SECTION 2.4
Flagship 4: Supporting Policies, Programs, and Enabling Action through Research (SPEAR)
RATIONAL AND SCOPE

Agricultural development has enormous potential to make significant contributions to reducing malnutrition and associated ill health. With its close links to both the direct causes of undernutrition (diets, feeding practices, and health) and the underlying factors (e.g. income, food security, education, access to water, sanitation, hygiene [WASH] and health services, and gender equity), the agriculture sector can play a much stronger role in improving nutrition outcomes (Kadiyala et al. 2014; Pinstrup-Andersen 2012). Yet to date, there is little evidence that agricultural interventions are benefiting nutrition (Ruel and Alderman 2013) or that agricultural growth consistently leads to nutritional improvements (Webb and Block 2012). In many low- and middle-income countries (LMICs), where a high dependence on agriculture-based livelihoods coexists with a high burden of undernutrition, large changes in agricultural policy and practice have generated relatively small changes in nutrition (Headey, Chiu, and Kadiyala 2012; Ecker, Breisinger, and Pauw 2011). In short, there is a disconnect between agriculture and nutrition (Box 2.4.1).

This disconnect represents a challenge—but also an opportunity. The many links between agriculture and nutrition suggest that agricultural policies, interventions, and practices can be better designed to enhance nutrition and health benefits. In FP4: Supporting Policies, Programs, and Enabling Action through Research (SPEAR), we seek to understand why the disconnect persists, and more importantly, how we can turn agriculture into a powerful lever for raising people’s health and nutritional status, while at the same time contributing to other outcomes, such as food security, income, equity, and sustainability. Leveraging agriculture for nutrition implies: (a) making agricultural programs more nutrition-sensitive and therefore more effective in improving nutrition and health, (b) creating and strengthening policy environments that enable agriculture to support nutrition and health goals, and (c) developing capacity and leadership to use evidence-informed decisionmaking to enhance the impact of agriculture on nutrition and health. We have more to learn in all of these areas, and FP4 is designed to address such knowledge gaps.

Box 2.4.1. Definitions for concepts in FP4: SPEAR

The **agriculture-nutrition disconnect** describes the paradox of persistent undernutrition in a rapidly growing economy. From 2010–2012, members of the FP4 team were engaged in the **Tackling the Agriculture-Nutrition Disconnect in India (TANDI)** project that, among other activities, investigated the causes of this disconnect and the possible responses. The conceptual framework developed by TANDI (Gillespie, Harris, and Kadiyala 2012; Kadiyala et al. 2014) has since become very widely used and adapted for a **USAID/SPRING brief**.

**Nutrition-sensitive agricultural** programs are agriculture programs that have specific nutrition goals and integrate nutrition interventions (e.g. behavior change communications, distribution of micronutrient-fortified products, etc.) to achieve them (Ruel and Alderman 2013). They may or may not also integrate other types of interventions from other sectors such as water, sanitation and hygiene (WASH) or health (e.g. immunization, promotion of use of health services, etc.).

Nutrition and health are complex challenges, driven by factors and processes that require inputs and contributions from many sectors and at many levels, including both direct (nutrition-specific) interventions usually delivered by the health sector and indirect (nutrition-sensitive) programs implemented by a variety of sectors, underpinned by enabling policy environments (Black et al. 2013). Even if the recommended package of nutrition-specific interventions put forward by the **Lancet Nutrition Series** was scaled up to 90% population coverage in the 34 countries with the highest burden of undernutrition, child stunting would fall by only 20% (Bhutta et al. 2013). This means that efforts to scale up nutrition-specific interventions need to...
be paired with investments in nutrition-sensitive development programs and policies that address the underlying drivers of malnutrition.

Given the multi-sectoral nature of nutrition, agriculture needs to work in harmony with other sectors to maximize its impacts on nutrition. For example, social protection can protect the nutrition and health of poor smallholder households as they grapple with seasonality and climate shocks and stresses. Improved WASH can increase the nutrition benefits of improved diets by reducing disease. And linkages between local agricultural production and school feeding may generate win-win benefits: income for small producers and their families, and nutrition and cognitive gains (and likely future income) for school-age children.

FP4 seeks to fill major gaps in our understanding of the agriculture-nutrition disconnect, and to identify and evaluate global and local actions to successfully connect the two sectors. In doing so, it directly targets the second Sustainable Development Goal (SDG2) to “end hunger, achieve food security and improved nutrition, and promote sustainable agriculture.” We will build on current involvement of the CGIAR Research Program (CRP) on Agriculture for Nutrition and Health (A4NH) staff and partners with global and regional initiatives in Africa and Asia to support countries in addressing these gaps and tackling these goals.

To address the previously mentioned challenges, this FP is structured in three interacting and mutually reinforcing Clusters of Activity (CoAs):

1. **CoA1: Nutrition-Sensitive Agricultural Programs (NSAP)** focuses on understanding, documenting and enhancing the contribution of nutrition-sensitive agricultural programs to improvements in maternal and child nutrition.

2. **CoA2: Supporting Countries through Research on Enabling Environments (SCORE)** focuses on understanding how enabling environments (policies, institutions, governance) for nutrition and health are created and sustained, and testing approaches for cultivating such environments.

3. **CoA3: Capacity, Collaboration, Convening (3C)** focuses on strengthening capacity to demand, use and act upon relevant evidence, as well as providing a crucial bridge to other FPs, CRPs, and relevant national, regional, and global processes and opportunities to maximize the impact of CGIAR work to improve nutrition and health.

**OBJECTIVES AND TARGETS**

The main objective of FP4 is to understand and enhance agriculture’s contribution to improving nutrition at scale, aiming to:

1. Understand, document, and enhance the impact of nutrition-sensitive agricultural programs on dietary quality and health- and nutrition-related outcomes in children, adolescent girls, and women of reproductive age;

2. Understand and document the barriers and opportunities, and test approaches for strengthening enabling environments for agriculture to support nutrition and health goals; and

3. Strengthen capacity and leadership to promote evidence-informed decisionmaking along the policy, program development, and implementation continuum, to enhance the impact of agriculture on nutrition- and health-relevant policy and programming.

This FP will impact the second system-level outcome (SLO2) on improved food and nutrition security for health ([Figure 2.4.1](#)), with the potential to contribute to SLO1 on reduced poverty. We will focus primarily on undernutrition, and also consider the growing challenge of overweight and obesity. The three CoAs will

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1 Challenges relating to the agriculture-nutrition disconnect have been discussed in the 2013 *Lancet* Nutrition Series, the 2014 and 2015 *Global Nutrition Reports*, and high-level fora such as the Nutrition for Growth (N4G) event (June 2013), Global Gatherings of the *Scaling Up Nutrition (SUN)* Movement (2013-15), the CGIAR’s Science Forum in Bonn (September 2013), the International Conference on Nutrition (ICN2) in Rome (November 2014), and within the African Union’s *Comprehensive African Agriculture Development Programme* (CAADP) investment planning process.
contribute indirectly to all three intermediate development outcomes (IDO) under SLO2. We envision short term impact through the IDO on increased incomes and employment and long term impact by building human capital.\(^2\)

Figure 2.4.1. Impact pathways for FP4: Supporting Policies, Programs and Enabling Action through Research (SPEAR)\(^3\)

Impact will be achieved through four cross-cutting IDOs, with direct relevance for the IDO on enabling environment improved, defined as, “the wider political and policy processes which build and sustain momentum for the effective implementation of actions that reduce undernutrition” (see blog post and Gillespie et al. 2013). Since sustainability is a key element of an enabling environment for nutrition and health, this FP, in collaboration with the CRP on Climate Change, Agriculture, and Food Safety (CCAFS) and other Integrating CRPs (ICRPs), will also contribute to the sub-IDO on mitigation and adaptation achieved by re-viewing policies, programs, and interventions through a climate lens. Our focus on gender equity and empowerment of men and women, and on youth (school-age children and adolescent girls in particular) will contribute to the cross-cutting IDO on equity and inclusion achieved (see Section 2.9). We will contribute directly to the fourth cross-cutting IDO on national partners and beneficiaries enabled. Our contributions to the IDOs are summarized in Performance Indicator Matrix – Table C.

By 2022, this FP will contribute to five main outcomes (Performance Indicator Matrix – Table B):

- Development program implementers and investors (governments, non-governmental organizations [NGOs], United Nations [UN] institutions) use evidence, tools and methods to design and implement cost-effective nutrition-sensitive agricultural programs at scale;

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\(^2\) Improving nutrition in utero and the first few years of life can improve cognitive development, educational achievement, employment and wages, and health and nutrition at adulthood and in future generations (Prendergast and Humphrey 2014; Addo et al.; Hoddinott et al. 2013).

\(^3\) In this figure, NSA is shorthand for “nutrition-sensitive agriculture”.
Researchers and evaluators, in CGIAR and other CRPs, use evidence, tools, and methods to design high-quality evaluations of nutrition-sensitive agricultural and other multisectoral programs, and continue to build evidence; Regional, international, and UN agencies and initiatives, and investors use evidence, tools, and methods to inform decisions and investment strategies to guide nutrition-sensitive agriculture programming and nutrition-sensitive policies; National policymakers and stakeholders from different sectors, civil society, and industry use evidence to design effective nutrition-sensitive policies and strategies to enable effective programming; and Stakeholders from different sectors, civil society, and industry, in CGIAR and other CRPs, have improved capacity to generate and use evidence to improve nutrition-sensitive agriculture programming, nutrition-sensitive policymaking, and implementation.

These outcomes will contribute to the 2022 CGIAR target of 73 million people being without deficiencies in key micronutrients in 10 focal countries (Performance Indicator Matrix – Table A).

Target countries. The primary geographic focus of this FP is on countries where poverty and high burdens of malnutrition and ill health coexist; we will therefore focus on Africa south of the Sahara and South/Southeast Asia. Our central focus is on enabling and sustaining country-level impact, thus aligning with the Busan declaration for aid effectiveness that fosters country ownership and a focus on results, transparency, and accountability. Within countries, we will “zoom in” to optimize the impact of nutrition-sensitive agricultural programs and to understand the policy-implementation nexus at a subnational level. In selecting target areas for subnational analysis and engagement, we will emphasize the role of gender relations in influencing agriculture and nutrition outcomes, and on climate vulnerability, liaising with the CCAFS. Given rapid urbanization, we will expand in Phase II to look at programs and policy issues as they apply to urban-rural linkages and urban peri-urban/urbanizing environments, including their potential impacts on overweight, obesity, and the double burden of under- and overnutrition, where relevant. We will also focus on populations affected or displaced by ongoing agrarian change and agricultural intensification.

Geographically, our focus will initially4 be on 10 countries in Africa (Burkina Faso, Ethiopia, Malawi, Mali, Tanzania, and Zambia) and Asia (Bangladesh, India, Nepal, and Vietnam) that are home to nearly 1 billion people within landholding households (and more from agriculture-dependent but landless households). An estimated 82 million stunted young children (over 50% of the global total) reside in these 10 countries, all of which are among the 20 priority countries for CGIAR, and four of which are among the six highest-priority (++) countries.

IMPACT PATHWAY AND THEORY OF CHANGE
FP4: SPEAR seeks to achieve impact via outcomes generated through the Policies Pathway and the Development Programs Pathway (Figure 2.4.1). More elaborate theories of change (ToCs) will be developed in which the roles of, and synergies between, the three CoAs will clarified, building on ToCs that originated in Phase I. A set of ToCs will be developed, contextualized, and validated in a participatory manner with stakeholders.

Policies Pathway. Scaling and sustaining research impact requires creating and supporting an enabling environment for nutrition- and health-sensitive agricultural development and policy. This requires policy...

4 If and when funds become available and opportunities arise, we will explore options for working in additional CGIAR/A4NH priority countries.5 With 120 citations in just over two years, this paper is rated in the top 3 percent of all Lancet articles of its age and remains the second most influential paper by IFPRI, as per Altmetric.
dialogue and adaptation to different national and sub-national contexts, informed by evidence, guided by stakeholder analysis, and implemented through partnerships. Promoting the development of nutrition-sensitive agricultural policies will support adequate implementation strategies and resource commitments. We will build on recent work on scaling up impact on nutrition (Gillespie, Menon, and Kennedy 2015) and the fourth paper of the *Lancet* Maternal and Child Nutrition Series (Gillespie et al. 2013) to apply lessons learned from past attempts to create and sustain large-scale enabling environments. We will deepen our ongoing engagement, via CoA3: 3C, with regional and global platforms, such as Comprehensive Africa Agriculture Development Program (CAADP) and the Scaling Up Nutrition Movement (SUN), as well as directly engaging with other CRPs, the other A4NH FPs, and partners, including governments, in our focal countries.

Through CoA3: 3C, this FP will represent CGIAR as a convener in nutrition and health policy and program processes, bringing information about what CGIAR has to offer to national and global processes, and feeding back information and guidance to CRPs about where and how their work can contribute. This will allow sharing of lessons learned in agriculture and nutrition, which will optimize the collective impact of CGIAR on improving diet quality and nutrition in focus countries and regionally. In sum, this will help enhance the impact of investments in CGIAR and individual CRPs on nutrition and health outcomes. By bringing agriculture and nutrition and health stakeholders together, FP4 will help stimulate an enabling environment for partnerships and joint program and policy-making in the area of agriculture and nutrition.

**Development Programs Pathway.** CoA1: NSAP seeks to facilitate improved design, targeting, implementation, and scale-up of nutrition-sensitive agricultural programs, by development implementers. Building on Phase I work, it will continue to translate evidence on what program design and implementation modalities work, into actionable recommendations, and disseminate them to a broad range of implementers (including governments) nationally and internationally, to ensure that lessons learned are used to inform decisionmaking about program choice, targeting, design, and scale-up. This type of decisionmaking is often influenced by investors, with whom we work closely to ensure that evidence supports and informs strategies and investment choices. Examples include the U.S. Government’s *Feed the Future initiative*, which promotes the improvement of nutrition through multi-sectoral approaches linking agriculture, health and nutrition in 19 target countries, and the Bill & Melinda Gates Foundation’s newly launched *nutrition strategy*, which includes a strong focus on leveraging agriculture and food systems to improve nutrition.

Uptake also requires that program implementers can operationalize findings and adapt them to their own contexts. To facilitate uptake of our research outputs by programs, this FP will work closely with program implementers to formulate research questions, define program impact pathways, and discuss findings from process and impact evaluations. Through CoA3: 3C, it will work with *knowledge brokers*, defined here as communication experts or other specialized staff who work closely with researchers on evidence synthesis, knowledge translation, and knowledge mobilization. They will work with program implementers, policymakers, and investors to stimulate demand for information and feed contextual knowledge back to research teams. They will create and moderate a dialogue between researchers and policy and program actors and decisionmakers.

In Phase I, researchers in this FP worked closely on dissemination and capacity-strengthening activities with external institutions (e.g. the FANTA and SPRING projects and select NGO and UN institutions). In Phase II, we will work more closely with a mix of in-house and external knowledge brokers and engage with in-country staff and institutions who can support A4NH’s work and that of other relevant CRPs. Knowledge mobilization activities will include connecting different stakeholders to tailored and relevant nutrition information, data, knowledge, and tools; targeted policy and media engagement; and the translation of knowledge and evidence into lessons learned, guidance, and actionable recommendations. We will draw
from successful work connecting stakeholders with nutrition knowledge in India through our Partnerships and Opportunities for Strengthening and Harmonizing Actions on Nutrition in India (POSHAN).

In Phase II, we will continue to collaborate with researchers and mentor students from academic institutions and across CGIAR to further the reach and use of our outputs, continue to build a multi-disciplinary research culture, and to benefit from the methods, tools, and evidence generated by a broad range of researchers working in the agriculture, nutrition, and health development continuum. In Phase II, researchers from this FP will continue to play an important role supporting the A4NH gender-nutrition community of practice (CoP) and other A4NH-supported CoPs or learning platforms.

**SCIENCE QUALITY**

This FP builds and expands on more than a decade of CGIAR work focused on understanding, evaluating, and strengthening nutrition-sensitive agricultural programs and policies, on analyzing the political economy of leveraging agriculture for nutrition and health, on policy process research, and on cultivating and sustaining enabling environments for nutrition in South/Southeast Asia and Africa.

Tackling the agriculture-nutrition disconnect requires innovation on outcomes and to the systems and processes through which innovations are generated and delivered to their target audience (World Bank 2012).

A key innovation of this FP’s work on nutrition-sensitive agricultural programs (CoA1: NSAP) is the use of rigorous impact evaluation methods, such as experimental designs complemented by process evaluations and cost-effectiveness assessments. In the past, researchers have shied away from experimental approaches, which led to a deplorable lack of solid evidence of their impact on nutrition or other development outcomes (e.g. income, food security, diets, women’s empowerment), (Ruel and Alderman 2013). As pressure mounts for agriculture to deliver on nutrition, stakeholders (including investors, governments, and program implementers) increasingly demand evidence, successful models, lessons learned, and guidance for designing, implementing, and scaling up agricultural programs that drive improvements in nutrition. CoA1: NSAP started to fill this knowledge gap in Phase I, by using state-of-the-art methods and developing tools and indicators to generate a rich body of evidence on what works in leveraging agriculture for nutrition. Research in Phase II will focus on extensive synthesis work to compile lessons from Phase I, contextualized with findings of other relevant research in recent years. It will investigate new program modalities and agriculture platforms (e.g. self-help groups in India, national agricultural extension services in Bangladesh), and will document impacts on a broader range of indicators along the program impact pathways to nutrition, with a strong focus on women’s empowerment (e.g. Project-level Women’s Empowerment in Agriculture Index [pro-WEAI]). In collaboration with CoA3: 3C, the team will intensify its efforts in knowledge translation, dissemination, mobilization, and capacity strengthening.

CoA1: NSAP’s multi-disciplinary team first developed its strong reputation for impact evaluations by assessing the impact of large-scale social protection programs (e.g. Mexico’s path-breaking conditional cash transfer [CCT] program) on a variety of outcomes, such as poverty, food security, diet quality, women’s empowerment, and child nutrition (Skoufias 2005). Since this high-profile impact evaluation, the team has evaluated the nutritional impact of a variety of complex nutrition-sensitive programs in agriculture and other sectors, such as health and social protection, in a number of developing countries (Hidrobo et al. 2014; Ruel et al. 2008; Quisumbing et al. 2015; D. K. Olney et al. 2015; D. Olney et al. 2015; D. K. Olney et al. 2013; De Brauw et al. 2014). The team’s strong multi-disciplinary focus, combined with more than a decade of experience using experimental designs to evaluate complex development programs around the world, puts CoA1: NSAP in a unique position to generate a rich body of evidence on successful programming in agriculture and nutrition and documenting impacts on a wide range of indicators on
households and individuals at all stages of the life cycle. Through the CoA2: SCORE and CoA3: 3C, this evidence will be fed into country, regional, and international program and policy design processes.

CoA2: SCORE’s innovations in Phase I included the development of a framework to characterize enabling environments for nutrition (Gillespie et al. 2013). Subsequently applied successfully in Africa and South Asia, the framework highlights two stages (building momentum for nutrition, and translating it into implementation and ultimately impact) and three cross-cutting domains (knowledge and evidence, politics and governance, and capacity and resources). Other innovations to be built on in Phase II include the adaptation of tools for monitoring nutrition-relevant commitment and accountability, such as through the use of the Hunger and Nutrition Commitment Index (HANCi), co-developed by Transform Nutrition, which has attracted much media and government attention, and at the global level, through the Global Nutrition Report. Phase II will also build on the use of the innovative Stories of Change methodology to understand the drivers and pathways of change in our focal countries, and at state-level in India.

With regard to nutrition-relevant policy analysis, CoA2: SCORE’s leadership role is evidenced by the Copenhagen Consensus, The Lancet Maternal and Child Nutrition Series, the Global Nutrition Report, the Regional Strategic Analysis and Knowledge Support System (ReSAKSS), and multi-partner consortia such as Transform Nutrition, Leveraging Agriculture for Nutrition in South Asia (LANSA), and POSHAN. The Gillespie et al. (2013) framework was used in the Phase I work of the LANSA and Leveraging Agriculture for Nutrition in East Africa (LANEA) initiatives (Gillespie et al. 2015) and was adopted by the Global Nutrition Report (2015). This report, which originated in Phase I, is now widely regarded as the most comprehensive, up-to-date compendium of data, evidence, and insight on international nutrition. Other work on policy included papers in World Development and Food Policy on innovative research on the role of governance among other cross-country predictors of nutrition outcomes and on the role of leadership and capacity in country constraints and success. The team has developed with the CRP on Policies, Institutions and Markets (PIM) a toolkit and bibliography on understanding, engaging, and evaluating policy processes in agriculture, nutrition and health.

During Phase I, Transform Nutrition achieved specific impacts, including revisions to the Productive Safety Net Programme in Ethiopia on the basis of research on the program’s limited nutritional impact. Members have been invited to join nutrition policy development working groups in Bangladesh, Ethiopia, and India (at the national level and in Maharashtra state). The Government of India used Transform Nutrition’s situation analysis documents on nutrition-sensitive policies, and the December 2015 launch of the first India Health Report (with a focus on nutrition) generated a raft of media coverage, after a joint launch by two ministers.

Phase II will include a new CoA on “capacity, collaboration, and convening.” Although capacity development is critical to the success of current initiatives, such as SUN and CAADP, it is often undertaken without adequate documentation for meaningful lesson sharing and development of guidelines. CoA3: 3C will use a participatory qualitative research approach to ensure systematic documentation of capacity strengthening processes, and thus will contribute to global public goods for nutrition action within the SUN and CAADP frameworks. It will also test mechanisms and strategies to increase the capacity and leadership needed for effective evidence-informed decisionmaking along the policy, program development, and implementation continuum.

LESSONS LEARNT AND UNINTENDED CONSEQUENCES

5 With 120 citations in just over two years, this paper is rated in the top 3 percent of all Lancet articles of its age and remains the second most influential paper by IFPRI, as per Altmetric.
This FP will build on progress on understanding nutrition-sensitive agricultural programs and policies and creating an enabling environment for nutrition. We cite here a few examples of how learning from Phase I shaped new areas of research for Phase II.

**Targeting and measuring impacts on different age groups (including adolescent girls):** Phase I showed that a nutrition-sensitive homestead food production program (HFPP) in Burkina Faso improved mothers’ and children’s diets and nutritional status (D. Olney et al. 2015; D. K. Olney et al. 2015). New evidence emphasizes the need to focus on adolescent girls to accelerate nutrition progress because they are nutritionally vulnerable (e.g. high iron requirements due to menses; early pregnancy) and need to be better prepared for pregnancy, childbirth, and lactation (Bhutta et al. 2013). In Phase II, the team will explore the use of agriculture platforms to reach and support the nutrition of adolescent girls, in addition to mothers and children. Based on Phase I research showing that linear growth faltering continues beyond the first 1,000 days (Leroy, Ruel, and Habicht 2014), we will also include preschool children (2–5 years old) in our research where appropriate.

**Assessing long-term impacts and intergenerational effects:** Preliminary results from Phase I suggest that the Burkina Faso HFPP had sustained impacts on mothers’ nutritional status two years after the program ended and benefited their new babies (Bliznashka et al., unpublished data). In Phase II, we will explore opportunities to assess the sustainability of impact and test whether improvements in outcomes, such as maternal empowerment and nutrition and health knowledge, confer long-term benefits for themselves and their future children.

**New platforms and approaches to empowering women in agriculture:** In Phase I, most of our research focused on filling knowledge gaps regarding the potential of HFPP to empower women and improve nutrition. In Phase II, our larger agriculture portfolio will explore a variety of new platforms, including self-help group networks focused on agriculture, livelihoods, and financial services (India) and women-focused agricultural credit programs and government agricultural extension services (Bangladesh). We will also test and evaluate new approaches to sensitize men/communities on gender equity.

**Preventing overweight and obesity:** In Phase II, we will explore new opportunities to work on nutrition-sensitive agricultural programs (including value chains with FP1: Food Systems for Healthier Diets), where overweight and obesity, especially among women is rapidly increasing. We will work with program implementers, policymakers, knowledge brokers, and other stakeholders to design programs (e.g. promote production and consumption diversity and incorporate behavior change communication) to ensure income gains from agriculture translate into more nutritious diets and help prevent overweight and obesity. In its work on enabling environments, CoA2: SCORE will investigate options for countering emerging “obesogenic” environments.

**Capacity, collaboration, convening:** Phase I learning indicated a need for dedicated activities on capacity and leadership, collaboration, and convening. The recent independent evaluation of the SUN Movement and the 2015 Global Nutrition Report both highlighted these areas as critical in the next phase of SUN implementation to support progress. In addition, there is recognized need for greater coherence among CGIAR centers and CRPs to enhance the nutrition sensitivity and impact of the system’s overall work. In Africa, new requirements to mainstream nutrition within CAADP monitoring processes via ReSAKSS have also created a unique opportunity to promote research uptake for greater impact of agriculture on nutrition. CoA3: 3C will also aim to help countries demand and use evidence, and to strengthen the capacity for enhanced nutrition sensitivity of CGIAR as a whole.
CLUSTERS OF ACTIVITY

FP4 is structured around three interacting CoAs. They are not silos, but rather, interdependent and synergistic entities – in a sense, a three-legged stool that supports this FP. Put simply, the benefits of knowledge generated on programs and policies by CoA1: NSAP and CoA2: SCORE will be maximized through the interactions with CoA3: 3C. Links between the first two CoAs relate to national ownership, scale, and sustainability. Program innovations can influence policy, and policy (and enabling environments in general) can incentivize and enable the implementation and scaling of successful programs and interventions. Dialogues between program designers, policymakers, and stakeholders—and their resulting actions and outcomes—can be improved over time through the convening of learning events and through strengthening capacity and leadership, which is the focus of CoA3: 3C. Each CoA is thus linked, and the three clusters, working in harmony, are all essential for maximizing FP4’s impact.

CoA1: Nutrition-Sensitive Agricultural Programs (NSAP)

Nutrition-sensitive agricultural programs underpinned by nutrition-sensitive agricultural policy are now considered key elements of comprehensive strategies to support achievement of the ambitious global nutrition targets. As a result, there is strong demand from governments, investors, and program implementers for evidence on (1) the impact of agricultural programs on nutrition outcomes and the role of women in supporting achievement of nutrition goals, (2) how the design and implementation of agricultural programs can be strengthened so that they empower women and deliver on nutrition targets, and (3) the cost and cost-effectiveness of nutrition-sensitive agricultural programs (Ruel and Alderman 2013). CoA1 is designed to fill these gaps by generating and synthesizing evidence on what works, where, how and at what cost to improve the impact of agriculture on nutrition and health. This CoA focuses on the most nutritionally vulnerable population groups: adolescent girls, pregnant and lactating women, and young children, all of whom have high nutrient requirements, are particularly susceptible to infections, undernutrition, and increasingly, overweight and obesity. In addition, we seek to build capacity in this area among investors and implementers by generating guidance documents, and among researchers within and outside of CGIAR, by providing methods and tools for the rigorous evaluation of nutrition-sensitive agricultural programs.

The specific research questions that CoA1 will address in Phase II are:
1. How can nutrition-sensitive agricultural programs be optimized to improve diet quality and health and nutrition outcomes—including prevention of both undernutrition and obesity—especially in children, adolescent girls, and women of reproductive age?
2. How can nutrition-sensitive agricultural programs be optimized to empower women in agriculture and ensure that this empowerment translates into better nutrition and health outcomes for women, children, and other household members?
3. How can new nutrition-sensitive agriculture delivery platforms be leveraged to improve diets, health, nutrition and women’s empowerment (e.g. experimenting with value chains; self-help groups focused on agriculture, livelihoods or financial services; government agricultural extension services)?
4. What are the key pathways of impact of nutrition-sensitive agricultural programs that are particularly important and should be leveraged to optimize impacts on health and nutrition outcomes (e.g. agricultural production and household food availability, access to nutrient-rich foods, hygiene, health and nutrition related-knowledge and/or practices, income and/or women’s/men’s empowerment, culture)?

To accomplish this, we will undertake the following activities in the associated timeline (Performance Indicator Matrix – Table D):
1. Synthesize results and draw lessons from Phase I’s portfolio of evaluations and other recent literature on nutrition-sensitive agricultural and other multi-sectoral programs including from other relevant sectors (e.g., social protection, health, gender), (2017-18).
2. Broaden the scope and depth of Phase I’s work to include measuring impacts over longer time horizons to examine longer-term, spillover, and/or intergenerational effects; a greater focus on children beyond the first 1,000 days and on adolescent girls; additional outcomes and impact indicators (e.g. early child development outcomes, overweight, obesity, non-communicable diseases, new indicators of women’s empowerment (pro-WEAI); and new information on cost-effectiveness (2017-21).

3. Test a variety of new nutrition-sensitive agricultural program models and platforms for delivery (e.g. link with FP1: Food Systems’ CoA2: Food System Innovations); explore incorporating nutrition into national agricultural extension systems; test new program models in urban/peri-urban areas; expand our range of implementing partners (e.g. PRADAN in India, a strong agriculture NGO working on women’s self-help groups); and incorporate WASH, optimal management of human and animal feces, aflatoxin (with the International Livestock Research Institute [ILRI]), and malaria prevention and treatment in agricultural programs to maximize potential impacts on nutrition through reductions in disease burdens (in partnership with FP1: Food Systems, FP3: Food Safety, and FP5: Improving Human Health), (2017-21).

4. Conduct synthesis work on the whole portfolio and relevant additional literature; generate, publish and disseminate a rich body of evidence on what works, where, how, and at what cost with nutrition-sensitive agricultural programs (2022).

CoA2: Supporting Country Outcomes through Research on Enabling Environments (SCORE)
Better evidence will not lead to better outcomes if evidence-informed policy changes are not adopted and implemented. Evidence on existing policy, other available options, and the likely impacts on key target groups needs to be framed and communicated effectively so that it is accessible and useful to decisionmakers. But new evidence must also be accompanied by an understanding of the political economy of agriculture and agri-food systems and of the politics of policy processes, including the prevailing incentives, disincentives, opportunities, constraints, trade-offs, and potential synergies (Gillespie et al. 2015). This CoA is fundamentally about rigorously researching and supporting enabling environments and policy change in order to enhance the nutrition sensitivity of agriculture. It is essential for understanding where further political or policy leverage might be applied to the technical leverage gained from our work. As an example, to get an insight into policies and the policy processes in case-study countries, and to identify areas for further action, the LANSA and LANEA (Leveraging Agriculture for Nutrition in East Africa) projects conducted reviews of evidence on agriculture-nutrition pathways and of agriculture, nutrition and integrated agriculture-nutrition polices, along with mapping exercises and in-depth interviews with stakeholders (government, INGOs, NGOs, private sector, donor agencies, researchers). Some examples of policies or institutions that were highlighted include the Productive Safety Net Program (PSNP) in Ethiopia, National Rural Livelihood Mission in India and the Country Investment Plan on Agriculture, Food Security, and Nutrition in Bangladesh. Drawing on Phase I activities like these, we will continue to use different policy change models to structure our work and bring political and wider social science perspectives to our examination of agriculture-nutrition-health linkages in different contexts.⁶ We will structure such work to enable investigation of policy drivers of overweight/obesity as well as undernutrition.

The overarching research questions that CoA2 seeks to address are as follows:
1. **Policy coherence:** Why are agricultural policies and programs not aligned with nutrition and health goals, and what needs to be done to achieve alignment?

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⁶ For example, Sumner and colleagues from IDS disaggregate policy change into changes in framing, agenda-setting, content, resource allocation and, crucially, implementation, while Resnick and colleagues working in Policies, Institutions and Markets CRP (PIM) have developed the “kaleidoscope model” of policy change in agriculture, nutrition, and health (Sumner et al. 2011; Resnick et al. 2015).
2. **Policy processes**: What are the barriers and constraints to (and the opportunities for) creating cross-sectoral policy and institutional environments that better support nutrition and health goals for the poor and vulnerable?

3. **Policy learning**: What are the wider lessons from examples where political momentum for nutrition has been successfully linked to effective, large-scale implementation of relevant agricultural and other programs?

We will address these questions through core activities that fall into three overlapping stages, in the associated timeline:

1. **Understanding**: Undertake/update stakeholder mapping and policy landscaping in focal countries, using participatory approaches (e.g. NetMap). Linking with CoA3: 3C’s focus on capacity assessment, such in-country participatory mapping will involve a prioritization of policies for more in-depth policy research. Apply the Phase I conceptual framework (for characterizing enabling environments) and select policy change models in different contexts to investigate policy and implementation-related challenges, constraints, incentives, trade-offs, opportunities/windows using mixed qualitative and quantitative Stories of Change and other approaches. The Stories of Change methodology is a means to document changes in the relationship between agriculture and nutrition—and to inspire and inform action by stakeholders at national and regional levels (Gillespie and van den Bold 2015). A series of state-level Stories of Change will be developed in India. This will include formative research into “mental models” or mindsets of key decisionmakers regarding agriculture and nutrition, building on earlier work in Africa and South Asia (Gillespie et al. 2015) Policy analysis will also draw on CoA1: NSAP’s analysis of hitherto unexplored but high potential impact pathways linking agriculture and nutrition (2017-18).

2. **Operationalizing**: Work with stakeholders (in liaison with CoA3: 3C) to develop and apply diagnostic and priority-setting tools. Document real-time policy and program engagement processes, including CAADP and SUN processes, in focal countries. Investigate approaches for ensuring horizontal (cross-sectoral) as well as vertical (intra-sectoral) coherence in nutrition-sensitive agri-food systems and policy processes. Conduct policy research to identify and resolve emerging context-specific challenges and trade-offs, and to understand the relative roles and benefits of different tactics in catalyzing change.⁷ (2018-20)

3. **Evaluating**: Continue to document and evaluate real-time policy influence and engagement processes, and synthesize outputs and lessons learned. CoA2 will become a repository of global and local knowledge on policy processes to be accessible to all CRPs with a country presence (2019-22)

**CoA3: Capacity, Collaboration, Convening (3C)**

This CoA has three core functions, captured in its title – namely, capacity and leadership, collaboration and engagement, and convening and knowledge translation. CoA3 aims firstly to strengthen capacity and leadership for promoting evidence-informed decisionmaking along the policy, program development, and implementation continuum in order to enhance the impact of agriculture on nutrition-relevant policy and programming. In doing this, it will promote the effective use of research outputs from the first two CoAs. Second, it will foster collaboration with different stakeholders in the generation and use of evidence to influence decisions on policy, programming and implementation. And third, it will translate, frame and present knowledge and evidence generated by the first two CoAs in ways that are useful to policy and decisionmakers. This CoA will thus support CoA1: NSAP and CoA2: SCORE, as well as being responsive to other core constituencies (including other A4NH FPs, CRPs, focal countries and regional initiatives).

CoA3 is largely intended to support and maximize impact of research, but it will also address the following research questions:

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⁷ For example, as undertaken in recent work by te Lintelo and Lakshman in IDS (te Lintelo and Lakshman 2015).
1. What individual, organizational and systemic capacity and leadership gaps limit collaborative engagement, evidence generation and use across the policy, program development, and implementation continuum in focal countries and regionally?

2. What are effective mechanisms and innovative strategies to increase the capacity and leadership needed for effective evidence-informed decisionmaking?

3. What can be learnt from this FP’s approach (internal process documentation) to change?

The following planned activities for focus countries and regions will be responsive to the work done by CoA1: NSAP and CoA2: SCORE (years of milestone achievement in brackets).

1. Document and evaluate capacity and leadership gaps in evidence-informed decisionmaking by (i) retrospectively auditing Phase I at CGIAR and FP level, (ii) interviewing stakeholders, (iii) systematically reviewing the literature (2017). After a prioritization exercise (with stakeholders) an initial capacity strengthening plan will be developed. On an ongoing basis, we will develop, document, and conduct activities to strengthen and sustain capacity and leadership, liaising with the first two CoAs for selected country programs. Training materials and related guidelines will be developed and shared through knowledge brokers, country and regional level platforms.


3. Leverage A4NH’s convening role, and explore ways this FP could help other CRPs address knowledge, capacity and leadership gaps along agriculture-to-nutrition impact pathways. Synthesize lessons and develop guidelines for CGIAR (2019 and revised in 2022). Disseminate knowledge generated through CGIAR–convened learning events for CRPs (2019 and 2022) to help enhance the nutrition-sensitivity of research programs.

4. Consolidate and synthesize evidence on key learnings on what works at country, regional, and CRP levels to increase demand, use and uptake of evidence through a systematic process documentation of 3C. The process documentation will use an innovative participatory qualitative research approach – the content of group discussions before and during learning events being analyzed for emerging themes and subsequently used to inform capacity development activities. This is an adaptation of an approach successfully used by the Africa Nutrition Leadership Programme (ANLP). The co-lead of CoA3, EVIDENT, uses a similar approach responding to expressed needs of decisionmakers. In addition to this approach, Skype or WebEx recordings will be used to collect data. The documented process will serve as a learning guide to increase the impact of nutrition-sensitive agriculture programs and policies 2022).

PARTNERSHIPS
The International Food Policy Research Institute (IFPRI) will lead this FP, with two of the three CoAs being co-led by strategic partners – the Institute of Development Studies (IDS) will co-lead CoA2: SCORE and the Institute of Tropical Medicine (ITM) University of Antwerp will co-lead CoA3: 3C. Bioversity will be actively involved in two CoAs as convener with Rome-based food agencies (Food and Agriculture Organization of the UN [FAO], International Fund for Agriculture Development [IFAD], World Food Programme [WFP], UN Standing Committee on Nutrition [UNSCN], REACH).

FP4 has extensive experience working with three of A4NH’s four broad categories of partners: development implementers, enablers (policymakers/decisionmakers/investors), and researchers.

8 We will apply the Potter and Brough (2004) framework with its differentiation of capacity into individual, organizational and systemic levels, building on its adaptation by Gillespie and Margetts (2013)to nutrition-sensitive agricultural settings.
We rely heavily on strong partnerships with high-quality development implementers, such as international NGOs (INGOs) and NGOs, governments, and UN institutions. Examples include long-lasting partnerships with Helen Keller International (HKI) in several countries and with BRAC in Bangladesh. In some countries we interact with the national and community health systems through partner NGOs. In others, we work directly with governments to generate country-specific evidence for decisionmaking. We will expand partnerships with NGOs, such as PRADAN in India, which works through self-help groups.

We work closely with enablers, such as governments and investors, who decide which programs are implemented or scaled up. Examples include the Zambian National Food and Nutrition Commission and IFAD. We will continue the collaboration with IFAD, which started in Phase II, to strengthen joint research on nutrition-sensitive agriculture. Enablers also share evidence with international agencies, governments, and investors. The team has been effective in building an evaluation culture and increasing demand for rigorous evidence within networks of program implementers and investors.

FP4 already has strong links with a range of national research partners, including in the four CGIAR high-priority countries where we will work: Addis Ababa University and the Ethiopian Public Health Research Institute, International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) and BRAC University (Bangladesh), National Institute of Nutrition (Vietnam), and Sokoine University (Tanzania).

In Phase II, we will build on partnerships with other A4NH FPs. We will collaborate with FP2: Biofortification on testing and documenting different crop dissemination approaches, and studying how countries translate evidence into national policy and results on the ground. We will collaborate with FP1: Food Systems, exploring synergies in countries where obesity is an increasing concern, and collaborating on characteristics of enabling environments for nutrition-sensitive agriculture in different food system contexts, at both national and subnational levels in common focal countries. We will continue work with FP1: Food Systems on understanding which policy environments support homegrown school feeding programs, plus expand work to other value chains. FP3: Food Safety has already applied the CoA2: SCORE conceptual framework to its analysis of national food safety regulations and will build on this in Phase II around aflatoxins and informal markets for meat, milk, and fish.

With regard to other CRPs, we will collaborate with PIM in its CoA 2.3 (Political Economy and Policy Processes) within its FP2 (Economy-wide Factors affecting Agricultural Growth and Rural Transformation in Low- and Low-Middle-Income Countries); and with its CoA 4.1 (Social Protection Delivery and Outcomes) of FP4 (Social Protection Strategies and Programs) on integrating social protection with complementary agricultural interventions and nutrition to enhance poverty and nutrition impacts. We will also engage with CCAFS as discussed later. This FP will play a convening role for CGIAR, retaining the flexibility to engage with CRPs, based on expressed demand and comparative advantage. Where relevant and feasible, CoA3: 3C will address capacity gaps identified by other FPs and CRPs.

**CLIMATE CHANGE**
Both A4NH and CCAFS are concerned with issues of vulnerability and of sustainability, and it will be important to harmonize our work as far as possible, especially in countries in which both are active. A climate lens will be applied to our work in all three clusters. We will explore options for adopting the conceptual work recently undertaken by the Global Panel on Agriculture, Food Systems, and Nutrition, in structuring this work, in addition to our team’s Phase I work on developing a sectoral brief on climate, food, and nutrition security as part of a collaboration with FAO.

Building on discussions with CCAFS in the FP4 proposal development workshop, we will seek to address the following questions: Is nutrition-sensitive agriculture always climate-smart? Can the joint pursuit of climate-smart and nutrition-relevant objectives for agriculture open up potential synergies, and highlight
areas for productive partnership, and possibly joint research? Can partnerships of key actors focusing on climate and nutrition respectively generate win-win gains? Are there situations where these two objectives do not align—where, for example, the pursuit of climate-smart agriculture may be at odds with the nutrition-sensitivity objective? Why does this happen, where does it happen, and how can such a dilemma be resolved? What trade-offs are revealed? A three-way link between us, CCAFS, and A4NH FP1: Food Systems, may help explore the meaning and viability of a “sustainable diet” in different contexts. Our engagement with CCAFS will be via CoA 1.3 (Enabling Policy Environments for CSA) within its FP1 (Priorities and Policies for Climate-Smart Agriculture).

In CoA2: SCORE and CoA3: 3C clusters we will also explore the option of undertaking joint policy/governance work with CCAFS—for example, developing case studies for synthesizing lessons on good practice (engagement, implementation) in select countries.

GENDER
Phase I research highlighted the key role of women in fostering impacts of agriculture on nutrition (Gillespie, Harris, and Kadiyala 2012; Herforth and Harris 2014). We identified women’s health, nutrition, empowerment, and time use as key factors to ensure agriculture leads to improved diets and optimal use of income to protect the health and nutrition of vulnerable household members. In Nepal, we saw that low production diversity was associated with poorer maternal and child diets and poorer child nutritional status, while women’s empowerment mitigated these negative effects (Malapit et al. 2015). Results from our study in Burkina Faso with HKI showed that a nutrition- and gender-sensitive agricultural program improved women’s nutritional status and empowerment (D. Olney et al. 2015), including control and ownership of assets, and reduced the male-female asset gap (van den Bold, Quisumbing, and Gillespie 2013; Quisumbing et al. 2015). Preliminary evidence shows that increases in women’s empowerment mediated impact on reducing the prevalence of wasting among young children (Heckert, Olney, and Ruel 2015). We will continue work, with the A4NH Gender, Equity, and Empowerment (GEE) unit, and using the Women’s Empowerment in Agriculture Index (WEAI) and pro-WEAI, in the context of impact evaluations, and program design aimed at empowering women and reducing gender gaps in agriculture.

Our Phase II will be consistent with the A4NH Gender Strategy, taking into account women’s position as disadvantaged economic agents in many contexts. This approach is embedded within current agri-nutrition conceptual frameworks (Gillespie, Harris, and Kadiyala 2012) that highlight the balance between women’s wider livelihoods, unpaid care, optimal infant feeding practices, and women’s nutritional and health status. We will identify new ways to empower women and sensitize men and communities about the importance of supporting women in their multiple roles and in reducing gender bias.

CAPACITY DEVELOPMENT
Capacity is front and center to our proposed work. It is the essential rationale and basis for CoA3: 3C that seeks to ensure country-level contextualization of our work—and providing a conduit for engagement with other FPs, CRPs, and platforms. The other CoAs will generate evidence on what is needed for more effective policy, planning, and implementation processes relating to agriculture, nutrition and health, and their links to other sectors. This will identify capacity and leadership gaps that limit uptake of research outputs towards impact for sustained progress. 3C will build on the conceptual work by Gillespie and Margetts (2013) in terms of system, institutional and individual capacity strengthening, and practical work undertaken by the EVIDENT team on nutrition-relevant capacity in Africa, to develop, test, and document approaches for strengthening capacity and leadership of key actors and organizations. It will also build on the capacity assessments undertaken in selected African countries under the ReSAKKS program.

The CGIAR Capacity Development CoP has identified several core elements. Through the work of 3C, and through the process of undertaking research in the other CoAs with different partners, we will focus on all these elements. For example, Transform Nutrition has a strong record of capacity strengthening, having
designed and implemented a series of Transform Nutrition short courses for policymakers and
decisionmakers held in the UK and India; the Transform Nutrition alumni network for these courses now
stands at nearly 200 members. The annual global and regional events this FP describes in 3C are designed
to strengthen institutional capacity to look at both innovation and on development outcome demands
between agriculture research and nutrition and health policy and advocacy communities with European
Union-UN Children’s Fund (EU-UNICEF), SUN Civil Society, and other networks. Specific activities are
described more detail in Annex 3.2.

INTELLECTUAL ASSETS AND OPEN ACCESS MANAGEMENT
FP4 will contribute intellectual assets, such as evidence on impacts of nutrition-sensitive agriculture
programs, cost-effectiveness; methods and tools for rigorous impact evaluations; datasets; decisionmaking,
diagnostic and priority setting tools; policy process analysis; success stories; training materials and
guidelines; and capacity needs assessment made available in peer-reviewed articles, books, reports, briefs
and other print outputs; audio-visual and multimedia outputs; web and social media; and in-person
seminars, presentations and workshops. Details are in Annexes 3.8 and 3.9.

These outputs will be fed into networks of stakeholders through existing knowledge platforms including
IFPRI e-library and Institute of Development Studies OpenDocs repositories; Transform Nutrition,
LANSA, Eldis, POSHAN and Africa Nutrition Leadership Programme, the Global Nutrition Leadership
Platform, the Agriculture, Nutrition, and Health Academy, the EVIDENT network, the SUN Communities of
Practice on functional capacity for nutrition, and on social mobilization and communication, the SUN Civil
Society Network, CAADP via ReSAKKS, and Dataverse for datasets. Transform Nutrition and LANSA have
developed particularly strong policy engagement in their focal countries. India and Ethiopia have recently
hosted major conferences.

Knowledge mobilization activities will be led by knowledge brokers, drawing on the expertise of our
partners, supplemented by specialist inputs and in-house knowledge translators. We will monitor the
success of this global dissemination using online tools, like Altmetrics and Google scholar citations,
recognizing that these measures of global availability and access will not capture all types of use. We will
work directly with government partners to generate and disseminate country-specific evidence for
decisionmaking and through the tailoring of knowledge and evidence generated by FP4 to support our
capacity and leadership strengthening activities.

FLAGSHIP MANAGEMENT
FP4 will adopt a distributed leadership approach in which clusters will have the following co-leaders (CVs
are included in Annex 3.7):

CoA1: NSAP: Marie Ruel, Jef Leroy, Deanna Olney (IFPRI);
CoA2: SCORE: Stuart Gillespie (IFPRI), Nicholas Nisbett (IDS)
CoA3: 3C: Namukolo Covic (IFPRI), Roos Verstraeten (ITM/EVIDENT)

Two of the three CoAs are institutionally co-led: CoA2: SCORE will build on collaborations between IDS and
IFPRI (e.g. Transform Nutrition, LANA, Global Nutrition Report). IDS is a leading global institution for
development research at the University of Sussex in the UK. IDS was ranked no. 1 for Development Studies
in the QS World University Rankings in 2015. Through its leadership of the Future Agricultures Consortium
and the STEPS Centre, IDS brings considerable interdisciplinary expertise and experience in the analysis of
policy processes and the political economy of agricultural policy, as well as in nutrition and health policy
through its leading researchers in political science, anthropology and geography.

CoA3: 3C will be co-led by IFPRI and EVIDENT (Evidence-informed Decision-making in Health and Nutrition),
which brings its considerable experience in connecting African researchers and decision-makers. Strong
links will be forged with the Africa Nutrition Leadership Programme (ANLP, linked to the Global Nutrition Leadership Platform) and the Agriculture, Nutrition, and Health Academy, which aims to foster a global community of interdisciplinary researchers working on agriculture and food systems for improved nutrition and health.

The FP leader, Stuart Gillespie, will ensure CoA collaboration via monthly calls and periodic meetings. We will adopt an adaptive, results-based management approach in which we periodically review FP governance in the context of our ToC and workplan. We will be adaptive to seize new opportunities for national and regional impact, as and when they arise—as well as being responsive to other flagships and other CRPs.
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