CGIAR Global Research Portfolio: Livestock and Aquatic foods

Donor Meetings – Drop In Sessions (June 2022)

Dr Martin Kropff
Global Director
Resilient Agri-Food Systems, CGIAR
Agenda:

- Opening/ Initial Remarks (RAFS SGD + SDs) – 10 min

- Initiatives: Detailed Presentations (Leads/ Co leads) – 10 to 15 min each
  - LCSR
  - SAPLING
  - ONE Health
  - RAqFS

- Q&A (All participants) – 40 to 50 min
But with only nine harvests left, we need to move fast to accomplish our vision of thriving and resilient dryland livelihoods.
RAFS OVERARCHING OBJECTIVE

Contribute to regional Agri-Food systems transformation for affordable sufficient and healthy diets produced within planetary boundaries in a climate crisis.
RAFS INITIATIVES - OVERVIEW

Aims to transform current agri-food systems so more people – especially those who survive on less than US$2 a day – have access to affordable, sufficient and healthy diets.

RAFS will integrate CGIAR’s wide-ranging expertise to better address the interconnected farm-level challenges across crop, tree, livestock and aquatic systems.

What challenges does RAFS aim to address?
- Gaps in agricultural productivity
- Increasing demand for more nutritious food
- Threats to human health
- The expanding environmental footprint of agriculture
- Vulnerability of smallholder farmers and food producers
- Unequal access to inputs and innovations experienced by women and youth.
RAFS: The integrative, cross-disciplinary science group for CGIAR’s research on agri-food systems

As the ‘heart’ of the Agri-Food System, RAFS is the integrating science group assuring farm-level impact and coherence between CGIAR’s work in genetics with markets and policy.
Resilient Agri-Food Systems
Integration at different levels

- Climate Adaptation & Mitigation
- Environmental Health & Biodiversity
- Gender Equality, Youth & Social Inclusion
- Nutrition, Health & Food Security
- Poverty Reduction, Livelihoods & Jobs

Integration within regional innovation Systems

Crop, field, farm, landscape integration

Livestock and Aquatic Food Systems

GI varieties and seed
UPDATES / ADDITIONAL ACTIONS

Comprehensive process to update Initiatives based on ISDC feedback, including Initiative data on Theories of Change, Results Frameworks, Partners, Innovation Packages, etc.

Revised CGIAR Results Framework, including specific/ additional targets, i.e. co defined Action Area (AA) Targets

Harnessing CGIAR MELIA capacity – revised Technical Reporting Arrangement and Performance and Results Management Framework

CGIAR Research Portfolio/ Initiatives Introduction and Stakeholder Dialogue; all the initiatives have been launched

Initiatives’ Leadership teams have been confirmed and initiatives are being implemented
Innovation Packages and scaling readiness is monitored for the whole portfolio.

Nested Theories of Change

CGIAR Impact Areas
Action areas

Initiative
Initiative Work Packages

Initiative types
- Genetic Innovation
- Regional Integrated Initiatives
- Resilient Agri-Food Systems
- Systems Transformation
INITIATIVES NESTED THEORIES OF CHANGE AND MULTIPLE INTERCONNECTIONS WITH THE RAFS / RIIS

Initiative types
- Genetic Innovation
- Regional Integrated Initiatives
- Resilient Agri-Food Systems
- Systems Transformation

Livestock
Aquatic Foods

Resilient AgriFood Systems (RAFS)
END-GAME: INNOVATION PORTFOLIO MANAGEMENT AVOIDING OVERLAP AND FACILITATING A STAGE GATING PROCESS FOR INNOVATIONS (ESCHBORN PRINCIPLE)

CGIAR Innovation Profile (2538 on 1 Jan 2022)

Scaling Readiness of CGIAR Innovation Packages

Filters:
- Action Area(s)
- Country/ies
- Region(s)
- SDGs focus
- Impact Area focus
- Rising STAR Innovations
- Relative CGIAR investment
- Year(s)

CGIAR Innovation Portfolio Management and Stage-Gating

Discover (Low Readiness, Low Use) USD 200M CGIAR investment in 2022

Pilot (Medium Readiness, Medium Use) USD 400M CGIAR investment in 2022

Accelerate (High Readiness, High Use) USD 300M CGIAR investment in 2022

Scale (High Readiness, High Use) USD 200M CGIAR investment in 2022

Countries of Implementation

Disclaimer: RTB Innovation Catalog does currently not provide all these functionalities; Figures are illustrative
## HOW IS DUPLICATION AVOIDED, AND HOW ARE SYNERGIES ACHIEVED?

### COORDINATION
By the RAFS Science Group and led by a Principal and Co-Principal Investigator with strong systems science and collaboration credentials, supported by Regional Directors and Country Conveners (Task Force)

### COMMUNICATION
Regular coordination meetings across the Science Groups and with GE&I

### SYNERGIES
Within regions and countries, cross-initiative scientific and technical coordination is addressed by Science Group Regional and Country Leads

### PARTNERSHIP
Regional Directors and their country teams (a) facilitate partner engagement and operations, (b) flag risks of duplication, and (c) aid in priority setting

### ACCOUNTABILITY
GTI and RII leads accountable for cooperative planning, implementation

### ADAPTIVE MANAGEMENT
Inception period learning, adjustments, and fine-tuning

### This assures
- Internal and external scientific synergies
- Internal portfolio coherence: coordination between RII and global thematic initiatives
- External portfolio coherence: Alignment with partners’ demand
- Maximization of research investments and partnerships
Thank You!
Resilient Agri-food Systems/ Regionally Integrated Initiates

[Livestock, Climate and System Resilience]

26 June 2022
(13:00 CEST)
Agenda:

- Opening/ Initial Remarks (RAFS SGD) – 10 min
- Initiatives – Detailed Presentation – 10 to 12 min each
- Open floor/Q&A – 45 to 60 min
Initiatives – Detailed Presentation:

i. Initiative Overview
ii. Response to ISDC Comments
iii. Implementation to date
iv. Partner engagement + Inception Meetings
v. Collaboration with other Initiatives/ synergies
vi. Challenges / risks – and mitigations of these
vii. Q&A
Initiative Overview

The main objective is to address the challenges that climate change poses for livestock production.

Impact areas: Climate adaptation and mitigation, gender equality and social inclusion, environmental health and biodiversity plus poverty reduction and nutrition/food security

Five work packages
1. On-farm technologies in social context
2. Climate risk management with digital tools
3. System level research and interventions
4. Science to support finance
5. Improving the enabling policy environment

Target countries: Kenya, Ethiopia, Tanzania, Senegal, Mali, (Tunisia), Guatemala, Colombia
The team reflects diversity of One CGIAR and where we work
- 55-45% male – female
- 55-45% northern versus global south (research staff)

LCSR team comprises excellence in climate change and livestock production!

Staffing plan complete
- 90% positions filled with existing staff
- 10% new positions will be advertised
# Response to ISDC Comments

<table>
<thead>
<tr>
<th>Strengths</th>
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<tbody>
<tr>
<td>Research design</td>
<td>Thank you</td>
</tr>
<tr>
<td>Detail regarding the risks, but explain how mitigate</td>
<td>Mitigation measures will be explained</td>
</tr>
<tr>
<td>Nice M&amp;E, no detail on baselines</td>
<td>Baseline design forthcoming</td>
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<table>
<thead>
<tr>
<th>Weaknesses</th>
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<tbody>
<tr>
<td>Lack of capacity building targets</td>
<td>These can be elaborated with time as budgets are clarified</td>
</tr>
<tr>
<td>Difficult to assess skills of whole team</td>
<td>This has been addressed in the staffing plan</td>
</tr>
<tr>
<td>Low level of commitment to local engagement</td>
<td>Also forthcoming in the inception plan, building on a strong track record</td>
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</table>
Implementation to date

• One of the few initiatives to reach our FinPlan budget with designated funds

• **Inception meeting** in Rome, May 2022
  • Team building
  • Detailed workplans

• Presentations to **GIZ, AIM4C**
• Organizing side events at **UNFCCC**

• **Engagement** with the Global Research Alliance, the World Bank and Green Climate Fund
2022 Deliverable Highlights

• WP 1: Gendered analysis of technologies in practice
• WP 2: Identify climate information needs for producers; develop metrics for insurance design adequacy.
• WP 3: Sustainable Rangeland Management (SRM) toolkit v.1 launched and promoted through strategic partners and events; sites for new PRM and JVLUP (CRP innovations) established and new activities in 'old' sites as part of scaling process;
• WP4: Harmonized cross-institution investment analysis framework
• WP5: Side event at a COP27 "Achieving climate resilient livestock production in developing countries"
Partners

- Working with long-standing partners and new (including commercial sector).
- GHGe partners such as the GRA
- Rangelands national (government, NGO and communities) well-established and global (WWF, IUCN, FAO, UNEP, ILC (International Land Coalition), UNCCD,
- Exploring how we can work with development actors to increase our reach including SNV, IFAD, WB, PROCASUR, other........
- Collaborating with private sector such as fin-techs for financial service delivery and beef packers in LAC to achieve GHG mitigation

With more to come...
Collaboration with other Initiatives/ synergies

- Joint work in Kenya on digital services and baseline surveys
- Joint work in Guatemala and Colombia on policies, climate smart technologies and digital services
- Joint work in Kenya and Tunisia on indicators, landscape management.
- Zoonoses and manure management in Kenya
- Joint work in Kenya, Senegal, Guatemala and Colombia on policies, digital services, scaling out and landscape governance.
- Technologies and practices for productivity and environmental sustainability in Ethiopia, Kenya and Mali
- Joint work on GHG emissions from livestock systems in Kenya
- OneHealth
- Agroecology
- LAC Resiliente
- Ukama Ustawe
- ClimBeR
- SAPLING
- MITIGATE +
Challenges / risks – and mitigations of these

- Budget adjustments
  - Working for transparency and a shared vision
- Slow to get in new staff
  - Hiring consultants, sharing ToRs
- Slow to commit to partner agreements
  - Beginning with well known, trusted partners
- Unclear, unstable funding structure makes recruitment of PhDs difficult
Sustainable Animal Productivity for Livelihoods, Nutrition and Gender inclusion (SAPLING)

Isabelle Baltenweck (ILRI)
Mourad Rekik (ICARDA)
SAPling aims to fill critical productivity and value-chain competitiveness gaps by developing a pipeline of new and existing demand-driven, co-delivered health, genetics, feed and market systems innovations including climate-smart and digital solutions.

Working in 5 countries (Ethiopia, Kenya, Tanzania, Uganda and Vietnam) with quick wins for scaling, and 2 countries (Mali and Nepal) where relationships will be built and packages co-created to achieve intermediate outcomes by 2024.

7 value chains with high potential for small- and medium-scale producers to capture market growth:
- Dairy
- Beef
- Sheep
- Goats
- Eggs
- Poultry meat
- Pig
Outcomes and main impact areas

USD 30M
invested by private and public sector partners in co-creation and delivery of novel, low emissions, demand-driven, gender and youth inclusive, and productivity enhancing technologies and practices for genetics, feed/forages, and health

Policies and investments in Ethiopia, Kenya, Tanzania, Uganda, Mali, Nepal and Vietnam
informed by public and private decision makers using the initiative innovation packages, building towards an inclusive and sustainable livestock system, including progress towards equity and inclusion

Outcomes

6 public and private sector organizations use initiative-developed social behavior change communication strategies and tools targeted at incorporating safe LDFs into diverse diets to inform nutrition education strategies and/or campaigns

Co-created, demand-driven innovation packages of productivity- and resilience-enhancing, low emissions technologies and the institutional arrangements for their adoption are being used by 800,000 women and men in households keeping cattle, chickens, small ruminants, pigs and buffalo in Ethiopia, Kenya, Tanzania, Uganda, Mali, Nepal and Vietnam, resulting in a 30-50% increase in livestock productivity

Poverty reduction, livelihoods and jobs

Gender equality, youth and inclusion

Nutrition, health and food security
Countries, value chains and work packages

WP1: Technologies and Practices
WP2: Livestock-derived foods as part of diverse diets
WP3: Gender Equity and Social Inclusion
WP4: Competitive and Inclusive Livestock Value Chains
WP5: Evidence, Decisions and Scaling

VALUE CHAIN ICONS:
- beef
- chickens
- dairy buffalo
- dairy cattle
- pigs
- small ruminants

Locations:
- Mali
- Nepal
- Vietnam
- Ethiopia
- Uganda
- Kenya
- Tanzania

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ii. Responses to ISDC comments

**Strengths**

- A clear vision for the initiative “leveraging livestock development opportunities as an important contributor to building resilient food systems”
- The interdisciplinarity around nutrition and uptake of innovations around livestock-derived foods
- Women empowerment and the strong gender mainstreaming along the initiative work packages and all through the proposal

**Weaknesses**

- *No articulation of promising technologies* -- SAPLING builds on decades of applied livestock for development and the initiative builds on a large inventory of innovations and innovation packages
- *Weak alignment with target countries priorities, regional and other CGIAR initiatives and weak focus on equitable partnerships* -- 
  - We have developed value chain Theory of Change for each selected value chain within each of the 7 target countries with and by the relevant stakeholders, to ensure that the priorities are aligned and equitable partnerships with national scientists
  - Discussions on synergies with other global initiatives particularly LCSR, OneHealth and Mixed Farming Systems
- *Weak capacity development plan* -- Capacity development plans have now been embedded in the value chains TOCs and WP workplans
iii. Implementation to date

At country and value chain level, co-development of theories of change with stakeholders and partners during in-person meetings in all the 7 SAPLING countries

Example -Uganda dairy value chain ToC

- Discussion on innovation and innovation packages – basis for joint activities with partners and engagement
- Identification of partners and stakeholders
- Intermediate outcomes used to monitor progress towards the EoI outcomes

This forms the basis for detailed country & value chain workplan, co-designed with partners

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• Kickoff of field activities in most countries and value chains (blogs published e.g. Vietnam and Kenya)

• Expected SAPLING outputs by end 2022
  • Framework to identify integrative and gender-responsive entry points for the ‘feed- genetics-health’ combined innovations
  • Trade off scoring for selected SAPLING innovation packages
  • Running scaling scan for selected innovation packages
  • Finalizing the design and kick off of 4 impact assessment studies
iv. Partner engagement & Inception Meeting

• Kick-off meeting (hybrid) in Jan 2022 and in-person planning meeting in Nairobi in June to review theories of change, discuss MELIA and WP outputs

• At country and value chain level, co-development of theories of change with stakeholders and partners during in-person meetings in all the 7 SAPLING countries
  • Participants included national research partners, development agencies and private sector actors
  • Alignment on vision and 3-year outcomes, which are aligned with the SAPLING EoI outcomes

Tanzania stakeholders’ meeting, March 2022
v. Collaboration with other Initiatives

Livestock Climate and System Resilience
- Technologies and practices—productivity and environmental sustainability
- In Ethiopia, Kenya, Mali and Tanzania

OneHealth
- Herd Health
- Food safety
- In Kenya and Vietnam

Mixed Farming Systems
- Environmental impact of livestock
- Farm and landscape levels modeling integrating livestock
- In Ethiopia and Nepal

SAPLING
## vi. Challenges and risks, and mitigation measures

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Risks</th>
<th>Mitigation measures</th>
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<tbody>
<tr>
<td>Funding from OneCGIAR donors is lower than anticipated (all WPs)</td>
<td>Previous experience from the CRPs has shown that pooled funding from the CGIAR fluctuates</td>
<td>Work with national partners to leverage partner funding for key activities where suspension of activities may be detrimental.</td>
</tr>
<tr>
<td>Creators of new technologies (vaccines, etc.) are unable and/or unwilling to invest in innovations for sustainable livestock productivity for LMICs (WP1)</td>
<td>Companies are not willing to take the risk of investing in products for niche markets and/or when the end users have low purchasing power</td>
<td>Explore mechanisms to de-risk private sector investment including co-design and -investment. Cultivate partnerships with smaller regional companies.</td>
</tr>
<tr>
<td>Gender and social norms do not allow systems change (WP3)</td>
<td>In all SAPLING countries, there are social norms restricting women, youth and other marginalized groups from participating in and benefiting from livestock systems and markets.</td>
<td>Engage communities, development agencies and government bodies at various levels on gender accommodative and transformative approaches.</td>
</tr>
<tr>
<td>Insufficient incentives for livestock producers, value chains actors and policy makers to change behaviors (WP4 and WP5)</td>
<td>SAPLING is working in countries where business is riskier and risk reducing mechanisms (insurance) are less available.</td>
<td>Co-design efforts will support creation of innovation packages that offer appropriate incentives.</td>
</tr>
<tr>
<td>Unforeseen events in all or some target countries (e.g., including climatic extremes, political disruptions, pandemics) prevent field activities (all WPs)</td>
<td>The frequency of such events is increasing, the amplitude is larger and the duration longer.</td>
<td>Having 7 target countries should allow work to continue in some countries or sites unless the event is global.</td>
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</tbody>
</table>
Additional slides
Initiative team

- Team composition
  - Leads and WP leads: 2 men and 4 women; 3 from Global North and 3 from the Global South
  - Country leads: 5 men and 2 women; all from the Global South

- People resourcing
  - A total of 163 persons involved, corresponding to about 58 FTE across the 3 centres (43 for ILRI, 8 for ABC-CIAT and 7 for ICARDA)
  - 30% women, 61% men, 9% to be recruited
  - We posted 5 positions on the CGIAR portal and got feedbacks on 2
Summary of proposal development process

- Core team constituted in March 2021 with members from CIAT, ICARDA and ILRI, based on expertise and interest
- Concept note developed through online meetings and Teams shared files, including sub teams on theory of change, country selection and innovations. Discussion with BMGF representative
- Submission on 28th April 2021 after internal reviewers’ feedbacks
- Expansion of the team and continuation of regular calls and use of shared files. Creation of teams working on work packages, country activities, theories of change and projected benefits
- Round of virtual ½ day consultation meetings - July to September for all 7 SAPLING countries, to get inputs on value chains, innovations and sites. See report here
- After external and internal reviews, submission on 28th September 2021
Protecting human health through a One Health approach

Hung Nguyen (ILRI) and Vivian Hoffmann (IFPRI), 27 June 2022
Why do we need an initiative for One Health?

The challenges

Antimicrobial Resistance (AMR) is a growing problem.

Food safety: large burden comparable to tuberculosis, malaria, and HIV/AIDS, but small investment.

Today
1.2 million deaths each year from AMR

2050
10 million deaths each year from AMR

90% occur in low- and middle-income countries worldwide.

Food safety: large burden comparable to tuberculosis, malaria, and HIV/AIDS, but small investment.
One CGIAR initiatives on One Health

Objective is to protect human health by improving detection, prevention, and control of zoonoses, foodborne diseases and AMR in LMICs

How do we do?

• Generate evidence on risks and public and private returns to action
• Evaluate impacts of technologies, tools, and approaches on health risks and economic outcomes
• Integrating innovations into policies and programs
Selected Innovations

WP4: Environment (Water)
improve water management to reduce infectious disease risks

WP1: Zoonoses
reduce disease emergence and transmission at wildlife-livestock-human interfaces

WP2: Food Safety
reduce foodborne disease through capacity building of market actors and incentives for compliance

WP3: AMR
reduce emergence and spread of antimicrobial-resistant zoonotic pathogens

WP5: Economics, governance, and behavior
understand incentives for and constraints to behaviors affecting One Health
Work Packages, scope of work and outcomes

**Zoonoses**
Characterisation of the risk of novel zoonotic disease emergence using data on the locations, movements, and practices of farm workers and traders in wildmeat value chains obtained through mobile phones, and development of interventions to address this risk.

**Food safety**
Support of value chain actors to improve food safety through training, certification and promotion of consumer demand, and of governments in the development of feasible, non-punitive approaches to regulatory enforcement.

**AMR**
Evidence on how livestock and fish production and farm profits are affected by reducing antimicrobial use while implementing alternative herd and fish health approaches.

**Water**
Models for delivery and finance of safe water from farm to fork at critical control points in informal value chains.

**Economics, Governance and Behavior**
Incentives for improved hygiene practices through community monitoring of slaughterhouses, and performance-based food safety ratings for vendors in traditional markets.
Where we will work & Prioritization process

Research contexts:
• Intensifying food systems
• Informal food systems
• Wildlife-livestock-human interfaces

Themes/Research questions/Innovations
selected based on potential for long-term impact on human infectious disease burden
## High priority country and workpackages

<table>
<thead>
<tr>
<th>Country</th>
<th>Key Work Package</th>
<th>Partners in countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vietnam</td>
<td>WP1, WP2, WP5*,</td>
<td>Ministry of Agriculture and Rural Development, National Institute</td>
</tr>
<tr>
<td></td>
<td>WP3, WP4</td>
<td>of Veterinary Research, Hanoi University of Public Health</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>WP3</td>
<td>Food Safety Authority, Ministry of Livestock and Fisheries, Bangladesh Livestock</td>
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<tr>
<td></td>
<td></td>
<td>Research Institute</td>
</tr>
<tr>
<td>India</td>
<td>WP4, WP2</td>
<td>ICAR, Food Safety and Standards Authority of India; Office of the Commissioner of Food</td>
</tr>
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<td></td>
<td></td>
<td>Safety – Odisha and Assam</td>
</tr>
<tr>
<td>Kenya</td>
<td>WP1, WP3, WP5, WP2</td>
<td>National and country departments of veterinary services and public health</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>WP2, WP4, WP5</td>
<td>One Health National Platform, Ministry of Agriculture (Livestock), Universities of</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Addis Ababa</td>
</tr>
<tr>
<td>Cote d’Ivoire</td>
<td>WP1, WP2</td>
<td>One Health National Platform, Centre Suisse de Recherche en Cote d’Ivoire</td>
</tr>
<tr>
<td>Uganda</td>
<td>Leverage from</td>
<td>Ministry of Agriculture, Animal Industry and Fisheries, Inter-</td>
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<tr>
<td></td>
<td>other One Health</td>
<td>University Council for East Africa (IUCEA)</td>
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<td></td>
<td>projects in</td>
<td></td>
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<tr>
<td></td>
<td>Uganda</td>
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*WP in **bold**: focus WP in the country, other: light activities in the country
Impact Forecast

Medium to high certainty impacts by 2030

- Female food vendors served by innovations: 157,000
- People with 10-50% of annual income benefit: 135,000
- Women prevented from entering poverty: 322,000
- People prevented from entering poverty: 645,000
- DALYS saved: 370,000
- Women benefiting from better zoonoses control: 5.9 million

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Linkages with other Initiatives/ synergies

One Health initiative

- SAPLING: Zoonoses, Food safety, AMR, co-location
- LCSR: Zoonoses, manure management
- SHiFT: Animal sourced food, food safety
- RC: Food safety in urban environment
- Plant Health: Food safety
- Gender: Gender integration
## High priority country and workpackages

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Gender</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Initiative Leadership (Leads, Co-Leads, WP Leads)</strong></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>WP1</td>
<td>7</td>
<td>50%</td>
</tr>
<tr>
<td>WP2</td>
<td>6</td>
<td>50%</td>
</tr>
<tr>
<td>WP3</td>
<td>7</td>
<td>78%</td>
</tr>
<tr>
<td>WP4</td>
<td>10</td>
<td>91%</td>
</tr>
<tr>
<td>WP5</td>
<td>4</td>
<td>67%</td>
</tr>
<tr>
<td><strong>Cross-cutting</strong></td>
<td>2</td>
<td>18%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>33</td>
<td>56%</td>
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* Totals are less than WP-level numbers as some individuals are mapped to multiple WPs or to both a WP and Initiative Leadership.

### Positions to recruit (ongoing):
- Science, project management and M&E expert for cross-initiative
- Water Quality Modeler, Microbiologist, and Research Officers for WP3-4
- PhD students for WP2, WP3 in Ethiopia and Kenya
Proposal development process and implementation

- Initiative Design Team assignment: March 2021
- Pre-concept submission: April 2021
- National consultation workshop in 7 country: July-Aug 2021
- Proposal submission: September 2021
- Review and response to ISDC comments: December 2021
- Kick-off meeting of the team and key partners, Nairobi, Kenya: January 2022
- Workplan and protocol development, Vietnam, Uganda, Ethiopia country meetings, site visit and consultations: March-June 2022
ISDC feedbacks

Synergies with other CGIAR research:

• Use of common set of tools and indicators to measure common outcomes.

• Co-location: One Health with SAPLING in Ethiopia, Kenya, Uganda, and Vietnam, with LCSR in Ethiopia, India, and Uganda, and

External partnerships:

• The CGIAR has conducted over 15 years of research on zoonoses, food safety, AMR, and safe use of wastewater. We have developed strong relationships with national and other partners during this time and will build on these partnerships to deliver research that positioned for immediate impact.

• Partnerships with the private sector: historically One Health has had limited engagement with the private sector – it has been focused on public sector institutions. We will strengthen this. Our initial discussion with potential private sector partners has been positive and we will work to build these links (17 Striggers, Land O’Lake Venture 37, BioSpring)

CGIAR comparative advantage in Water and AMR in water: Built on IWMI’s 20 years of experience in the safe use of polluted water in food production and development of Resource Recovery and Reuse (RRR) of waste within the Water, Land & Ecosystem CRP and CGIAR AMR Hub

Plan for capacity development of early career researchers in partner organizations: PhD training and leverage from other One Health projects
More information on the One Health initiative:

- Protecting Human Health Through a One Health Approach
- How to Stop Food Systems from Feeding Pandemics: Embrace One Health

@OneHealth_initiative
Resilient Aquatic Food Systems for Healthy People and Planet

Eddie Allison
Marie-Charlotte Buisson
Aquatic foods provide micronutrient-rich foods for 3.3 billion people.

800 million people depend on small-scale fisheries and aquaculture for their livelihoods.

1 in every 2 workers in the primary and secondary sectors of fisheries and aquaculture are women—who are crucial to aquatic food systems, providing labor, innovative ideas and entrepreneurship.

Aquaculture is the fastest-growing food production sector in the world, with production set to increase by 32% to 109 million metric tons.

Aquatic foods can supply essential micronutrients at a lower carbon footprint and with far fewer biodiversity impacts than many land-based crops and livestock.

Global demand for aquatic foods has doubled since 2000.

Aquatic foods are deeply interconnected with the rest of the food system—in human and livestock diets, supply chains and water systems.

Aquatic food systems are one of seven priority investments in agricultural research identified by the Experts and Scientific Group of the 2021 UN Food Systems Summit.
Challenges to resilience

- Overharvesting of wild aquatic food stocks
- Inequities in supply chains
- Inequitable aquaculture productivity growth
- Vulnerabilities to climate change
- Pollution, land use change, and competition for water, space and resources in the blue economy
- Aquatic animal diseases and antimicrobial resistance
- Supply chain disruptions from COVID-19, natural hazards and political and economic instabilities

All these challenges exacerbate existing gender and other inequalities

Why these challenges persist

An order-of-magnitude underinvestment in aquatic food systems R&D has resulted in the following:

- Lack of data to inform policy and investment decision-making leads to them being undervalued
- Power asymmetries marginalize aquatic food system actors—particularly women—in food systems transformations and the blue economy
- Aquatic foods and associated livelihoods are being overlooked in large-scale water resource management planning
- Underinvestment in genetic improvement for farmed fish limits productivity, profitability and resource use efficiency gains
- Innovations and potential solutions to aquatic food system challenges remain unscaled because national agricultural innovation systems do not extend to aquatic foods
Work packages

WP1 AquaData
Data and analytical tools supporting policies and investments into aquatic food systems

WP2 Aqua+Partners
Cross-system partnerships to support inclusion of aquatic food system actors in food system transformations and the ocean economy

WP3 AquaPlans
Including aquatic food systems in multifunctional water management plans

WP4 AquaGenetics
Public-private partnerships (PPPs) to scale delivery of genetically improved fish varieties

WP5 AquaLabs
Platforms to evaluate, scale and accelerate uptake of aquatic food system innovations

IMPACT AREAS
- Climate adaptation and mitigation
- Environmental health and biodiversity
- Gender equality, youths and social inclusion
- Nutrition, health and food security
- Poverty reduction, livelihoods and jobs

Gender inclusion

Reach Benefit Empower Transform
ISDC feedback and responses

“The Resilient Aquatic Food Systems for Healthy People and Planet (RAqFS) Initiative is highly relevant with potential to make significant contributions to CGIAR Impact Areas and more broadly to the 2030 Strategy.... [It] addresses fundamental problems and challenges ... places emphasis on development and scaling of innovations and on creating the ecosystems necessary for research results to become innovations that ... create value ... in an integrated and inclusive way.”

“Overall, this is a strong proposal.”

– ISDC Review, February 2022
1. **Strengthen project management mechanisms.**
   - Involve all of WorldFish’s senior scientists and several of the IWMI’s senior scientists in the management of the Initiative.
   - IDT led by the WorldFish Director of Science and Research.
   - Hold quarterly meetings of the leadership team, consisting of the Initiative’s leader and deputy leader, WP leaders, country leads, MELIA leads and three cross-cutting thematic leads for nutrition and health, gender and social inclusion, and climate and environment, respectively.
   - **Create a matrix management structure** so that country-program leads play a crucial role in ensuring that countries implementing multiple work packages (including from other initiatives) work with inputs from various WP leads and leverage synergies.
   - **Form a science advisory board** that includes senior scientists and leaders from CGIAR entities as well as from the broader community of stakeholders within aquatic food systems (academic scientists, policymakers, representatives from international organizations and the private sector).

2. **Implement actions to guarantee the future sustainability of the project's outputs and outcomes, including notably at the smallholder level.**
   - We see our role in CGIAR as catalyzing existing or potential partnerships and supporting policy design.
   - We partner with many networks of researchers, civil society organizations, and intergovernmental and regional bodies that support ongoing mechanisms for upscaling and adoption of innovations.
3. **Strengthen the explanation of the role and engagement of partners and stakeholders, and ensure that the related assumptions that underpin impact pathways are addressed in a continuous and proactive manner.**

   - In the ongoing inception phase, deeper engagement with partners is taking place, consultation and definition of their role are needed in the implementation and the impact pathways. Partnership with Royal Rhoads Univ, Canada in this initiative, on ToC development, will pioneer improved use of ToC in project management across oneCGIAR. Five country-level workshops planned in 2022.
   - Synergies with other initiatives and bilateral projects are now more apparent as in-country workplans solidify. - e.g. ACIAR projects in Solomon Islands and Timor Leste, USAID and BMGF projects in Bangladesh.

4. **Ensure integration of the work package on new varieties (WP4) with other work packages.**

   - Innovations developed in WP4, both in terms of varieties and scaling mechanisms (PPPs), are considered in WP2, 3 and 5 when and where contextually appropriate.
   - Synergies have also been developed through co-investment outside the Initiative: Fish for Africa Innovation Hub, Namno Initiative Eol.
   - Choice of combinations of the work packages in the countries are based on the diagnosis of the state of the research and innovation system for aquatic food systems in each country and what value our work can add under the constraint of financial and time resources. Assuming three phases of the RAqFS initiatives (2022–2025, 2025–2028, 2028–2031), most focal countries would benefit from the synergies between the five work packages by the end of the program cycle.
Implementation activities and progress

Official start date: April 1st 2022
Global Inception meeting: April 27–29, 2022. (hybrid)
Attended by Prof Martin Kropff, RAFS Director, OneCGIAR
Implementation activities and progress

Country meetings and launch events: May–September 2022

Aquatic Foods initiative events
June 14: Ghana
June 22: Bangladesh
June 28: India
July 12: Zambia
September 15: Timor-Leste
September 16: Solomon Islands

Engagement in other One CGIAR initiative events
May 17: Kenya – NPS
June 14: Zambia – Consultation and introduction of the One CGIAR Portfolio
June 22: Cambodia – Introduction of the One CGIAR Portfolio
June 23: Nigeria – NPS

- Consultation with partners
- Technical meetings for activity planning
- Lined up with communication (country briefs, blogs, videos) and field visits for sites selection
Implementation activities and progress

Early activities and deliverables

- MEL and IA plans under development
- Workplans finalized through the country meetings (June-September).
- Selection of sites and field visits completed (Ghana), underway (Bangladesh, India), upcoming (Solomon Islands, Timor Leste, Nigeria, Zambia, Cambodia, Myanmar).
- Cornerstone deliverables under development (selection):
  - Rural food system actor mapping (Solomon Islands and Timor-Leste)
  - Data base and review of small reservoirs for multiple use purposes (Ghana)
  - Fisheries policy review (Ghana, Egypt, Kenya, with NPS) and blue economy review (India)
  - Case studies to identify institutional pathways to strengthen community fish refugees (Cambodia)
  - Cookbook and video focusing on traditional practices and Indigenous foods (Solomon Islands, Zambia); Secretariat of the Pacific Community (SPC) bulletin paper accepted, highlighting Indigenous freshwater foods (forthcoming in June 2022)
  - Two publications on equity and justice in aquatic resource management/blue economy published in "Conservation Letters" (May 2022) and “npj Ocean Sustainability” (June 2022).
  - Paper on Gender, aquatic foods and climate change nexus for COP27, with CGIAR Gender platform (for Nov 2022).
Partnerships

Partner engagement and contracting continues, with in-country partners a priority, including the following:

**Solomon Islands and Timor-Leste**: Kastom Gaden Association and the CFHD (Centru Feto Haburas Dezenvolvimento), two Indigenous-group partners focusing on traditional agriculture, community education and training.

**Ghana**: Council for Scientific and Industrial Research (CSIR) and the Fisheries Commission.

**Cambodia**: Cambodia Development Resource Institute and the Department of Agricultural Extension in Cambodia.

The objective is to create a network of civil society, government and private sector partners around a portfolio of innovations that scale through the most locally viable pathways.
Synergies with other initiatives

Challenges to resilience

- Overfishing
- Inequities in supply chains
- Pollution, land use change, and competition for water, space, and resources in the blue economy
- Supply chain disruptions from COVID-19, natural hazards, and political and economic instabilities
- Vulnerabilities to climate change
- Anti-microbial resistance
- Challenges to resilience
- Inequitable aquaculture productivity growth

Aquatic Foods

- HER+
- One Health
- MITIGATE+
- Agroecology
- National Policy and Strategy
- Foresight and Metrics
- Markets
- Shift+

Synergies with other initiatives:
- AMD RII
- UU-ESA RII
- TAFSSA RII
- WCA RII
- CWANA RII
Thank you