A4NH Strategic Links to other CRPs, Coordination, and Site Integration

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Given the new portfolio arrangements of the CGIAR research programs (CRPs), Agriculture for Nutrition and Health (A4NH) plans for different collaborative arrangements with other CRPs in Phase II primarily through the six proposed flagships. Each of the proposed flagships contributes to the IDOs under *improved food and nutrition for health*, which is the primary focus of A4NH, but they do so in different ways (Table 1). Some flagships focus on developing and delivering specific agricultural solutions with potential to go to scale. Others focus on improving the pathways through which agricultural research contributes to development outcomes.

Table 1. Examples of cross-flagship collaboration in A4NH

			Flagships focused on developing and promoting specific technological and/or institutional innovations		
			Biofortification	**Food Safety**	**Improving Human Health**
			These flagships may work together on issues related to delivery, especially at scale		
Flagships focused on understanding and improving impact pathways	**Food Systems for Healthier Diets**	These flagships work together in key areas such as how the results of value chain and program research can inform policies and investments and how policy can support and sustain implementation at scale of VC and program interventions	*Value chain analysis; evaluations that consider specific challenges of biofortified crops (e.g., invisible traits, reaching poorest households through market-based approaches)*	*Risk based approaches in food system assessment; consumer-oriented interventions; evaluations of value chain interventions*	*Trade-offs and effective co-management of intensification and health outcomes.*
	Integrated Programs to Improve Nutrition		*Effectiveness studies (HarvestPlus crops as part of integrated programs)*	*Food safety might be an issue in some types of programs, especially at scale*	*Evaluation of multi-sector interventions*
	Supporting Country Outcomes through Research on Enabling Environments		*Policy and regulatory issues; delivery at scale*	*Regulatory issues in formalizing markets*	*Funding and delivering programs at scale*

We make ***three assumptions*** about our role in the system as we think about these collaborative arrangements. First, A4NH brings expertise in nutrition and health research not widely available in CGIAR through a consumption rather than production focus. Second, there is a need in CGIAR for advice on how to integrate evidence-based nutrition and health perspectives into its research questions, theories of change (ToCs), and development outcomes, which A4NH can provide. Lastly, CGIAR cannot achieve its ambitious nutrition and health agenda without the help of partners from the nutrition and health communities; A4NH can convene these communities on behalf of CGIAR.

Strategic Links

Driven by these assumptions about our role, we envisage three types of strategic links within CGIAR.

1. ***Docking stations*** will be areas where A4NH and other CRPs conduct joint or closely aligned research with various forms of joint or co-funding that helps each CRP achieve its outcomes.
2. A ***community of practice (CoP)*** will be how A4NH supports and adds value to work of other CRPs to help them achieve their IDOs. The A4NH contribution will consist primarily of capacity strengthening efforts with some targeted research, conducted or commissioned, to address priority issues faced by multiple CRPs.
3. Through its ***convening*** role, A4NH will represent other CRPs in nutrition and health policy processes, adding value to A4NH's own work and the collective work of CGIAR. The A4NH contribution will consist primarily in convening CGIAR with nutrition and health partners. Through an annual event hosted by A4NH, nutrition and health groups will be able to share what research results and outcomes they would like from the agricultural research community and researchers can share opportunities they are pursuing to improve nutrition and health.

How A4NH will collaborate in Phase II with other CRPs builds on lessons learned from past experiences and anticipates new needs in the future. Some significant examples are described next.

- The HarvestPlus Challenge Program (2003-2011) and now A4NH flagship (2012- present) has been able to provide programmatic leadership, research excellence and global, regional and national convening power that has added tremendous value to what individual CGIAR Centers and/or CRPs could do on their own. Early on, HarvestPlus agreed on priorities and a focused research agenda that included crop breeding for micronutrients as well as *ex ante* economic impact assessments and nutritional efficacy research that provided convincing evidence of the plausibility of the hypothesized impact pathways. Breeding was achieved by teams of breeders working across CGIAR Centers and economics and nutrition evidence was generated by both external partners and experts within HarvestPlus. These research outputs were then effectively catalyzed into a program of operational/action research with partners for delivery at scale. This coordinated approach effectively integrated the best of agriculture and nutrition research for development outcomes.

- In Phase I of A4NH, CGIAR researchers working on food safety, across perishable and staple foods, have come together to share and coordinate their research and to ensure that critical expertise such as epidemiology, risk assessment, and economics are integrated into CGIAR technology development research. This coordinated research is focused on priority research questions and evidence gaps, some of which were identified during Phase I through the development of detailed ToCs that link farm- and value chain-level innovations to food safety outcomes, such as exposure among consumers. Coordinating food safety research within A4NH brings together critical mass and adds value across the CGIAR to what researchers were doing before in individual Centers/CRPs. Despite the benefits of working together, it is important to keep in mind that there are also costs to coordination and researchers do not always have incentives to invest their time and resources in it. Similar to the HarvestPlus model, A4NH proposes to manage food safety research in the CGIAR and link this to value chain agri-and food systems research in the agri-food system CRPs (AFS-CRPs). This has been a successful model in Phase I, in which A4NH funded food safety research that aligned with value chain research funded by other CRPs on Livestock and Fish, MAIZE, and Grain Legumes. There was also a successful mechanism of joint funding by A4NH and the system CRPs for improved nutrition outcomes.

- The gender-nutrition CoP developed into a successful mechanism to engage gender researchers and monitoring and evaluation (M&E) specialists in all CRPs with nutrition outcomes during Phase I. By focusing on the gender intermediate development outcome (IDO) and emphasizing technical issues, such as methods and metrics, the CoP drew upon expertise and outputs from A4NH flagships and other CRPs, such as Policies, Institutions and Markets (PIM). The A4NH Gender Strategy initially envisioned significant joint research with other flagships and CRPs, however it quickly became apparent that there was interest among the CRPs working on gender and nutrition for knowledge on specific topics about which the CRPs themselves had little capacity or methodological expertise, for example women's time use or household decisionmaking. Thus, A4NH invested resources in conducting or commissioning gender research on key cross-cutting topics. The implication for Phase II is that CoPs need to include both capacity building and scope for strategic research in support of key issues prioritized by the community. Another lesson from Phase I, and a recommendation from the CRP Commissioned External Evaluation of A4NH, is that this type of "value adding" work needs its own ToC to show how it supports other CRPs and against which progress can be tracked. These considerations have been included in the revised A4NH Gender Strategy.

Global and national efforts to achieve health and nutrition goals have focused on country ownership of processes to improve outcomes across sectors and development stakeholders. Faster than expected progress in supporting country enabling of nutrition was made in Phase I and there is a large demand for both research and capacity development in this area (see evidence from Transform Nutrition, LANSA, and cited in the 2014 Global Nutrition Report). CGIAR has a lot to contribute, especially if the contribution can be effectively coordinated. In Phase II, we are proposing that A4NH should play a bigger role in representing CGIAR in national and global nutrition and policy processes and also in bringing messages and implications from these processes to other CRPs. We are proposing additional activities in Phase II to play that system role.

Based on these experiences and the realignment of the CRP portfolio in Phase II, we are proposing some very specific, strategic links with both AFS-CRPs and I-CRPs, as described in the Coordination Matrix below (Table 2). In each case, we are proposing the nature of the linkage and what is needed from A4NH and our partner CRPs and what resources will be required. Some of the linkages will need to be formal and well-resourced. Others will be more informal, though in all cases they will need clear ToCs to support planning and monitoring.

Table 2. Coordination matrix between A4NH flagships and other CRPs for Phase II, by A4NH flagship

Biofortification	What A4NH can contribute	What others would contribute
Purpose: To mainstream high-levels of micronutrients into staple crop breeding and delivery of planting material **Outcome**: By 2022, 2.5% annual increase in mainstreaming as a percentage of total CGIAR Center efforts for target crop/agroecology **Type of linkage**: **Docking station** with AFS-CRPs (Wheat, Maize, Rice, Dryland Cereals and Legumes, and Roots Tubers and Bananas (RTB)), at least through 2019. Some joint foresight modelling with PIM. **Resources:** In 2015, approximately $16 million is provided through the flagship on Biofortification to AFS-CRPs and Centers to supplement their own budgets for this mainstreaming. Will continue through 2017-2019 and be reassessed for 2020 onwards.	**Docking stations.** In addition to the research results related to nutritional efficacy, impact, gender, and delivery (all of which have important implications for developing successful biofortified varieties), this flagship can offer: (a) high-level advocacy and resource mobilization for biofortification globally, regionally and nationally. Inclusion of biofortification into international standards such as Codex Alimentarius; (b) breeding tools and technologies to increase the cost-effectiveness of breeding for higher-levels of micronutrients; and (c) capacity to use tools and technologies.	**Docking stations.** Systematically include nutrition along with yield, other quality characteristics and resistance to biotic and abiotic stresses in breeding for relevant systems, particularly considering climate change. Raise additional funds for mainstreaming micronutrients into breeding. Periodically assess and update target crops/systems/seed and planting material delivery systems for nutrition mainstreaming, based on analysis of target beneficiaries (micronutrient deficient women and children) and specifically considering gender and youth, (alone or in collaboration with A4NH).
Food Safety	**What A4NH can contribute**	**What others would contribute**
Purpose: To ensure alignment between the food safety outputs of A4NH and the value chain work in CRPs on Livestock and on Fish, and the agronomy, varietal dissemination and value chain work in Dryland Cereals and Legumes, MAIZE and the flagship on Biofortification in A4NH. **Outcome**: By 2022, food safety innovations from A4NH are included in the impact/scaling plans (e.g., proposals, detailed impact pathways, implementation plans) in sites (value chains, hubs, countries) of Livestock, Fish, and Dryland Cereals and Legumes **Types of linkages**: Docking station with three AFS-CRPs (Livestock, Fish, and Dryland Cereals and Legumes) and the I-CRP on WLE (on wastewater re-use and vegetable value chains). Alignment with MAIZE value chains. Some joint research with the Inclusive and Efficient Value Chains flagship in PIM. **Resources:** A4NH provides the food safety inputs (people, funding, partnerships) and links these to value chain activities in AFS-CRPs and PIM. Proposed A4NH food safety co-investments in 2017 linked to AFS-CRP value chains and WLE would be $15 million.	**Docking stations.** Developing and validating innovations with potential to improve food safety in pilot trials and at scale in target value chains and regions. Integrating of food safety teams in value chain planning of other CRPs. Shared research outputs.	**Docking stations.** Coordination and information sharing on target sites and on plans for developing large-scale, integrated interventions.

Table 2. Coordination matrix between A4NH flagships and other CRPs for Phase II, by A4NH Flagship (cont'd)

Food Systems for Healthier Diets	What A4NH can contribute	What others would contribute
Purpose: To integrate nutrition and gender into value chain research as part of food systems **Outcome**: Value chain research questions and ToCs of other CRPs appropriately integrate nutrition and gender considerations, increasing their likelihood of contributing to impact on diet and gender and equity IDOs. **Types of linkages**: With **all CRPs,** but **especially AFS-CRPs, a CoP** on agriculture-nutrition-health research. This CoP brings together and builds on two Phase I initiatives: support on integrating agriculture-nutrition pathways, methods and metrics into research in AFS-CRPs and the gender-nutrition CoP. A4NH would support annual meetings on best practices for methods and metrics for diet nutrition, health and gender in food systems research bringing together AFS-CRPs, A4NH and nutrition and health partners. This CoP will then be linked to joint research In Phase II with **AFS-CRPs docking stations**. This will expand on joint research between A4NH and other CRPs from Phase I. Given the expanded demand for agriculture-nutrition research to improve diet quality in Phase II, A4NH will greatly expand its nutrition support to AFS-CRPs to support improved CGIAR research quality for agriculture-nutrition evidence. Greater emphasis will be placed on diet diversification through nutrient-dense foods (animal source, legumes, vegetables, fruits, dryland cereals). Main nutrition links with staples will be through Biofortification. With **I-CRPs, docking station** to co-fund research linking healthy food systems to broader food and economic policy (PIM) and sustainable food systems (CCAFS and WLE). **Resources:** • **CoP and docking stations with AFS-CRPs.** This would include major co-investment by A4NH of approximately $3 million per annum (assuming an average of 2 research projects with the 8 AFS-CRPs). • **Docking stations with I-CRPs.** Proposed $1 million per annum from A4NH.	**CoP**: A4NH provides consumption-focused expertise across CGIAR and links to and leverages production, commodity value chain and agri-food systems expertise in AFS-CRPs, including technical support on nutrition and on gender and equity (methods, metrics, and approaches such as agriculture-nutrition pathways). **Docking stations:** • **I-CRPs**: Joint research in focus countries (Bangladesh, Ethiopia, Nigeria and Vietnam) on food systems linking our expertise on healthier diets to the emphasis in CCAFS and WLE on sustainable food systems. • **AFS-CRPs**: Research methods and evaluation of diet quality/diversity and nutrition outcomes for interventions	**CoP**: AFS-CRPs – commitment to share innovations on agri-food innovations and to integrate better nutrition and gender methods into value chain and systems (including seed systems) research. **Docking stations:** • **I-CRPs:** Co-investment and joint research in focus countries (Bangladesh, Ethiopia, Nigeria and Vietnam) on food systems linking their expertise on sustainable diets to healthier diets emphasis in food systems by A4NH. • **AFS-CRPs**: Use conceptual frameworks, evidence and other outcomes of this flagship to identify, develop or adapt promising value chain and food system interventions For example, the CRP on Forest and Agroforestry Landscapes (FTA) will work in communities that depend on foods from trees and bushmeat and work with A4NH nutritionists on design, methods and evaluation.
Improving Human Health	**What A4NH can contribute**	**What others would contribute**
Purpose: Coordinate and share information between CGIAR and public health researchers for joint research. **Outcomes**: Public health research community has a better understanding of how agriculture can contribute to public health objectives and CRPs identify new research opportunities and partnerships **Types of linkages**: **Docking stations with I-CRPs**, WLE and CCAFS **Resources**: Largely co-funding research with expectation of approximately $1 million per annum from A4NH.	**Docking stations.** A4NH provides platform for coordination with global, regional and national public health research institutions that view agriculture as a key mitigation / prevention strategy for health and are willing to work on joint identification of research opportunities. A4NH also provides expertise on epidemiology, risk analysis and other related expertise to WLE and CCAFS.	**Docking stations.** CCAFS, WLE contribute knowledge and expertise on agricultural investments for water and climate smart agriculture. They are committed to engaging engage in joint research on priorities, targeting and potential options to be tested, and to exploring opportunities for joint interventions.

Table 2. Coordination matrix between A4NH flagships and other CRPs for Phase II, by A4NH Flagship (cont'd)

Supporting Country Outcomes through Research on Enabling Environments	What A4NH can contribute	What others would contribute
Purpose: To coordinate and share information; A4NH provides information on country needs and processes and AFS-CRPs provide information on agricultural innovations (technologies, institutions, policy) with potential to contribute to nutrition and health outcomes. Coordination and information sharing with PIM, CCAFS and WLE. **Outcomes**: (1) In target countries: identification of additional policy constraints in other sectors (e.g., agriculture, NRM) brings new actors into policy processes and leads to new opportunities to improve nutrition and health outcomes through cross-sectoral policy action; (2) In CRPs: research and dissemination agendas are based on an understanding of target country policy contexts and processes; (3) A4NH is better able to represent the CGIAR and identify opportunities where outputs from other CRPs can contribute to an improved enabling environment for nutrition and health **Types of linkages**: With **all CRPs, convening** role. With **I-CRPs, docking stations** to share methods and approaches for policy processes, communications and advocacy **Resources:** • **Convening.** Global and regional; approximately $200,000 per annum. • **Docking stations.** Joint research with I-CRPs (particularly CCAFS) on co-funding of research into national and regional policy engagement including evaluation and communication methods ($1 million per annum).	**Convening** role: Annual science event convening CGIAR scientists and nutrition and health partners globally with additional regional and national events as appropriate; engagement with nutrition and health leadership platforms on behalf of CGIAR. **Docking stations with I-CRPs**: Joint research outputs with I-CRPs on policy processes, methods for enabling countries. Contributions to policy engagement platforms such as ReSAKSS and country strategies, for example to support programs to support monitoring of key outcome indicators (with PIM) and with think tanks and civil society (with IDS). Research methods such as stories of change and engagement strategies, including for documenting outcomes	**Convening** role: **AFS-CRPs** willingness to coordinate and share information on agricultural innovations with potential to contribute to nutrition and health outcomes. Commitment to engage in country nutrition and health processes with and through A4NH rather than from an individual-commodity perspective. **Docking stations with I-CRPs**: Joint research with PIM on policy processes and linking nutrition and health engagement with broader policy processes in countries. Joint research with CCAFS on policy processes, country engagement and communications and advocacy with the food and nutrition security futures under climate change cluster.

COUNTRY COLLABORATION PLANS FOR A4NH

Table 3 lists the 20 countries identified for some level of site integration as proposed by the Consortium and which ones A4NH will be working with other CGIAR entities to carry out country collaboration activities. The CGIAR Site Integration++ countries are in **bold**. A4NH is not taking the lead in site integration in any country. IFPRI (A4NH lead Center) and Tier 1 partners in A4NH – Bioversity International, CIAT, IITA, and ILRI will coordinate site integration in some countries (noted below). Table 4 lists all countries where A4NH expects to have activities in Phase II, by flagship.

Table 3. Country Coordination Plan for A4NH in Phase II

Country	Current CGIAR entities working with A4NH	Planned CGIAR entities working with A4NH in Phase II	Type of coordination mechanisms with A4NH flagships) in Phase II	What A4NH will do and what it expects to offer in Phase II
Bangladesh	IRRI/GRISP, WorldFish, PIM, CIP/RTB	All CRPs in the country through site integration ++	CoP/Docking Stations (all CRPs) – Food Systems for Healthier Diets; Biofortification target country; Food Safety docking stations (Fish); Convening Platform (all CRPs) - Supporting Country Outcomes	All flagships except Improving Human Health; staff, project investments, IFPRI country office
Burkina Faso		TBD based on CGIAR coordination arrangements developed	TBD based on CGIAR coordination arrangements developed	Food Safety (aflatoxins); Integrated Programs; Food Systems for Healthier Diets– all project investments with partners
Cameroon				Partnerships in Improving Human Health as part of regional coordination
DRC	CIAT, IITA	TBD based on CGIAR coordination arrangements developed	TBD based on CGIAR coordination arrangements developed; Biofortification target country	Biofortification – project investments, country office, staff, IFPRI and IITA country offices
Ethiopia	ILRI, Livestock and Fish, PIM	All CRPs in the country through site integration ++	CoP/Docking Stations (all CRPs) – Food Systems for Healthier Diets; Biofortification target country; Food Safety docking stations (Livestock); Convening Platform (all CRPs) - Supporting Country Outcomes	All flagships except Improving Human Health; staff, project investments, IFPRI country office. ILRI principal campus
Ghana		TBD based on CGIAR coordination arrangements developed	CoP/Docking Stations (all CRPs) – Food Systems for Healthier Diets; Convening Platform (all CRPs) - Supporting Country Outcomes	Food Safety (aflatoxins); Food Systems for Healthier Diets; Supporting Country Outcomes – all project investments with partners; IFPRI Country Office; IITA country office
India	ICRISAT	TBD based on CGIAR and ICAR coordination arrangements developed	CoP/Docking Stations (all CRPs) – Food Systems for Healthier Diets; Biofortification target country; Food Safety docking stations (Livestock); Convening Platform (all CRPs) - Supporting Country Outcomes	All flagships; staff, project investments, IFPRI regional office
Kenya	ILRI, Livestock and Fish, Humid Tropics, ICRAF and Bioversity International	TBD based on CGIAR coordination arrangements developed	CoP/Docking Stations (all CRPx) – Food Systems for Healthier Diets; Food Safety docking stations (aflatoxins and Livestock); Convening Platform (all CRPs) - Supporting Country Outcomes	All flagships except Biofortification and Integrated Programs to Improve Nutrition; staff, project investments, ILRI headquarters and Bioscience east and central Africa platform

Malawi	ICRISAT	TBD based on CGIAR coordination arrangements developed	CoP/Docking Stations (all CRPs) – Food Systems for Healthier Diets; Food Safety docking stations (aflatoxins); Convening Platform (all CRPs) - Supporting Country Outcomes	Food Safety (aflatoxins); Food Systems for Healthier Diets; Supporting Country Outcomes – all project investments with partners; IFPRI Country Office
Mali		TBD based on CGIAR coordination arrangements developed	No plans at present	Integrated Programs to Improve Nutrition project investments with partners
Mozambique		TBD based on CGIAR coordination arrangements developed		
Nepal		TBD based on CGIAR coordination arrangements developed	CoP/Docking Stations (all CRPs) – Food Systems for Healthier Diets; Convening Platform (all CRPs) - Supporting Country Outcomes	Integrated Programs to Improve Nutrition, Food Systems for Healthier Diets, and Supporting Country Outcomes project investments with partners; backstopping from IFPRI regional office
Nicaragua	CIAT / EMBRAPA	TBD based on CGIAR coordination arrangements developed		Biofortification project investments (linked to Latin America regional coordination by EMBRAPA / CIAT)
Niger				
Nigeria	IITA, PIM	All CRPs in the country through site integration ++	CoP/Docking Stations (all CRPs) – Food Systems for Healthier Diets; Food Safety docking stations (aflatoxins); Convening Platform (all CRPs) - Supporting Country Outcomes	All flagships except Improving Human Health and Integrated Programs to Improve Nutrition; staff, project investments, IITA headquarters, IFPRI country office.
Rwanda	CIAT	TBD based on CGIAR coordination arrangements developed	Biofortification target country	Biofortification – project investments, country office, staff
Tanzania	Livestock and Fish and Bioversity International	TBD based on CGIAR coordination arrangements developed	COP/Docking Stations (all CRPS) – Food Systems for Healthier Diets; Food Safety docking stations (aflatoxins and livestock); Convening Platform (all CRPs) - Supporting Country Outcomes	All flagships except Biofortification and Improving Human Health; staff, project investments, IITA country office.
Uganda	CIAT, Livestock and Fish and Bioversity International	TBD based on CGIAR coordination arrangements developed	Food Safety docking stations (livestock, aflatoxins); Biofortification target country; Convening Platform (all CRPs) - Supporting Country Outcomes	Biofortification, Food Safety and Supporting Country Outcomes – project investments, staff and IFPRI country office.
Vietnam	CIAT, Humid Tropics and Bioversity International	All CRPs in the country through site integration ++	COP/Docking Stations (all CRPS) – Food Systems for Healthier Diets; Food Safety docking station (livestock)	All flagships except Integrated Programs to Improve Nutrition and Supporting Country Outcomes – project investments, staff and CIAT country office.
Zambia	WorldFish/AAS, CIFOR/FTA and Bioversity International	TBD based on CGIAR coordination arrangements developed	CoP/Docking Stations (all CRPS) – Food Systems for Healthier Diets; Food Safety docking stations (aflatoxins and fish); Convening Platform (all CRPs) - Supporting Country Outcomes	All flagships except Improving Human Health; staff, project investments, IITA and WorldFish country offices.

Table 4. Countries where A4NH is expecting to work in Phase II, by flagship

Countries	Biofortification	Food Safety	Food Systems for Healthier Diets	Improving Human Health	Integrated Programs to Improve Nutrition	Supporting Country Outcomes
Bangladesh	**X**	X	**X**		X	X
Benin			X	X		
Bolivia	X					
Brazil	X					x
Burkina Faso			X		X	
Burundi		X				
China	X					
Colombia	X					
DRC	**X**					
El Salvador	X					
Ethiopia	**X**	X	**X**		X	X
Ghana			X			X
Guatemala	X					
Haiti	X					
Honduras	X					
India	**X**	X	X	X	X	X
Indonesia	X		X			
Kenya		X	X	X		X
Malawi		X	X			X
Mali		X			X	
Myanmar	X					
Nepal			X		X	X
Nicaragua	X					
Nigeria	**X**	X	**X**			X
Pakistan	**X**		X			X
Panama	X					
Philippines	X					
Rwanda	**X**	X				
Senegal		X	X		X	X
Tanzania		X	X	X	X	X
Uganda	**X**	X		X		
Vietnam	X	X	**X**	X		
Zambia	**X**	X	X		X	X

Notes: CGIAR Site Integration++ countries are shaded in dark green, CGIAR Site Integration+ countries are shaded in light green. ***Bold X*** *- Harvest Plus 'discovery phase' target countries (in the case of Biofortification); main target countries (Food Systems for Healthier Diets)*