were already underway, with a potential negative impact on the accuracy of the baseline obtained. Moreover, these baselines were not reported in the Excel documents containing the Results Frameworks that were shared by the SG with the evaluation team. This was also reported in the RII EA, which found that no results frameworks were updated to include data from baseline studies carried out during implementation. TAFSSA and CWANA did not complete their baseline for reasons linked to budget constraints and to inherent challenges in obtaining values for outputs and outcomes (CGIAR, 2023d).

As commented by some stakeholders, another weakness of the M&E plan at initiative level is linked to the presence of outcome indicators that can be attained in the long run and mainly relate to factors beyond the initiative's sphere of control. In this respect, it would have been preferable to design indicators more aligned with the type of changes attainable within the initiative timeframe.[67]

While the implementation of M&E benefited from budgetary provisions and dedicated human resources, it seems to have consisted mainly of capturing elements to feed the PRMS results dashboard and of fulfilling technical report requirements. More specifically, the evaluators were not able to access comprehensive data showing how outputs and outcomes move cumulative progress against expected target values. Despite monitoring tools exist, mostly in Excel, no real-time system tracking the values achieved for outputs and outcomes at a specific time was found. Against this backdrop, the evaluators could not have an overview of target values achieved against the planned end-of initiative outcomes. "*Technical reports pick results here and there without clear reference to the progress towards expected end-of-the initiative outcomes* " (Interviewee). In addition, it was noted that outputs and outcomes are usually inserted in the PRMF dashboard at the end of the year, not allowing for real-time monitoring.

[66] During the TAFS-CWA initiative implementation, for example, farmers were registered electronically to track changes over time in outcomes such as production levels, income, and diet diversity.

[67] A range of examples span across initiatives: under Nature+ the outcome indicator "At least 5,000 smallholders in target sites use NATURE+ innovations by 2025"; under Aquatic Foods, WP3, the outcome indicator "5,000 farmers using agro-ecological practices by 2025".

At SG level, since the launch of the initiatives in 2022, no quantitative progress towards action area outcomes were tracked. It has been argued that this will take place at the end of 2024, when the initiatives will end and submit their final counts for outcomes and outputs. Again, this seems to favor ad-hoc monitoring activities, primarily aimed at reporting, rather than an intentional use of monitoring as a tool to support informed decision-making.

No visible or planned action has yet appeared in relation to the capitalization of the knowledge acquired within the framework of the initiatives. The knowledge accumulated during the initiatives concerns both the technical feasibility of the innovations deployed, as well as the lessons learned throughout the implementation process. However, capitalization mainly derives from internal reflection processes, namely the Pause and Reflect Workshops, without an apparent consolidated and accessible system.

For capitalization purposes, several stakeholders recalled the importance of the past CGIAR impact narratives, apparently missing in this investment cycle, allowing to demonstrate the current and future impact of past and present research investments. Some types of research and impact emerge slowly or build impact cumulatively over a long time. Using the example of ILRI support to pork marketing in Vietnam, which now falls under the OH umbrella, investments in research on food safety and food safety management practices have been carried out for more than a decade.

4.5 Quality of Science[68]

EQ 5 - To what extent does the SG ensure the QoS (scientific credibility and legitimacy)?

This section presents the main findings on the QoS assessment. The full QoS report and analysis, including the assessment matrix, can be found at Annex 8.

FINDING 11 – Design. The SG research portfolio design well considered global and regional problems and, for countries visited, it was clearly aligned with national challenges and needs. However, initiatives were developed in a relatively short space of time and drew heavily on existing research partnerships and pre-existing activities. A less rapid process of developing research questions, testable hypotheses and partnerships might have given a stronger sense of co-ownership. The adopted research methodologies are generally of a high standard and the use of ToC across Initiatives and WPs is an example of improved practice between CRPs and current initiatives.

Focus on challenges: Initiatives in RAFS aligned their research questions with the key global challenges at the time of design and have demonstrated some important flexibility during implementation by responding to the specific agenda of Food Systems Transformation, for example in Vietnam. Where assessed in detail, Initiative proposals are well founded in global challenges and closely aligned with SDGs. Regionality can be seen mostly in commodity and landscape foci. For example, improving productivity in risk in Southeast Asia whilst reducing the carbon impact of rice production has the potential for distinct, regional and global impact where uptake is strong. The innovations emerging from the portfolio of initiatives in RAFS have the potential to address key global challenges, including climate change and the transition to new, more appropriate, global food systems. A high proportion of scientific effort considered can be ascribed to clear local needs, and, in many cases, for example OHI in Vietnam, is driven by new national policies in this field. A significant proportion of scientific design and founding relevance was drawn into the RAFS initiatives from earlier work associated with CRPs.

[68] https://iaes.cgiar.org/evaluation/publications/applying-cgiar-quality-research-development-framework-process-and as referenced in the evaluation TORs. The SG wide QoS evaluative brief was launched in August 2024.

Co-design and partnership: Strong national, regional and international partnerships continue to underpin high quality fieldwork. Over the long term, RAFS has drawn into the initiatives the key local and global partnerships necessary to generate research-based solutions towards developing a sustainable food system. An extensive, but somewhat truncated (hurried), consultation and co-design process was conducted. Information on the degree to which the needs of the very poorest or most vulnerable were addressed by the research was not available. Inclusion of these groups is, largely, assumed during design, if co-design is conducted with farmers.

Consideration of needs: The use of ToC across Initiatives and WPs is an example of improved practice between CRPs and initiatives. Closer alignment of underlying research questions with current problems increases the likelihood that significant, voiced, needs are being addressed. Few ToCs have changed since initiatives began. However, the time period is very short for new 'needs' to be surfaced and included.

Method assessment: Currently, PRMS for RAFS shows 605 individual innovations in two years. To assess the appropriateness of the method for each associated scientific step for this many wide-ranging scientific activities is not possible. A sample of case studies and deep dives showed that methods are generally of high standard, and this is largely evidenced where data generated produces a paper accepted by a high quality, peer-reviewed international journal. Where outputs are reported in non-peer reviewed technical reports, method quality is harder to assess. A lot of technical reports have co-authorship from strong academic institutions, and this increases the likelihood of rigour and appropriateness.

Of the 2,464 outputs identified across GTIs and RIIs in 2022 and 2023, only 88 items were non-open access. This degree of accessibility declined from around 13% of all outputs in 2022 to less that 6% in 2023. Considering the same set of outputs from the perspective of peer review shows that there was a small decline in the proportion of outputs peer reviewed in RAFS between 2022 and 2023 (from about 30% to around 20%). Actual number of peer reviewed outputs remain roughly the same (2022 = 336, 2023 = 305) but the total volume of outputs increases in this time from 1,000 in 2022 to 1,464 in 2023, showing an acceleration of non-peer reviewed outputs by around 50% in this period. A higher proportion of this growth in non-peer reviewed outputs is from RIIs (from 199 in 2022 to 440 in 2023) than from GTI (from 465 in 2022 to 719 in 2023).

Alignment to global challenges: The use of SDGs and 'Impact Areas' to align ToCs during the planning phase of Initiatives means that, at a very high and somewhat superficial level, alignment can be clearly demonstrated. What is more problematic is to see the specific contribution that individual research activities and innovation application might have to achieving specific SDG indicators, e.g., SDG 12.3 on food loss and waste which requires a 50% reduction by 2030. Looking at case studies and deep dives in RAFs where this type of activity features, the likely contribution to this indicator is not mentioned and no effort to measure contribution is offered. In interviews, when asked about the baseline food loss and waste (FLW) measure against which impact can be assessed, random FLW estimates not based in quantitative analyses were provided (e.g., "losses in the fresh fruit chain are terrible–more than 50%").

FINDING 12 – Inputs. The only skill shortage highlighted refers to gender and partner engagement experts. Cases of inadequacy of inputs constraining results were not identified. However, budget cuts have had possible negative impacts on science quality. Much could be done to improve the student experience and reduce drop-out rates among Post Graduate Researchers associated with RAFS.

Skill availability: The only skill shortage mentioned during the evaluation was with respect to access to gender specialists, who seem to be in short supply and much appreciated where they are available in-country (e.g., in Vietnam), and social scientists, particularly regarding experts in engaging with external partners. Many scientists in Colombia indicated that the initiatives gave greater integration of scientists

with more opportunities to share skill sets compared to previous CRPs. Interrogation of the CGIAR Workforce Dashboard shows that, as of 1 June 2023, RAFS has a workforce of 1,673, of which 502 (30%) identified as female. This gender imbalance is slightly improved at mid-level scientist level (34%) but returns at support staff level (29%). In terms of staff location, RAFS is heavily concentrated in Sub-Saharan Africa (51.3% of the workforce).

Access to scientific resources: The planned nine-year horizon encouraged some ambitious and potentially valuable longitudinal research to be initiated or continued., e.g.,large RCTs in several initiatives. Cuts resulted in the depth/frequency of some of these studies to be reduced, sample sizes to be decreased, and threatened the likelihood of endlines being completed. Scientific infrastructure endowment and needs vary significantly across geographies and subjects. Cases of inputs constraining results were not identified.

Capacity building for science quality: Generalizing about capacity building across the panoply of activities in RAFS is difficult. In the cases considered in detail, capacity building activities seemed appropriate and engaged a good number of target beneficiaries. Various capacity building approaches were assessed from working with farmer groups up to supporting postgraduate research.

Overall, the PhD experience across RAFS is highly variable and students spoke in some cases of isolation, over-burdened supervisors, variation in student experience, and having to contribute to initiative deliverables. Initiative managers were often not aware of the number of PhD students associated with their work. There seems to be no central agreement on what a student should expect from a CGIAR supervisor and no rules other than those taken from partner academic institutions. Questions such as: "what is the maximum number of students a CGIAR staff member can supervise" and "what are the maximum number of hours of paid work a PhD student can do a week" could not be answered, suggesting an underlying lack of quality norms. Data on the number of students currently under supervision, proportion finishing within an appropriate time frame and drop-out rate were not available. Some standards and norms for quality control of student experience and mapping their journey would improve the likelihood of strong PhD outcomes. Best practice would be a OneCG Doctoral Training Program.

FINDING 13 – Processes. The evaluation found limited evidence of quality oversight at CGIAR SG level (e.g., for annual reports) and some inconsistency in the criteria applied to science quality assessment of outputs across RAFS initiatives. Fairly consistent efforts to recognize national and other partner efforts through co-authorship or acknowledgement were recorded. The existence of MELIA support more widely in initiatives is seen as an advance on the situation in CRPs. However, data to demonstrate future scientific impact is not being collected systematically. Successive cuts to budgets in the past two years have had a significant impact on the management of science. In addition to budget uncertainty, system changes, staff-turnover and over-loading of tasks generated low morale among scientists.

Roles and responsibilities for QoS: For QoS, responsibility for quality should rest with the relevant scientific leader within the initiative. We could not find any evidence of oversight at a systems level. An example is journal choice policy which seems to be left to individuals. Management of postgraduate research quality is also orphaned. Other policies, such as ethics and scientific misconduct, are managed at Center level and this seems to work well. Questions asked during case studies on data management and quality control suggest that this might be an area that needs improvement, particularly at the field level and among associated researchers who are unaware of the right international standards.

Recognition of partnerships: Outputs reviewed show a fairly consistent effort to recognize national and other partner efforts through co-authorship or acknowledgement. In Colombia, interviews were made with nine partners. All nine expressed satisfaction with the initiative's partnering. Some had formal MOUs, while others expressed that they had an 'organic relationship' with the initiative.

Effectiveness of M&E: Many interviews noted a heavy burden on them to populate various data sets related to M&E. The existence of MELIA support more widely in initiatives is seen as an advance on the situation in CRPs where leads had to input data. The absence of longitudinal impact narratives in initiatives risks the loss of important impact evidence which will be hard to create in the future. For example, evidence to support the contribution made by OH to future food safety needs to be collected and curated now, if it is to be used to demonstrate the long-term cumulative benefits of the investment in this space in the future. The EA Synthesis Report of four RIIs indicated a need for more meaningful data collection based on a more thorough analysis of ToCs and on a more comprehensive approach to monitoring and evaluation activities overall.

Leadership and management processes: Successive cuts to budgets in the past two years have significantly affected the management of science. Many scientific leads either reduced the percentage of time they were committing to the actions needed (without reducing the deliverables), or spread themselves too thin. Leadership of the Resilient Cities initiative, for example, was diminished by the addition of other major tasks, including leading a CGIAR centre. Almost all research leaders have been impacted. The result has been, in many cases, stress, disillusion and, high staff turn-over. None of these things have been conducive to maintaining the highest standards of science. Morale among scientists is generally low. Budget uncertainty, system changes, staff-turnover and over-loading of tasks, particularly at initiative management levels, all contribute to this impression. Collaborative work across initiatives, SG and centres has a high transaction cost, particularly if not pre-budgeted, and this has caused frustration.

Communication of science: A total of 30 communications tools were assessed and the quality found to be generally fair to high, with some good examples. There is a good blend of different communications product and a substantial volume reflecting the strong communications support that initiatives get from CGIAR centre communications teams.

Risk management: All initiatives stated that the risk of budget cuts was not planned for, a common re-occurrence. It is not clear at what level the system considers and registers business risk. ToC as it is currently used, always includes identification of risks or counter-factual arguments. Adding regular re-assessment of ToC including risk assessment may address this challenge.

Table 5. Examples of QoS impacts of Budget Cuts

Example of QoS cut (initiative example)	Possible impact on QoS (suggested by respondents)
Reduction of number of countries covered in a survey (Nature+).	Reduced international relevance of results.
Topping up budget with bilateral funds (Nature+ - Burkina).	Spill-over impact on other outcomes from reduced budget.
Reducing survey sample size (not mentioned).	Lower rigor and credibility of research findings.
Reducing survey scope (not mentioned).	Lower rigor and breadth of research findings.
Cutting midline surveys (OH).	Reduced validity of findings.
Cutting shared and cross-cutting activities between Initiatives (SAPLING/Nature+).	Output lost.
Work package consolidation (Nature+: soil health and biological diversity).	Reduced rigor. Lower potential for cross-learning and novelty.

Example of QoS cut (initiative example)	Possible impact on QoS (suggested by respondents)
Additional administrative burdens on scientists to make changes (all).	Reduced time for scientific activities.
Transfer of scientific effort into search for bilateral funding to maintain activity levels (all).	Reduced time for scientific activities.

Source: interviews and assessment by the RAFS evaluation team

FINDING 14 – Outputs. Quality, rigor and credibility of RAFS outputs range from excellent to poor. Greater emphasis on quality control, reducing the drive/incentive for dashboard outputs and outcomes, more internal peer review, and more rigorous journal choice, would improve overall quality.

Subject matter experts have reviewed and assessed 101 individual outputs against QoS criteria. Some findings drawn from this are suggested here. The spread of assessment is shown in Annex 8.

Rigor and credibility. Examples of high quality and rigorous work were found, especially some where this is evidenced by papers in high quality, peer reviewed journals. However, also found were some pockets of activity of lesser quality which were not peer reviewed and whose purpose seems uncertain. Sometimes, particularly for technical reports, meeting reports, and PowerPoint presentation from meetings, it is hard to understand why these are in the public domain. Often the quality of editing for documents such as PowerPoint presentations and meeting reports is poor, or the content is too long and not well synthesized. Where data is presented as authoritative, it is important that it is done so with a high level of rigor and credibility.

High-quality science and practice has continued from the work of the previous CRPs. New novel and useful areas of research and application, tackling important global challenges and complex intersections between challenges have been given more emphasis and impetus under the Initiative structure. These include, for example, the OH approach, Resilient Cities, which considers the important structural changes at the rural-urban intersection, and Nature+, which consides aspects of the bio-economy and circularity.

At the level of technical reports, briefs, communications and non-peer reviewed outputs, there is some excellent material, but also some that is either of limited quality, poor potential for scientific uptake or, in some cases, poorly reviewed. A refocus on quality over quantity of this type of output should be considered. There is insufficient evidence to demonstrate that science quality has improved during the transition from CRP's to SGs and initiatives. This maybe a motivation to concentrate science quality management into future design. Of the 1,811 RAFS knowledge products, 435 had an Altimetric score (23%) demonstrating a range of impact from very high to not yet showing interest. This reveals that a range of measures of science quality and impact are needed as single measures can be distorting, and if over-used, can incentivize the wrong type of academic behaviors (e.g., sensationalizing scientific outputs rather than conducting rigorous, but less eye-catching research). Of course, it is possible, and probably desirable, to have both attention and high quality.

Table 6. Synthesis of Scientific Output Assessments by the Evaluation Team[69]

Item	No. reviewed	Assessment				
Assessment criteria		4	3	2	1	0
Journal Papers	21	9	5	7	0	0
Technical publications	36	10	8	17	1	0
Technical outputs	14	4	8	2	0	0
Communications materials	30	1	18	11	0	0
Total	101	24	39	37	1	0
%	100	24	39	37	1	0

Source: RAFS evaluation team assessment

Technical outputs: In terms of innovations, of the 14 outputs reviewed by the team, four were assessed as 'excellent' and all were 'good' or better than 'good'. There are some high potential outputs generated by RAFS SG. It is not always easy to determine what technical reports were generated by initiatives based on the work since 2022, what culminated from many years of investment (e.g., direct seeding of rice within AMD and EiA), and what is 'new' innovation. Much of the current reviewed outputs may be based on pre-initiative work.

The evaluation team assessed 36 technical reports of various types. The assessment of quality in this category is that it is variable, with some strong work and other examples of technical work that may not have been ready for public dissemination. There are some very high quality and important manuals and capacity building materials and good examples of co-authorship with national partners (e.g., Asmah, P et al, 2023).

Engagement with policy makers: There is, in general, a strong attempt to use scientific outputs of various kinds as a means to engage with and provide evidence to policymakers. Engaging policymakers with highly technical evidence is difficult. A senior Vietnamese policymaker told the team "*We don't need any more complex science, we want technical solutions*". This is a legitimate concern for policymakers and politicians alike -they need to deliver tangible results. Our assessment is that, from the sample of outputs and case studies, an appropriate balance is being struck between providing deep and high-quality evidence based scientific insight, and delivering packages of high potential innovations.

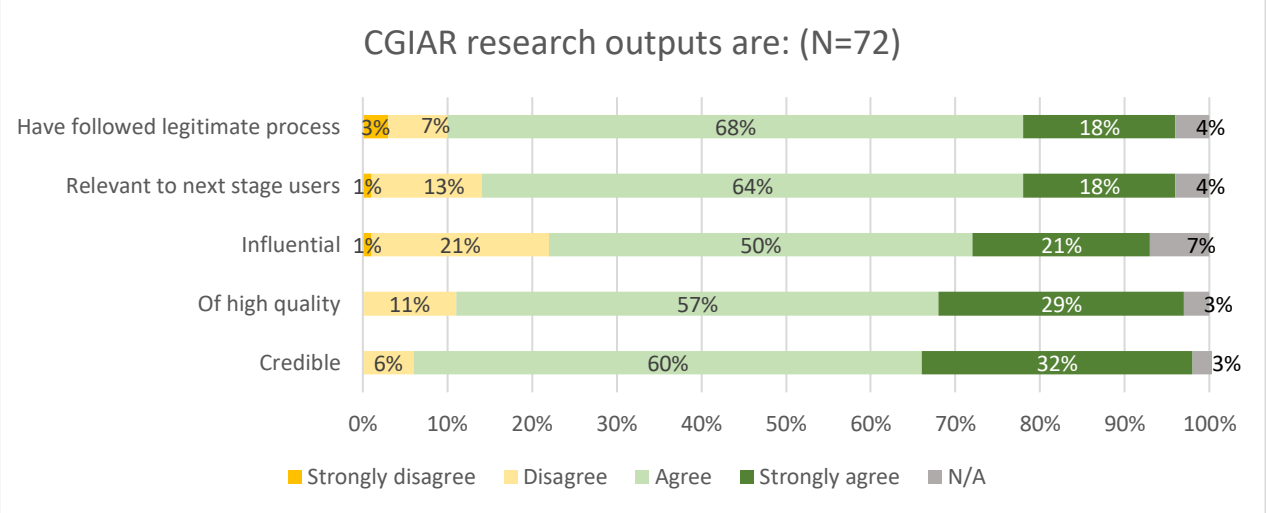
Innovation and scaling readiness: The balance between fundamental and applied research (including development and scaling), has been the centre of a long debate. The transfer of innovations and technologies from initiatives to regional initiatives envisaged a dichotomy of effort between these two aims. Several examples of this approach being effective were fund in RAFS SG. Efforts to assess impact and scaling readiness of innovations are an interesting innovation (seemingly an evolution of the now

[69] The assessment criteria are as follows: **0** = not assessable or relevant; **1** = low, lacking novelty, rigor, relevance, objectivity, and/or credibility; **2** = weak, standard methods, established knowledge, weak coherence, low applicability; **3** = good, original methods, approach, broad applicability; and **4** = excellent, highly original, new knowledge, theories or concepts, significant international applicability.

discontinued Output Impact Case Reports conducted under the CRPs[70]). Researchers are asked to complete an Impact Package and Scaling Readiness Report (IPSR)-not mentioned by any actors interviewed for the RAFs evaluation and may be seen as yet another reporting burden. They appear useful, but not much used yet.

Innovation introduction and scaling was done in both regional and global Initiatives. The theory of passing innovation for maturing to regional initiatives does not seem to have worked well in practice, although there are examples of success (e.g., various rice systems innovations being scaled in the Mekong Delta with collaboration from several initiatives and AMD coordination). One challenge mentioned by stakeholders that may have constrained this free movement of innovations to scaling entities was budgets and budget cuts, as well as bureaucratic funding constraints to sharing budgets which have been highlighted elsewhere. Systematic disincentives seem to be in place that discourage resource-sharing, and therefore, activity/innovation-sharing. A further concern identified in the Ghana deep dive, was the potential challenge of equity during scaling. It was found that strategies for including the most vulnerable and resource-poor in scaling were always considered (e.g., only farmers of a certain size were considered for a scaling initiative).

Figure 10. Quality of CGIAR Research Outputs and Processes-RAFS SG



Source: IAES Evaluation online Survey[71]

A third of outputs, reports and presentations assessed were 'weak' (although a similar proportion were 'excellent'). With this uneven quality, there needs to be some quality control. Not all should be published externally, as they risk undermining overall SG quality assessment. It is difficult to discern what the quality control process is for all outputs, but some sort of national level management of quality would improve standards. There were no 'not assessable' outputs and only one rated as 'low' by the evaluation team. Internal peer review seems often to be by inviting co-authorship e.g., if a colleague is asked to review a paper, their name is included in the final list of authors. Is there an opportunity for a more systematic peer review policy, possibly exploring a peer review 'college' approach and thereby reinforcing the academic citizenship aspect of mutual peer review?

[70] See 12 reviews of CRPs and OICR analysis https://iaes.cgiar.org/evaluation/crp-2020-review
[71] https://iaes.cgiar.org/evaluation/science-groups-evaluations.

The survey results suggest that the majority of CGIAR respondents have a positive view of CGIAR research outputs across various dimensions—credibility, quality, influence, relevance, and legitimacy, as shown in Figure 10. This indicates strong overall confidence in the work produced by CGIAR.

4.6 Cross-Cutting Themes

EQ.6 - How well were the cross-cutting themes of partnerships, gender and climate change integrated into design and implementation of the SG Portfolio?

FINDING 15- While the partnership base of the RAFS SG's initiatives was wide and thoroughly diverse, partnerships were mainly derived from CRPs. Thin capacity to engage with scaling partners was reported, namely the private sector and national agricultural extension services. The in-country listening sessions have launched a promising dialogue with external stakeholders, but it is not clear whether they will be maintained in the future, and to what extent they will be integrated into a partnership strategy.

SG initiatives have led to numerous and diversified partnerships as shown in Annex 9; several initiatives recorded an impressive number of external partners involved.[72] Partnerships with UN agencies were also recorded.[73] However, evaluators have not found a repository or database of partnerships. As such, it is difficult to undertake a quantitative and qualitative assessment, as well as to capture the specific results triggered from these partnerships.

According to interviews conducted, RAFS initiatives mainly continued working with the **same partners involved in previous research programs**. On the one hand, this continuity has ensured rigorous and contextualized research, on the other, it discloses thin capacity to engage with new partners. This could also explain the fact that relationships with individual centers, rather than with CGIAR, are still predominant when talking to partners. As indicated in Finding 8, resorting to partner engagement experts was far below what would be necessary.

The engagement with **scaling partners**, particularly with the private sector and the extension services, is another aspect to be strengthened. Although there have been several partnerships established with the private sector in various countries[74], stakeholders believe that CGIAR needs further engagement in this area. During the listening sessions in Vietnam, it was also noted that CGIAR should build stronger linkages with the national research institutes, expanding their role from executors of individual research activities to partners which participate from the phase of identifying research priorities.

[72] Examples are TAFSSA, working with 160 partners (TAFSSA, 2023 Technical Report) and Ukama Ustawi, collaborating with 180 partners (Ukama Ustawi 2023 Technical Report), both of which include regional networks and organizations.
[73] In Vietnam, Nature+ has a partnership with the UNDP to build on and expand the UNDP-Ministry of Natural Resources and Environment (MONRE) Circular Economy Hub (https://www.iwmi.cgiar.org/news/joint-initiative-to-upgrade-agricultural-circular-businesses-in-viet-nam/).
[74] In Colombia, under the Livestock and Climate initiative, a large private seed company was involved to increase the sale of the initiative's recommended forage seeds. A large fertilizer company was also involved to better inform ranchers on improved pasture production. In Vietnam, the involvement of the private sector under the EiA initiative was crucial for the development and piloting of the mechanized direct seeding for rice production. Under the SAPLING initiative, a private sector partner in Ethiopia has set up a digital marketing system for small ruminants and this is facilitating the marketing of animals from community-based breeding programs (CBBPs) for small ruminants.

> *"If we involve partners more meaningfully, they will gain greater knowledge of the initiatives. We often work with many partners, each with an assigned small task to deliver. This wastes resources when we should instead focus on involving crucial and strategic partners"* (Interviewee).

In Colombia, there were mixed opinions about the extent to which partners got what they expected from their partnership with CGIAR. Listening sessions showed that most stakeholders from the private sector and civil society (63%) strongly agree that collaboration with CGIAR is based on a mutual understanding of priorities, needs and complementary capacities. However, only 36% of public sector, national agricultural research Institutes and academia felt this way, suggesting that there is room for improving complementarity with these partners (CGIAR, Listening Sessions in Colombia). Regarding partners' involvement in the design process of the initiatives and transparency and information sharing by CGIAR, the listening sessions showed more satisfactory feedback from the private sector and civil society organizations, with the public sector, NARS and academia expecting further efforts to improve collaborative work in these areas.

If, on the one hand, budget cuts were considered among the main challenges affecting CGIAR credibility towards external partners, another concern relates to the current uncertainty regarding the continuity of the initiatives. *"We had very long and cumbersome negotiations with the Government due to lengthy formal requirements. When we reached an agreement, budget cuts occurred and we had to re-start the negotiation process, which affects our credibility"* (Interviewee). "*Within our initiative, some partners are proposing new activities for the next year, but we do not know what the future looks like, so we cannot give an answer on how cooperation will continue* (Interviewee)."

More generally, and beyond the specific ways in which each initiative has engaged and interacted with external partners, CGIAR should clarify the process of consultation and engagement with partners at national and international levels in its upcoming partnership strategy. In-country listening sessions aimed at providing a space for dialogue with key local partners in view of the new Portfolio emerged strongly as a good practice to be replicated[75]. In Vietnam, the Science Day, held in November 2023 at the premises of the MARD to showcase CGIAR's innovations in the country, was also considered an important opportunity to strengthen the dialogue with external actors and to foster better corporate positioning. However, the evaluation could not ascertain to what extent these events are part of a structured partnership strategy and whether they will be replicated.

FINDING 16– Gender was well considered in the design and implementation of the initiatives. Dedicated WPs were designed; gender-related studies and activities were conducted; and gender expertise was integrated within initiatives. Female presence in research and capacity building activities was overall adequate and initiative staff composition generally gender balanced. However, budget cuts have frequently concerned gender components, thus seriously affecting their implementation. The SG lacks a specific conceptual framework depicting how RAFS contributes to gender empowerment and social inclusion and how these contribute to the action area endeavors. Furthermore, there are no gender and social inclusion monitoring accountability mechanisms. All these factors jeopardize efforts in these domains.

Design: The majority of RAFS initiatives well integrated gender and social inclusion in their design. Six out of fifteen initiatives are labelled as gender responsive (SAPLING, AMD, OH, Plant Health, Ukama Ustawi, TAFSSA) and eight are labelled as gender aware (AgriLac Resiliente, Aquatic Food, EiA, Livestock and Climate,

[75] CGIAR conducted "Listening Sessions" to engage with key partners, stakeholders, and beneficiaries in 32 countries across the Global South to inform the development of its 2025-30 portfolio of research programs. (link)

Nature+, Mixed Farming System, Resilient Cities, TAFS-WCA).[76] Several initiatives explicitly mention women in their outcomes and promote research and capacity building activities that directly target them. In SAPLING, for instance, gender integration unfolds a dual modality. On the one hand, it is considered across WPs through an integrated research approach analyzing the impact of gender empowerment on the livestock sector, on the other hand, a dedicated WP[77] leads the strategic gender work with a specific research agenda aimed at designing transformative interventions to support all WP.[78] This reflects a high level of gender integration. Most of these initiatives acknowledged the role of gender equality and women's empowerment in promoting resilient agrifood systems. Some initiatives adopted a transformational approach by considering the issue of ownership, which is mainly based on customary rules in the contexts of intervention and prevents women from accessing land and other assets.

Despite the SG not developing a specific Gender Strategy, the Aquatic Food initiative is the only initiative that has developed a Gender Equality and Social Inclusion (GESI) Strategy, providing guidance on how to undertake aquatic food research for development through a gender lens (Adam et all, 2023).

Implementation: Extensively **gender-related studies** were referenced across initiatives. For instance, under the Plant Health initiative, studies on developing awareness raising interventions on aflatoxin management were conducted among women in four regions in Nigeria. Under SAPLING, the link between women's empowerment, gender norms and resilience to climate change was studied in Tanzania. In Vietnam, specific studies on climate change adaptation among Khmer women were carried out to inform policies on ethnic minorities and women under the AMD initiative. Ukama Ustawi finalized research on promoting strategies on gender empowerment and social inclusion in the agribusiness sector in Kenya and Zambia.

Standardized **research tools** to assess changes in empowerment and norms were developed or sharpened. For instance, SAPLING fine-tuned the Women Empowerment Livestock Index (WELI)[79], measuring women's empowerment in livestock, through incremental innovations and improvements. In addition, the initiative developed the Women's Empowerment in Livestock Business Index (WELBI), a new tool measuring the empowerment of livestock entrepreneur women, which was adopted by policy makers, a private poultry brooding company and an NGO in Tanzania. In 2023, TAFSSA developed a tool to analyze data on household food task allocation, including intra-household disaggregation, delving into how tasks are distributed among different female members within households in South Asia.

Regarding the **implementation of activities aimed at empowering women**, awareness raising activities addressing gender norms were carried out under SAPLING. In Tanzania, for example, a social media campaign was implemented to promote a positive image of women working in the livestock sector. Under Ukama Ustawi, gender-sensitive crop diversification and nutrition training activities were organized in Kenya, in cooperation with the HER+ initiative hosted under the ST SG.

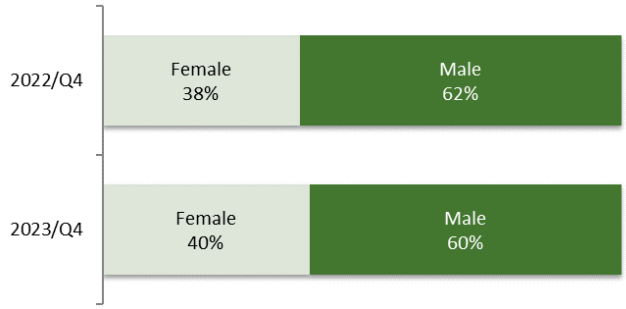
[76] The CGIAR GENDER Impact Platform adapted the OECD gender marker, splitting the 1 score into 1A and 1B. For gender equality, scores are: 0 = Not targeted; 1A = Gender accommodative/aware; 1B = Gender responsive; and 2 = Principal.
[77] WP3 on "Sustainable livestock productivity for gender equity and social inclusion".
[78] Research questions like "How women empowerment may unfold?", "How does a livestock intervention affect the empowerment of women and girls?" are investigated under the dedicated WP.
[79] In 2015, the International Livestock Research Institute (ILRI), in collaboration with Emory University developed the WELI tool based on the Women's Empowerment in Agriculture Index (WEAI) developed earlier by IFPRI. The WELI measures women's empowerment in livestock and crop agriculture and focuses specifically on key areas of livestock production, such as animal health, breeding and feeding; and on use of livestock products, such as animal-source-food processing and marketing.

In terms of **female presence** in research and capacity building activities, initiatives seem to have performed well. In Vietnam, SAPLING achieved an average of 39% of female presence in the training activities carried out in 2023. OHI in Vietnam reached 69% of female presence in training and research activities. In Ghana, the Aquatic Food Initiative reached 40% of female presence in on farm-trials and 31.3% of female presence to other activities in the period from January 2023 to May 2024.

Gender targeting approaches were adopted in some cases. On the one hand, many initiatives set specific target values to be achieved in terms of female presence, on the other hand, proactive measures have also been recorded, namely awareness raising activities towards men at community level, and among partners.

Overall, the initiatives collected **gender-disaggregated data,** although a finding of the EA Synthesis Report indicates the need for more thorough stakeholder analysis to support a more refined approach. And while some gender-disaggregated data was collected, it has not been possible to find gender-data aggregations at the SG level. How this data and the analysis have informed a more general approach on gender at the SG or CGIAR levels also remains unclear.

Figure 11. Gender Distribution of RAFS Initiatives Assignments



Source: 2022/Q4 and 2023/Q4 People Plans Update, and the CGIAR Research Initiatives: People Dashboard

With respect to **staff composition**, 40% of current RAFS initiative assignments are filled by females, compared to 38% in 2022/Q4, as shown in figure 11. According to data provided by the CGIAR People and Culture Department, currently 47% of RAFS Initiatives reach the overall 40% target of female representation and a total of 650 out of 1,635 assignments are allocated to females.

In addition, 38% of the initiative leadership assignments are filled by females. A total of 53 out of 140 (37.8%) Initiative leads/co-leads or WP leads or co-leads assignments planned to work for the initiatives are allocated to females. Seven out of 15, namely 47% of RAFS initiatives, reach the 40% target of female representation at leadership level.

However, interviews pointed out regional unbalanced gender composition among CGIAR leadership roles in South Asia. Some initiatives have dedicated gender teams, which are also adequate in numbers. The ILRI staff working on SAPLING, for instance, is composed of 15 gender experts.

CGIAR **engagement with partners** specifically working on gender has not emerged from interviews. On the contrary, in Vietnam, it was underlined that gender is not a priority focus of national and local CGIAR partners, which have a limited capacity and no specific approaches on mainstreaming gender issues. Partners involved in country listening sessions provided inputs on four out of five CGIAR impact areas, with gender being neglected. A greater involvement of partners active on gender would be recommended, as well as the capacity building of traditional partners. More capacity building for internal staff was also wished for.

As mentioned, some **interactions with the Gender Platform**[80] have taken place. The small grants that the Platform allocated to centers to strengthen the gender-related activities have also benefited some initiatives, as in some cases they have mitigated financial constraints caused to budget cuts. Although there have been **budgetary provisions** clearly dedicated to gender (gender experts hired in the initiatives, planning of gender-related studies and activities, gender-disaggregated data collection and monitoring), budget cuts have quite frequently affected gender components. Under SAPLING, gender related interventions in Uganda and Ethiopia were mostly cut. In Colombia, stakeholders reported that budget cuts primarily affected gender activities. Although the Aquatic Food initiative was provided with a gender strategy, it then had to cut off many of the gender related activities due to budget constraints. There is a need for documented requirements and enforceability mechanisms on gender commitments, holding centers, teams and the whole CGIAR accountable for achieving the stated genders goals.

More broadly on **social inclusion**, the 2021 Evaluation Synthesis (CGIAR, 2021) recommended the RAFS Strategic Action Area to "Reorient work to focus more on the vulnerable poor, in particular women and the disadvantaged and those at greatest risk from natural resource depletion, severe climate change impacts, economic deprivation, and conflicts" and to "… co-develop social and technical innovations with at-risk populations" (CGIAR, 2021). Results for youth and social inclusion, though documented through the evaluation deep dive conducted in Ghana, were undifferentiated and subsumed under the gender tag. Furthermore, social inclusion lacks a valid definition, standard indicators, and a conceptual framework. Nevertheless, the research processes yielded innovative solutions that address the needs of smallholder farmers. The physical products incorporate innovations with social and technical interventions that are crucial in overcoming barriers to technology, credit, and market access, particularly improving time use for smallholder women farmers.

FINDING 17 – Climate change adaptation and mitigation were at the core of RAFS initiatives. Many initiatives directly address climate change by promoting climate-resilient technologies, sustainable agricultural practices, and collaboration among stakeholders to mitigate climate change effects in the agricultural sector. However, the SG has not developed a related conceptual framework, which hampers efforts in tracking the overall progress and accomplishments in this domain.

The RAFS portfolio has well considered climate change mitigation and adaptation. Many RAFS initiatives[81] focus on enhancing farmers' access to climate-resilient varieties, practices and technologies, such as climate smart crop varieties tailored to local conditions, sustainable farming techniques, conservation agriculture, agroforestry, and precision farming. Several initiatives contributed to research platforms, digital technologies for agro-advisory and agricultural risk management services to provide valuable insights for producers' decision-making processes. Some of the RIIs address the specific climatic challenges affecting production systems and food security in the Asian Mega Delta Region, in drylands across Central and West Asia and North Africa, in Latin America, and in the Caribbean Region. The AMD Initiative, for instance, addresses very specific needs in primary rice-growing areas in the Mekong, Ayeyarwady and Ganges Deltas, namely sea level rise, floods, salinity intrusion, and water shortages. However, despite the strong focus, the SG has not developed a conceptual framework on climate change adaptation and mitigation, which hinders efforts in tracking progress and accomplishments in this area.

[80] GENDER Platform was evaluated by IAES in 2023. https://iaes.cgiar.org/evaluation/publications/cgiar-gender-platform-evaluation-report.

[81] AgriLac, AMD, Ukama Ustawi, EiA, Nature+, Livestock and Climate, TAFS-WCA, MFS.

5 Conclusions, Lessons Learned and Recommendations

5.1 Conclusions

1 – Relevance: The RAFS SG portfolio was relevant to national, regional and global priorities. The initiatives, however, did not put enough emphasis on integrating their work into national research programs. The design process of the portfolio was too rushed, which hindered meaningful participation both from internal and external stakeholders. The SG ToC was weakly articulated, and the initiatives' results architectures appeared unrealistic compared to the three-year period of implementation.

2 – Coherence: The Initiative set-up has enhanced research integration and cross-center collaboration. However, the SG has not systematically designed and guided cross-initiative synergies (at SG level and across SGs), nor interactions with Impact Platforms or RIIs and GTIs mutual engagement, which was a missed opportunity to advance internal coherence.

3 – Effectiveness: Several quality results were observed during the evaluation. Overall, the initiatives' effectiveness was strengthened by strong continuity with previous research programs, though it was severely affected by considerable and reiterated budget cuts.

4 – Efficiency: The SG governance, management and internal coordination was not adequate to achieve the expected objectives. Financial resources have not been made available efficiently nor in due time, and several operational challenges linked to the system of legally independent centers have jeopardized the initiatives' efficient implementation. Despite adequate results architectures at the initiative level, the related M&E plans have been weakly implemented and it is difficult to assess performance against expected end-of-the-initiative outcomes.

5 – QoS: RAFS produced a lot of excellent science despite the evidence that financial changes and planning uncertainty impacted science quality. There is room to improve science quality through more consistent quality management and coordination. Important new research themes generated innovative approaches and new information. Some high-quality capacity building was found, but also some poor practice, noticeably around the way postgraduate learning is conducted.

6 – Cross-cutting themes: Partnerships in the initiatives were wide and thoroughly diverse, however with thin capacity to engage with scaling partners. Gender and climate change were adequately considered in the design and implementation of the initiatives. However, the absence of specific strategies hampers depicting how the SG contributes to these endeavors and undermines accountability on related commitments.

5.2 Lessons Learned

1. **Initiative/program design requires adequate time to allow for a meaningful involvement of internal and external stakeholders and a strong integration with national research agendas.** Several stakeholders perceived the approach to the design phase of the initiatives as too rushed and, in some cases, top-down. To avoid feelings that hinder ownership, adequate time should be devoted to the design phase, by ensuring that the different types of stakeholders are consulted and meaningfully involved in the process.
2. The **low level of country knowledge and understanding of CGIAR is not likely to contribute to raising the organization profile**. It is important to **build a solid knowledge base and increase internal and**

external awareness of ONE CGIAR. Internal and external dissemination is needed, including through planned activities within initiatives (still appearing too center-generated), use of dedicated knowledge products with key simple messages for external audiences, and organizing CGIAR meetings and events with external partners (see Vietnam's Science Day).

3. **Policy changes to address complex challenges take time and multi-stakeholder engagement.** The OH case study shows the advantages of long and deep relationships with national institutions and how this can result in policy leadership over time.
4. **In-country listening sessions have launched a promising dialogue to nurture relations with external partners**. This can be maintained in the future and integrated into the CGIAR partnership strategy.
5. **Uncertainty about the future has created internal demotivation and burnout**. This may also undermine CGIAR's reputation towards external partners.
6. Towards **synergies,** better results were achieved when based on strong commonality of interests, including common geographies, fostering integrated research, and when planned from the outset.

5.3 Recommendations

Aligned to evaluation objectives and UFE approach, a good recommendation advises on how to change something. The recommendations below buit upon evaluation evidence and conclusions to be actionable and grouped in light of transitional context for RAFS SG and CGIAR at large.

5.3.1 For the RAFS SG

1. Where founding research has been started by RAFS initiatives (e.g., baselines), **this investment needs to be completed** so that the results can be capitalized in the new science programs. A systematic review of unfinished experiments should be carried out to advise future plans and consolidate scientific gains.

5.3.2 For the CGIAR System

2. **Better anchor CGIAR work to national research and development agendas**. This would require a more meaningful involvement of NARES in the design and implementation of CGIAR Portfolio 2025-30. Developing country level strategies and results frameworks, aligned with national priorities and strong connections with NARES, would strengthen and lay the ground for CGIAR country-level relevance and coordination capacity. The partnership strategy currently being designed (CGIAR, 2024) should specify how CGIAR will ensure an inclusive agenda setting with national and international partners, including by developing a framework strategy for a multi-level consultation and decision-making mechanism with partners. Country level strategies should be informed by this approach and include comprehensive rolling engagement plans to ensure that the national research programs are constantly part of the dialogue.
3. **Strengthen the crucial role of country conveners** by allocating adequate budget and establishing clear coordination mechanisms and communication lines with CGIAR Regional leadership and Science Programs/Accelerators' coordinators. A single coordination point would enhance and institutionalize cooperation at country level across centers and between partners and will be at the forefront of raising CGIAR's profile in countries.
4. **Operationalize CGIAR's Integration Framework Agreement (2022)** through financial and human resources, administrative policies, to streamline and harmonize procedures across centers to avoid unnecessary duplications, administrative burdens and excessive bureaucracy.

a. Clarify the role of centers in program and budget management of science programs resources.[82]
b. In the absence of a unified human resource platform, enhance CGIAR's cross-coordination abilities to mobilize expertise across centers and regions, based on emerging needs and opportunities, thus demonstrating unified value proposition to national partners.

5. **Operationalize the combination of pooled and bilateral funding by providing specific guidelines to streamline complementarity between the two modalities**, with clarifying reporting modalities, both in terms of funding and results. While initiatives have reported only the pooled funded portion of the Portfolio (CGIAR, 2024), it is necessary to undertake a review to identify solutions to this problem and provide improved guidance on integrated planning, implementation and reporting.
6. **Formalize and systematize the PhD student experience and enhance post-graduate researcher contributions to the delivery of the research portfolio based on review.**[83] Changing from a three-year to six-year implementation cycle should facilitate the effectiveness and quality of the PhD experience, which is currently variable across centers and SGs. Consistently support Doctoral studies and provide quality control. Conduct an independent review of this important aspect of capacity building with the aim of developing a consistent, system-wide, approach, possibly through a CGIAR Doctoral Training College.
7. As already highlighted in the 2021 Synthesis Review, there is still a need **to further broaden the internal skills set to include more social scientists, gender, partnerships and communication experts.** Apparently, these have increased during the Portfolio 2022-24 but their presence is not yet adequate for increased efforts towards scaling pathways. It is also important to **strengthen internal capacities** on topics related to partnerships, policy, and development work through dedicated training.

5.3.3 For Science Programs Portfolio 2025-30

8. **Improve strategic and operational guidance towards cross-center collaboration, interactions between science programs, and between science programs and accelerators**. Mechanisms for accountability on cross-center cooperation and cross-programs synergies should be designed and implemented, as well as incentives and rewards for joint work. Intentional planning of synergies is recommended from the design phase, especially by building on commonalities at thematic or geographic levels and through participatory planning exercises with programs coordinators. Once defined, these synergies should be systematically guided and reported.
9. **Scaling innovations and managing scaling partnerships should be concentrated in a single scaling program[84] for better coordination. An enhanced decision tool should be developed to help match innovation readiness with resources and scaling partners at country level with a focus on marketable solutions.** A deliberate, consistent and coordinated approach across all science programs is needed for this to work. The feedback loops between the Scaling for Impact Program and the rest of the science programs should be clarified and the pathways towards reciprocal engagement should be articulated. The mechanisms on how the achievements of Scaling Program would contribute to impact at national and regional levels should also been made explicit.[85] This recommendation further expands on what was already indicated in the 2021 Synthesis.[86]

[82] Provided in SC 20-drop in materials in Eval Insight 3- Rec. 12.
[83] Provided in SC 20-drop in materials in Eval Insight 3- Rec. 8.
[84] The 2025-2030 Portfolio Narrative proposes one dedicated Scaling Program (Scaling for Impact Program).
[85] The same was already indicated in the EA of RIIs.
[86] The 2021 CRP Synthesis Evaluation recommended "to foster adoption of technical and social innovations at scale, as required to achieve system transformation, and give greater emphasis to research on scaling science and implementation science."

10. **Develop unified guidelines and procedures on performance indicators** for staff assessment and quality control mechanisms within Science programs. Since programs involve many centers, performance assessment should be clearly framed and go beyond individual centers systems.
11. **Reassess the current expectation of convening and meeting** across the science delivery structure to set governance and communication norms from the outset of science program implementation. Establish the frequency of meetings within and between Science Programs. This was quite inadequate during the implementation of the Portfolio 2022-24, with repercussions on ownership to the SG and on the implementation of synergies.
12. **Strengthen the focus on impact areas in the context of medium and long-term processes across and under science programs** within a six-year business cycle, to avoid mixing too many topics, while ensuring continuity of research from initiatives (2022-24).
    a. **Address the possible isolation of important sub-themes (e.g., food safety, OH, plant health and postharvest) by improved cross-programs coordination and design.** Important topics are spread across science programs (e.g., OH, Resilient Cities, Nature Positive Solutions, Plant Health) and need to be coordinated. **Appoint thematic champions/leads acting as focal points supporting coordination across Science Programs** to prevent isolation and the loss of current scientific gains.
    b. **Appoint a single point of thematic leadership within existing job descriptions for issues of strategic importance to Improve coordination thematically across science programs,** e.g., FLW or postharvest losses. The challenges and questions related to the theme of the deep dive on Food, Feed, and Waste were fragmented across the design of several Initiatives. This suggests that, in future re-designs of the thematic research of CGIAR, a stage of cross-assessment of research questions should be included to ensure consistency and reduce the possibility of duplication.
    c. **Where initiatives show early promise**, e.g., the OHI, **it is important to protect these gains** when designing science programs and to encourage more widespread adoption of the approach.
    d. **Target processes** while not being excessively guided by an 'ideal' number of programs and their 'form' and be realistic on expectations; avoid an excessive number of outputs and deliverables to be achieved in short timeframes.
    e. **During planning, consider that research needs adequate time to produce results**. In this respect, CGIAR should promote donors' and external partners' awareness to allow **science quality to determine the pace of the programs.** In this respect, MELIA mid-term reviews should support evidence-based targeting and steering.
13. **The chief scientist should be responsible for measurable improvement in QoS and alignment to QoR4D across all science programs. An action plan to implement this should be developed and implemented within a year.** This plan should aim to generate the highest quality of scientific outputs and innovations in the next planning cycle. A focus on improving quality and encouraging greater engagement in QoS improvements from NARES partners should form part of this plan to promote improving legitimacy over time.
14. **Science programs should systematically design and implement M&E frameworks and plans**, including development of baselines, for real time monitoring to support result-based timely decisions. M&E frameworks, plans should be constantly updated with cumulative values achieved for output and outcome indicators.
15. **Align the work on gender, equity and social inclusion**, recognized as accelerators in the 2025-30 Portfolio, **with the Gender Strategy being developed** by the Gender Platform (CGIAR, 2023)**.** While related conceptual frameworks, action plans and M&E systems should be designed at system level, also including issues related to youth and social inclusion of marginalized groups, the Gender Accelerator should translate them into actions within science programs:

a. Ensure that **gender-responsive and gender-transformative research continue underpinning Science Programs** through the designated accelerator and that these cross-cutting themes (accelerators) are not dropped by future budget cuts;
b. Building on the above-mentioned strategy document and frameworks, science programs **should develop their own position papers** explaining how they contribute to gender and social inclusion endeavors and on how gender empowerment and equity support advancements towards programs' outcomes. They should also develop **action plans and M&E systems** supporting implementation and accountability to stated gender objectives;
c. **Internal and partners' capacities on gender,** social inclusion and intersectional analysis should be enhanced (see Rec.7) and the **engagement with partners working on gender** should be expanded;
d. **Social inclusion of marginalized groups and inclusion of youth should be clearly stated and accompanied by definitions and standard indicators to support operationalization.**

Annex

Annexes are available online: https://iaes.cgiar.org/evaluation/publications/resilient-agrifood-systems-science-group-evaluation-report

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