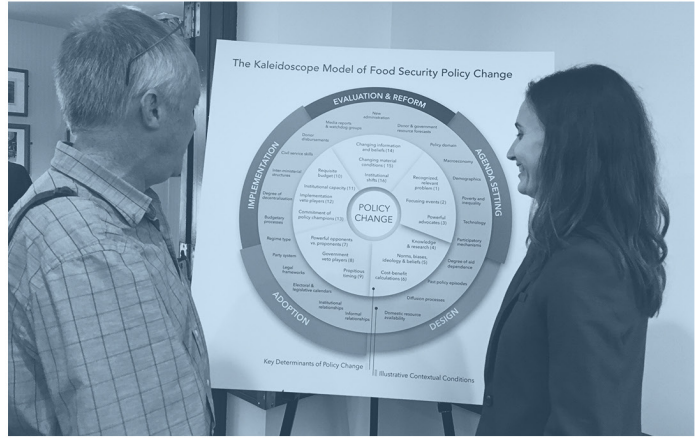




# FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative



## FINAL TECHNICAL REPORT

Feed the Future Innovation Lab for Food Security Policy

February 2020



MICHIGAN STATE UNIVERSITY



UNIVERSITEIT VAN PRETORIA  
UNIVERSITY OF PRETORIA  
YUNIBESITHI YA PRETORIA

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## ACRONYMS

AA	Associate Award
AAPC	Annual Agricultural Policy Conference
AGLC	Africa Great Lakes Region Coffee
AGRA	Alliance for a Green Revolution in Africa
AMSEC	Agricultural Mechanization Service Center
ASPIRES	Agricultural Sector Policy and Institutional Reform Strengthening
APU	Agricultural Policy Unit
AU	African Union
AUC	African Union Commission
BFAP	Bureau for Food and Agricultural Policy
BFS	Bureau for Food Security (USAID)
BMGF	Bill and Melinda Gates Foundation
BR	Biennial Review
BRN	Big Results Now
C1, C2, C3, C4, C5	Components of the FSP project
CAADP	Comprehensive Africa Agriculture Development Programme
CARD	Centre for Agricultural Research and Development, Bunda College, Malawi
CEPPAG	Centro de Programas e Políticas Agrárias
CD4AIS	Capacity Development for Agricultural Innovation Systems
CIAT	International Center for Tropical Agriculture
CIMMYT	International Maize and Wheat Improvement Center
CIPE	Center for International Private Enterprise
CSO	Civil Society Organizations
DAEA	Department of Agricultural & Agribusiness Economics
DAPS	Department of Agricultural Planning Services (Malawi)
DAPS	Ministry of Agriculture, Directorate for Analysis, Forecasting and Statistics (Senegal)
DDL	Development Data Library
DHS	Demographic and Health Survey
DPP	Directorate of Policy and Planning
EAC	East African Community
ECOWAP	ECOWAS Common Agricultural Policy
ECOWAS	Economic Community of West African States
FAO	Food and Agricultural Organization of the United Nations
FAPRI	Food and Agricultural Policy Research Institute
FISP	Farmer Input Support Program
FMARD	Federal Ministry of Agriculture and Rural Development
FSN	Food Security and Nutrition
FSP	Food Security Policy (Feed the Future Innovation Lab)
FSPP	Food Security Policy Project
FTF	Feed the Future
FY	Fiscal Year
GFSS	Global Food Security Strategy
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit

HLPE	High Level Panel of Experts
IAA	Institutional Architecture Assessments
IAPRI	Indaba Agricultural Policy Research Institute
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
IER	Institut d'Economie Rurale
IFAD	International Fund for Agricultural Development
IFDC	International Fertilizer Development Center
IFPRI	International Food Policy Research Institute
IL	Innovation Lab
IRs	Intermediate Results
ISP	Input Subsidy Programs
ISP4D	Inclusive Sustainable Partnerships for Development
ISSER	Institute of Statistical, Social and Economic Research
JSR	Joint Sector Review
Km	Kilometer
KM	Kaleidoscope Model
LAN	Local Analysis Network
LIFT	Livelihoods and Food Security Trust Fund
LSMS	Living Standards Measurement Study
MAFC	Ministry of Agriculture, Food Security and Cooperatives
MARE	Ministry of Agriculture and Rural Equipment
MIU	Market Intelligence Unit
MoAIWD	Ministry of Agriculture, Irrigation and Water Development
MOALI	Ministry of Agriculture, Livestock and Irrigation
MoLF	Ministry of Livestock and Fisheries
MSU	Michigan State University
M&E	Monitoring and Evaluation
NAAE	Nigerian Association of Agricultural Economists
NAPP	Nigeria Agricultural Policy Project
NAIPs	National Agriculture Investment Plans
NAPAS	New Alliance Policy Acceleration Support
NEPAD	New Partnership for Africa's Development
NGO	Non-Governmental Organization
PAG	Policy Analysis Group
PAPA	Projet d'Appui aux Politiques Agricoles
PE	Partial Equilibrium
PIM	Policy, Institutions and Markets
PMCA	Policy Inventory, Mapping of stakeholders, Constraint identification, Actions
PMP	Performance Monitoring Plan
PRPoSAM	Projet de Recherche sur les Politiques de Sécurité Alimentaire
REDFS	Rural Economic Development & Food Security
ReNAPRI	Regional Network of Agricultural Policy Research Institutes
ReSAKSS	Regional Strategic Analysis and Knowledge Support System
SADC	Southern African Development Community
SDG	Sustainable Development Goals

SR	Synthesis Report
SRs	Strategic Results
SSA	Sub-Saharan Africa
UP	University of Pretoria
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
USG	United States Government
VPR	Venezuela Pathways to Recovery
WA	West Africa



# PREFACE

The Innovation Lab for Food Security Policy (FSP) is one of the 20+ Innovation Labs that support Feed the Future (FTF), the U.S. Government's Global Hunger and Food Security Initiative. Feed the Future Innovation Labs draw on the expertise of top U.S. universities and developing country research institutions to tackle some of the world's greatest challenges in agriculture and food security. FSP is a Leader-with-Associate Award project funded from July 15, 2013 to January 14, 2020 through USAID, grant number AID-OAA-L-13-00001. The Lab's activities under this core grant are supported and supplemented with several country-focused Associate Awards and Buy-ins from USAID's country or regional offices.

The FSP Innovation Lab seeks to contribute to Feed the Future's goal of significant reductions in poverty and hunger among poor people through facilitating host government policy changes that expand inclusive economic growth and reduce malnutrition. It is implemented by a consortium of three members: Michigan State University (MSU) as prime, and the International Food and Policy Research Institute (IFPRI) and University of Pretoria (UP) as subcontractors.

This Final Technical Report seeks to document major contributions and achievements by the FSP project over the past six and a half years. It also highlights challenges and lessons learned from implementing activities towards generating research-based evidence, strengthening capacity, and influencing policies. We hope that the lessons and strategy nuggets reflected in this Report will enable leaders of USAID-sponsored Innovation Labs and other policy research projects to better design and implement robust policy research and institutional strengthening programs in the future. This Report, along with FSP Annual Reports, Research Papers, Policy Research Briefs, and Synthesis Reports, will continue to be made available to the general public by Michigan State University. Electronic documents can be accessed and downloaded from the Food Security Policy Innovation Lab web page at <http://www.canr.msu.edu/fsp>.

The achievements highlighted in this Report stem from contributions by many individuals associated with this project. As Director, I want to take this opportunity to express my sincere gratitude to the more than 50 researchers affiliated with the three consortium member institutions and partnering institutions (Ministries, universities, policy think tanks, Non-governmental organizations [NGOs]) in several countries in West Africa,



*Members and partners of FSP Innovation Lab at the Reflection Workshop, March 2019*



East and Southern Africa and Myanmar who contributed in significant ways to the research and capacity-development achievements of the FSP Innovation Lab. They were the heart and soul of the program and deserve credit for the project's successes.

On behalf of Michigan State University, IFPRI, and University of Pretoria, I would like to thank the Office of Agricultural Research and Policy (ARP), Bureau for Food Security (BFS), USAID, for funding the proposed Technical Application for the FSP Innovation Lab. I hope this Report demonstrates the project's significant contributions to advancing Feed the Future development goals by enhancing institutional capacity development, facilitating better policy environment, and promoting better policy formulation processes in a few FTF focus countries. I hope the knowledge generated and reflected in hundreds of research outputs and project publications will continue to pay dividends for years to come in terms of better policies to enhance productivity, livelihoods, and resiliency of stakeholders along the upstream, midstream and downstream of the food system, and greater food and nutritional security for all.



Mywish K. Maredia  
Director, Feed the Future Innovation Lab for Food Security Policy

## EXECUTIVE SUMMARY

### Project objectives and organization

The Feed the Future Innovation Lab for Food Security Policy (FSP) started in July 2013 as a project under the Feed the Future (FTF) initiative of the U.S. government to tackle the challenges of food insecurity. The overall goal of the FSP program is to promote inclusive agricultural productivity growth, improved nutritional outcomes, and enhanced livelihood resilience for men and women through improved policy environments. The goal is achieved by two integrated objectives of: (1) fostering credible, inclusive, transparent and sustainable policy processes at the country level, and (2) filling critical policy evidence gaps for informed policy debate and formulation at country, regional, and global levels.

FSP is organized around five clusters (components) grouped under three types of activities. These activities are articulated with major cross-cutting themes: climate change, gender, nutrition and youth employment.

### Country-level support for policy change:

C1: Field-Level Collaborative Research and Formulation/Analysis of Policy Options

C2: Capacity-Building for Policy (Data, Analysis, Advocacy, Formulation, Consultation, Coordination, and Implementation)

### Policy system analysis:

C3: Global Collaborative Research on Support to the Policy Process and Policy Capacity

### Policy-relevant agri-food system research and support to donor policy and strategy:

C4: Engagement in Global Policy Debates on Food Security

C4a: Agrifood System Transformation in the Upstream

C4b: Agrifood System Transformation in the Downstream and Implications for Linkages to the Upstream

C5: Strategic Analytical Agenda and Support to Donor Policy and Strategy

Over the past six and a half years, C1 was implemented jointly with C2, which supported data collection, analysis, advocacy, formulation, consultation, coordination, and implementation. Conversely, the results of country assessments under C1 were used to identify country-specific policy system capacity needs under C2. C1 and C2 were also tied in with global components C3 and C4. The design of activities for C1 and C2 was informed by best practices identified through C3 (policy systems analysis). Implementation experience in turn strengthened the evidence base on best practices for capacity building. Similarly, engagement in global policy debates and strategic analytical support to USAID (C4a, C4b and C5) informed evidence-based policy analysis at country level and vice versa.

### Overview of Activities

**Components 1 and 2 (C1/C2)** activities were carried out through a combination of core funding and Associate Awards and Buy-Ins in the following countries/regions in Africa (Malawi, Mali, Nigeria, Rwanda, Senegal, Tanzania, West Africa, and Zambia) and Asia (Myanmar). Country programs were designed to strengthen two key building blocks for evidence-based policy making at country level: (a) the information base, at farm, firm, and market levels; and (b) applied research on policy questions. The activities were carried out in a collaborative, learning-by-doing mode with local researchers and data collection staff in response to country-led, prioritized research agendas. Intended outcomes were to increase national capacity to generate and analyze information, and to formulate evidence-based policy options for consideration by decision makers and stakeholders. Applied research activities emphasize gender-disaggregated analysis, linked to nutrition outcomes where feasible, and integration of natural resource management dimensions.

Over the past six-plus years, **Component 3 (C3)** focused on addressing the fundamental questions of how to achieve policy change by focusing on four major activities: conceptual framework, in-depth case studies of policy change, analysis of changes in policy architecture, and policy engagement. With efforts from a multi-disciplinary team of researchers from all three consortium institutions, FSP conducted cutting-edge research,

developed practical tools and guidelines for policymakers, and trained civil society actors in sub-Saharan Africa and Asia regarding how they could best influence policy change. The C3 team advanced theory and practice on pathways to policy change in at least two key ways. First, they demonstrated that policy impact requires a deep understanding of the underlying policy processes at the regional, country, and subnational levels. Second, through their high-quality research outputs as well as their established relationships with government actors, local research institutes, and donors, they generated discussions, mobilized coalitions for reforms, and monitored changes in policy modalities.

**Component 4 (C4)** focused on research and analysis to deepen and strengthen the evidence base for important food policy issues. It was organized around the theme of *transforming agri-food systems in Africa and Asia* and addressed the entire agri-food system, including policy issues related to “upstream” on-farm production and practices (C4a), and policy issues related to “downstream” players along the value chain, from the farmgate to the plate (C4b). The topics addressed under C4a ranged from changing patterns of farmland ownership and use, implications of rising land prices in many areas of Africa, shifts in technologies (e.g., mechanization), fertilizer promotion strategies, sustainable intensification issues, youth employment, and market responses to these changing dynamics. A special focus of the work under C4b was on documenting the rapid changes underway in agri-food systems (in the midstream, downstream, and demand side) to help policy-makers design programs and policies that promote rapid but equitable growth.

Throughout the project, **Component 5 (C5)** has provided various types of technical, communication and outreach support to USAID and its global development partners to supply analysis and evidence to evaluate options on “front burner” policy issues. FSP undertook special studies to fill key knowledge gaps and provided customized, on-demand technical support through analysis, dialogue, in-country consultation, and training, drawing from a pool of high-quality researchers from MSU/IFPRI/UP. FSP communication and outreach efforts consisted of preparation of policy briefs, co-organization of consultative meetings with USAID staff, and participation at global research fora. FSP provided technical input into USAID-sponsored events/round tables on issues relevant to FTF.

### Accomplishments and Major Outcomes

The FSP project’s integrated approach to research, capacity development, and policy engagement **has resulted in several successes at the country, regional, continent, and global levels. At the country level**, FSP has helped in drafting and/or adoption of national policies (e.g., Malawi), strategies and research masterplans (e.g., Myanmar), and several policy reforms (e.g., Tanzania, Myanmar, Zambia). It has provided analytical support to evaluate policies (e.g., Mali, Zambia, Tanzania), establish units for policy analysis (e.g., Myanmar) or market intelligence (e.g., Tanzania), and strengthen policy research think-tanks (e.g., Zambia). Countries have also benefited from the application of methodologies and tools developed by FSP’s global components such as the Kaleidoscope Model and the methodology for evaluating the effectiveness of development planning. These tools and methods have provided a framework to analyze the institutional architectures, indicators, and policy changes, to improve the second generation National Agricultural Investment Plans (NAIPs) in several countries in Africa (e.g., Malawi).

**At the regional and continental levels**, FSP’s work has attracted interest and attention from key policy makers. For example, the synthesis work of C3 on regulatory policies (e.g., pesticides) has continued to receive much interest and attention from policy makers in the West Africa region. It has succeeded in attracting interest and resources from a variety of stakeholders including major private sector groups, regional testing laboratories, key regulators, economic policy making bodies, and donors (USAID and U.S. Department of Agriculture [USDA]). Methodological advancements by the FSP C3 and C5 team have also gained increased attention by regional programs and platforms. For example, a methodology was developed for evaluating the effectiveness of development planning in terms of the alignment and linkages of (a) international, African and regional commitments and (b) national transversal development imperatives, (c) the quality of the NAIPs in attaining the Malabo and Sustainable Development Goals (SDG2) targets, and (d) assessing the gender equality components against commitments. This methodology has been integrated into the Regional Strategic Analysis

and Knowledge Support System (ReSAKSS) NAIP support tools, and forms part of the Comprehensive Africa Agriculture Development Program (CAADP).

FSP has also provided technical support and strengthened capacity of regional organizations. For example, FSP researchers have liaised extensively with pan-African organizations and national governments through the preparation of African Development Bank's policy strategies, collaborated with Ministries of Agriculture and Lands on national plans and policy papers, and conducted country studies examining progress in the design and implementation of land policies to protect land rights of individuals and local communities in selected pilot countries. FSP team members working on land-related research have also helped develop an Africa-wide guideline (toolkit) for Monitoring and Evaluation of Land Governance in Africa.

**At the global level**, the knowledge, methodologies, and tools developed by FSP are serving as a global public good to researchers, donors, governments, civil society, and the private sector. FSP's research findings have slowly but steadily diffused to numerous public, private, and civil society groups in Africa and around the world. For example, results and findings of the research conducted on agri-food system transformation, changing farm structure, input subsidies, youth employment, mechanization, and land policies are slowly shaping the nature of the discussions on African agricultural and food policies in Africa. Some of these outputs are gaining traction on the world stage as evidenced by invitations from international organizations such as the International Fund for Agricultural Development (IFAD), the Chicago Council on Global Affairs, the World Bank, the MasterCard Foundation, and Pan-African platforms like Alliance for a Green Revolution in Africa (AGRA) to FSP researchers to lead their flagship reports and serve as reviewers, keynote speakers, and panel members at their annual conferences and roundtable events that are attended by policy makers, donors, and other stakeholders. FSP's research has also featured prominently in mainstream media including a front-page article on land research in the *New York Times*, two articles in *The Economist* on the rise of medium-scale farms in Africa, an article in *The Economist* on the rise of agricultural mechanization in Myanmar, two articles in a special issue of *Foreign Affairs*, and an article on the economics of coffee farming in *Forbes*. These works provide evidence that FSP's research has gained traction in country and regional strategies as well as in the international press.

Over the past six-plus years, FSP's work also **promoted and built the research and analytical capacity** of many national and regional research institutions. In Tanzania, for example, the project supported the establishment of the Market Intelligence Unit (MIU) to conduct rapid market surveys and provide key recommendations to guide the Ministry's decisions on the important value chains. FSP's hands-on training approach by coaching and mentoring MIU staff has institutionalized the production of market bulletins and assessment of local Government's fiscal policy reforms. The FSP project has trained hundreds of researchers from local partner institutions in focus countries, conducted short courses on a wide variety of topics, provided mentorship to researchers from partner institutions, and collaborated with them on joint publications, as a way to build not only individual researchers' analytical capacities, but also institutional capacity to collect data, generate insightful analysis / reports / publications, and communicate those results to relevant stakeholders. Research methodologies and tools such as the Kaleidoscope Model (KM) are enhancing the capacity of civil society, national governments, donor partners, and researchers to both engage in and study the policy process. For example, the KM and other outputs from FSP's C3 component have fed into African Union and the Economic Community of West African States (ECOWAS) efforts on policies and institutions, as well as Africa Lead's revision of its Institutional Architecture Assessments.

### Lessons, Challenges, and Opportunities

The experience of FSP offers several lessons on how best to support and build capacities of policy institutes, national governments, regional organizations, and international donors to formulate informed policies, implement reforms, and reconcile trade-offs across different food security objectives. FSP has generated four Synthesis Reports that reflect on the progress, achievements, and lessons learned from the implementation of FSP Innovation Lab (FSP-IL). These are signature outputs of FSP-IL and will remain available on the FSP website at <https://www.canr.msu.edu/fsp/Synthesis-Reports/>.

Challenges encountered and key lessons learned from FSP's efforts in capacity development, research, and influencing policy include:

*Capacity building:*

1. *Utilizing a variety of capacity-strengthening approaches*, rather than simply providing training courses alone, is essential to address the mixture of research, financial, and organizational challenges faced by local institutes and universities.
2. *Training courses* are most effective when they are complemented by opportunities to apply material on the job and when they include staff across levels of seniority.
3. *Collaboration with university staff offers many benefits*, but care must be taken to ensure that such collaboration does not become a distraction from faculty members' teaching and mentoring responsibilities.
4. *Research institutes are more likely than university professors to respond to short-term policy needs*, but their ability to exert policy influence depends on the quality of such institutes' leadership, their ability to retain competent staff with competitive pay structures, and a sustainable fundraising strategy.
5. *Tradeoff between breadth and depth in the capacity-development portfolio*. Covering many topics as part of institutional capacity development is beneficial for raising researchers' awareness of a range of methods and topics. However, with limited time and resources, this may come at the cost of depth. Capacity-development efforts should be based on researchers' and institutions' preferences for breadth vs. depth in technical capacity.
6. *The values of the implementing institutions matter*. A commitment to capacity building is essential and highly valued by national stakeholders especially in a context of extreme human capital deprivation due to decades of isolation, sanctions, and political oppression.

*Research*

1. *Leveraging long-term, multi-donor funded research by global components* has been a major factor in realizing many of the project successes. It reinforces the *importance of researcher-led and discovery-oriented policy research* in extending the knowledge frontiers, and also in disseminating the results and outputs through individual networks to the targeted audiences.
2. *Research on the transformation processes offers the following lessons:*
  - a. No policy or program will fundamentally alter the transformations taking place, but they can nudge the changes in more inclusive and healthy directions. This amounts to a socially informed business approach that “goes with the flow” while maximizing positive effects and managing negative ones.
  - b. Small and medium enterprises and smallholder farmers are natural partners. Though each will decline over time, a gradual rather than abrupt transition is in the interests of both and is the only approach conducive to inclusive transformation.
  - c. The foundations of any effective approach are policy and infrastructure. Getting these factors right is the only way to ensure a payoff to other, more targeted investments.
  - d. Helping those on the margin who might be able to prosper to actually do so, and protecting those who are unable to prosper, requires targeting different elements in a portfolio of approaches to different kinds of people.
  - e. Just as the current trends and transformations observed in African food systems are the outcomes of policies and public investment patterns of prior decades, the future will be shaped and transformed by today's policy actions—either those taken proactively or those taken passively as a result of no action. Enlightened public action can “bend” many of these trends in socially desirable directions if properly anticipated.
3. *Importance of empirical evidence*. There is a strong need and interest for empirical evidence. The best policies are designed and implemented (and revised accordingly) based on empirical facts and not anecdotal evidence. Investment in data and analytical skills is fundamental to improving the quality of information and supporting effective policy making.
4. *Empirical data collection on complex and diverse household and value chain realities requires major investment of experienced human resources*. There is no such thing as “low-cost” empirical data collection that combines statistical rigor and meaningful analysis.



5. *Importance of collaboration.* Long-term collaborations serve a dual purpose of strengthening local research capacity and increasing the credibility of key results with local policy makers. Collaboration helps local researchers gain professional credibility, at home and internationally, especially if they lead/co-author publications in peer-reviewed scientific journals.

### *Influencing Policy*

FSP's experience points to:

1. **The importance of:**

- a. *Building long-term relationships* with a broad range of policy champions in order to enhance credibility and trust.
- b. *Stakeholder consultation, inclusiveness, and engagement* in realizing policy change. It should be recognized, however, that consultative policymaking on national issues that involves numerous stakeholders is a slow process with regular setbacks and detours.
- c. *The private sector and donors* in the implementation or other aspects of food security policy. For example, case studies on the KM application have highlighted the significant role that the private sector plays in implementing food security policy. This suggests that government-centric models of policy processes need to be expanded to consider the growing role of nongovernment entities.

2. **The recognition that:**

- a. It takes time for policy research and outreach to influence policy, and other elements come in to play. For example, it took nearly a decade of policy research and outreach plus other factors to achieve the piloting of the Farm Input Subsidy Program (FISP) e-voucher in Zambia, which was subsequently rolled out nationwide. Also, recognizing that policy reversals happen when influential government champions move to different positions and when reforms undermine rent-seeking opportunities for powerful actors.
- b. Achieving food security requires looking at agriculture holistically, taking into account linkages with, and implications for, other sectors.
- c. The pressure to deliver quick results sometimes leads to hurried decisions that are not evidence-based. Researchers need to be aware of the pitfalls of caving into such pressures and recognizing the value of peer reviews, validations, and consultation, before major policy decisions are endorsed.
- d. Most countries have weak capacity to implement policies and reforms. For example, acute budget constraints have prevented effective post-registration enforcement of regional input regulations. New models of regulatory financing are required to ensure regionally harmonized enforcement of regulations.
- e. Opportunities for policy and public sector organizational reform cannot be predicted but must be anticipated. Flexibility in program design and implementation is thus essential in transition economies characterized by weak institutions and political uncertainties.



## OVERVIEW

### Context

The world population is growing fast and cities continue to expand. For example, the population of Sub-Saharan Africa (SSA), a continent with the most acute challenges of food insecurity, is projected to double from 0.95 to 2.1 billion people between 2015 and 2050. In 2016, one out of every two people in sub-Saharan Africa lived in urban areas. Shifts in population demographics and other drivers are contributing to rural transformation, which in turn is changing the patterns of land holding for agricultural purposes. It is also creating employment challenges, especially for youth who are entering the labor force in large numbers. Concomitantly, food systems are undergoing rapid transformation, shifting towards high-value products, processed foods, and modern supply chains. The increasing demand for such food is stressing the agri-food system at all levels, from production to consumption. At the production level, it is contributing to degradation of natural resources, which lowers agricultural productivity and livelihood opportunities for farmers. At the consumption level, incomes and food availability continue to be low, affecting the quantity and quality of food consumption and leading to food insecurity and undernutrition. At the same time, in these countries, another form of malnutrition—too many calories from sugar and fat—is emerging as a consequence of diet change, resulting in overweight and associated diseases.

The Feed the Future Innovation Lab (IL) for Food Security Policy (FSP) started in July 2013 as a project under the Feed the Future (FTF) initiative of the U.S. government to tackle some of these old and new challenges of food insecurity. It was established based on the recognition that: (a) rigorous research is needed to provide scientific evidence to inform the policy-making process; (b) data collection and analysis can demonstrate the positive or negative impact of a policy and guide the policy design process; (c) scientists can model possible scenarios and evaluate outcomes to inform policy decisions; and (d) different types of research are necessary and complementary for influencing policies. For example, long-term empirical and theoretical research creates a pool of knowledge useful for designing sustainable and effective programs and policies. Strategic applied research can also give decision-makers advance warning about potential upcoming crises and help develop preventive and curative solutions. When a crisis occurs, scientists can also lead short-term research or analysis that focuses on the specifics of the situation and helps identify potential solutions.

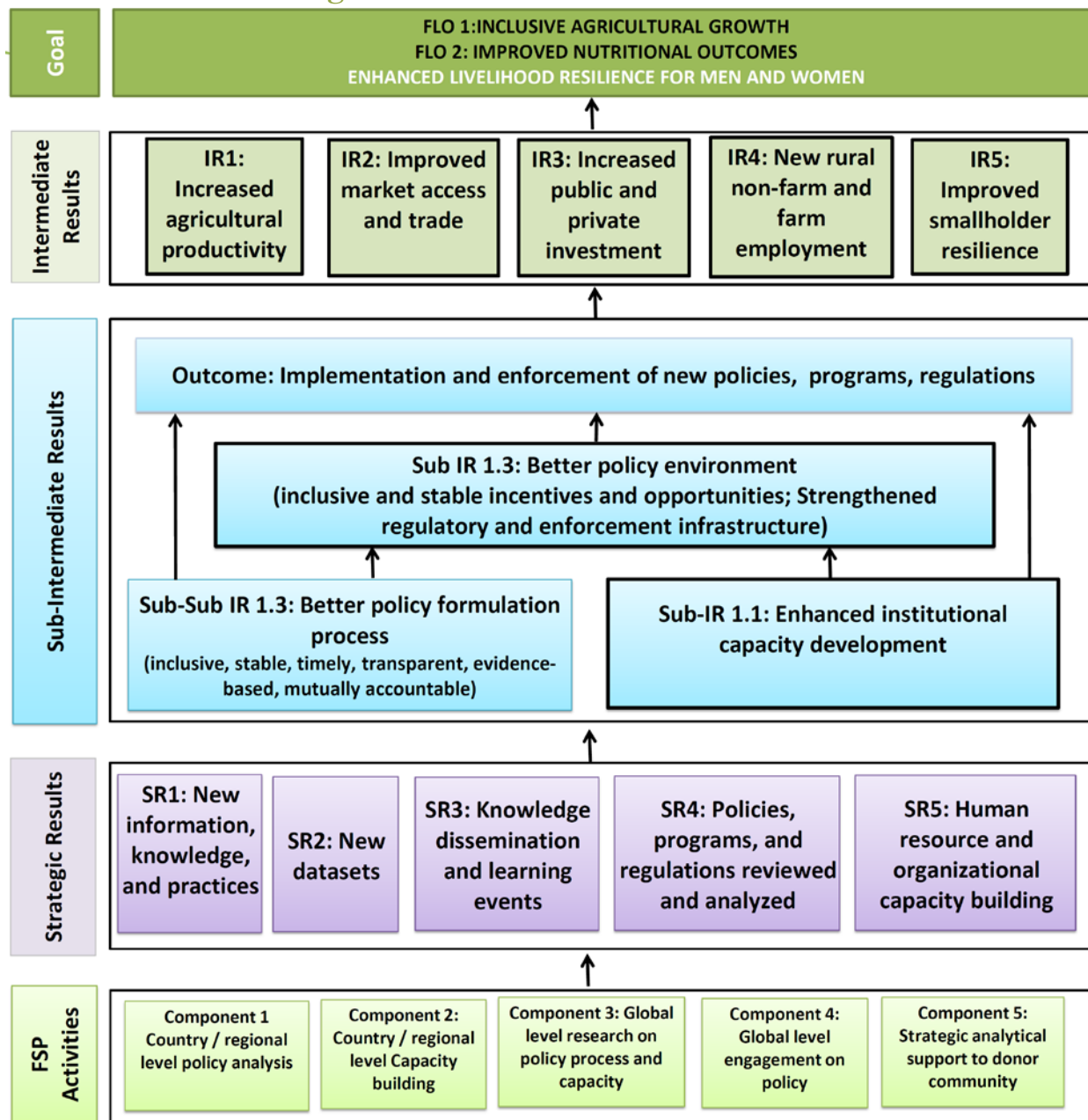
### Program Goals and Objectives

The overall goal of FSP is to promote inclusive agricultural productivity growth, improved nutritional outcomes, and enhanced livelihood resilience for men and women through improved policy environments. The goal is achieved by fostering credible, inclusive, transparent and sustainable policy processes at country and regional levels and filling critical policy evidence gaps. The FSP Innovation Lab, since it started in July 2013, has taken a broad view of agriculture, including the farm and off-farm parts of the agri-food system, and has strived to increase countries' capacity to generate policy-relevant evidence and analysis, with the expectation that this knowledge, when utilized by stakeholders, will improve policy formulation and implementation throughout the food system. FSP focuses on two integrated objectives:

- **Objective 1:** Address critical evidence gaps for informed policy debate and formulation at country, regional and global levels. FSP will generate, synthesize and disseminate new knowledge on targeted policy issues for which the current evidence base is insufficient or inadequately understood to permit confident formulation and implementation of effective policies at country, regional and global levels.
- **Objective 2:** Foster credible, inclusive, transparent and sustainable policy processes at country level. The FSP will strengthen the building blocks for national policy systems in their regional contexts, promote inclusion of and dialogue among all stakeholders around critical policy issues, and disseminate globally sourced examples of successful innovation and best practice in policy system capacity building.

The Results Framework in Figure 1 describes the pathway that has guided FSP IL's work program over the past six and a half years to achieve the development goals through these objectives.

Figure 1. Results Framework for FSP



## FSP Organization

FSP is organized around five clusters (components) grouped under three types of activities: policy-relevant agri-food system research, policy system analysis, and country-level support for policy change. These topics interact and inform each other. They are articulated with major cross-cutting themes: climate change, gender, nutrition and youth employment. The five components are:

### Country-level support for policy change:

- C1: Field-Level Collaborative Research (on Farms, Firms, and Markets) and Formulation/Analysis of Policy Options
- C2: Capacity-Building for Policy (Data, Analysis, Advocacy, Formulation, Consultation, Coordination, and Implementation)

**Policy system analysis:**

C3: Global Collaborative Research on Support to the Policy Process and Policy Capacity

**Policy-relevant agri-food system research and support to donor policy and strategy:**

C4: Engagement in Global Policy Debates on Food Security

C5: Strategic Analytical Agenda and Support to Donor Policy and Strategy.

The above components are designed to achieve five strategic results (SRs). The SRs are essential to the achievement of the two Feed the Future Sub-Intermediate Results (sub-IRs), which are critical to the project's attainment of five Intermediate Results (IRs) and two FLOs (Figure 1).

During the project's first year the decision was made to:

- Merge the C1 and C2 teams into one single C1/C2 team since FSP IL researchers decided the ground-level research and capacity building had to go hand-in-hand; and
- Sub-divide the C4 team into two sub-teams:
  - C4a: One global component team focused on “upstream” agricultural issues such as land and agricultural inputs (e.g., seed, fertilizer); and
  - C4b: A second global component team focused on “downstream” agricultural issues such as food processing, shifts in food consumption patterns, regional and national trade, and market information systems.

## Geographic and Policy Focus Areas

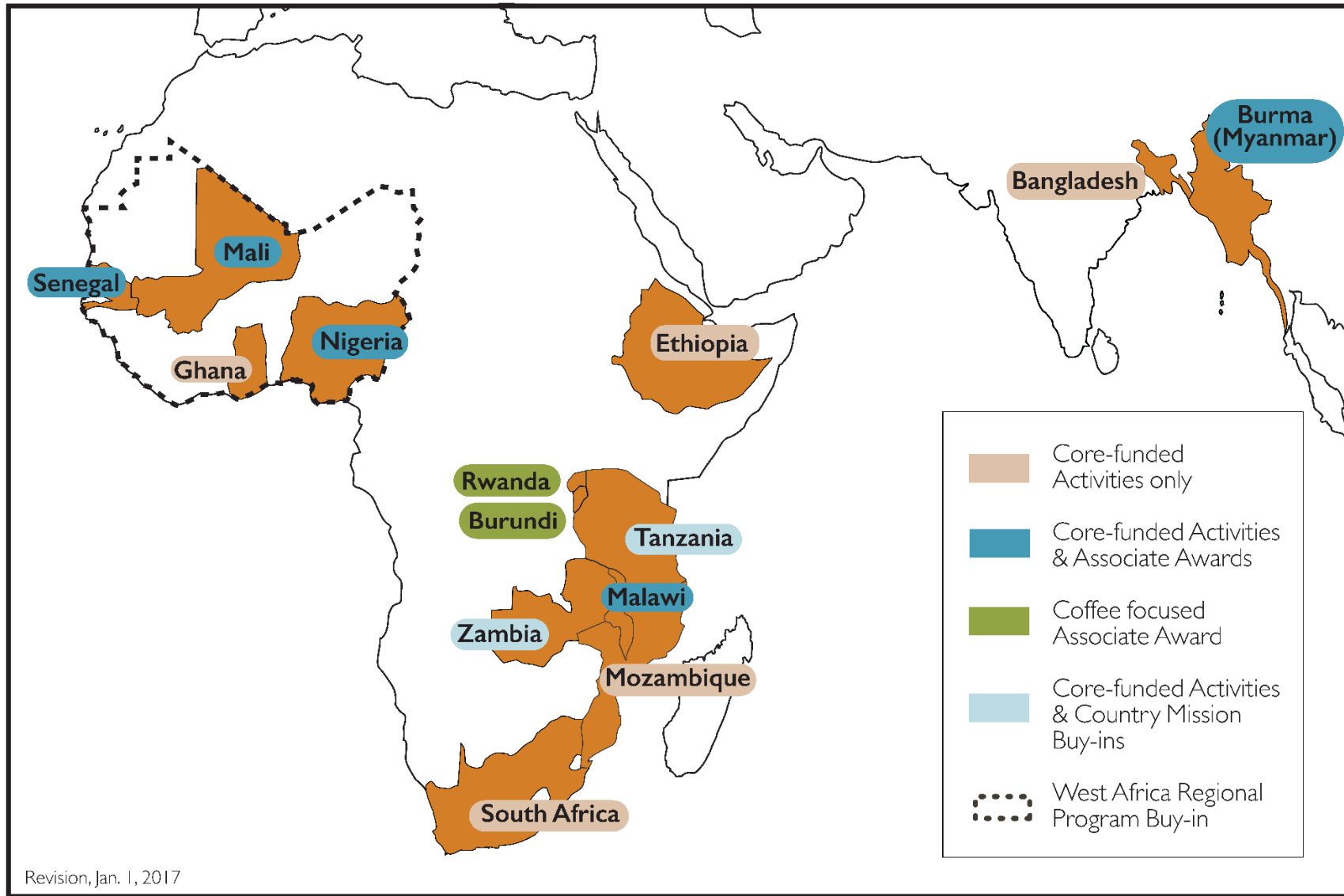
FSP activities have been directed primarily at the FTF focus countries in West Africa, Eastern and Southern Africa, and Asia. Targeted project beneficiaries are the stakeholders in the policy process: i.e., governments, private sector, civil sector and research institutions. FSP provides country-level support for policy change through Associate Awards and Mission Buy-ins. During the life of the FSP core award, these efforts focused on one country in Asia, Myanmar, and on eight countries or regions in Africa, which include: Africa Great Lakes Coffee Region (Burundi and Rwanda), Malawi, Mali, Nigeria, Senegal, Tanzania, West Africa Region, and Zambia (see Figure 2 for a map of the areas of activity).

FSP's work on food security policy encompasses a wide range of topics, including:

- Agricultural inputs policy
- Land and natural resources tenure
- Resilience and agricultural risk management policy
- Agricultural trade policy
- Nutrition policy
- Institutional architecture for improved policy formulation
- Enabling environment for private sector investment throughout the food system

Over the past six and a half years, FSP's researchers across the three consortium member institutions (MSU, IFPRI, and UP) have analyzed and articulated existing policies and new emerging challenges with evidence-based research to inform possible reforms. FSP considers the agri-food chain as a complex system of interactions between a variety of stakeholders, including the regulators, input suppliers, farmers, traders, transporters, processors, retailers, and others that link farmers to consumers. It has addressed transformation issues that impact the entire agri-food system. FSP's value-added has been its focus on challenges at the farm, firm, market, sector, and economy levels, and on generating information and analysis that feed and undergird both its policy work and its efforts to build policy capacity. In this Final Technical Report, we give an overview of activities undertaken by FSP researchers and summarize major achievements, outcomes, lessons learned, challenges and opportunities. The Report is organized by Components as outlined above. Since country-level research and capacity-development activities were implemented in an integrated manner, components C1 and C2 are combined as C1/C2 in reporting the country-level support for policy change.

Figure 2. Geographic Areas of FSP Activities, 2013-2020



# COMPONENT C1/C2: COUNTRY-LEVEL RESEARCH AND CAPACITY BUILDING

## Introduction

Country-level support for policy change was provided under: Component C1–Field-Level Collaborative Research (on Farms, Firms, and Markets) and Formulation/Analysis of Policy Options; and Component C2–Capacity-Building. Over the life of this grant (July 2013-January 2020), activities under these two components were carried out through a combination of core funding and Associate Awards and Buy-Ins in the following countries in Africa (Malawi, Mali, Tanzania, West Africa, and Zambia) and Asia (Myanmar).<sup>1</sup> Activities under C1/C2 were designed to strengthen two key building blocks for evidence-based policy making at country level: (a) the information base, at farm, firm, and market levels; and (b) applied research on policy questions.

The activities were carried out in a collaborative, learning-by-doing mode with local researchers and data collection staff in response to country-led, prioritized research agendas (See Box 1 for list of partners FSP has collaborated over the years.) Intended outcomes were to increase national capacity to generate and analyze information, and to formulate evidence-based policy options for consideration by decision makers and stakeholders. Applied research activities emphasize gender-disaggregated analysis, linked to nutrition outcomes where feasible, and integration of natural resource management dimensions.

C1 was implemented jointly with C2, which supported data collection, analysis, advocacy, formulation, consultation, coordination, and implementation. Conversely, the results of country assessments under C1 were used to identify country-specific policy system capacity needs under C2. C1 and C2 were also tied in with global components C3 and C4. The design of activities for C1 and C2 was informed by best practices identified through C3 (policy systems analysis). Experience in implementation in turn strengthened the evidence base on best practices for capacity building. Similarly, engagement in global policy debates and strategic analytical support to USAID (C4a, C4b and C5) informed evidence-based policy analysis at country level and vice versa. Specific activities, accomplishments, outcomes, and lessons learned under C1/C2 are discussed for each country where significant core funding was allocated.

## Malawi

### *Overview of Activities*

After some initial core-funded activities, the New Alliance Policy Acceleration Support (NAPAS) project was implemented as an Associate Award from November 2014 through February 2019. Led by MSU in collaboration with IFPRI and the University of Pretoria, its objective was to support the Government of Malawi in implementing its agenda of policy reforms around agricultural development and food security. These reforms focused on improving the agricultural investment climate in Malawi, expanding agricultural commercialization, and increasing the role of the private sector in Malawi's agricultural sector. NAPAS had three components: policy formulation; policy communication; and capacity strengthening. The project provided technical support to the Ministry of Agriculture, Irrigation, and Water Development and other stakeholder institutions on a range of sectoral and sub-sectoral policy and strategy reforms, including the formulation of the National Agriculture Policy, which was adopted in 2016. Many of the sectoral and sub-sectoral policy reform efforts involved extensive consultations and communication about the proposed reforms. Several symposia on agricultural policy issues of national scope, including on fertilizer and on land issues, were held to promote dialogue around these issues. The project also carried out several types of capacity-strengthening activities, including mentoring of policy analysts; workshops on strategically strengthening policy institutions, on policy communications, and on policy analysis; and intensive training of journalists to better enable them to report on agricultural and food security-related topics.

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<sup>1</sup> Associate awards or buy-ins were also received for other projects that did not have any significant core budget support. Summary information on these projects, including Myanmar, is contained in Annex B.

### Box 1. FSP PROGRAM PARTNERS

#### Consortium Members

Michigan State University, International Food Policy Research Institute, and University of Pretoria

#### In-Country/Regional Collaborators in countries with Mission Buy-In or Associate Award:

##### Malawi

- Civil Society Agriculture Network
- Malawi's Ministry of Agriculture, Irrigation and Water Development (MoAIWD)
- MoAIWD Department of Agricultural Planning Services (DAPS)
- Centre for Agricultural Research and Development (CARD), Bunda College, Lilongwe University of Agriculture & Natural Resources (LUANAR), Malawi.

##### Mali

- Institut Polytechnique Rural
- Institut d'Economie Rurale (IER)
- Cellule de Planification et de Statistiques du Secteur Développement Rural

##### Myanmar

- Food Security Working Group
- Myanmar Development Resource Institute–Centre for Economic and Social Development

##### Nigeria

- University of Ibadan

##### Senegal

- Ministry of Agriculture, Directorate for Analysis, Forecasting and Statistics (DAPS)
- Senegalese Institute for Agricultural Research
- University Cheikh Anta Diop of Dakar.

##### Tanzania

- Directorate of Policy & Planning (MAFC)
- Department of Agricultural Economics and Agribusiness (DAEA), Sokoine University of Agriculture
- Policy Analysis Group

##### Zambia

- Zambia Land Alliance
- Indaba Agricultural Policy Research Institute (IAPRI)

##### Rwanda/Burundi

- University of Rwanda
- Institute of Policy Analysis and Research, Rwanda
- Polytechnic University of Gitega, Burundi
- University of Ngozi in Burundi

##### International

- African Fertilizer and Agribusiness Partnership (AFAP)
- Africa Rising
- Bill and Melinda Gates Foundation (BMGF)
- CGIAR Program on Policies, Institutions, and Markets (PIM)
- CIMMYT
- ECOWAS
- Global Center for Food Systems Innovation (GCFSI)
- International Fertilizer Development Center (IFDC)
- ICRISAT
- Kansas State University Sustainable Intensification Innovation Lab
- ReNAPRI
- ReSAKSS-Africa and ReSAKSS-Asia



### ***Accomplishments***

The NAPAS:Malawi project made major contributions culminating in preparation of the National Agriculture Policy. This policy served as the basis for the content of the Malawi NAIP, which is to guide both public and donor investments in the sector through 2023. In addition to working on the NAIP, NAPAS:Malawi also was involved in formulation and consultation efforts around the Contract Farming Strategy and the National Fertilizer Policy, as well as discussion around developing or modifying the Farmer Organization Development Strategy, the Agriculture Sector Food and Nutrition Strategy, the Horticulture Policy and Strategy, and the Agricultural Extension and Advisory Services Policy and Strategy.

### ***Major Outcomes/Utilization of Research Outputs***

The drafting and adoption of the National Agricultural Policy was the major achievement of the project. This policy served as the basis for the Malawi National Agricultural Investment Plan (NAIP), which is to guide both public and donor investments in agriculture through 2023. NAPAS:Malawi was also involved in formulation of the Contract Farming Strategy, the National Fertilizer Policy, and in discussions around the Farmer Organization Development Strategy, the Agriculture Sector Food and Nutrition Strategy, the Horticulture Policy and Strategy, and the Agricultural Extension and Advisory Services Policy and Strategy. NAPAS:Malawi also reviewed the continuing suitability of two major agricultural laws, the Special Crops Act and the Agriculture General Purposes Act, and produced an agricultural zoning atlas containing 59 high-resolution national crop suitability maps developed from data collected by the Malawi Land Resources Evaluation Project. Several studies of specific commodity value chains were also carried out under the guidance of NAPAS:Malawi for use in the drafting of the NAIP.

### ***Lessons Learned, Challenges and Opportunities***

Consultative policymaking on national issues that involve numerous stakeholders is a slow process with regular setbacks and detours. Relative to expectations, far less progress was accomplished in policy formulation and adoption but far greater engagement was achieved with stakeholders. This greater consultation should result in more broadly supported policies and strategies around agricultural development and food security in Malawi than in the past. The public agricultural sector in Malawi is moving towards more accountable and inclusive policy formulation processes, and the project activities reflected this. However, it will be some time before the impact of the policies and strategies developed in this consultative manner, and its value relative to more classic technocratic and less consultative approaches, can be assessed.

## **Mali**

### ***Overview of Activities***

Activities in Mali encompassed applied research, capacity building and policy dialogue, which aimed to improve the quality of information on which Malian leaders base policy decisions. These activities were supported both by core and Associate Award funds. MSU faculty worked with Malian scientists to address key evidence and analytical gaps in priority policy areas identified in the USAID policy matrix, including agricultural input policy, private sector investment policies and agricultural trade. Key project activities included research collaboration with Malian scientists, student mentoring, short-term training of agricultural professionals in local institutions, long-term student training and data collection required to support empirical analysis of critical policy questions. MSU and local partner (Institut d'Economie Rurale, IER) conducted a series of studies on the Malian's fertilizer subsidy program, the top priority expressed by the Malian Ministry of Agriculture. Other policy topics covered by the team included pesticide regulatory policies, the agricultural policy system, the dairy processing sector, and trade barriers. Several agricultural university students conducted field work and participated in training sessions on data organization and analysis. Activities in Mali will continue until February 2021 under the mission-funded Associate Award.

### ***Accomplishments***

MSU and local collaborators made important advances in the following key policy areas:

- *Fertilizer policy.* A team of MSU and IER scientists completed four rounds of survey interviews with farm households to investigate the impact of Mali's fertilizer subsidy program and the performance of the e-voucher program in two major agro-ecological zones. One key finding is that a very limited number of farmers received their subsidized fertilizer through the e-voucher system within e-voucher pilot zones, highlighting issues with the beneficiary list, agro-input dealers, and mode of communication (i.e., illiteracy, telephone network coverage). We also found that the allocation of fertilizer received through the subsidy program depends on intrahousehold negotiations between the head and other household members. Having access to subsidized fertilizer can significantly contribute to improving women's diet quality, but the magnitudes of effects are small and they differ by agro-ecological zone. Overall, malnutrition remains prevalent among Malian farm women, most of whom do not consume the minimum number of food groups for an adequate diet and hence are deficient in iron and vitamin A.
- *Pesticide policy.* MSU and market monitoring agents from Mali's Observatoire du Marché Agricole (OMA) agents completed an inventory of pesticide products available in formal and informal markets in Mali in order to bring new evidence of the proliferation of fraudulent pesticide. Farmers regularly complain about the bewildering variety of new pesticide products and the resulting variability in pesticide quality. Health and environmental impacts remain largely unmonitored and poorly understood by key stakeholders, such as policymakers, farmers, and consumers. Research by MSU and local partners has revealed significant farmer concerns about low pesticide quality as well as a high prevalence of fraudulent pesticides (e.g., fraudulent products contain 8-10% less active ingredients than registered products, and banned products are available in the markets).

### ***Major Outcomes/Utilization of Research Outputs***

- *Fertilizer policy.* Key findings related to the low performance of the e-voucher were presented directly to the Ministry of Agriculture and donors, such as the World Bank and AGRA. Both the World Bank and AGRA, in close relationship with the Government of Mali (and especially the Ministry of Agriculture), were in key policy advisory and dialogue roles regarding the fertilizer subsidy program. Without the empirical information MSU had provided, they would have had little current farm- and market-level evidence to undergird their dialogue with the Ministry. Our research served to guide the Government of Mali in the implementation of the fertilizer subsidy program, including the e-voucher program (i.e., better selection of agro-input dealers).
- *Pesticide policy.* Regulators and the private sector have expressed a great interest in the pesticide work. At their request, Mali project team members have presented the results at a series of regional regulatory meetings convened by the Comité Sahélien des Pesticides as well as multiple private sector consultations organized by CropLife International with their major distributors in West and East and Southern Africa. Active engagement with national and regional policy makers (e.g., Ministry of Agriculture and the Comité Sahélien des Pesticides) ensures that these key decision-makers have access to empirical evidence required for informed policy formulation. In addition, the results of this core funding and related pesticide policy research funded under the West Africa (WA) regional buy-in provide a depth of evidence that has informed much larger policy discussions with USAID headquarter, the Fall Army Worm Taskforce, USDA, ECOWAS and East African Community (EAC).

### ***Lessons Learned, Challenges and Opportunities***

- *Importance of empirical evidence.* There is a strong need and interest for empirical evidence. The best policies are designed and implemented (and revised accordingly) based on empirical facts and not anecdotal evidence. Investment in data and analytical skills is fundamental to improving the quality of information and supporting effective policy making.
- *Importance of collaboration.* MSU has conducted collaborative research with Malian scientists in the national agricultural research institute, market information and statistical organizations, and agricultural universities. These ongoing collaborations serve a dual purpose of strengthening local research capacity and increasing the credibility of key results with local policy makers. Over the past year, local collaborators have served as co-authors on multiple research papers, policy briefs, and internationally refereed journal

publications. Malian scientists gain professional credibility, at home and internationally, by continuing to publish in peer-reviewed scientific journals.

- *Challenges of doing research under conditions of social strife and political unrest.* Security remained an ongoing challenge, limiting travel to and throughout Mali. This impacted the geographic scope of field research and caused significant delays in implementing activities. In response to these challenges, the project team had to institute a security plan involving improved monitoring, tighter review of travel plans, purchased a satellite telephone, restricted local travel and careful vetting of hotels based on security rating. Local field staff had to modify field research practices and sampling strategies by replacing the insecure locations with comparable locations where security issues did not arise. Due to social strife and tension, several outreach activities had to be postponed or canceled.

## Myanmar

### *Overview of Activities*

The USAID/Burma-funded Food Security Policy Project (FSPP) is an Associate Award under the FSP-IL. Initiated in September 2014, the project focused on laying the foundation for evidence-based policy analysis through key pieces of empirical research on agricultural value chains and rural livelihoods and putting in place essential missing elements in policy architecture. Since 2016 the scope expanded to include working closely with the Ministry of Agriculture, Livestock and Irrigation (MOALI) Department of Planning, where a new Agricultural Policy Unit (APU) was established in response to an FSP proposal developed by IFPRI and MSU. The APU serves as a critical entry point for introducing evidence-based policy analysis, prioritizing public investment, and to support MOALI's functional transition to a facilitator/enabler of the private sector. Activities in Myanmar will continue under the FSPP Associate Award till September 2020.

The overall goal of FSPP is to promote inclusive agricultural productivity growth, improved nutritional outcomes, and enhanced livelihood resilience through an improved policy-enabling environment. Taking a broad view of agriculture, including the farm and off-farm parts of the food system, this goal was pursued by developing increased capacity to generate policy-relevant evidence and gender-sensitive analysis that is used by stakeholders throughout the food system to improve policy formulation and implementation. This goal was pursued through two integrated objectives that mirror the leader award, namely: (1) to address critical evidence gaps for informed policy debate and formulation and (2) to foster credible, inclusive, transparent, and sustainable policy processes. Initially allowed only to work with civil society organizations and the private sector, the project began working with the government in 2016 after sanctions were lifted.

### *Accomplishments, Major Outcomes/Utilization of Research Outputs*

At the beginning of FSP, there was a clear consensus that Myanmar was the country with the highest food policy stakes of any country where FSP might work globally. The core-funded work, complementing the larger work under the Mission-funded AA, took place at a pivotal moment in policy affecting agricultural, rural development and rural poverty in Myanmar. Earlier government policy decisions were driven by longstanding erroneous assumptions on the part of almost all policymakers, as well as assumptions by the non-government elite that became part of the new government in 2016, related to the extent of existing markets and trade, the importance of “minor” commodities such as pulses and fish, and most importantly whether rice (and by implication land for rice production) was of highest economic priority in rural areas. This contributed to a narrow view of both farmer's and others' opportunities in agriculture, and of agriculture's ability to contribute to improved nutrition and to inclusive economic growth. By providing a continuing stream of evidence, and building capacity to continue to produce that evidence, which demonstrated that current government/elite assumptions were wildly off-base, the project's activities, funded by core and by the Associate Award, were able to shape a new and much more constructive set of agricultural and rural policies, culminating in a discussion paper laying these out in lay terms for the incoming government.

Over the past five years, the project has undertaken household- and community-level survey research in four major agro-ecological zones of the country and eight value chains. The research documented the composition

of rural household income, and trends in migration, infrastructure, rural financial access, technology adoption and input use, off-farm enterprises and farm and non-farm employment. The results were communicated in 52 project publications (9 journal articles, 20 FSP Research Reports, 3 IFPRI Discussion Papers, 17 project Research Highlights, and 4 Policy Briefs). Regular outreach events to communicate results were held in Yangon, Nay Pyi Taw, and regional capitals. In addition, 19 survey-based data sets were made publicly available. In the course of survey implementation, the project significantly strengthened the capacity of its primary civil society partner and a private sector data collection service provider. In addition to regular outreach events, the project organized a one-week workshop for researchers and graduate students from Yezin Agriculture University and the Ministry of Agriculture, Livestock and Irrigation (MOALI) to familiarize them with the data.

Given the importance of irrigation in achieving increased smallholder productivity and diversification into high-value enterprises, a research study on “Strategic Planning for Irrigation Development in Myanmar” was undertaken. This study assessed the current irrigation status and potential for development to enhance the agricultural sector of Myanmar and examined the effectiveness of alternative agricultural policies on water resources. As part of this study, a national-scale hydrological and crop simulation model which covers major agricultural area of Myanmar was set up. This model serves as the main predictive modeling tool to support the strategic irrigation planning analysis.

In response to a project concept note, MOALI established an Agricultural Policy Analysis Unit (APU) in the Department of Planning and accepted international policy advisers for the first time. The project chief of party was one of three international advisers appointed to support the Department of Planning. The APU organizes regular monthly policy talks attended by representatives of all MOALI departments. Other outcomes included:

- In 2016 MOALI revised its agricultural policy and, in 2018, published a new agricultural development strategy, based in part on project recommendations.
- In 2018, in response to a study undertaken in collaboration with the APU, the Department of Agricultural Research, responsible for crops research in the country, undertook a pilot decentralization program in Sagaing region to strengthen linkages between farmers, extension and research. The pilot program is now being extended to Shan State, and will be extended further with World Bank support.
- In 2019, in response to project analysis and advocacy for increased investment in agricultural research, MOALI also prioritized and embarked on an agricultural research master plan to establish livestock and fisheries research programs and strengthen the role of biotechnology in research.
- In 2019, partly in response to project studies of the pulses and beans sector, the Ministry of Commerce lifted the ban on international firms purchasing agricultural products on the domestic market so long as those products are subject to value-added processing in-country prior to export. Previously only domestic companies could purchase on the local market.

In response to project research on the profitability of aquaculture compared to paddy production in the Delta, the Agriculture, Livestock and Rural Development parliamentary affairs committee of the lower house, in collaboration with three other related parliamentary committees, has decided to submit an amendment to the Farmland Law to allow smallholders farmers (15 acres or less) to convert up to one-third of their paddy land to permanent alternative agricultural use (i.e., high-value enterprises such as aquaculture, livestock raising, fruit orchards). Currently this is only possible if a small farmer obtains approval at local, regional and union Minister levels.

Project findings and outreach had a significant effect on the composition of the portfolio of the USAID/Burma Office of Economic Growth (more than 80% agriculture related), the strategy of the Livelihoods and Food Security (LIFT) Fund, planned investments in agriculture by the World Bank, as well as the bilateral programs of LIFT Fund Board members (e.g., Deutsche Gesellschaft für Internationale Zusammenarbeit [GIZ] investments in aquaculture).

The project trained more than 20 researchers from its local partner, the Center for Economic and Social Development. Of these 8 have been awarded scholarships for graduate training, 5 at the PhD level (one each

in Australia, New Zealand, Thailand, the United Kingdom and the USA) and 3 at the MS level (in Australia, Italy and New Zealand). The project provided short courses in collaboration with Yezin Agricultural University and MOALI on Cost-Benefit Analysis, Policy Analysis, and Research Data Analysis.

### *Lessons Learned, Challenges and Opportunities*

- History, culture, geography, ethnicity and political economy are of enormous importance in policy reform for transition and post-conflict countries. Effective policy reform projects need to understand this context. Project managers sought out national and expatriate mentors to guide them, as well as reading extensively on the history of the country.
- The foundation for FSP's involvement in Myanmar was laid in October 2012 when MSU was awarded a two-year Associate Award by USAID Burma under the Food Security III Cooperative Agreement. Having a "ramp" like this two-year diagnostic phase prior to major investments in FSPP was enormously helpful to understanding the above dimensions, as well as for building organizational and personal relationships and trust.
- The values of the implementing institutions matter. A commitment to capacity building is essential and highly valued by national stakeholders in a context of extreme human capital deprivation due to decades of isolation, sanctions, and political oppression.
- Empirical data collection on complex and diverse household and value chain realities requires major investment of experienced human resources. There is no such thing as "low-cost" empirical data collection that combines statistical rigor and meaningful analysis. This is especially challenging when the extended monsoon season restricts scoping and household data collection activities to specific months of the year.
- Flexibility in program design and implementation is essential in transition economies. Opportunities for policy and public sector organizational reform cannot be predicted but must be anticipated. M&E systems must allow for this flexibility or they can become a straitjacket. They also need to be designed to minimize reporting burdens.
- Engaged leadership from USAID/Burma and the U.S. Embassy Rangoon was very helpful to project staff in creating networking opportunities and prioritizing research and outreach topics. The presence of the Ambassador and his personal words of encouragement were very helpful to sustaining morale to national and expatriate staff.

## Tanzania

### *Overview of Activities*

FSP began applied policy research and policy process engagement in Tanzania funded by FSP core resources in 2013. This work has complemented and built upon analytical work and capacity-building activities led by MSU's country-based faculty member (Dr. David Nyange), whose position was embedded within the Directorate of Policy and Planning of the Ministry of Agriculture, Food Security and Cooperatives (DPP/MAFC) under the Bill and Melinda Gates Foundation (BMGF)-funded Guiding Investments in Sustainable Agricultural Intensification in Africa/Tanzania project. Dr. Nyange provided support to DPP/MAFC in agricultural policy analysis, capacity building, and policy coordination activities to meet MAFC-driven research and capacity-building priorities.

In 2014, activities in Tanzania were supplemented with a small buy-in from the Tanzania country mission. In May 2016, the Agricultural Sector Policy and Institutional Reform Strengthening (ASPIRES) project was initiated as a new buy-in with significant support from the country mission. The objective of the ASPIRES project is to accelerate Tanzania's adoption of more effective policies and programs to drive broad-based agricultural sector growth, improve household food security and nutrition, and reduce poverty. ASPIRES is organized around four areas of action designed to reduce the policy evidence gap and establish a foundation for more credible, inclusive, transparent and sustainable policy formulation processes: (1) Policy outreach and advising, through systematic stakeholder engagement; (2) policy coordination, through the Policy Analysis Group, the Development Partners Agriculture Working Group, and the Partnership and Accountability



Committee; (3) capacity building; and (4) collaborative policy research. In Year 2, nutrition policy was added as a fifth area. ASPIRES' activities in Tanzania will continue until December 2024 under the SERA BORA project, a new mission-funded Associate Award (see Annex B for an overview of this new Associate Award).

### ***Accomplishments***

A major accomplishment of FSP activities in Tanzania is the establishment of the Policy Analysis Group that brings together over 15 organizations. Establishment of this group was the result of a direct request by the then-Minister of Agriculture who was concerned about lack of coordination across multiple policy advisory or analysis providers, and an inability of the Ministry to gain access to advice on a coherent and usable set of policy options. The PAG jointly organizes the Annual Agricultural Policy Conference (AAPC), which for five years has brought together over 250 stakeholders to share policy research results, identify emerging policy issues for reforms, and prioritize new areas for research. The country project collaborated with the Private Sector Development and Market Information Unit (MIU) teams to produce seven commodity value chain briefs for livestock and fisheries to provide evidence-based information to assist in decision making by the Ministry of Livestock and Fisheries (MoLF) senior leadership. Further, MoLF abolished 10 types of fees and charges in dairy and poultry, which was among the livestock sector policy reforms under review. The project helped to build the policy capacity of partner institutions (government, university, parliamentary committees) through collaborative research, policy analysis, and short- and long-term training.

### ***Major Outcomes/Utilization of Research Outputs***

- The FSP project has been supporting reforms in 10 policies of which 6 have been fully or partially approved: (1) reduction of the agriculture levy (crop cess) charged as percentage of turnover by Local Government Authorities from 5 percent to 3 percent, and introduction of an electronic payment system for the levy; (2) formulation of the second phase of the Agriculture Sector Development Program (ASDP-2) which implements the National Agriculture Policy and the CAADP investment plan; (3) establishment of the Market Intelligence Unit (MIU) under the Marketing Section of the Ministry of Agriculture; (4) restructuring of 11 agricultural boards to improve efficiency and delivery of service to farmers and other stakeholders in 11 value chains; over 120 regulatory fees and charges have been either reduced or removed, including value-added tax on farm inputs; (5) increase in tariff for imported edible oil, whose current import bill is \$300 million per annum despite the rapidly expanding domestic sunflower sub-sector; and (6) establishment of the Private Sector Desk at MoLF to support regulatory reforms, and removal of 10 regulatory fees and charges.
- Project interventions have led to (1) enhanced analytical capacity, (2) policy research and analytical studies that support enhanced evidence-based policy making, (3) an improved policy administration system, and (4) a new M.S. graduate to support agriculture policy.
- Research results have been put into use in shaping (1) the policy reforms agenda, including new research areas on food safety and the nutrition double burden; (2) development of a study to assess the benefits of the rising medium-sized farms and transforming food systems; and (3) agricultural development programming by the major development partners. The private sector has also responded to the research results, e.g., banks are developing new financial products to cater for medium-sized enterprises and tractor dealers are supplying them with more appropriate-sized tractors (45 hp versus 100-120 hp).

### ***Lessons Learned, Challenges and Opportunities***

An important lesson from the successful crop cess reform is that policy commitments made at the top level in the absence of empirical information or stakeholder consultation require greater information and consultation to actually implement those commitments. The G8-Tanzania “New Alliance” commitment to eliminate the crop cess was in fact unimplementable without the in-depth work by FSP on stakeholder consultation and generating evidence on how such a policy reform could be a win-win for all. Assuring ways to continue local government revenue and technical means to increase collection of revenues while reducing the burden of the tax through mobile technology, all came out of FSP work on this issue.



Other lessons learned from the experience of implementing this policy project in Tanzania include:

- The importance of defining the policy issues in a context of the national policy framework.
- Identifying and engaging the champions (i.e., the movers and shakers, partners with a more convening power).
- Understanding the evolution of the policy and acknowledging the political economy within which policies are made.
- Anticipating stakeholders' concerns and developing a dialogue strategy to allay those concerns.
- Objectively laying out alternative and coherent policy options for consideration, debate, and dialogue.
- Documenting regional experience and international best practices, and bringing them to the attention at national level.
- If dialogue and debate do not produce a consensus, finding the middle ground and taking a phased approach to policy reforms.
- Mapping out the process (e.g., non-legislative, amending an existing law).
- Piloting reforms, monitoring, and learning from the pilots prior to scaling out.
- Importance of sustained engagement with stakeholders involved in policy processes.

The project in Tanzania also highlighted several challenges of working in the policy arena. For example, frequent leadership turnover at Agriculture Sector Lead Ministries slowed down policy dialogue given the need to bring the new leadership up to speed. The pressure from new leaders to deliver quick results sometimes led to hurried decisions that were not evidence-based. The shift of Government of Tanzania headquarters from Dar es Salaam to Dodoma (500 km) increased the cost of the country project as ASPIRES had to open a sub-office in Dodoma. Nonetheless, the pace of reforms has accelerated. Observations about the policy process include:

- There have been more reforms to protect the domestic industry through increased tariffs than reforms to enhance the competitiveness of the agricultural sector.
- MoLF has implemented commendable fiscal reforms, but challenges remain in regulatory reforms under sector ministries.
- From the value chain perspective, policy reforms vary by kind of policy and potential impact. The reforms have targeted especially traditional exports and import substitutes (for crops and livestock) with limited attention to food and non-traditional crops.
- From the food security perspective, reforms have focused on enhancing food availability rather than food access, utilization, stability or nutrition.
- Some reforms have been reversed (e.g., export ban, raising and lowering of import tariffs).
- New priorities have emerged that result in new policy intervention, push for industrialization leading to increased import tariffs on food commodities, and desire to increase government revenues leading to export taxes on tea, coffee, cashew nut and livestock hides and skins.
- There has been increased market intervention by the Government including reinstatement of agribusiness parastatals and increased marketing board involvement.

## West Africa

### *Overview of Activities*

Three major activities were implemented under the West Africa buy-in: (1) Provision of technical support by MSU on regional input policies to the ECOWAP (Regional Agricultural Policy for West Africa) Joint Sector Review (JSR) process led by IFPRI; (2) provision of technical support by IFPRI/ReSAKSS on revising the ECOWAP technical guidelines and handbook of indicators to make them consistent with the Malabo indicators, and follow-up training activities on data collection; and (3) six case studies by MSU of uneven implementation of regional pesticide policies.

### ***Accomplishments***

The two JSR support activities conducted by IFPRI and MSU helped to raise the technical quality of the ECOWAS Joint Sector Review and the CAADP Biennial Review process. The case studies of regional pesticide policies have led to a series of high-profile regional consultations involving regulators and the private sector addressing critical emerging policy concerns, most notably the rapid rise in regional pesticide sales, the generally weak market monitoring by the responsible national regulators, the consequently large volume of fraudulent products on sale (probably one-third of total volumes sold), and the emerging evidence of poor quality and under-dosage of fraudulent products.

### ***Major Outcomes/Utilization of Research Outputs***

The collective concerns raised during activities under this buy-in led to a series of follow-up activities by the Comité Sahélien des Pesticides, the industry trade group CropLife, USDA and MSU. They focused on joint anti-fraud outreach efforts to inform farmer groups, and laboratory inventory, assessments and training to provide the means to monitor pesticide formulation quality and potentially adverse impacts on the environment and human health. In addition, findings and recommendations from FSP have informed the wider USAID/USDA policy dialogue on pesticides in Africa, as well as USDA and USAID work with EAC on these issues

### ***Lessons Learned, Challenges and Opportunities***

Harmonized regional agricultural input regulations offer significant advantages to regulators as well as the private sector: reduced red tape due to one-stop-shop registration; reduction in smuggling following common registration decisions; and pooling of scarce technical personnel and laboratory resources. The Sahelian countries have enjoyed these advantages since 1994, inspiring ECOWAS to try to establish a parallel harmonized regulatory system in the coastal countries as well. Despite the adoption of sound regulatory policies, implementation capacity remains weak in many countries, particularly for post-registration monitoring of input quality and safety. Acute budget constraints have largely prevented effective post-registration enforcement of regional input regulations. As a result, new models of regulatory financing will be required to ensure enforcement and avoid potentially serious variable productivity and safety problems.

## **Zambia**

### ***Overview of Activities***

Zambia activities were funded both by core and by the Zambia mission under a buy-in awarded in 2016. The main objectives of the Zambia buy-in were to enhance the Indaba Agricultural Policy Research Institute's (IAPRI's) technical capacity to conduct and disseminate high-quality socio-economic research and to strengthen IAPRI's capacity to participate in regional policy debates. To achieve these objectives, IAPRI and MSU researchers engaged in collaborative research as well as domestic and international outreach efforts; designed and implemented a series of technical trainings for researchers from IAPRI and other Zambian partner institutions; and supported IAPRI's institutional capacity development. Research and outreach focused on three themes: (1) rural transformation with an emphasis on issues related to land/farm-size and migration; (2) climate-smart agriculture, resilience, and sustainable forest management; and (3) agricultural policy analysis, policy processes, and stakeholders' policy preferences. MSU staff also provided technical support for the 2019 Rural Agricultural Livelihoods Survey data and training on policy-relevant analysis of such data.

### ***Accomplishments, Major Outcomes/Utilization of Research Outputs***

- *Land/farm size and migration issues.* The project's research has been noticed and referenced by public sector representatives in Zambia in their own speeches, and they are taking account of the rise of medium-scale/emergent farms in their policy discussions and plans. Building on collaborative work under FSP, IAPRI has embarked on its own research and policy engagement activities on medium-scale/emergent farmers in Zambia.
- *Climate-smart agriculture, resilience, and sustainable forest management.* FSP researchers engaged with various stakeholders both locally in Zambia and internationally on the impacts of climate-smart agriculture on

welfare and cropland expansion, impacts of climate change on water availability and agriculture, options for sustainable forest management, and options to nudge climate-smart adoption and build climate resilience among smallholder farmers. Various research outputs were produced and published as working papers and in peer-reviewed journals. Through stakeholder interactions, it became evident that our research outputs influenced evidence-based debates around climate-smart agriculture and natural resource management, especially among parliamentarians in the Zambian National Assembly.

- *Agricultural policy analysis, policy processes, and stakeholders' policy preferences.* Collaborative work between MSU and IAPRI over the last decade contributed to the government's decision to pilot an e-voucher approach to FISP. Several FSP researchers were awarded the Bruce Gardner Memorial Prize for Applied Policy Analysis by the Agricultural and Applied Economics Association for work on FISP and other African countries' input subsidy programs (ISPs). FSP researchers made presentations on ISPs at several high-level international meetings and published several peer-reviewed journal articles on the topic.
- *Capacity building.* FSP researchers designed and implemented more than 22 trainings (an average of 1.5 per quarter) with IAPRI and other partners to build technical skills and capacity for policy analysis and outreach. Topics ranged from methods for impact evaluation, to improving writing skills and communication to lay audiences, to identifying priority topics for agricultural and food policy research, to using GIS, among many others. There is evidence of training participants applying the skills developed during the trainings and of an increase in peer-reviewed publications led or co-authored by IAPRI researchers. FSP also supported institutional capacity building at IAPRI via collaboration between FSP business office and IAPRI administrators, and strategic interactions between senior FSP researchers and the IAPRI leadership.

### ***Lessons Learned, Challenges and Opportunities***

- *Land/farm size and migration issues.* Near-term trends identified in the project's research will fundamentally influence Africa's rural economies over the next decade. Most current trends are not inevitable, however. Just as the current trends and transformations being observed in African food systems are the outcomes of policies and public investment patterns of prior decades, the future will be shaped and transformed by today's policy actions—either those taken proactively or those taken passively as a result of no action. Enlightened public action can “bend” many of these trends in socially desirable directions if properly anticipated.
- *Agricultural policy analysis, policy processes, and stakeholders' policy preferences.* It takes time for policy research and outreach to influence policy, and other elements to come in to play. For example, it took nearly a decade of policy research and outreach plus other factors to achieve the piloting of the FISP e-voucher, which was subsequently rolled out nationwide. However, the e-FISP has since been somewhat rolled back. Policy reversals happen, e.g., when influential government champions move to different positions and when reforms undermine rent-seeking opportunities for powerful actors.
- *Capacity building.* Covering a large number of topics under FSP has been beneficial for raising IAPRI researchers' awareness of a range of methods and topics. Future efforts could build on that to develop depth to complement this breadth.

### **Other Capacity-Building Activities**

Over the past six and a half years, FSP in collaboration with the Regional Network of Agricultural Policy Research Institutes (ReNAPRI) has helped strengthen policy analysis and outlook modelling capacity at several policy research centers in East and Southern Africa. Specific centers targeted included: the Centro de Programas e Políticas Agrárias (CEPPAG) at Eduardo Mondlane University in Mozambique, Department of Agricultural Economics and Agribusiness (DAEA) at Sokoine University of Agriculture in Tanzania, the Centre for Agricultural Research and Development (CARD), Bunda College, Lilongwe University of Agriculture and Natural Resources (LUANAR), Malawi, and IAPRI in Zambia.

This set of activities undertaken in different countries was led by the University of Pretoria in collaboration with the Bureau for Food and Agricultural Policy (BFAP), which is a South African think-tank and also a

member of ReNAPRI. The objective was to expand and strengthen capacity for the selected centers to use Partial Equilibrium (PE) Modelling for policy analysis and market outlook projections in national and regional contexts. The need for such policy analysis skills is evident from the fact that some of the highest-profile agricultural policy issues in recent years have included changes in maize, rice, and sugar trade policies with no analytical input as to the trade flow patterns and welfare consequences of these changes for consumers, small or large-scale producers, wholesalers, retailers, input dealers, etc. It is also important for analysts to expand their engagement with regional market outlook analysis efforts through the ReNAPRI network supported by BFAP.

Under this activity selected staff from each center received basic training in partial equilibrium modelling. Some of this training was conducted in collaboration with the Food and Agricultural Policy Research Institute (FAPRI), University of Missouri. This activity supported an initiative that had already commenced in 2014 where each ReNAPRI center produced their country-specific 10-year outlook report for different crops with the assistance from BFAP. Over the years through various sources of funding, the commodity coverage has expanded and included maize, rice and wheat in Tanzania; maize and rice in Mozambique; and maize and soybeans in Malawi and Zambia. These outlook and foresight analyses reports from different countries became featured presentations at the annual ReNAPRI outlook conferences from 2014 to 2019. Apart from the annual outlook presentations, the first application of the ReNAPRI network's modelling platform as an "early warning tool" came in October 2015, when the majority of weather forecasts indicated a high probability of an El Nino event for the 2015-16 summer production season. The impact of the expected drought on regional production and consequently the prices and the interregional trade flows was presented to private sector and governments, which initiated a range of precautionary measures (e.g., securing white maize stock on the world market, 24-hour operations at ports to increase handling capacity, etc.). More recently this modelling system was also included in a broader value chain analytics approach led by BFAP in collaboration with IFPRI and ReNAPRI partners to identify product-specific market-led interventions per value chain. Policy shifts have already been implemented in the Tanzanian sunflower value chain based on the findings generated by this integrated approach.

The BFAP model based on the FAPRI partial equilibrium (PE) analysis tool is a less complex approach to doing policy analysis and much easier to understand and use (and considerably less data-intensive) relative to Computational General Equilibrium modeling. Because PE models are commonly taught as part of MSc-level courses such as agricultural trade and marketing, an applied PE tool was easy to integrate by university faculty (associated with the policy centers) into their own courses on these topics and/or used in MSc student theses as appropriate. This provided opportunities for FSP to extend this analytical capacity beyond the direct participants to other students and users through teaching and mentorship.

# COMPONENT C3: GLOBAL COLLABORATIVE RESEARCH ON POLICY PROCESS AND CAPACITY

## Overview of Activities

Policies regulate socio-economic practices and can have either positive or negative effects on social and economic development. They can be powerful mechanisms to channel income from one group to another in response to vested interests, and they set a context for strategic public investments to enhance public goods and avert social costs. FSP's Component 3 (C3) was based on the recognition that understanding the political economic context and institutional constraints is critical to the successful design and uptake of policies and reform processes. Activities under this component informed, and were informed by, activities under Components 1 and 2. Over the past six and a half years, C3 focused on addressing the fundamental questions of how to achieve policy change by focusing on four major activities:

1. Activity 1: Conceptual framework. The emphasis in the development community on demonstrating policy impact requires a better understanding of national policymaking processes to recognize opportunities for, and limits to, generating policy change. Thus, the major focus of the C3 team in the initial years of FSP was on deriving and refining an applied framework (the Kaleidoscope Model, discussed below) to generate testable and operational hypotheses about key factors influencing policy change, especially agriculture and nutrition policies.
2. Activity 2: Case studies. In-depth case studies of policy change were conducted to test the applicability and rigor of the KM across different policy domains and disparate institutional, political, and economic settings (fertilizer policy in Ghana, Tanzania and Zambia, micro-nutrient policies in Malawi, South Africa and Zambia, land governance in Nigeria, and pesticide policy in West Africa).
3. Activity 3: Changes in policy architecture. This activity focused more broadly on efforts to reform food security policy systems by analyzing how different experiments with institutional reforms (e.g., coordinating units, service delivery units, devolution of agricultural ministries) have emerged and how reform of policy institutions has altered incentives, stakeholder motivations and policy outcomes, and from this to derive practical lessons for reforming policy architecture and policy processes. The main case study that emerged focused on the devolution of agriculture functions in Ghana from the national Ministry of Food and Agriculture (MoFA) to the district assemblies and was based on original surveys with both agricultural bureaucrats and rural households.
4. Activity 4: Policy engagement. Drawing on findings that cut across all activities, and in a variety of settings, the team developed a series of web-based tools for policy process analysis, training and policy engagement. The tools were applied in conducting a comprehensive policy stocktaking and mapping of the post-Malabo food security policy context in Malawi and Ghana.

## Accomplishments

With efforts from a multi-disciplinary team of researchers from all three consortium institutions, FSP has conducted cutting-edge research, developed practical tools and guidelines for policymakers, and trained civil society actors in sub-Saharan Africa and Asia regarding how they can best influence policy change. As described in [FSP Synthesis Report 1](#), the C3 team has advanced theory and practice on pathways to policy change in at least two key ways. First, FSP researchers have demonstrated that policy impact requires a deep understanding of the underlying policy processes at the regional, country, and subnational levels. Second, through their high-quality research outputs as well as their established relationships with government actors, local research institutes, and donors, FSP team members have generated discussions, mobilized coalitions for reforms, and monitored changes in policy modalities.



The outcomes of this work over the past six and a half years include a widely shared [Kaleidoscope Model](#) (KM) of Policy Change (see [Synthesis Report 1](#), Figure 5). The KM was motivated by the fact that achieving sustainable impacts on food security and economic growth at scale requires the formulation of sound policies by government actors and a long-term commitment to, and capacity for, their implementation. Yet, too often, environmentally or economically unsustainable policies prevail, or well-meaning policies never translate into progress on the ground. For example, input subsidies tend to crowd out higher productivity investments in agricultural research or in agricultural extension systems, encouraging a reliance on inorganic fertilizer that may be detrimental to soil structure and groundwater. Despite a large body of research demonstrating these outcomes, policymakers persist in implementing input subsidy programs. The KM helps explain why these dynamics occur and how they can be addressed by adopting an interdisciplinary perspective that builds on the C3 team's collective expertise in agricultural economics, gender, nutrition, and political science.

**Box 2. Here's what experts and practitioners have to say about the significance of the Kaleidoscope Model, a major intellectual contribution of FSP:**

*"The model makes complexity more coherent...The model starts to build a body of science around policy change theory."* -- David Pelletier, Professor, College of Human Ecology, Cornell University

*"For practitioners, the model provides insights on how decisions are made and how to take policy change forward...What the World Bank does is aligned with the model, verifying its applicability to the real world."* -- Michael Morris, Economist, The World Bank

The significance of the KM is its ability to synthesize a vast set of prior scholarly literature and practical lessons into a manageable set of 16 variables that appear to repeatedly play a critical role at different stages of the policy process (Box 2). This enables researchers working on food security to better identify where and when empirical findings can have the greatest impact. The model provides a visualization of the policy process to equip researchers and empower policy makers in driving policy change. Furthermore, it also allows donors to better understand how development assistance should be more effectively targeted for sustainable outcomes and enables both private sector and civil society actors to identify government champions with whom to partner in advancing particular food security goals.

The KM is also accompanied by three sets of practitioners' guidebooks. These include:

- [A User's Guide to the Kaleidoscope Model: Practical Tools for Understanding Policy Change](#). Feed the Future Innovation Lab for Food Security Policy Research Paper No. 46.
- [Practitioner's Guidebook and Toolkit for Agricultural Policy Reform: The P.M.C.A. Approach to Strategic Policy Engagement](#). Feed the Future Innovation Lab for Food Security Policy Research Paper 49.
- [The Integrated Framework for Gender Analysis of Nutrition Policy](#). Feed the Future Innovation Lab for Food Security Policy Research Brief 32.

The first elaborates on four types of tools that can assist others in testing the KM in any context or policy area. These tools include policy chronologies, stakeholder inventories, policy system schematics, and circle of influence graphics. The second is a practitioner's guide, called the PMCA approach, which enables policymakers to identify *ex ante* those policies that are more amenable to reform and should be prioritized as opposed to those that are more intractable due to political economy and associated considerations.<sup>2</sup> The third provides an integrated framework for gender analysis of nutrition policy and was developed as a tool for influencing gendered policy change. One of the team members has also developed a framework that integrates the KM into the methodology for national agriculture and food security plan assessments<sup>3</sup>. The adaptability of the KM and the application of its associated tools is one of its major strengths.

<sup>2</sup> The PMCA acronym stands for **P**olicy inventory, **M**apping of stakeholders, **C**onstraint identification, and **A**ctions.

<sup>3</sup> [http://www.up.ac.za/media/shared/661/ZP\\_Files/NAIP/nafsjp-reviews-2016-fsn-guide-january-2017.zp128622.pdf](http://www.up.ac.za/media/shared/661/ZP_Files/NAIP/nafsjp-reviews-2016-fsn-guide-january-2017.zp128622.pdf)

The KM and its associated tools have been broadly communicated and disseminated to a vast number of audiences. Within the international development and donor community, relevant events have included a USAID Agrilinks webinar (February 2015), a [seminar to the World Bank's agricultural community of practice](#) (February 2016), a [regional research findings validation workshop in Pretoria](#) (September 2016), an [IFPRI policy seminar](#) (March 2017) with discussants from the World Bank and Cornell University, and the [CAADP Learning Event in Kampala](#) (May 2017<sup>4</sup>). Government policymakers, the private sector, and civil society have been exposed to the KM during the annual meetings of the [Regional Network of Agricultural Policy Research Institutes](#) (RENAPRI) in Maputo, Mozambique (October 2015), at a Public-Private dialogue in Kathmandu, Nepal (January 2016), in South Africa's parliamentary Joint Portfolio Committee on Agriculture, Forestry and Fisheries; Health; Social Development and Mineral Resources (February 2016), and at a Feed the Future Nigeria Agricultural Policy seminar in Abuja, Nigeria (July 2016).

To field test the KM, the C3 team engaged in extensive fieldwork and process tracing in a dozen African countries across five different policy domains. Initially, three cases of input subsidies were conducted in Ghana, Tanzania, and Zambia, while work on micronutrient policies occurred in Malawi, South Africa, and Zambia. Subsequently, at the request of the FSP-supported Nigeria Agricultural Policy Project (NAPP), a study was also conducted on land governance reform in Nigeria, which revealed particular nuances of policymaking under a federal setting. This application of the KM included an analysis of differential reform of land tenure regularization across six Nigerian states (Cross Rivers, Kaduna, Kano, Katsina, Jigawa, and Ondo). The KM also informed a series of seven country case studies aimed at exploring the highly variable rates of regional pesticide policy implementation in West Africa. Another application of the KM included assessing gender in nutrition policy.<sup>5</sup> The analysis of gender mainstreaming in nutrition policy in Malawi was conducted as part of a review of the policies and became an integral part to the review of the Malawi National Agricultural Investment Plan (NAIP).

Throughout these many applications, the KM has shown its versatility across a wide range of policy domains and country contexts. Its application in different settings has demonstrated that use of the KM makes it possible to identify food security and nutrition policy process dynamics and points of intervention not only across countries but also at the sub-national and regional levels. Publications summarizing the KM model and case study applications include:

- Resnick, D., S. Haggblade, S. Babu, S.L. Hendriks, and D. Mather. 2018. The Kaleidoscope Model of policy change: Applications to food security policy in Zambia. *World Development* 109: 101–20.
- Steven Haggblade, Suresh Babu, Sheryl Hendriks, David Mather, Danielle Resnick. 2017. What Drives Policy Change? Evidence from Six Empirical Applications of the Kaleidoscope Model. [Feed the Future Innovation Lab for Food Security Policy Research Brief 31](#). East Lansing: Michigan State University

In terms of training and capacity development, C3 team members have led approximately 13 capacity-building events that exposed stakeholders to the KM and its tools. Such events have been held globally, in locations ranging from Nepal, Myanmar, India, Malawi, and South Africa. The KM is also now a regular feature of USAID's training events with its mission staff. The C3 team's commitment to journalist training on food security issues is particularly notable since the engagement of developing country journalists on complex issues, and their exposure to dynamics of the policy process can, in the long-term, improve the quality of knowledge and engagement that citizens can have with their government on these issues.

Over the past six years, the FSP C3 team has also participated in making presentations at high-level policy events and provided input in policy engagement platforms. Some examples include:

- Presentation to the joint parliamentary portfolio committee on agriculture, health and rural development, February 2016 (South Africa)

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<sup>4</sup> <https://agrilinks.org/blog/driving-change-nutrition-policy-requires-confluence-number-key-elements>

<sup>5</sup> <http://www.up.ac.za/media/shared/661/policy-brief-17-gendering-malawis-national-nutrition-policyfinal.zp102430.pdf>

- Feedback and input into the food security and nutrition national plan, 2015-2016 (South Africa)
- Providing inputs into the draft early childhood development policy, 2016 (South Africa)
- Participation in the consultative workshop on gendering nutrition policy, 2016 (Malawi)

## Major Outcomes/Utilization of Research Outputs

With work conducted under C3, FSP has made two main contributions. First, it has provided empirically grounded guidance to national governments, regional policymakers, and development partners on the key ingredients for facilitating improved agricultural and food security policies. FSP's research and outreach under C3 has contributed to enhanced understanding of policy processes that lead to effective policy change, the nature of capacity required for generating evidence, effective policy advocacy, and an institutional architecture that enables transparent and inclusive policy changes. Such an understanding can help policy makers and development partners identify the bottlenecks in the policy process and intervene accordingly to strengthen the policy system. The research is helping to uncover, among other things, when research is most likely to have an impact on policymakers, what set of stakeholders need to be persuaded for improved food and nutrition policies to be adopted, and whether and how resource constraints and major political and administrative shifts shape the opportunities for reform.

Secondly, it has developed robust research methodologies and tools aimed at enhancing the capacity of civil society, national governments, donor partners, and researchers to both engage in and study the policy process. The early outputs from this component have fed into African Union and ECOWAS efforts on policies and institutions as well as Africa Lead's revision of its Institutional Architecture Assessments. The C3 team's KM, research and policy tools, and associated case studies have served as a global public good to researchers, donors, governments, civil society, and the private sector. The C3 team's commitment to capacity building, especially journalist training on food security issues, is particularly notable since the engagement of developing country journalists on complex issues, and their exposure to dynamics of the policy process can, in the long term, improve the quality of knowledge and engagement that citizens have with their government on these issues. The model has been integrated into the curriculum of the Collaborative Masters in Agricultural and Applied Economics at the University of Pretoria, and into technical support to the CAADP process.

The indirect impact of these applications is significantly larger, with changes influenced in the Malawi nutrition policy and strategy as a direct result of the gender analysis work, potentially reaching the next generation of children. Also, the integration of elements and insights from the South African micronutrient policy case into the National Food and Nutrition Security Plan of Action, 2017-2022, will have widespread future impact and is an example of FSP's work influencing policy.

Some extensions of the KM's framework and tools have also been directly applied to study and interrogate whether the heavy focus on traditionally marginalized groups, such as women, may actually undermine broader food security objectives. For instance, some C3 team members have analyzed the extent to which nutrition policies truly mainstream gender by examining whether there is a conducive environment for participation by male policy allies and the extent to which the inclusion of men in the preparation and rollout of such policies may prove critical for achieving major nutrition goals<sup>6</sup>.

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<sup>6</sup> <https://theconversation.com/when-men-tackle-mother-and-child-health-lessons-from-malawi-69501>

The KM is having positive and significant downstream impacts on other initiatives that are aimed at enhancing growth and environmental sustainability. This includes analytical, technical and capacity support to the African Union Commission's 20 priority countries, including Malawi in the current round of CAADP National Agricultural Investment Plans (NAIPs). Moreover, the C3 team has interacted continuously with DAI's work on the Institutional Architecture Assessments (IAA) to establish how the KM can inform and refine the IAAs. Relatedly, the KM has proved useful to the Bureau of Food Security's brainstorming on an institutional architecture indicator that would inform a broader set of country graduation criteria intended for the 12 countries targeted by the forthcoming Global Food Security Strategy. Moreover, the World Bank and IFPRI staff have reportedly used the model as a base for assessing their program impacts and making funding decisions (see Box 3).

**Box 3. Example of the application of the Kaleidoscope Model: Testimonial of an IFPRI researcher**

*"In investigating factors behind policy influence successes of IFPRI's country programs, I found the Kaleidoscope Model to be very useful in helping to structure the information we received from lengthy interviews. In particular, it was helpful to understand the importance of factors in control of the country programs (e.g., high-quality research) and the larger number of factors mostly outside of their control, to which researchers need to adjust and adapt."* – Frank Place, Current Director, then Deputy Director, CGIAR Research Program on Policies, Institutions, and Markets (PIM), 2017

## Lessons Learned, Challenges and Opportunities

Several key findings emerge from the various strands of research, outreach and capacity-building activities conducted by FSP under C3 that have lessons and implications for future policy-focused efforts. Key lessons from the case studies are the importance of the private sector and donors in the implementation or other aspects of food security policy. For example, several case studies have highlighted the significant role that the private sector plays in implementing food security policy, whether through delivering subsidized fertilizer, producing fortified foods, or generating required software for land registration. This suggests that government-centric models of policy processes need to be expanded to consider the growing role of nongovernment entities. Case studies also indicate that in countries that are more dependent on foreign aid, donors play a significant role in raising awareness of problems, influencing design modalities, shaping cost-benefit calculations, and providing required resources and technical support. Yet donor engagement is insufficient to generate change when there are powerful opponents to reform among the political elite. Finally, FSP's research has also indicated that reform episodes have been more frequent in the arena of fertilizer subsidies than in other domains studied; the low visibility of micronutrient interventions and the complexity of land governance reforms have failed to generate the same levels of sustained political and public attention needed for the implementation of policy reform. Thus, more attention needs to be devoted to other domains of public policy that are potentially important to achieve the goals of enhancing food security and nutritional outcomes.

In selecting the case studies to apply the KM model, care was taken to select domains and topics that exemplified different types of policy change, different implications for policy engagement, visibility in terms of benefits for stakeholders, degree to which they involve inter-ministerial cooperation, and whether they have long- or short-term impacts on beneficiary populations. Substantial effort went in the planning of case studies. However, in some instances, the FSP team faced challenges in completing the tasks as planned. For example, following the completion of a broad inventory of policy system reform efforts, the C3 team had selected the Big Results Now (BRN) model for specific study to see how it was exported from Malaysia to Tanzania, South Africa and elsewhere and how implementation changed as a result. However, after extensive preparation for the first of these case studies, during the final planning consultations prior to travel to Tanzania, the FSP Tanzania country team requested that the C3 team indefinitely postpone this activity due to acute local political sensitivities. Tanzania's BRN, sponsored by presidential initiative, quickly became taboo under a new incoming administration. In this instance, the C3 team acceded to the wishes of the country team to avoid provoking sensitive issues that might compromise otherwise strong ongoing local policy engagement. This example illustrates the challenges of doing research on a policy topic that is politically sensitive and the need to be open to the possibility of incurring sunk costs that go in the planning and preparation of policy research that sometimes may not yield any outputs.

By contrast, the work on devolution in Ghana was widely supported by MoFA, which provided access to their district directors of agriculture across all (then) ten regions of the country for the C3 team to survey. Consequently, the research informed MoFA about how the transfer of agriculture responsibilities to local government affected both staff morale and local service provision. The findings emphasize the growing role local governments play in African agriculture and have been recognized by other donors, such as GIZ and Global Affairs Canada, the latter of which has requested subsequent research on how devolution affects the efficacy of their budget support to agriculture in Ghana.



## COMPONENT C4: ENGAGEMENT IN GLOBAL POLICY DEBATES ON FOOD SECURITY

### Overview of Activities

Throughout the implementation of this Innovation Lab, FSP's Component 4 (C4) activities have focused on research and analysis to deepen and strengthen the evidence on which global food policy debates take place. FSP's work under C4 was organized around the theme of *transforming agri-food systems in Africa and Asia* and addressed the entire agri-food system, including policy issues related to “upstream” on-farm production and practices (C4a), and policy issues related to “downstream” players along the value chain, from the farm gate to the plate (C4b). The “upstream” and “downstream” teams under this global component developed a complementary and largely consistent “story” about the promises and challenges facing smallholder farmers, small entrepreneurs, and consumers in rapidly changing agri-food systems.

The topics addressed under C4a are highly inter-related and range from changing patterns of farmland ownership and use, implications of rising land prices in many areas of Africa, shifts in technologies (e.g., mechanization), fertilizer promotion strategies, sustainable intensification issues, youth employment, and market responses to these changing dynamics. Research and policy engagement activities initiated in Years 1 to 3 focused on these topics. In Year 4, the first two themes were merged to address the role of fertilizer policy as part of broader sustainable intensification strategies. In the last two years, two new activities were initiated on seed systems policy and the role of financing to enhance food security and nutrition.

A special focus of the work under C4b over the past six years has been on documenting the rapid changes underway in agri-food systems (in the midstream and downstream) so as to help policy-makers design programs and policies that promote rapid but equitable growth. Key drivers of this transformation documented in the literature are rapid growth in per capita incomes and urbanization, which drive the rapid rise in demand for food through markets as opposed to own production, and the rising demand for processed and perishable foods as opposed to grains and staple root crops. Together, these forces have created enormous agribusiness opportunities for local entrepreneurs, which promise to make important contributions to continued growth and to employment. However, this rapid transformation has also created challenges of promoting the ability of small- and medium-sized food processing firms to compete in local and regional markets. Their competitiveness depends on the overall enabling environment within which they operate. Thus, C4b activities addressed key policies and programs that support the contribution of “downstream” actors to agri-food system transformation.

### Accomplishments

FSP research under C4a and C4b has made major contributions to the body of knowledge on: (a) agri-food system transformation; and (b) policies to promote agricultural intensification and conducive input and factor markets. It has resulted in many scholarly outputs in the form of research papers, journal articles, and books that have influenced policy debates and will guide future policy research. FSP's research contributions on the theme of agri-food system transformation in the upstream and downstream, and agricultural policies to promote intensification and inclusive markets are highlighted in Synthesis Reports [I](#), [II](#), and [III](#), and summarized here under the following major themes: (a) Agri-food system transformation, encompassing farm structure change in the upstream, diet transformation on the demand side, and quiet revolution on the supply side in the mid- and downstream; and (b) Changes that affect farm production, encompassing intensification, inputs, and factor markets.

#### ***Agri-food system transformation***

*Farm structure change in the upstream and its implications.*

Evidence from research by C4a team suggests that a major new trend affecting African agri-food systems is the changing structure of land ownership. Research in several African countries shows the rapid rise of a medium-

scale farming sector (defined as farm holdings between 5 and 100 hectares). In Ghana, Kenya and Zambia, the medium-scale farming sector already controls more land than do large-scale investors and, in Zambia and possibly also Ghana, they now control more land than smallholder farmers. Within the past decade, the amount of agricultural produce that these farms contribute to national output has also risen rapidly. In Tanzania and Zambia, medium-sized farms now account for roughly 40 percent of the national marketed agricultural produce. The importance of medium-scale farms appears to be greatest in countries with relatively abundant land. While national development policy strategies and investment plans within the region (including CAADP) officially regard the smallholder farming sector as an important vehicle for achieving agricultural growth, and poverty reduction objectives, the meteoric rise of emergent farmers warrants their inclusion.

Research by FSP C4a team has shed light to the causes and consequences of changing farm structure, and how this is likely to affect the agricultural transformation in Africa (see [Synthesis Report II](#)). Research suggests four main reasons for the changing farm structure: the rise of land markets, the recent era of relatively high global food prices, agricultural policy reforms, and the growing influence of relatively wealthy and politically influential “emergent farmer” interests. The rise of medium-scale farms is affecting the region in diverse ways that are difficult to generalize. On the upside, emerging medium-scale farms are sources of dynamism, technical change, and commercialization of African agriculture. They attract private investment in crop buying and input supply, and in doing so they improve market access conditions for all surrounding farms regardless of scale. They also may make it more feasible for governments to raise taxes from the farm sector. However, on the downside, medium-scale land acquisitions may exacerbate land scarcity in favorable rural areas, raise land prices, and crowd out young peoples’ access to land for farming. Medium-scale farmers tend to dominate farm lobby groups and can thus influence agricultural policies and public expenditures to agriculture in their favor.

Research also points to some warning signs of this changing farm structure. For example, the rising acquisition of land by outside investors reduces the stock of land under customary tenure that will be accessible to current and future generations of local people. To the extent that traditional authorities are selling off land to outside investors who can afford to pay generous prices, their actions are raising the price of land, reducing the ability of young rural people to acquire land, and increase their likelihood of exiting farming or migrating out of the area. Research indicates that smallholders’ perceived tenure security is negatively correlated with the degree of local land market activity. Households residing in communities with more active land markets perceive greater risk of losing land through private disputes or government expropriation. As the customary land tenure system comes under greater stress with the increased commodification of land, the protections that traditional systems historically have provided to safeguard individuals’ rights to land are starting to break down.

On the whole, the rise of land markets is creating a new class of landless workers in Africa, who sell their land informally to others and become dependent on the local nonfarm economy for their livelihoods. These land purchase market developments produce winners and losers in the short run, and the evidence is not fully clear whether the short-run losers become long-term winners through processes of economic transformation and growth. Policymakers will need guidance on how to minimize these hardships, protecting those who are most vulnerable, as economic transformation gradually raises living standards for the majority of the population.

#### *Diet transformation on the demand side and its implications.*

FSP research under C4b has documented the rapid diet transformation taking place on the demand side (see [Synthesis Report III](#)): It has highlighted four ways in which diets are changing in many parts of Africa and Asia. First, diets are increasingly based on purchased foods. For example, research has found that 40% to 50% of the value of all food consumed by rural households in East and Southern Africa was purchased, not produced on their own farms. In rural Nigeria, this share is around 70%, and in Bangladesh it reaches 80%. Second, diets are becoming more perishable with animal foods and fresh produce making up over half of all consumption in Africa and Asia. Third, diets are becoming more processed. Although processing *per se* does not imply change in diet if processing is just a labor-saving step in preparing traditional foods. But as transformation proceeds, processing comes to involve multiple food ingredients (e.g., basic packaged bread with no preservatives), food additives (that same bread with corn syrup, preservatives, and added vitamins), and often chemical processing to ensure homogenization or agglomeration for attractiveness to consumers. These foods are entirely distinct

from traditional staples and have profound implications for diets and health. Fourth, foods are becoming more prepared and consumed away from home.

This diet change brings two broad implications. One is dramatic growth in agribusiness opportunities. The second is a rapidly changing mix of nutritional challenges. The early stage of transformation brings improvements in nutrition, but increased consumption of highly processed and unhealthy food. This is driving rapid increases in overweight and obesity and associated non-communicable diseases. At the same time, micro-nutrient deficiencies persist. As a result, nearly all developing countries now face escalating levels of diet-related chronic conditions such as cardiovascular disease and diabetes even as they struggle to eliminate problems of undernutrition.

#### *Quiet revolution on the supply side and its implications*

FSP research under C4b has also documented that in most countries, the diet transformation and its associated urbanization and income growth are changing the structure and behavior in the midstream and downstream. This segment of the agri-food system has largely escaped the attention of donors and government policymakers, and there was little empirical research on this emerging phenomenon a decade ago. The body of knowledge generated by FSP's C4b team has brought to light this quiet revolution happening in the "hidden middle" of the African continent's agri-food systems, meaning firms (ranging from small to large) in the wholesaling, processing, and logistical operations between farming and retailing.

FSP research has shown that this quiet revolution in the wholesaling, processing, and logistical operations is changing supply chain configurations in three ways, which are generating benefits but also creating new concerns. First, supply chains have lengthened both spatially and temporally, allowing food to be sourced from more distant areas, and stored longer. Second, rural–rural supply chains have emerged and become more dense and longer, due to rising reliance on markets in rural areas. Third, urban–rural chains have emerged to distribute locally produced and imported foods to rural towns and villages. Consumers see three main benefits from these changes. First, seasonality of food supply declines, as food is sourced from broader geographic areas including imports. Second, consumers see lower real prices as average scale of operation of firms at various levels in the system is rising and driving down unit costs. Third, the diversity and convenience of foods increase greatly, as firms experiment with products to meet consumer demand and generate a profit. Entrepreneurs benefit from rapid growth in demand for value-added products, driving a huge increase in the number of micro-, small-, and medium-size enterprises in the midstream. Farmers benefit from better market access due to improved public infrastructure and private investment in input supply and in output trading at scale that reduce costs.

These changes also bring new challenges beyond the already-discussed nutritional concerns. First, food safety becomes a much greater concern. On the supply side, the lengthening of supply chains typically occurs well before meaningful improvements in water and sanitation in public marketing infrastructure, or in regulatory capacity to deal with these new challenges. On the demand side, consumers have more income and education and are thus more likely to focus on food safety. A second concern relates to the employment effects of the increasing agribusiness opportunities: as firms consolidate and grow larger, they employ much less labor per unit of output. Thus, a too-rapid rate of consolidation will decrease the employment contribution by the agri-food system. Policies that help micro firms grow in size, and that favor competitive response by small- and medium-size firms, can generate substantial employment within the hidden middle.

Evidence generated by FSP has also shown that the bulk of Africa's growing urban food consumption is supplied by domestic processors and traders. The transformation of local agri-food systems has nonetheless increased trade in food products. For example, since 1990, the share of net food imports in total domestic quantities supplied has risen from 10 percent to 14 percent in Africa. While some policy makers see the increase in net import share as unambiguously negative (drawing down scarce foreign exchange reserves and capturing market share from local farmers and food processors), it also presents several positive opportunities, including greater income and employment opportunities from potential increases in intra-African trade and the processing, marketing, and transport opportunities associated with increased food trade in general.

### ***Changes that affect farm production and factor markets***

#### *Agricultural intensification and inputs*

The agri-food system transformation highlighted above has occurred concurrently with changes in farm production practices. It has accelerated adoption of more input-intensive practices, including productivity-enhancing purchased inputs, such as fertilizer and improved seed, as well as labor-saving technology, such as herbicides, mechanized land preparation, and mobile mechanical threshers. FSP's research under C4a has focused on documenting these changes and its policy implications.

A major focus of C4a in the initial years was on policies that promote *fertilizer* use by African farmers. Many governments were seeking technical support to help re-design their input subsidy programs. FSP activities under C4a focused on updating the evidence on the benefits of market-driven approaches to input distribution and the benefits of considering fertilizer promotion from a holistic standpoint that aims to help farmers to raise their fertilizer use efficiency rather than just increasing the amount of fertilizer used. C4a research emphasized the importance of attending to soil quality and farm management issues in order to raise crop response rates to fertilizer, raising the profitability and effective demand for fertilizer and other inputs and the development of commercial input markets.

*Mechanical technologies*, including tractors, are one of the critical technological enablers of rural, agri-food system transformation. They complement other agri-food technologies and institutions. The mechanization research under C4a investigated three issues: (a) how mechanization (tractors in particular) is used and contributes to smallholders, who may not naturally gain through complementarity between land and mechanical technologies? (b) what are supply-side issues for mechanization in sub-Saharan Africa (SSA)? and (c) how can we influence policymakers? FSP's efforts on addressing these questions have led to several empirical case studies, a book (soon to be published), south-to-south learning events, and policy engagements in African countries, specifically in Ghana and Nigeria. Research since the late 1990s has shown that mechanized land preparation, tractor hire, and mechanical threshing services have grown substantially in Africa, propelled by tightening rural labor markets and emerging medium-sized farms unable to manage critical planting and weeding operations with hand labor. Policymakers in at least nine African countries have focused on government-subsidized tractor rental schemes, which generally have failed. Private tractor owners have been more successful; for example, by 2016, roughly one-third of crop-producing households in Ghana used mechanical tillage for land preparation, much of it through hiring tillage services from tractor-owning farmers.

In parallel, farmers' use of *herbicides* has increased rapidly in many parts of Africa since about 2005, in response to rising costs of labor for hand-weeding and simultaneously falling global prices for newly available generic herbicides. Research conducted by FSP has shown that by 2015, cereal farmers in southern Mali applied herbicides on more than half of their maize and sorghum plots. In doing so, they control weeds at half the cost of hand-weeding. This growth in herbicide use has emerged without widespread subsidies. Nonetheless, the growing use of pesticides, including herbicides, insecticides, and fungicides, has drawn attention to feeble regulatory monitoring of product quality, unsafe usage of these products (with implications for food safety), and their potentially adverse impacts on the local environment.

Given the importance of *seed* as an input and as a mechanism to deliver improved genetics to increase crop productivity, some attention was also devoted in later years to issues of access to quality seed. FSP's research on this topic was done collaboratively with the CGIAR Program on Policies, Institutions, and Markets (PIM). The focus was on filling knowledge gaps on farmer demand for quality seed, and on quality assurance system and related policy/regulatory issues such as seed certification, cross-border seed trade, and integrating seed policies in national action plans for climate-resilient agriculture. Research shows that standard policy interventions implemented in the past to increase varietal adoption, varietal turnover, and quality seed have played a historic role in seed system development, which has led to increased use of improved varieties and availability of quality seeds to farmers, especially for some staple cereal crops. But these policies are not enough to accelerate the pace of development in the face of climate change, agricultural commercialization, and

structural transformation that is affecting smallholder farmers in developing countries. More innovative policy interventions are needed to keep the pace of seed systems development on track.

#### *Changes in factor markets and its implications for youth employment*

Research by the C4a team has documented that rural population growth and associated land pressures have resulted in fewer rural youth inheriting land, causing land markets to become a major pathway for engagement in farming by young Africans. The growing class of medium-scale farms (noted above) has been facilitated by the increasing commercialization of land, whereby land formerly allocated to local people by traditional authorities increasingly is being sold if there are buyers willing to pay the right price for it. More broadly, FSP research in a diverse range of settings has shown how titling reforms and greater security of property rights, especially for women and youth, can encourage long-term investments in land that contribute to agricultural productivity growth. For instance, in Nigeria, the larger the size of the expected land inheritance, the more likely that youth will stay in agriculture rather than migrating or getting involved in nonagricultural activities.

Food system transformation has triggered significant changes in *labor markets* as well. Data suggest that since 2000, the share of the labor force engaged in farming has declined in almost all African countries. This is true of both young people and the total labor force. Empirical estimates project an increase in the share engaged in off-farm segments of the agri-food system, and an even greater increase in the share engaged in work entirely outside the agri-food system. Within the agri-food system, research projects employment in food preparation away from home to grow most rapidly in percentage terms, followed by food manufacturing, and then by marketing, transport, and other agri-food system services. From a policy perspective, the size distribution of enterprises that capture growing market shares in farming, input supply, and agro-processing strongly shape employment outcomes. Because women play major roles in most food processing and in the preparation of food consumed away from home, pro-employment policies in these areas of the agri-food system tend to favor gender equity.

## Major Outcomes/Utilization of Research Outputs

FSP C4a/C4b research findings highlighted above have slowly but steadily diffused to numerous public, private and civil society groups in Africa and around the world. The results and findings of the research conducted on agri-food system transformation, changing farm structure, input subsidies, youth employment, mechanization, and land policies are slowly shaping the nature of the discussions on African agricultural and food policies in Africa. The C4a and C4b teams targeted four sets of stakeholders: host country governments, bilateral and multi-lateral donors, the private sector, and civil society, through various outreach events at national, regional, and global levels. Their work also promoted and built capacity for research in this area with local research institutions. Some examples of realized outcomes include:

- Informal discussions and formal presentations engaging African policy makers from the region:
  - **At the national levels**, C4a/C4b teams have worked hand-in-hand with country programs to mainstream the messages emerging from this research and to begin achieving concrete policy impact. For example, the C4 team has engaged at national level with (a) policy-makers in and beyond the agricultural sector, (b) bilateral and multi-lateral donors, (c) private sector, and (d) research think tanks and civil society in countries like Tanzania, Zambia, Malawi, and Nigeria. For example, to communicate the findings from mechanization research, the team organized meetings with various government officials in Nigeria, including the Minister of Agriculture and Rural Development, as well as high-ranking aides, where important messages were communicated including the linkages between mechanization adoption and plant-breeding systems, and in Ghana, to share lessons from its recent program where Brazilian tractors were provided at concessional loan terms, combined with various capacity-enhancing components.
  - **At the regional level**, C4b has engaged with ReSAKSS through its Annual Trends and Outlook Reports (i.e., 2015) and C4a with AGRA on their annual continental conferences (e.g., the African Green Revolution Forum) that bring together selected African policy makers. This past year, C4b



team provided leadership to the IFAD Rural Development Report 2019, which drew heavily on both the diet change and employment work that has been done under C4. This report was released by the Alliance for a Green Revolution in Africa (AGRA) at its signature annual conference, which is attended by policy makers from around Africa and globally.

- **At the global level**, both C4a and C4b have formally engaged through roundtables, invited chapters/reports, keynote speeches, invited talks, invited reviews, and informal requests with USAID/Washington, IFAD, FAO, World Bank, The MasterCard Foundation, the Chicago Council on Global Affairs, the CG system's A4NH program (Agriculture for Nutrition and Health) and PIM. As an example of FSP's recognition by these global organizations, a C4a team member led the 2018 Chicago Council Report on *Youth for Growth* and was a featured participant at the 2018 Chicago Council Global Food Security Symposium.
- Emerging understanding among researchers (both African and international), leaders of Pan-African organizations, and policy makers of the potential role of input subsidy programs to contribute to climate-smart objectives resulting from C4a research and outreach activities. FSP's research is reemphasizing the need for much greater production and utilization of organic matter in input subsidy programs to increase crop response to inorganic fertilizers. As another example, FSP's C4a research findings are also gradually influencing current thinking on the need for continued agricultural productivity growth as part of a comprehensive youth employment strategy in Africa. Observed declining employment shares in farming are often interpreted as a sign of the "declining role" of agriculture. This interpretation, however, is a source of confusion that fails to distinguish between the causes and effects of the dynamism. Our research that identifies agricultural productivity growth as the source of the on-going dynamism in Africa's employment structure is gradually changing the erroneous perception of a declining importance of farming. It has provided many public, private, and civil society groups including the Chicago Council on Global Affairs, GIZ, International Fund for Agriculture (IFAD) and Alliance for a Green Revolution in Africa (AGRA) an empirical basis to advocate for and emphasize continued investment in agricultural productivity growth in their programming. Examples of specific outcomes include: Influencing the design of several development partners' youth strategies through engagement with the International Labor Organization, the German Development Agencies (e.g., GIZ), IFAD, the Chicago Council, and the African Development Bank.
- Specific policy engagement activities involving the RENAPRI network: RENAPRI researchers are now addressing and integrating these findings in their own research and outreach work, particularly in Zambia, Tanzania, Malawi, and Kenya.
- FSP researchers have liaised extensively with Pan-African organizations and national governments through collaboration on country studies examining progress in the design and implementation of land policies to protect land rights of individuals and local communities in selected pilot countries.
- Some FSP countries asked for guidance about the appropriate role of medium-scale investor farms, what crops they are growing and selling, and whether they are contributing to agricultural transformation. For example, the Tanzania government and development partners requested ASPIRES assistance in producing a paper focusing on medium-scale farms in Tanzania with a view to including the findings in upcoming Tanzanian policy discussions and national plans. FSP produced a draft paper in response to these requests that was finalized in late 2018, accepted for publication in *Development Policy Review*, and also heavily drawn upon in a 2019 World Bank report, *"Transforming Agriculture, Realizing the Potential of Agriculture for Inclusive Growth and Poverty Reduction."* Also, initial results were presented at the 4th Annual Agricultural Policy Conference in mid-February 2018 and a combined team of World Bank and ASPIRES' researchers toured medium-scale farms to get a better understanding of their characteristics and potential.
- C4a researchers have also worked together with USAID/land policy researchers to integrate their findings on the causes and consequences of changing farmland distribution patterns in Africa. [Synthesis Report II](#) is an example of this collaboration with USAID/land team.
- Coverage of some of the research conducted under C4 has also received media attention. For example, land research by C4a team has been featured prominently in mainstream media including a front-page article in the *New York Times*, and two articles in *The Economist*. This is an evidence that FSP's research

findings about the rise of medium-scale farms are gaining traction and that policy discussions need to consider their impacts on youth access to land and broader rural transformation processes.

- With an attempt to scrutinize potential flaws in blanket solutions to address issues of tenure insecurity, FSP-funded empirical research from Ghana, Nigeria and Mozambique show that, overall, collective tenure risk (expropriation or land eviction) are the real threat to women’s tenure security while individual tenure risks (ownership, inheritance, border dispute, etc.) are more of a threat to tenure security of men. However, a more gender-disaggregated analyses (not only comparing male-versus female-headed households but also with female as a spouse) show a reversal to the story of what drives tenure insecurity as the results show: (1) Females as a spouse (married women) fear more private tenure risks (signs of intra-household land grabbing); and (2) Female heads (single/unmarried women, widows, divorce/separated) mostly fear private tenure risks in areas with relative vibrant economy and developed land markets—a sign of how increasing land scarcity and/or land values erode (adversely affect) women’s sense of tenure security in contrast to their male counterparts as the former is usually considered to be the residual claimant in such a high-stress situation under the customary tenure system. Results also show that land-related legal awareness seems to be more significant in dictating (positively) perceived tenure security of women as compared to their male counterparts. This research has had the following results: (a) the Nigerian Systematic Land Tenure Regularization process has been implemented using parcel-based titling instead of issuing titles at the household level (avoiding the usual practice of issuing titles in the name of the male heads); and (b) the new Africa-wide guideline/framework for Monitoring and Evaluation of Land governance in Africa includes a proxy or indicator (endorsed/validated by 10 member states of the African Union Commission [AUC]) “IND 44: Proportion of women with knowledge of land laws and procedures.” This is one way of tracking progress in enhancing good land governance at a country as well as continental level.
- In Ethiopia, FSP researchers with a longstanding portfolio of work on land governance have had substantial input into potential reforms. Due to a strong reputation and in-depth knowledge of the issue and the country’s policy environment, FSP researchers were tasked to revise a draft land policy statement prepared by the national donor working group on Rural Economic Development & Food Security (REDFS). Key recommendations included that Ethiopia should revisit the current restriction on land rental markets as specified in the federal land proclamation, which imposes size and durational restrictions in order to discourage long-term migration to urban areas. Building on existing analyses showing that the policy was having the opposite effect on migration, FSP research recommended that the proclamation be amended to allow for leases with longer durations, as some regions in the country were already doing, to allow for more efficient utilization of land and also voluntary defragmentation of land via the land rental market.
- The activities under the mechanization component have also influenced governments’ mechanization programs in Ghana and Nigeria. In Ghana, recommendations to improve the country’s flagship program, AMSEC (Agricultural Mechanization Services Center), were based on the research conducted in a close collaboration with the officials from the Ministry of Food and Agriculture. Some of these recommendations were included in the AMSEC phase II program started in 2016, e.g., the program broadens its support to diverse types of service providers, puts greater emphasis on training, maintenance and spare parts supply, and pays more attention to multifunctionality for enhancing utilization rates of machines. A mechanization study-tour in Bangladesh organized under FSP also influenced the officials from Nigeria’s Federal Ministry of Agriculture and Rural Development to develop a program promoting more affordable smaller tractors including power tillers, for review by the Minister.

## Lessons Learned, Challenges and Opportunities<sup>7</sup>

Research conducted by FSP under Component 4 had the following characteristics and benefits:

- **It was mostly researcher driven:** Most of the research conducted under C4 falls under researcher-led policy research, which built on and leveraged many years of work by a team of disparate researchers

<sup>7</sup> This section borrows heavily from the ideas expounded in the following blog post by some of the researchers involved in C4 (Jayne, Reardon, Maredia, and Tschirley). <https://www.agrilinks.org/post/why-influence-agricultural-policy-research-probably-greater-we-think>

from a consortium of three institutions. FSP was able to leverage the long-term and ongoing research and scholarship (funded from other sources) of a range of researchers and reap the benefits at low marginal cost.

- **It was based on long-term efforts and investments in data collection:** the C4 team's ability to provide evidence-based policy guidance in response to government priorities on a wide range of topics required long-term efforts to collect and analyze data.
- **It leveraged individual researchers' networks:** FSP research under C4 facilitated the cross-country pollination of ideas through individual researchers' networks, enabling research and analysis in one country to spread through networks represented by local researchers in other countries. Country teams under Component 1/2 also benefited from these networks of C4a/C4b researchers through south-south interaction and between north-south research networks.

Undertaking research and policy analysis on topics identified by policy-makers ("demand-led" research) is a key activity of programs that are designed to contribute to improved policy making. However, an important lesson from FSP's six and a half years of experience in doing policy research on globally relevant themes is the **important role that researcher-led policy research** plays in not only extending the knowledge frontiers, but also in disseminating the results and outputs through individual networks to the targeted audiences. An example is **discovery-oriented research** that anticipates the major challenges of tomorrow and alerts governments to the need to respond proactively rather than reactively. Some of the research under C4 focused on discovering under-appreciated facts about the ways that agri-food systems work or not (i.e., dispelling myths), which can profoundly alter policy-makers' views of what the challenges are and how they should be addressed. Research by C4a on the rising middle-scale farmers and by C4b on the quiet revolution in the supply chain of the food systems in Africa and the changing diets are examples of such discovery-oriented research. None of this was well understood 10 years ago, and very few African policy makers were asking how they should be responding to these developments. FSP research, analysis and outreach efforts have pushed these issues to the forefront of development policy agendas.

A challenge, however, for justifying investment in long-term discovery-oriented policy research is that it is difficult to track impacts and attribute them to this kind of research. The impact pathway of such policy research is not as straightforward as for demand-driven research, which involves the following measurable steps. First, researcher engage with policy makers to learn what their priority policy challenges are. Then, researchers respond to policy makers' priority issues and undertake "demand-led" analysis to address them. Next, research findings feed into policy engagement activities, providing new information that policy makers would consider and discuss with other policy analysts and stakeholders, which then potentially leads to policy impact.

Although some demand-led research (especially under C1/C2) has indeed generated policy impact in this way, much of the research under C4 has been researcher led and discovery oriented with no such measurable linear pathway to track the impact of research from a scholarly output to policy change. Arguably, many of the world's most impactful ideas are "supply driven," generated by scholars and diffused via networks of other scholars, research institutes, development agencies, social media, conventional news agencies, civil society, the private sector and ultimately governments. By the time these ideas get to governments, they are often considered well-accepted facts, which makes it difficult to attribute the policy change that eventually occurs over time to any specific research.

In conclusion, even though much of the research conducted under C4 was researcher driven and discovery oriented, such analysis may have a huge impact if other scholars pick up on these points and spread similar messages that get assimilated into mainstream views. This is the potential return from investing in policy research of the type conducted under the FSP C4 component.

# COMPONENT C5: STRATEGIC ANALYTICAL AGENDA AND SUPPORT TO DONOR POLICY AND STRATEGY

## Overview of Activities

An important subcomponent of FSP was the establishment of a rapid-response team of researchers to assist USAID and its global development partners to supply analysis and evidence to evaluate options on “front burner” policy issues that have a critical bearing on the achievement of shared FTF, Global Food Security Strategy (GFSS) and CAADP goals at country, region and global levels. FSP undertook special studies to fill key knowledge gaps and provided customized, on-demand technical support through analytics, dialogue, in-country consultation, and training. In doing so, FSP informed USAID strategy and policy deliberations by providing timely policy advice and empirically based policy recommendations

This component was organized around two principal areas of support to USAID/Feed the Future:

1. **Technical support on a demand basis.** FSP undertook special studies to fill key knowledge gaps and provided customized, on-demand technical support through analytics, dialogue, in-country consultation, and training. In addition, special studies were identified in consultation with USAID/Feed the Future to fill key knowledge gaps on timely policy issues by drawing from a pool of high-quality researchers from MSU/IFPRI/UP as well as expert group discussion with external participants and Feed the Future country institutions.
2. **Communication and outreach.** FSP communication and outreach efforts consisted of preparation of policy briefs, co-organization of consultative meetings with USAID staff, and participation at global research fora. FSP provided technical input into USAID-sponsored events/round tables on issues relevant to FTF.

## Accomplishments

Some examples of FSP **C5 technical support** by IFPRI include:

- FSP C5 submitted a paper to USAID entitled “The Role of Agriculture in Achieving the Sustainable Development Goals: Helpful Answers to 20 Questions.” The paper summarized what types of agri-food system investments and policies contribute to poverty reduction, improved nutrition and enhanced resilience, and how, by answering 20 questions developed by the BFS Policy Unit. The paper represents an update of a previous version submitted by IFPRI in 2009 (prior to the launch of FTF in 2010) and makes the case for the continued support of agriculture to achieve the SDGs. It also provides a critically important background piece that was helpful to USAID and the U.S. Government (USG) in the development of the first Global Food Security Strategy, under the Global Food Security Act. “
- FSP C5 provided data analysis to support BFS discussions on prioritizing focus crops for the GFSS. The request consisted of identifying what crops are the most important for food security in GFSS countries and globally to understand where USAID may want to invest in crop science and technologies to have the largest impact.
- FSP C5 prepared a brief that identified, based on emerging insights from various policy and research communities (Yale, William and Mary, Africa Lead, etc.), some focused hypotheses regarding when and how evidence may (or may not) influence policy change. This involved addressing (1) how is evidence used by policymakers and (2) what particular types of evidence, as well as which features of the policy process and broader policy system, determine when evidence may (or may not) influence change. The second task was to determine whether testing those hypotheses in more depth constitutes a valid long-term research agenda and what types of data would be needed in order to fulfill that agenda. The resulting insights from the two tasks were shared with a wide array of partners working on the evidence-to-policy interface.

- Assistance to USAID/BFS to identify a more practical and robust set of monitoring indicators on policy processes that could be used within the FTF initiative to measure progress of FTF policy projects. This exercise was motivated by the need to (1) bring cohesion across 14 countries and regions in tracking and monitoring investments in policy change and their results; and (2) to promote dialogue and mutual learning among multiple partners and stakeholders involved in the policy change agenda.

Examples of FSP **C5 technical support** by the University of Pretoria include:

- Evaluation of food security and nutrition policies in Africa with particular attention to supporting the process of NAIP1 review and the quality of NAIP2 drafts in 11 countries.
  - This work was led by University of Pretoria C5 team. It built on the C3 mapping of food security and nutrition policies and programs globally (78) countries and involved a review of the FTF policy matrices and the 2013 FTF Policy Framework. This C3 work documented food security policy changes and the integration of gender in food security and nutrition policy. While the C3 work focused primarily on Malawi, the C5 work evaluated food security and nutrition policy in Africa more broadly.
  - The C5 work by University of Pretoria began with the identification of food security and nutrition policies and documented the changes in policies and programs concerning food security, nutrition-sensitive agricultural programs, and direct nutrition interventions covering under-nutrition and micro-nutrient deficiencies as well as overweight and obesity. The work comprised five main areas: (a) an assessment of the institutional architecture for the coordination of the NAIPs, (b) policy changes in food security and nutrition over the period 1990 – 2016, (c) evaluation of the appropriateness of the monitoring and evaluation frameworks of the NAIP2s against the SDG indicators, Agenda 2063 indicators and the CAADP Results Framework, (d) the development of a resilience assessment framework tool and assessment of how well resilience has been integrated into food security and nutrition policies in Africa, and (e) application to these assessments of the gender work carried out under C3. In addition, a comprehensive database of policies, programs and strategies was prepared for Malawi under C3, and was handed over to the Government.
- Mapping policy change in food security and nutrition: This work assessed policy changes that have occurred, mapped the changes and trends in policy change since the 1990, and directed efforts to supporting national review and design of NAIPs and policy alignment. Several policy changes have occurred in the 11 countries investigated. However, the results showed that there were variable interpretations of the concept of food security and nutrition among countries, with significant implications for the content of the NAIPs. Increased focus on nutrition has generally overshadowed issues of food security despite the fragile nature of food insecurity in Africa. NAIPs offer the potential to develop a comprehensive framework for food security and nutrition policies across relevant sectors. Two journal papers on this work are under development.
- Updating of the FTF Institutional Architecture Assessments (IAAs) with recent food security policy changes: An assessment of the existing policy matrices showed that very few have nutrition as a focus area. None has food security as a policy area. The Inclusive Sustainable Partnerships for Development (ISP4D) framework was developed based on the institutional architecture guidance contained in the CAADP Implementation Guide, the Biennial Review and the international agreements of the Paris Declaration, Accra Agenda and the Bussan Partnership Agreement as well as the SDG approaches found in (among others) Rio 1994, Rio 20+, and the recently launched a High Level Panel of Experts (HLPE) report on multi-stakeholder partnerships for food security and nutrition. The framework was used to evaluate the institutional arrangements for 12 countries with final or draft NAIPs. The assessment found that about half the countries had a supra-national coordinating body within their institutional architecture chaired by either the president or prime minister. Most of the countries focused on only the agricultural sector. Less than half have a multisectoral coordination body at the national level. The inclusion of other stakeholders (private sector and civil society organizations (CSOs)) is still limited. Nine countries had incorporated both private sector and CSOs in their institutional architectures, although their involvement was only of an advisory nature. Only two countries had inclusive architectures that engaged the CSOs. Interestingly, Guinea Bissau, Malawi and



Niger included beneficiaries in the institutional architecture, although some such as Malawi included farmers. However, it is difficult to establish how genuine the inclusiveness is. A report based on this work was presented at several international workshops and conferences and shared with ECOWAS, the African Union (AU), ReSAKSS and the countries for distribution and engagement.

- A rapid assessment of the level of resilience built into 2014+ second generation national agriculture and food security investment plans (NAIPs) with specific reference to Myanmar and the 2018 Malawi NAIP2: Given the high profile of resilience in the international literature and debates on food security, climate change, conflict and economic crises, this study aimed to develop a framework for analysis of the five risk reduction and five adaptive capacities set out by USAID 2012's resilience framework and to evaluate the Malawi NAIP in order to determine how adequately resilience has been dealt with in the Plan. The work built on Suresh Babu's review of resilience in Myanmar's food policies. The UP team and Babu conducted an extensive review of available resilience analysis frameworks relevant to food security and nutrition. The team's assessment of indicators across ten African countries found that very few included elements of resilience. This new framework was used to identify gaps in Malawi's NAIP2. Further work (beyond FSP) is testing the analysis tool on the Kenyan NAIP and other policies in Malawi.
- Research into Food Security and Nutrition (FSN) policy reform in Malawi: Desktop research was supplemented by substantial in-country engagement, one-on-one discussions with expert officials, and participation in workshops and conferences. The aim of this activity was to determine the extent to which Malawi's current constitutional, policy, legal and administrative frameworks had incorporated the FSN-related obligations and commitments entrenched in key international (global), regional (African), and sub-regional (SADC) instruments. The results indicated that key aspects of the Malawi domestic FSN framework (the Malawi Constitution, the policy, legislative program and institutional frameworks, as well as of three specific focus areas (gender, children, and health)) did not provide evidence of adherence to the sequential nature of the policy loop. The analysis found a plethora of policies, statutory instruments, medium-term strategies, annual implementation (work) plans, institutions and M&E indicator sets. These were often unconnected, incoherent and contradictory, and to a large extent uncoordinated—and consequently ineffective. Regarding compliance with, and implementation of, FSN-related obligations created by global (international), African (regional), and SADC (sub-regional) conventions, treaties and protocols, the vast majority of instruments referred to in the research paper did not give evidence of such alignment.

Some examples of **communications and outreach support provided under C5** include:

- Assistance to the BFS Policy Unit in the preparations for a Partners' Meeting that took place in December 2015. The meeting was organized to develop a common understanding of BFS policy priorities, facilitate partnerships among partners around specific actionable items, and share approaches and best practices that partners have developed. Specific tasks included help with organization and report-out on discussions, development of a presentation summarizing progress made on BFS policy targets and the Policy Unit's 2015-16 work plans, and reviewing and collating partner contributions to the event.
- USAID's BFS, in conjunction with MSU/IFPRI, convened the "Cities and the Future of Agriculture and Food Security Roundtable" on March 30, 2016, in Washington, DC, to discuss the drivers and implications of urbanization for food security programming. The roundtable discussion was to inform the direction of USAID programming and be the starting point for a series of internal policy papers. A document summarizing the outcomes of this discussion was released by Food Security Journal. The roundtable was comprised of four sessions each focused on a particular theme:
  - 1) Urbanization: Trends, Drivers, and Trajectories: Exploring the extent and pace of urbanization; the implications of urbanization for urban poverty, food security, and long-term economic growth; and the extent to which USAID food security programs should engage in urban areas.
  - 2) Urbanization: Needs and Opportunities: Considering the implications of urbanization patterns for food demand, and the challenges and opportunities associated with nutrition, dietary diversity, and overconsumption.

- 3) Secondary Cities and Rural-Urban Agri-Food Value Chains: Addressing the role of secondary cities in spurring local agricultural growth and greater interchange of outputs, services, and factors including labor between rural and urban areas.
  - 4) Urbanization and the Future of Farming: Examining how farming is likely to be reshaped by changing urban demand and by urbanization, and the implications for farmers, rural wage labor, and SMEs.
- FSP C5 supported an AUC “Evidence Summit” in April 2014, including provision of policy briefs, outcomes of recent or ongoing relevant studies, and implications and findings of recent research in order to identify the key constraints and the value-added outcomes from addressing these constraints in the next series of CAADP investment plans.
  - FSP C5 organized a technical dialogue on “African Agriculture in 2025: Futures Analyses Informing the African Union Malabo Declaration on Accelerated Growth and Transformation” held at IFPRI on October 1, 2014. The event discussed whether the AU vision of African agriculture by the year 2025 is achievable given Africa’s past sources of growth and the current trends, drivers and challenges in African agri-food systems.

## Major Outcomes/Utilization of Research Outputs

### *Support to the Global Food Security Strategy Country Selection Process*

USAID/BFS approached FSP C5 in early November 2016 to assist them and their other inter-agency partners (USDA, Millennium Challenge Corporation, Dept. of State) in developing indicators and a tool to select focus countries for the new USG Global Food Security Strategy. FSP C5 and additional USAID funding sources were used to provide this support. The first phase of the engagement was to assist in developing indicators by which countries could be ranked in terms of the following criteria as defined by the GFSS:

- Need
- Potential for agricultural-led growth
- Opportunities for partnership
- Opportunities for regional economic integration, and
- Government commitment to food and nutrition security.

These quantitative indicators needed to be easily accessible, come from reputable third-party sources, and have wide country coverage. Many criteria were rejected (e.g., participation in CAADP, various governance indicators) because of lack of coverage across the entire sample of low- and lower-middle-income countries across Africa, Asia and Latin America. Numerous inter-agency groups took part in finalizing this list of indicators during a series of meetings, with USAID/BFS convening and leading the discussions.

Once this list of indicators was finalized, FSP collected the data and developed an Excel-based tool that allowed the user to select indicators and weight them within each of the GFSS criteria listed above, giving a composite index of agricultural potential, regional integration, opportunities for partnership and government commitment. The tool also plotted the indicators along two axes: one based on need and another on enabling factors.

The final presentation was given to senior BFS leadership on December 21, 2016. It presented various scenarios based on weighting and grouped countries into categories. From the initial list of 83 low- and lower-middle-income countries considered, the tool helped to narrow the list to 54 countries that were included for further consideration in the second phase of the selection process. FSP provided USAID a copy of the Excel tool and conducted a brief training exercise so that they could continue to refine indicators and/or adjust weighting within the criteria.

FSP C5 was also approached to support the second phase of country selection to narrow the list of 54 countries to the final list. For the second phase, FSP was asked to explore new metrics and data sources to evaluate, in more depth, the GFSS selection factors (a) government commitment and (b) opportunities for partnership. More specifically, FSP developed metrics that explored:

- Government commitment: Whether countries are committed to making food security a priority agenda item and the degree to which they put in place the framework and commitments to deliver on their plans, as well as their progress on delivering on those commitments.
- Opportunities for partnership: What additional data sources could be used to measure opportunities to leverage complementary resources and expertise through partnerships with civil society, the private sector, and other donors working on food security.

FSP selected additional indicators to evaluate these criteria and provided the revised Excel tool, results, and a final technical report describing all analyses to USAID. The final list of GFSS target countries makes use of FSP's analyses in selecting the countries.

### ***Support to the GFSS Graduation Strategy***

Early in FY 2018, USAID approached FSP C5 for support in the development of a GFSS Graduation Strategy. Again, FSP C5 and additional USAID funding sources were used to provide this support. The graduation strategy monitors and evaluates country progress towards an end state where they can transition out of GFSS target country status. The decision to strategically transition a country is to be based on sustainable reductions in poverty, hunger and malnutrition as well as concomitant improvements in capacity and government commitment to improve food security.

In support of the GFSS transition strategy, FSP C5 provided support in selecting indicators (to be measured annually) and developed an Excel-based tool to collect and aggregate data and visualize country progress in the form of a scorecard. Multiple indicators were used to develop three high-level analytical dimensions identified by FSP and the inter-agency as being necessary to transition a country out of target status:

- 1) Level of need/Development Achievement: This dimension evaluates long-term trends in poverty, hunger and malnutrition. Due to the importance of promoting resilience in the GFSS and the need to ensure that the USG will not continue to expend significant resources in areas of recurrent crisis, an indicator of humanitarian need was also included.
- 2) Country commitment: This dimension evaluates the host country government's commitment to food security and nutrition investment and policy reform through national investment in the agricultural sector and the implementation of sound policies and regulations.
- 3) Country capacity: This dimension evaluates a host country's capacity to sustain advancements in food security by analyzing the capacity of civil society, the effectiveness of key government institutions and the performance of the agriculture to assess its ability to effectively reduce poverty.

To develop quantitative criteria to assess the progress and possible transition status of GFSS target countries along these dimensions, IFPRI researched, analyzed, and compared potential data sources. Four key criteria were used to determine which data to include:

- 1) Data availability: the number of years of existing data, availability for the majority of low- and lower-middle-income countries, and frequency of data updates;
- 2) Data variance: the extent of the movement of data over time;
- 3) Conceptual resonance: the degree to which the data reflected the underlying concepts sought by GFSS (i.e., development achievement, capacity, and commitment);
- 4) Balance between breadth and specificity: combining data that provides an overview of the broader policy-making context while simultaneously offering specificities relevant to agriculture and food security.

The indicators were discussed through a series of meetings with the inter-agency group from August 2017 through March 2018. In addition, FSP responded to multiple requests for direct consultation with BFS front office staff and responded to comments from Mission staff on the selection criteria, indicators, and the evaluation process. FSP also drafted an explanation of the indicators that documented the definition, the source of the data, and provided justification of its inclusion in the final set of indicators. Furthermore, FSP documented other indicators that were proposed during the six months of discussions and why they were not

selected. FSP also designed a scorecard that captured a country's performance on each of the dimensions in the form of a spider diagram and a display of time series data on each of the indicators. This scorecard was generated from an easy-to-use, Excel-based tool where all indicator data were collected and aggregated. The tool is automated such that the end user can input data in the future as it becomes available and all calculations and graphics will update. The tool was provided to USAID along with an explanation to the end-user on how to use it.

FSP also generated a total of 28 country scorecards, of which 12 are the GFSS target countries. The additional 16 countries represent a mix of countries that were previously FTF countries, those that are important in USAID's resilience efforts, and those that are strategically important under other USAID themes. FSP also developed a 'How to Read a Scorecard' document to aid staff across the inter-agency to interpret a scorecard. The GFSS Graduation Policy and review process was reviewed and approved by USAID Administrator Mark Green.

### ***Development of the AgGDP+ and AgEMP+ indicators to support GFSS monitoring***

FSP-C5 initially supported the development of a new measurement approach for evaluating the performance of broad agri-food system development. These measures, eventually defined as AgGDP+ and AgEmp+, consider the value-added and employment within agriculture as well as beyond the farm gate. This includes the value-added and jobs created by processing food that directly use agricultural raw materials as intermediates, the production of inputs used directly by farmers and agro-processors, domestic transportation and trade activities associated with the movement of agri-food products from farms to consumers, and the food services sector. As standardized definitions and estimation procedures, AgGDP+ and AgEmp+ will be able to track performance and transformation of agri-food systems in developing countries systematically. USAID has since provided direct financial support through the IFPRI-ReSAKSS project to develop AgGDP+ and AgEmp+ indicators for GFSS countries as part of the standard FTF performance indicators.

### ***Assessing FTF Policy Progress***

Each FTF/GFSS target country has a policy matrix jointly developed by missions and their country partners that lays out a prioritized agenda of policy actions that are to be accomplished by a specified date. Each year, country missions report on the status of various policy actions (complete, on target, etc.), the successes and barriers in achieving progress and policy change, partners/stakeholders involved with various policy changes, and other status updates. Working with members of the policy team, FSP C5 has supported the BFS policy unit in their reporting on policy progress in focus countries since 2013. C5 cleans and analyzes the reporting data and prepares a summary report synthesizing progress on the policy matrices, where policy efforts are focused, some of the successes and challenges that policy teams were having at post, gaps in the reporting or matrices that need to be addressed going forward, and a summary of progress across countries and policy areas.

### ***Evaluation of food security and nutrition policies in Africa***

For each element of the C5 work completed by the UP team, a complete review of the policy domain has been conducted. It documents the historical development of the issue over the past two to five decades, with particular attention to the (a) international, African and regional commitments, (b) national transversal development imperatives (including, but not limited to, the country-specific constitution, vision, medium-term growth and development strategy, and cross-cutting intergovernmental, financial and development legislation), (c) the Malabo and SDG2 targets related to food security and nutrition, and (d) gender equality components in international, regional and national commitments.

For each element (policy analysis, institutional assessment, monitoring and evaluation framework, resilience and gender analysis), an analysis framework or tool was developed for adoption by countries not only to strengthen their NAIP review and design but also to provide research tools for further food security and nutrition policy research. In particular:

- The gender work conducted under C3 and C5 has been published as a thesis by Elizabeth Mkandawire.

She also converted the analytical framework developed through her thesis and engagement with policymakers and community members in Malawi into an innovative 6-part practical video on how to use the framework to improve the integration of nutrition into food security and agricultural policies. See: <https://drive.google.com/open?id=1uOy4QwJ9xKuDKJQ33vPY7zqlGLfsCNjD>.

- The ISP4D framework was developed to evaluate the extent to which the coordination structure for national food security and nutrition is multisectoral and inclusive.
- The methodological approaches developed for policy analysis, monitoring and evaluation frameworks and gender have already been integrated into the ReSAKSS NAIP support tools. They form part of the CAADP Technical Network Support framework for component 4 of the Malabo Declaration assessments and the Biennial review Process. The assessment framework and the key points of the analyses conducted by the team with regard to the policy, institutional monitoring and evaluation and gender considerations for food security and nutrition in Africa form the base of the technical guidance for the support and review of NAIPs.

The work under C5 listed above has been integrated into the Malabo Knowledge Compendium (<https://www.nepad.org/caadp/publication/knowledge-compendium-domestication-malabo-declaration>).

The Compendium focuses on the domestication of the Malabo Declaration into national agricultural investment plans and processes. The work also informs the framework for the NAIP Task Force country status assessment reports and the Policies, Opportunities and Programme reports prepared by the Task Force. All country analysis work conducted by the team, along with the respective working papers and briefs, have been shared with the AU, New Partnership for Africa's Development (NEPAD), Regional Economic Communities and countries for distribution and engagement. The work was presented at the IFPRI/FAO conference in Bangladesh in 2018.

The largest comprehensive database of food security and nutrition indicators for over 40 African countries (for 2000 – 2016) was compiled and shared with the AU, NEPAD, RECs and countries. The work on the indicators was considered in the Biennial Review (BR) revision workshop in Nairobi in 2018. At least three indicators were included in the revised BR indicator set. The full database of approximately 500 food security and nutrition-related documents (conventions, treaties, agreements at the international, Africa and regional-level and domestic policies, strategies, legislation and plans for Malawi) was shared with the Malawian government and submitted to ReSAKSS for loading onto the ReSAKSS website. Many have already been loaded.

The C5 UP work has been integrated into the UP Masters Curricula and the Collaborative Masters in Agricultural and Applied Economics modules on Food Security and Nutrition Analysis, New Institutional Economics (NIE) and Agriculture and Rural Development. Four graduate students (two PhD and two Masters) from the UP have completed their dissertation/thesis research based on FSP-supported research.

The analytical frameworks and insights from the research have been integrated and presented in 16 chapters of a book, to which 11 FSP researchers contributed: *Food Security Policy, Evaluation and Impact Assessment* (edited by Hendriks, 2020). This book provides a much-needed go-to resource to equip both current development practitioners and future professionals with up-to-date tools for rigorous policy analysis in the era of evidence-based and impact-driven planning demanded by the SDGs and the new era of mutual accountability.

### ***Mapping policy change in food security and nutrition***

This activity has led to several outputs and outcomes as listed below:

- A methodology for monitoring and evaluation was developed and applied to 11 countries with final or draft NAIPs. A journal article is being prepared documenting this work.
- A template for systematic analysis of policy changes was developed, and the policy landscape for 11 countries was assessed. Results were published as a working paper and brief.
- Briefs based on reviews of the Malawi, Liberia, and Nigeria NAIPs were completed and shared with the respective country CAADP teams. The recommendations from the Malawi and Liberia policy briefs were taken up in the final NAIPs. The Ugandan NAIP was reviewed at the request of the AUC and a brief published on this review.



- The team played a role in convincing ECOWAS countries and South Africa to include indicators for food security and nutrition that align with the Malabo commitments, the Biennial Review Report outcomes and indicators, and SDG2 in their NAIPs.

### ***Updating of the FTF Institutional Architecture Assessments (IAAs)***

The ISP4D framework has been presented at international conferences and included in Master's degree program modules at UP. The framework has been used to evaluate the institutional arrangements for 11 countries with final or draft NAIPs. The analysis conducted under C5 has examined the institutional architecture for 10 NAIPs in order to assess their adequacy relative to the NAIP institutional architectures contained in the CAADP Implementation Guide, the Biennial Review, and the international agreements of the Paris Declaration, Accra Agenda and the Bussan Partnership Agreement as well as the SDG approaches found in (among others) Rio 1994, Rio 20+ and the recently launched HLPE report on multi-stakeholder partnerships for food security and nutrition. A report based on this work was presented at several international workshops and conferences and shared with ECOWAS, the AU, ReSAKSS, and individual countries for distribution and engagement.

### ***A rapid assessment of the level of resilience built into 2014+ second generation NAIPs***

The conceptual framework and analytical tool developed in this paper can be useful for enhancing policy-making capacity as well as improving the national plans and strategies in terms of emphasis on resilient programming and being more proactive. The framework offers a new paradigm that indicates the linkages between food security, climate change, conflict and economics crises. The approach we have taken is also useful in comparing the sectors which are more advanced than others in a multi-sectoral resilience planning approach. Beyond FSP, the team will use the analytical tool to create a typology of countries with regard to resilience relative to food security.

### ***Research into Food Security and Nutrition (FSN) policy reform in Malawi***

A number of consultative meetings have been held with Malawian officials from the Ministry and the National Planning Commission (NPC) to share the results of the C5 work, build ownership and hand the process of continuing the work over to the Planning Commission. The significant database of documents collected and collated through the FSP C3/5 research was handed over to the Planning Commission in Sept 2019, for which they expressed great appreciation.

Awareness- and capacity-building opportunities presented themselves through the team's participation in numerous NAIP and policy review sessions. Before making inputs to the NAIP, the FSP team received a clear indication of interest from mid-level officials in capacity-development interventions regarding application of the relevant components of the framework. The officials had not been exposed to this knowledge and were finding it difficult to make effective inputs when engaged in drafting of the NAIP and related policies. For example, the UP team was asked to draft a section for the NAIP and the MGDS on the international and African frameworks and to propose a structure to report on these outputs related to the economic and planning perspective. This was presented through a briefing (training session) on the specific role, powers and functions of the NPC at the request of the Chair of the NPC.

## ANNEX A: BUY-INS AND ASSOCIATE AWARDS

The following list represents the status of all buy-ins and associate awards as of February 2020.

Name/Description	Dates	Amount	Status
<b>Food Security Policy Leader Award</b>	7/15/2013 - <b>1/14/2020</b>	Amount: \$15,000,000 Obligated: \$15,000,000	Completed
<b>Buy-Ins:</b>			
USAID/Mali	10/20/2014– <b>1/14/2020</b>	Amount: \$900,000 Obligated: \$900,000	Completed
USAID/Tanzania (ASPIRES)	6/1/2016– <b>1/14/2020</b>	Amount: \$6,000,000 Obligated: \$6,000,000	Completed
USAID/Tanzania	10/20/2014– <b>1/14/2020</b>	Amount: \$500,000 Obligated: \$500,000	Completed
USAID ZAMBIA	6/1/2016– <b>1/14/2020</b>	Amount: \$1,500,168 Obligated: \$1,500,168	Completed
USAID/West Africa	10/20/2014– <b>1/14/2020</b>	Amount: \$600,000 Obligated: \$600,000	Completed
USAID/CD4AIS Toolkit	12/11/2017– <b>1/14/2020</b>	Amount: \$700,000 Obligated \$700,000	Completed
USAID/Venezuela	12/11/2017– <b>1/14/2020</b>	Amount: \$300,601 Obligated: \$300,601	Completed
USAID/Lit review	10/30/2018– <b>1/14/2020</b>	Amount: \$130,000 Obligated: \$130,000	Completed
<b>Associate Awards:</b>			
Food Security Policy Project (Myanmar)	9/24/2014– <b>9/30/2020</b>	Amount: \$7,718,509 Obligated: \$6,995,307	Operational
Malawi New Alliance Policy Acceleration Support (NAPAS)	11/24/2014– <b>2/27/2019</b>	Amount: \$4,002,467 Obligated: \$4,002,467	Completed
Senegal Agricultural Policy Project (PAPA)	7/27/2015– <b>3/31/2019</b>	Amount: \$6,000,000 Obligated: \$6,000,000	Completed
Africa Great Lakes Coffee (AGLC)	7/20/2015– <b>7/19/2018</b>	Amount: \$1,800,000 Obligated: \$1,376,805	Completed
Nigeria Agricultural Policy Project (NAAP)	7/1/2015– <b>6/30/2020</b>	Amount: \$12,499,999 Obligated: \$11,363,537	Operational
Mali Associate Award (PRePoSAM)	2/17/2016 – <b>2/15/2021</b>	Amount: \$4,399,932 Obligated: \$3,267,807	Operational
Venezuela AA	7/24/2019 – <b>12/31/2020</b>	Amount: \$1,500,000 Obligated: \$600,000	Operational
Tanzania AA (SERA BORA)	1/1/2020 – <b>12/31/2024</b>	Amount: \$6,500,000 Obligated: \$1,000,000	Operational

## ANNEX B: SYNOPSIS OF BUY-INS AND ASSOCIATE AWARDS NOT SUPPORTED BY CORE FUNDS

Buy-ins and associate awards summarized in this Annex are the following, in alphabetical order:

- Africa Great Lakes Region Coffee Support Program (AGLC) (AA)
- Capacity Development for Agricultural Innovation Systems (CD4AIS) (Buy-in)
- Literature Reviews (Buy-in)
- Nigeria Agricultural Policy Project (NAPP)—(AA)
- Projet d'Appui aux Politiques Agricoles (PAPA)—Senegal (AA)
- Tanzania Agriculture and Nutrition Policy Activity—SERA BORA (AA)
- Venezuela (Buy-in)
- Venezuela Pathways to Recovery (VPR) (AA)

### *Africa Great Lakes Region Coffee Support Program (AGLC)*

**Overview.** The long-term viability of the coffee sector in the Africa Great Lakes region, the main source of cash income for millions of smallholder farmers and families in the region, is threatened first by the prevalence of antestia bug (and associated potato taste defect—PTD), and second by coffee yields that are among the world's very lowest. AGLC was a three-year, USAID-funded collaborative initiative led by Michigan State University designed to meet these combined challenges through an integrated program of applied research, farmer capacity building and policy engagement. The solution to these challenges requires a public-private sector coordinated response across the entire value chain, including producers, washing stations, dry mills, exporters and the government agencies that support the sector's growth.

The applied policy, household, and agronomic (field-level) research of AGLC drew upon a broad mix of quantitative and qualitative data collection methodologies, including a series of coffee farmer/household survey, experimental field/plot level data collection, and a broad set of targeted key informant interviews and focus group discussions. The baseline survey of coffee growers was conducted on a sample of 1,024 households randomly selected from listings of 16 coffee washing stations (CWS) geographically dispersed across four districts/communes in each country (Rwanda and Burundi) ensuring that the four CWSs in each district/commune would include an even distribution of privately/cooperatively operated CWSs. The subsequent midline and endline surveys were conducted using a random 50 percent sample of the baseline households and included data on AGLC's core indicators in addition to new programmatic areas identified during the earlier stages of the stakeholder engagement activities.

The combined research and policy engagement activities targeted a set of eight problem areas identified by coffee value chain stakeholders. They included: farmer investments, pricing and quality, zoning, coffee cooperatives, gender, inputs access, PTD/antestia control, and coffee sector sustainability. Important findings and policy debates emerged from each of these program areas.

**Farmer investments.** AGLC research on farmer investments has provided data and analysis on how chronically low cherry prices have contributed to a decline and stagnation in coffee production over the past two decades. Detailed estimates of farmer cost of production and analysis of farmer incentives have provided the empirical basis for a new cherry price policy that has begun to incentivize farmers to invest in their coffee plantations, a change that has led to higher productivity and over time is expected to result in improved coffee quality, higher volumes and more attractive prices from international buyers.

**Pricing and quality.** All levels of the value chain have demonstrated opportunities to increase value addition through greater emphasis on differentiation of quality segments, including multi-tier pricing by coffee washing

stations. These opportunities are maximized by NAEB policies that emphasize the cherry floor price as a price paid for high-quality cherry, and by innovative coffee washing stations that are implementing multi-tier pricing as one component of an integrated farmer education and quality control strategy.

**Zoning policy.** Rwanda's 2016 "zoning" policy requires that farmers within a geographic zone must sell to specific CWSs within that zone and CWSs must only buy from designated farmers. Designed to improve relationships between CWSs and farmers, improve traceability, and reduce activities of middlemen, evidence presents a mixed picture of the policy's success. After its first year (2016), many farmers did not know about zoning, and those that did thought it harmed them. After its second year (2017), more farmers knew about zoning, and were more positive about the policy. Other stakeholders suggest that the policy has created challenges for some cooperatives and CWSs, but also that the policy has reduced the activities of middlemen, while in practice allowing farmers to sell across adjacent zones.

**Coffee cooperatives.** Coffee producer cooperatives emerged in AGLC studies as a critical institution for building farmer capacity, promoting adoption of improved technologies and inputs, and increasing productivity. Cooperative membership also serves as a catalyst to the payment of premiums (second payments) to coffee farmers.

**Gender in coffee.** Female-headed households are disadvantaged in their access to inputs. They are also challenged in that they often have to pay wage labor for many production tasks such as stumping, pruning and inputs application.

**Inputs access.** An important influence on coffee productivity and quality is use of inorganic fertilizer and pesticide. Rwanda's coffee input distribution system is organized such that a private sector organization takes a fee from exported coffee and uses it to purchase and distribute bulk fertilizer and pesticide. Over the course of the project, AGLC studied changes in inputs distribution and use. Distribution has improved since 2015, with more farmers accessing inputs. However, many farmers still do not receive inputs, and the volume of inputs farmers receive per tree remains low. In addition, vulnerable farmers such as women who are heads of households and older farmers either fail to receive inputs or receive smaller volumes than other farmers.

**PTD findings.** AGLC research findings show that potato taste defect (PTD) is highly correlated with antestia bug density and damage but not with coffee berry borer infestations. Controlling antestia bug is found to be most effective using a combination of pruning coffee tree branches and the application of insecticide. Of the insecticides tested, Fastac is found to be the most effective, dramatically reducing the incidence of PTD. Based on these results leaders in Rwanda's coffee industry now purchase and distribute Fastac to coffee farmers throughout the country.

**Coffee sustainability.** Long-term sustainability of the coffee sector depends on two important changes. The first is to go beyond the current focus simply on building farmer capacity, giving equal attention to the importance of farmer incentives through improved compensation aligned with the real cost of production. The second is a fundamental policy change aimed at restoring coffee production as a pillar of growth to Rwanda's rural economy. This strategic change must recognize coffee's comparative economic and agronomic advantages as well as its potential for addressing soil erosion on steep slopes as an alternative to expensive bench terrace construction.

### *Capacity Development for Agricultural Innovation Systems (CD4AIS)*

**Overview.** The Capacity Development for Agricultural Innovation Systems (CD4AIS) buy-in to the Feed the Future Innovation Lab for Food Security Policy aimed to provide tools and resources for development practitioners engaged in the design and implementation of capacity-development activities with an innovation systems approach in mind. The CD4AIS activity offers practical applications that enable agricultural innovation systems actors to better identify capacity-development opportunities that continuously improve innovation capabilities within value chains, agri-food systems, and agricultural innovation systems.

The CD4AIS activity is closely aligned with the [GFSS Technical Guidance for Capacity Development](#), which offers a framework under which strategies for capacity development in agriculture and food systems can be developed and harmonized across Feed the Future activities. The activity is a collaboration that engages a set of core partners—MSU, IFPRI, Wageningen University and Research, and the University of Florida—with the Livestock Systems Innovation Lab, the Fish Innovation Lab, Mississippi State University, WorldFish, and the International Livestock Research Institute.

**Accomplishments.** The CD4AIS activity’s accomplishments are highlighted by an interactive web-based “Practitioners’ Guidebook” featuring analytical tools, resources, and case studies designed to develop the capacity of individuals, organizations, networks, and systems to (a) share and adopt new applications of existing information, new products and processes, and new organizational cultures, attitudes, and practices; (b) leverage new market-oriented opportunities anchored in effective and well-coordinated innovation policies and policy instruments; and (c) build long-term, sustainable capacity-development agendas accompanied by institutional ownership, leadership commitment, and necessary resources. The guidebook will be available online following USAID review and approval.<sup>8</sup>

**Major outcomes.** The most significant outcomes of the CD4AIS activity were *changes in the capacity-development strategies* of two Feed the Future initiatives in two focal countries: The Innovation Lab for Livestock Systems in Ethiopia, and the Fish Innovation Lab in Nigeria. Through a series of learning exercises conducted with principals and partners of these innovation labs, the CD4AIS activity helped reshape their conceptualizations and strategies for capacity development beyond a standard training-based approach.<sup>9</sup> In the words of Yigerem Sintayehu, an assistant professor of dairy science at Hawassa University in Ethiopia, reflecting on the learning exercises he participated in,

“The complex nature of these factors [in capacity development], I wouldn’t think about it, so this is new to me. A different way of observing, these actors, these stakeholders, is one thing which I could take from this workshop. I have to delete what I had already, to receive the new learning. So I deleted what I knew and started in a new way.”

**Lessons Learned, Challenges and Opportunities.** A key challenge for the CD4AIS activity was ensuring close alignment with Feed the Future and USAID programming. Initial efforts to introduce the CD4AIS activity to USAID missions failed in part due to the many competing demands on mission staff. This required a pivot to the innovation labs, which were more receptive to opportunities to advance their capacity-development strategies. Based on the positive experiences with these innovation labs, there is considerable opportunity to replicate these learning exercises with other innovation labs and Feed the Future/USAID implementing partners who actively seek guidance on improving their capacity-development strategies.

### *GFSS Learning Agenda Literature Reviews of Policy Systems and Market Systems*

The new phase of the Feed the Future (FTF) initiative is guided by the U.S. Government’s Global Food Security Strategy (GFSS). The GFSS builds on lessons learned from the implementation of the first phase of FTF, which was guided by a learning agenda. This buy-in was awarded to FSP in September 2018 to support the USAID/BFS learning agenda in two areas—policy systems and market performance measurement.

#### ***1. Policy systems learning agenda – Literature review***

**Overview.** Effective governance, policies, and institutions can catalyze and accelerate the food and agricultural systems transformation required to reach the GFSS-FTF goal of sustainably reducing global hunger, malnutrition, and poverty. Much has been learned from five years of implementation of Feed the Future on how to strengthen a country’s governance, policies, and institutions that support transformation of food and

<sup>8</sup> A [beta version of the website](#) is available

<sup>9</sup> The case studies from these two innovation labs are featured in the guidebook.



agricultural systems to scale and sustain development investments and impact. Yet a robust learning agenda remains. Four priority learning agenda questions for policy systems are: (1) Theory of change: What is the emerging evidence on the relationship between policy systems (defined as policy agendas, institutions, relationships, and processes) and food security? (2) Promising policies: What's the emerging evidence on policies that promote agricultural transformation and policy institutional architecture and mutual accountability? What are the implications of this emerging evidence for programming? (3) Effective programming: What are effective programming approaches to strengthening policy systems to accelerate improvements in food security? (4) Measuring progress: What are effective approaches to measuring the strength and capacity of food policy systems? How robust are these measurements in predicting 'good' policy outcomes from those systems? What country-level policy indicators may signal that a country has in place food-policy systems that enable the country to transition from relying on U.S. foreign assistance for food security?

This desk-based review of published and unpublished literature was undertaken to enhance an understanding of the role of policy systems in food security by addressing following question to support this learning agenda: What are the characteristics of national policy systems that make the desirable outcomes (stability, coherence, public regardedness, and quality implementation) more or less likely?

**Accomplishment.** A literature review of the relationship between features of policy systems and the characteristics of food security policies was undertaken, and a draft paper was submitted in November 2019. The review focused specifically on the characteristics of policies rather than their content since the latter can vary dramatically depending on the agro-ecological, economic, and nutrition challenges confronted by different countries. Four policy characteristics are examined: stability (i.e., lack of volatility), coherence, public regardedness (i.e., allocative efficiency and general welfare rather than narrow interests), and quality implementation. These policy characteristics are examined vis-à-vis a range of theories on political institutions (regime type, number of veto players, party system), business-state-relations, and state capacity, among others.

**Main findings:** With reference to agriculture and food security policies in Africa, the review highlights that different policy system features generate trade-offs among the policy outcomes. For instance, strong executives and a high power concentration among elites can be critical for pushing through implementation and facilitating coherence but is problematic for policy stability. Such trade-offs can also have implications for the use of information and research in the policy process. Specifically, more veto players in the policy system leads to a lower likelihood of the suppression of disconfirming data and to more points of access and influence. Yet, features of the policy system that create fragmentation can also facilitate an influx of incompatible information that can then be easily dismissed. The review also highlights a number of gaps where further information and focus is warranted to better understand and strengthen policy systems. For example, the need for more empirical evidence of what exactly the policy preferences of citizens in Africa are regarding agricultural policy and how those preferences vary along the supply chain. Also, the paper highlights the importance of legislative strengthening to reduce policy volatility and enhancing oversight. Finally, the review points to lack of in-depth analyses as to whether weak Ministries of Agriculture in many African countries result from human resource practices that fail to attract the most qualified staff, excessive political interference, or hierarchical structures that prize obeying authority over innovation, lateral thinking, and experimentation.

## ***2. Market systems learning agenda—Literature Review***

**Overview.** The market systems learning agenda is centered on the following main question: “What are the most effective approaches to sustainably strengthen food and agriculture market systems in ways that benefit the poor, women, and youth through production, employment, and other avenues, both directly and indirectly?” Significant progress has been made in developing a better conceptual understanding of the complexities of market systems and systemic change. However, there remains a lack of agreement about how to understand and measure the systemic change in market system. There is diversity of views that has led to a variety of measurement approaches and tools made available for use by practitioners and implementers to measure systemic change. This review focused on the ‘measurement’-related learning question: How to measure market system performance? It generally focused on the economics and agricultural economics literature and

asked the following question: “What are the generally known, proven, and widely used measures of market performance by agricultural/marketing economists that can be applied to market systems performance in the FTF context?”

**Accomplishments.** Through a consultative process and web-based literature search, several pieces of literature were identified and reviewed. Insights gained from the review of this literature formed the basis of a paper that was submitted to USAID in October 2019. This paper gave an overview of the conceptual and theoretical underpinnings of why markets and market system strengthening matter, and described different performance measurement frameworks and approaches used through the long history of treatment of this question in the economics, agricultural economics, and development literature. Based on the literature, the paper identified various measures of market system performance and proposed them as potential indicators of systemic change in the context of the following FTF objectives: growth, efficiency and sustainability; resilience; competitiveness; provision of nutritious food; consistent availability and access to goods and services; and inclusivity.

**Main findings:** The review suggests that significant progress has been made in developing a better contextual and conceptual understanding of the complex and dynamic nature of market systems. There is diversity of indicators, measurement approaches, and tools that researchers and practitioners have used to measure market performance. While some of these approaches focus on the performance of the market system in terms of the desired outcomes related to agricultural productivity, incomes, employment, and nutrition, other approaches focus on indicators that measure the structure and conduct of the market system and the actors in the system. A few of the proposed measures are new and will require some piloting in a few FTF countries. However, most of the proposed measures are well-tested and widely used by market economists. In many developing countries a major challenge in operationalizing some of these proposed measures will be availability and access to data. If the required data are not available that would imply investment in program-led data collection effort. This can be a resource intensive endeavor that can limit the scope of the field implementation of market system performance measurement.

### *Nigeria Agricultural Policy Project*

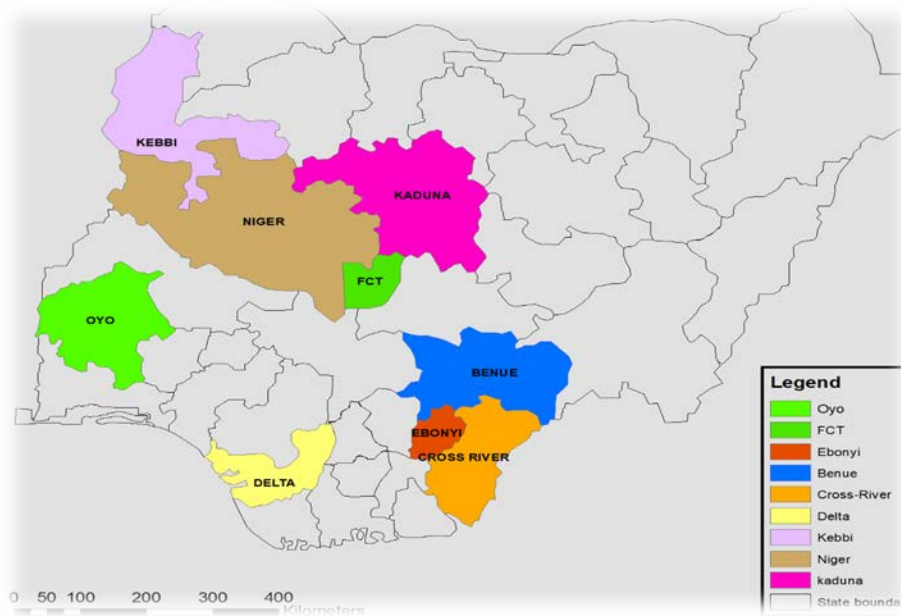
**Overview.** The Feed the Future Nigeria Agricultural Policy Project (NAPP) is a five-year USAID-funded project geared to promote inclusive agricultural productivity growth, improved nutritional outcomes, and enhanced livelihood resilience for men and women through strengthening the enabling environment for improved policy making. To achieve this goal, the project has worked to support the production of evidence for policies to reduce food insecurity and promote agricultural productivity in the country while enhancing capacity to effectively advocate for, plan, implement, and monitor agricultural policies. These efforts have been achieved through collaborative research with Nigerian scholars (especially young scholars) to do high-quality research and to train others (for sustainability and self-reliance), and to maintain sustained engagement with government and other stakeholders.

Figure 3 shows a map of the FTF focus states in which NAPP worked. Though Oyo State is not an FTF focus state, it was included under this activity because of longstanding relationships with researchers that played a significant role in the development and implementation of capacity-building efforts of the project.

**Accomplishments.** Over the last four years, the project has been successful in the following areas:

*Research.* Building resilience by producing the evidence base for policies to reduce food insecurity and promote agricultural productivity. Through collaborative research conducted by MSU faculty, IFPRI researchers, and partners across research institutions and government agencies, the project has produced 91 publicly available publications including 35 working papers, 39 policy briefs and policy notes and 17 journal articles. These research outputs have been instrumental for conversations among stakeholders (including government, private sector and civil society) on important issues such as food safety (particularly aflatoxins along complex commodity value chains in Nigeria), food and nutrition security, agricultural productivity (seed variety improvement), macroeconomic issues, political economy of agricultural policy-making as well as climate change

and resilience. As of November, 2019, more than 4,200 participants have attended organized policy-relevant events (conferences/workshops/seminars/policy roundtables).



**Figure 3: FTF focus states in Nigeria where the NAPP has worked**

*Training.* Increasing self-reliance by strengthening the capacity of young Nigerian scholars and their supervisors to do high-quality research and to train others across Nigeria. The project has trained more than 4,400 beneficiaries from the Federal Ministry of Agriculture and Rural Development (FMARD), state ministries of agriculture, research institutions, media, farmers, and the private sector. These trainings cover important issues such as (a) data collection and analysis for policy, (b) understanding Nigeria’s agricultural policies, (c) applying value chain concepts in Nigeria’s food systems transformation, (d) policy communications, and (e) economy-wide modelling and macroeconomic Adjustment.

*Outreach and communications.* Expanding the local and international visibility of Nigerian agriculture, Nigerian agricultural policy research and Nigerian scholars. Being collaborative, NAPP ensures that Nigerian scholars contribute to the generation of new knowledge and are able to carry on such research independently in the future. An active network of Nigerian-based, and American-based scholars is already functional. The overall aim is to strengthen the visibility and credibility of local research networks as well as to enhance policy interaction with stakeholders. Collaborative dissemination also ensures that the project addresses policy impact through increased and targeted policy communication strategies. The overall idea is to promote a “think tank” culture within the agricultural policy process that can be led by Nigerians.

### Major Outcomes.

- *Sustainable capacity strengthening for Nigerians led by Nigerians:*
  - The Policy Project brought Nigerian scholars (14 Masters and PhD students) and their advisors to Michigan State University (MSU) for courses, research training and support combined with long-term mentoring. Mentoring starts in Nigeria after scholars have been selected and before they come to MSU. It continues even after the scholars complete their tenure at MSU and return to Nigeria. So far, NAPP scholars have produced 31 publicly available research publications and 28 program highlights including peer-reviewed journal articles. Project scholars returning home have so far trained over 1,000 people on data collection and analysis. There is currently an increasing demand for these trainings across the country.

- With zeal and passion for their communities, scholars have developed non-technical communication pieces (based on rigorous scientific evidence) for extension agents, farmers, processors and households. These communication pieces have been translated to Nigerian languages (including Igbo, Hausa, Tiv and Yoruba). Some of them have also been prepared in oral form to disseminate research findings in a culturally relevant manner. This is part of the train-one-to-train-others approach of NAPP that is supporting conversations among stakeholders to discuss, advocate for and develop policies to promote food security and agricultural productivity in the country. Nigerian supervisors who expand their research network and skills through the program have become more enthusiastic in supporting younger colleagues to innovate at their home institutions, using the gains of their NAPP experience.
- The project continues to work with Nigerian research networks and associations to strengthen their capacity and expand their recognition in the agricultural policy space. Annually, the project works with the Agricultural Policy Research Network. The project also works with the Nigerian Association of Agricultural Economists (NAAE) to organize capacity-strengthening activities, typically geared at young and mid-career scholars. In 2018/2019, NAPP and NAAE jointly trained and mentored some scholars over a one-year period. The best works of the mentees were presented at an international conference and will be published in the 2019 edition of the *Nigerian Journal of Agricultural Economics*.
- *Research Impacts.* The Policy Project's research on nutrition has been well received. FMARD is now committed to starting a new Department of Nutrition that will enhance the nutrition focus of agricultural policy. NAPP will be supporting the new department for organizational effectiveness and productivity.
- *Outreach and Communications.* NAPP helps Nigerian research networks to get international recognition. The project supported the online publication of the *Nigerian Journal of Agricultural Economics* (Volume 2 (2011) – Volume 8 (2018)). Just between October 2018 and November 2019, these articles have been downloaded over 38,481 times!

**Lessons learned.** Over the last four years, the Policy Project has learned that:

- Policy permeates all facets of agricultural life in Nigeria and policy change requires sustained engagement at several levels.
- Impact therefore takes place through (a) capacity strengthening via training and long-term scholar mentoring; (b) rigorous collaborative research and dissemination on food safety and nutrition, agricultural productivity, extension, climate change and resilience, etc.; and (c) support to Nigerian research associations and networks.
- These activities are strengthening resilience by producing the evidence base for policies, and increasing self-reliance in research, policy development and implementation.

### *Projet d'Appui aux Politiques Agricoles (PAPA)—Senegal*

**Overview.** The goal of the Feed the Future Senegal Agricultural Policy Support Project (Projet d'appui aux politiques agricoles—PAPA) has been to strengthen Senegal's policy and enabling environment for increased public and private agricultural sector investment through an effective and sustainable system for formulating, implementing, and monitoring agricultural sector policies. The technical approach employed by PAPA involved setting up: (a) a network of local centers of expertise that was empowered to generate knowledge to meet the evidence needs of Senegal's Ministry of Agriculture and Rural Equipment (MARE); (b) an inclusive policy dialogue and consultation platform that allows a wide group of state and non-state actors to review and influence agricultural policies; and (c) a knowledge management infrastructure that acts as a portal for disseminating data and analyses to agricultural sector stakeholders. The project activities were organized into four components: (1) Enhancing national capacity for policy research, analysis, and policy communication; (2) Fostering political buy-in, stakeholder involvement, and ownership of agricultural policies and processes; (3) Promoting evidence-based agricultural policy formulation, implementation, and M&E, and (4) Facilitating effective policy implementation and monitoring and evaluation.

**Major achievements** of PAPA include: (a) a local analysis network (LAN) was successfully set up, bringing together, for the first time in Senegal, research centers and universities to agree with the Ministry of Agriculture

on a research agenda and work jointly to produce relevant data and analysis that will inform agricultural policy making; (b) the most comprehensive set of primary survey data in the country's history covering all segments of all major agricultural input and output value chains, which was produced by the LAN; (c) a large number of analytical products (e.g., factsheets, discussion papers, technical reports) developed by the LAN from the extensive database, which will guide agricultural policies dealing with the various value chains; (d) the creation of a decentralized digital knowledge management platform and M&E system, the first ever for the ministry and a central tool for the coordination of agricultural policy design and implementation; (e) strengthening the practice of mutual accountability in policy making by facilitating Senegal's Agriculture Joint Sector Review process, and (f) strengthening of institutional and individual technical capacities for agricultural policy research and analysis. Capacity building/strengthening is central to the project's objectives and underlies all other achievements. It is therefore discussed in more detail below.

### **Major Outcomes:**

*Creating a decentralized digital knowledge management platform and M&E system:* PAPA has been successful in building and strengthening capacity within MARE, particularly in policy formulation, implementation, monitoring and evaluation. The establishment of an M&E and knowledge management system is one of the essential components for significantly improving policy making within MARE. In terms of implementation, PAPA has broken this down into four sub-components: a computerized M&E module, a working website, a knowledge management strategy and a communication strategy. These four components aim at facilitating evidence-based policy making and are today a reality in Senegal. A fully computerized and web-based M&E system has been developed and launched, with the accompanying instruction manual and staff trained to manage the new system. To make the system accessible to decentralized users including farmers and agri-businesses, a mobile application of agricultural information sharing has been developed and tagged to the web-based information system. Together with Africa Lead, the project also developed a knowledge management and communication strategy. PAPA trained 114 MARE staff in the concepts of result-based management and M&E, 111 staff in the computerized M&E modules, and 58 staff in the areas of change management and leadership development. To support the software and human capital buildup, PAPA provided hardware, including desktops, laptops and printers, to the decentralized units of MARE in charge of data collection and initial processing. Taken together, PAPA has contributed to setting up a novel system of data collection, analysis and sharing between all units of the Ministry of Agricultural, including top-level cabinet and other government agencies. This is expected to optimize policy development and implementation and to provide the information needed by private and public entities considering investment in agriculture.

*Strengthening of institutional and individual technical capacities for agricultural policy research and analysis.* PAPA has enabled a number of key individual institutions and think tanks to improve their organizational capacity to collectively engage with the ministry and develop mechanisms to collaborate and deliver a rich body of data and research outputs. Individual researchers benefited from hands-on experience in generating research outputs, from designing raw field data collection to data cleaning, analysis, and report writing.

As a result, PAPA realized the largest field data collection effort in Senegal. Entire value chains of all major agricultural commodities were surveyed, covering all value chain segments from the manufacturing, import, distribution and use of modern inputs to farm production, post-harvest, processing, wholesale and retail trade, and final consumption. Institutions had to collaborate to deploy their research staff and a great number of field operators to collect these data. They worked together on designing the questionnaire, producing tablet-based applications to facilitate data collection, training enumerators, organizing the actual field operations, assembling the data, and cleaning and analyzing the data. They formed joint teams to prepare close to 20 individual technical reports all addressing issues of major policy concerns. All these tasks and required planning and coordination involved a chain of activities that tested institutional capacities and, in the end, contributed to strengthening these same capacities.

The availability of extensive and high-quality field data and the interaction with experienced senior researchers from IFPRI and MSU also created opportunities for collaboration around the use of state-of-the-art tools and



methodologies to unleash the creativity, motivation, and readiness of network members in producing research that is meant to influence policy, not just for publications or other academic purposes. The PAPA data sets are comprehensive in addressing broad aspects of agricultural development, and the LAN researchers have tapped into these data to produce analyses that were not feasible with pre-PAPA data or by them working separately. The many analytical outputs produced by LAN researchers look at issues ranging from the structure-conduct-performance of all agricultural input and output value chains, to the patterns and determinants of rural and urban food consumption, to understanding the changing complexity and level of transformation within Senegal's agricultural sector. The work involved detailed look into input sectors (fertilizers, seeds, mechanization) as well as economy wide modeling to better understand to interrelationships within and across value chains. This wealth of information, data and analytical products, is available to the ministry and analysts to respond to policy questions today and in the near future. Moreover, individual researchers are poised to gain more professional visibility through the publication potential offered by the PAPA experience. Already, an edited book is in preparation, summarizing Senegal's experience in transforming its agriculture in the light of PAPA's research and using the analytical outputs of LAN and IFPRI/MSU researchers.

As LAN institutions continue to work together using the collected data sets and around the thematic issues defined together with the ministry, significant spillover effects are bound to emerge. For instance, participating university departments and researchers are likely to generate bachelors, masters or doctoral theses and other research outputs using PAPA data and on topics identified under the project and funded from their own resources. The pipeline of students to be trained using the same data and working on the same data will continue to expand the pool of local expertise.

**Key constraints and lessons Learned.** The main characteristic of PAPA is its novelty in terms of approach, whereby local centers of knowledge have been mobilized and deployed to collaboratively conduct research needed to feed into policy making. This contrasts with the pre-project context where centers have worked in silos and research was carried out completely disconnected from policy concerns faced by the government or, in ad hoc fashion, through outside expertise.

*Challenges.* Setting up such a novel system has not been easy or straightforward, as it involved bringing research institutions and think tanks that have barely worked with one another in the past to depart from their usual, in-house focused research approaches, to partnering with other groups around a shared data collection and analysis agenda. Issues such as institutional independence and individual interests were factors to deal with before institutions could aggregate into a local analysis network. This takes time, so project coordinators and donors must be patient and avoid throwing in the towel before the new system matures.

Preparing local centers of knowledge and individual researchers to move from a consultancy-based to a more strategic mode of engagement with the ministry has been another key challenge. This does not only involve a change of culture but also calls for coordination and decision mechanisms that have to be elaborated, agreed and abided to by all parties.

*Lessons learned.* It has been possible to overcome the above obstacles thanks to three factors: (1) ownership and leadership of the project by the ministry's top decision makers, and their support to the project; (2) an inclusive approach to project activity formulation and implementation, whereby technical partners and the project unit have consulted regularly; and (3) space and time for members of the LAN to define and lead the research agenda.

The PAPA experience and modalities offer useful lessons for African countries struggling to meet the data and analytical needs of more effective agricultural sector policies. The organization of data collection around key data clusters, the coordinated design of data survey and analysis, and the decentralized execution of data and analytical tasks by individual centers of knowledge not only allowed for a comprehensive coverage and data and thematic issues, but also did so at a relatively low cost.

### Tanzania Agriculture and Nutrition Policy Activity—SERA BORA

**Overview:** The “Agriculture and Nutrition Policy Activity,” which is called SERA BORA in Kiswahili (meaning “better policies”), is a project funded by USAID/Tanzania. FSP received this Associate Award in September 2019 with a start date of January 1, 2020. The objective of this project is to accelerate adoption of better and more effective policies and programs to drive broad-based agricultural sector growth, improved food security and nutrition, and reduced poverty in Tanzania. SERA BORA will leverage existing activities (the first core implementation principle) in three ways. First, it will build on the current ASPIRES project to launch ASPIRES the NGO as a local agricultural policy think tank, as a central element of its focus on sustainability. Second, it will continue to use and strengthen the platforms of the Policy Analysis Group (PAG) and the Annual Agricultural Policy Conference (AAPC) to engage a wide array of private, public, and civil society stakeholders in (a) identifying priorities for policy research and reform, and (b) assessing the implications of research results for the design of policy reform actions. Third, it will engage strategically with other USAID-funded activities in a way that enhances results for both.

The project has three programmatic components:

1. **Policy research and data generation.** SERA BORA will conduct research and generate data through the emerging ASPIRES NGO think tank in collaboration with local partners.
2. **Engagement for policy and regulatory reform.** All SERA BORA’s research will feed into this engagement. It will facilitate engagement by “pulling” perspectives and priorities from stakeholders and “pushing” information out to them through research reports and articles, policy briefs, policy success stories, social media, and its web site.
3. **Strengthening of policy institutional architecture and capacity.** Key mechanisms here will be the PAG, the AAPC, and stakeholder forums formed around particular policy studies.

### Venezuela Buy-in

FSP received this buy-in in September 2017 to do an agricultural sector assessment in Venezuela. Under this buy-in, IFPRI and MSU in collaboration with their partners in Venezuela have achieved the following activities and outcomes:

1. A Pathways report was developed that outlined different possible actions by USAID and other international organizations under three scenarios, focusing on helping the people of Venezuela as well as democracy in that country:
  - Scenario 1: Current government continues same macro and microeconomic policies. Three proposals to alleviate suffering (and weaken the use of food as a tool of political control) and to do preparatory work on land and agro-industrial firms.
  - Scenario 2: Changes in some agri-food policies within current overall policy regime. Three strategies to improve food security in the short term are proposed under this scenario.
  - Scenario 3: Changes in the overall policy regime under four groups of topics. Group 1: food security/poverty safety net plus “big bang” approach to prices and markets (3 proposals/programs). Group 2: agricultural and agro-industrial programs (4 proposals/programs). Group 3: cross-cutting, general topics (3 proposals/programs). Group 4: medium-term development program.
2. This Report was presented to USAID in November 2018. It benefitted from two meetings with colleagues from USAID and other U.S. agencies, another meeting organized by USAID with other groups working on Venezuela, and a separate meeting that took place at IFPRI with staff from the IADB, the World Bank and the IMF to discuss drafts of the Assessment and Pathways reports.
3. Colleagues from USAID received the reports (including the previous Assessment) and indicated that they did not have further comments, but that they were considering further steps regarding how to help the people and democratic institutions in Venezuela.
4. Because of the expectations of possible improvement in the political conditions in Venezuela, the IMF, the World Bank and the Inter-American Development Bank requested that IFPRI staff give them access to the work done, to help them prepare a potential program for the first year of a new government. USAID

- allowed the IFPRI/MSU team to share the documents. A further paper was prepared for the IMF and multilateral banks with a more focused program and estimated costs for that hypothetical transition period.
5. The MSU/IFPRI team has maintained different conversations and contacts with the Venezuelan group of experts that helped with the two main reports as well as members of the Guaido Administration in Washington, DC, to explore possible ways to help improve food security, the economy and democratic governance in Venezuela.
  6. Because of this effort, the MSU/IFPRI team has established connections with over 25 active agricultural companies (small, medium and large), over 10 grassroots organizations, four major universities (three of them with active departments of agriculture). In addition, MSU/IFPRI has established an active communication channel with the national agro-processing organization, the national retail association, the national association of cargo and logistics companies and the most influential and representative federations of agricultural associations in the country. Updated information is constantly exchanged with these expanded networks of key informants, which we hope will continue to inform USAID, USDA, other bilateral as well as multilateral partners supporting Venezuela's planning for socio-economic recovery.
  7. All the deliverables of this Buy-in project were completed in the second quarter of FY 19. A follow-on Associate Award was awarded to FSP in summer 2019 to extend the work in Venezuela (this activity is described next).

### *Venezuela Associate Award*

**Overview:** The Venezuela Pathways to Recovery (VPR) project's work focuses on the following areas:

- Supporting private sector organizations in preparation for a major change in the policy environment (led by the Center for International Private Enterprise—CIPE)
- Piloting seed production for maize, rice and beans with better genetic materials to support food production and generate lessons learned prior to engaging in further scaling activities. Getting information right on the cost of producing seed and other important agricultural inputs is crucial for the second phase of Plan País Alimentario (led by MSU).
- Generating a database of private land and private companies linked to the food sector that were seized by the government and for which conflict resolution and normalization approaches will be necessary when the political environment allows for an open market economy. Putting land and installed capacity to work will be crucial for the second and third phase of Plan País Alimentario (led by IFPRI and MSU in collaboration with local partners).
- Identifying food security safety net models and lessons learned by other countries that could better inform Plan País Alimentario plans (led by IFPRI and MSU in collaboration with local partners).

**Accomplishments.** The project started field activities in September 2019. In the short time since then, private sector partners have advanced with the planting and multiplication of high-quality maize, rice and beans. Fundación DANAC, ASOPORTUGUESA and Seed Production Unit at Universidad Central de Venezuela expect to harvest by mid-March 2020.

Other activities have focused on negotiating subcontracts with IFPRI, CIPE, the International Center for Tropical Agriculture (CIAT) and Venezuelan Catholic University Andres Bello. Together, the partnership is lining up local resources to carry out the work plan for 2020 in coordination with the local private sector.

## ANNEX C: SYNOPSIS OF FOUR SYNTHESIS REPORTS

Final versions of following four Synthesis Reports (SR) were completed that reflect the progress, achievements, and lessons learned from the implementation of FSP. They are [available on the FSP website](#).

- Synthesis Report I. Advancing Research, Policy, and Capacity for Food System Transformation. Synthesis of Achievements from the Feed the Future Innovation Lab for Food Security Policy.
- Synthesis Report II. The Changing Face of African Farmland in an Era of Rural Transformation.
- Synthesis Report III. Rural and Agrifood Systems in Transforming Economies in Africa and Asia.
- Synthesis Report IV. Building Locally Led Agricultural Policy Analysis Capacity: Lessons from Experience in Developing Countries.

Synopses of these four reports are included below.

### *Synthesis Report I*

SR I contains four major sections: (1) Pushing the Knowledge Frontier on Agri-food System, (2) Pathways of Policy Engagement Transformation, (3) Capacity Strengthening and Partnerships for Responsive Policy Systems; and (4) Conclusions. The Conclusions (pp. 33-34) are presented below.

Any engagement in the food security policy arena requires a degree of humility. Knowledge gaps about agri-food system transformation and the best ways to achieve food security will remain sizable as global dynamics in technology, trade, communication, and demography continue apace in the coming years. Policymaking, even when rigorous and timely research is available, will never be entirely evidence-based. And building capacity will require not only training individuals about methods and data, but also addressing weaknesses in the financial and administrative management of local institutions and providing strategies to enable them to retain independence and credibility in sometimes difficult political environments.

Nevertheless, with its three-pronged focus on research, policy, and capacity, FSP has made important advances over the past five years in both Africa and Asia. Specifically, FSP research has advanced thinking about how rapid urbanization is changing diets and contributing to the growing consumption of ultra-processed foods in low-income countries. This creates notable policy trade-offs by, on the one hand, undermining nutrition and public health goals while, on the other hand, contributing to a growth in domestic supply chains and employment possibilities as emerging small- and medium-sized agribusinesses enter these supply chains. Growing demand for food generated by demographic pressures has also contributed to more input-intensive practices and labor-saving technologies, including mechanization and herbicide use. In some countries, there has been a push toward greater commercialization of farming, leading to a new class of medium-scale investors. These distributional shifts in landholding have occurred in parallel with a wave of titling reforms, especially in Africa, that were intended to protect property rights and encourage agricultural productivity.

Integrating this FSP research into policy action by national governments, regional organizations, and international donors has been facilitated by long-term engagement with key stakeholders and acquiring a firm understanding of underlying policy processes. In some cases, this integration has involved providing new data and tools to help governments identify policy challenges and appropriate interventions. In others, it has depended on uncovering implementation gaps that impede well-meaning policy designs from having the intended impact. In still others, it involved monitoring and evaluating extant policies to suggest key refinements. In these different circumstances, FSP researchers learned the importance of adapting policy recommendations to political and ideological realities, recognizing where agricultural policies had trade-offs with other development objectives, and committing to long-term engagement with a broad range of policy champions, including subnational governments, civil society, and the private sector.

In many instances, policy engagement was further facilitated by partnering with local research institutes, think tanks, and universities, and enhancing their capacities, through training courses, co-creation of research outputs, and exposure to new tools, to conduct and communicate rigorous analysis. Through experimenting with various capacity-strengthening modalities, the FSP team learned that training courses are most effective when they are complemented by opportunities to apply material on the job and when they include staff across levels of seniority. Collaboration with university staff offers many benefits, but care must be taken to ensure that such collaboration does not become a distraction from faculty members' teaching and mentoring responsibilities. Research institutes are more likely than university professors to respond to short-term policy needs, but their ability to exert policy influence depends on the quality of such institutes' leadership, their ability to retain competent staff with competitive pay structures, and a sustainable fundraising strategy.

By documenting these and other achievements over the six and a half years of FSP, this paper offers lessons about what works, where, and when for USAID and other stakeholders in the international development community that share the goal of advancing informed, effective, and sustainable policy systems to achieve global food security. Successful policy engagement will continue to require a blend of tailored human and organizational capacity building, with focused research on the knowledge frontier, to enable developing countries to resolve complex policy challenges on their journey to self-reliance.

### *Synthesis Report II*

The Executive Summary from this report is included below.

Mounting evidence suggests that sub-Saharan Africa has undergone profound rural transformation since the early 2000s, though progress has been highly uneven across countries. Conventional views of African agriculture are in many respects becoming obsolete. Our review highlights the evidence of farm-level transformation in the region, identifies the key sources of dynamism in the sector, and proposes an updated typology of farms that reflects the evolving nature of African agriculture. We underscore the rising importance of an entrepreneurial class of African commercialized medium-scale farmers, and examine the causes and consequences of this phenomenon.

#### **Key findings**

The size distributions of farms in many African countries are rapidly changing. In most of the countries for which national rural household surveys exist, and particularly those with substantial potential for cropland expansion, it is no longer true that the vast majority of farmland in Africa is under small-scale cultivation. The national shares of area under cultivation, the value of production, and marketed crop output on farms under five hectares has been declining over time, with corresponding increases in shares among medium- and large-scale farms. Medium-scale farms (defined here as farm holdings between 5 and 100 hectares) account for a rising share of total farmland, especially in the 5- to 25-hectare range where the number of these farms is growing especially rapidly. Medium-scale farms control roughly 20 percent of total farmland in Kenya, 32 percent in Ghana, 39 percent in Tanzania, and more than 50 percent in Zambia. Medium-scale farmers are a diverse group, reflecting several distinct pathways into medium-scale farming, including (1) the successful expansion of small-scale farms into medium-scale farms, generally in the 5- to 25-hectare range, through new land acquisition made possible because of increasingly active land markets; (2) the diversification into farming by rural nonfarm businesspeople and wage earners; and (3) land acquisitions by urban-based professionals, retirees, and rural elites. The relative importance of these pathways varies by country according to differences in potentially available cropland, the economic potential of that land, the ease of acquiring land through customary and statutory tenure systems, and the degree of farm scale bias of agricultural policies. The rapid development of land rental, purchase, and long-term lease markets has encouraged the growth of each of these pathways.

This trend is not happening everywhere. In densely populated countries such as Kenya, Malawi, Uganda, and Rwanda, land scarcity and high land values are impeding the pace of medium-scale farm acquisitions, and the



share of land under medium-scale farms is growing slowly if at all. However, as we establish in Section 2, the population-based Living Standards Measurement Survey (LSMS)-type data utilized in this study may underrepresent medium- and large-scale farm holdings, based on comparisons of larger farm censuses and LSMS data from the same year. Therefore, the shares of cultivated land, farm production, and marketed output accounted for by medium-scale farms as reported in this review most likely are underestimated.

### **Causes and consequences of the rise of medium-scale farms**

Farm size distributions in Africa have been changing for four reasons: the rise of land markets, the recent era of relatively high global food prices, agricultural policy reforms, and the growing influence of relatively wealthy and politically influential “emergent farmer” interests. The rise of medium-scale farms is affecting the region in diverse ways that are difficult to generalize. Many such farms are sources of dynamism, technical change, and commercialization of African agriculture. They attract private investment in crop buying and input suppliers, and in doing so they improve market access conditions for all surrounding farms regardless of scale. They also may make it more feasible for governments to raise taxes from the farm sector. However, medium-scale land acquisitions may exacerbate land scarcity in favorable rural areas, raise land prices, and crowd out young peoples’ access to land for farming.

Medium-scale farmers tend to dominate farm lobby groups and influence agricultural policies and public expenditures to agriculture in their favor. Nationally representative Demographic and Health Survey (DHS) data from six countries (Ghana, Kenya, Malawi, Rwanda, Tanzania, and Zambia) show that urban households own 5 to 35 percent of total agricultural land, and that this share is rising in all countries where DHS surveys were repeated. This change suggests a new and hitherto unrecognized channel by which medium-scale farmers may be altering the strength and location of agricultural growth and employment multipliers between rural and urban areas.

African states seem to be generally supportive of such changes. They are keen to increase food production and marketed farm output to feed their rapidly swelling cities and reduce dependence on food imports. Putting land into the hands of capitalized, educated, and entrepreneurial African farmers may be viewed as supporting this objective. Medium-scale farms are attracting major new private investment by input suppliers that improve market access conditions for nearby smallholders. Farming areas with a high concentration of medium-scale farms attract greater investment by large-scale grain buyers. In Tanzania, small-scale farms are much more likely to rent mechanization services in areas with a high concentration of medium-scale farms. Other evidence from Tanzania indicates that smallholder household incomes are positively and significantly associated with the share of land in the district controlled by 5- to 10-hectare farms, after controlling for market access, rainfall, and other local conditions.

However, there are warning signs as well. The acquisition of land by outside investors certainly reduces the stock of land under customary tenure that will be accessible to current and future generations of local people. As traditional authorities sell land to outside investors based on willingness-to-pay criteria, their actions are raising the price of land, making it more difficult for young people to acquire land, and raising the likelihood that young people will exit farming and migrate out of the area. The rise of land markets is creating a new class of landless workers in Africa; having sold their land informally to others, they become dependent on the local nonfarm economy for their livelihoods.

### **Implications for agricultural and land tenure policies**

A major policy question for African governments and international development partners concerns the future role of smallholder farms in Africa. While opinions are divided, our interpretation of available evidence is that governments may most effectively achieve their national development goals by explicitly promoting the productivity of smallholder farms to achieve agricultural and economic transformation with poverty reduction. Inclusive forms of rural income growth are likely to accelerate the pace and equity of structural transformation processes. Where competition for land is not intense, new investment in medium-scale farms can be a powerful source of economic dynamism, attracting private sector investments in input and output markets that improve

market access conditions and the commercialization potential of small-scale farms. In such areas, questions of “either/or” might be misplaced.

However, in densely populated areas where small-scale farms predominate and where only limited additional land remains available for area expansion, the priority is clear: focus on promoting the productive potential of small farms, realizing that success in this endeavor will lead to progressive movements of individuals and households out of farming and into off-farm jobs as part of the structural transformation process. In short, a successful smallholder-led agricultural strategy will result in a declining share of the labor force in farming over time.

Inclusive forms of rural transformation will require greater attention to supporting smallholder farms even as larger farms gain greater traction in the region. Given the diverse nature of extant customary land tenure systems in Africa and of the threats to tenure security facing different landholders and regions, policies to strengthen tenure security and regulate land transactions in Africa will need to be carefully tailored to the local tenure context and needs of different landholders to affect perceived tenure security and agricultural outcomes. Where land rights derive primarily from community membership, customary tenure systems effectively regulate within-community transactions, and external actors pose the primary threat to land rights, land registration at the community level accompanied by formal recognition of customary tenure institutions may be sufficient to reduce insecurity. In other areas where land rights are already individualized and internal actors pose the greatest tenure security threat, and especially where informal transactions involving outsiders are common, a more costly and time-consuming investment in registering individual land rights and transactions may be needed to secure existing rights and avoid conflicts that customary institutions will not be able to manage.

#### **Implications for national statistical agencies**

We do not yet know how generalizable these trends are across the region. However, existing population-based data collection platforms may systematically underreport a dynamic segment of African agriculture: the medium-scale farms. This omission, however understandable, has profound implications. Under the status quo, African governments cannot accurately monitor, much less understand, how farm structure is changing over time. Similarly, policymakers cannot adequately address such routine questions as the magnitude and location of marketed agricultural surplus. These questions are important for guiding strategic policy decisions aimed at stimulating agricultural growth, reducing rural poverty, and managing strategic food reserves and trade policies.

Redressing this informational blind spot will require new modes of data collection. We advocate for the expansion of agricultural sample census surveys to better capture the magnitude, location, and other characteristics of this growth of medium and large farms that currently structured LSMS-type surveys cannot adequately capture. We also advocate for the systematic collection of data on nonlocal land control—that is, ownership or other usufruct rights over rural agricultural land held by urban or other nonlocally residing households. This data collection demand will require new approaches to sampling, listing, and enumeration, as well as questionnaire designs that explicitly capture nonlocal holdings.

#### ***Synthesis Report III***

This report contains five major sections: (1) Background, (2) Drivers of Change, (3) Conceptual Approach, (4) Opportunities and Challenges from Drivers of Change, and (5) Policy Responses. The Executive Summary is six pages long, and is best consulted in the [original document](#):

#### ***Synthesis Report IV***

This report, contains five major sections: (1) Introduction, (2) Conceptual Framework: What influences the pace, sustainability, and impact of policy analysis capacity? (3) Case Studies of Efforts to Build Institutional Policy Analysis Capacity, (4) Insights from Efforts to Strengthen Institutional Agricultural Policy Analysis Capacity, and (5) Conclusions. The Conclusions section is included below.

In reflecting on the main insights described in Sections 3 and 4, and based on the authors’ own experiences

with institutional capacity strengthening in developing countries, the concluding section underscores three general points to guide future capacity-building efforts.

### **The appropriate policy analysis model depends on objectives and time frame for impact**

All three models—embedded advisors or units in government ministries, university-affiliated policy institutes, and independent policy think tanks—can be effective.<sup>10</sup> Effective model type depends on objectives and time frame for impact. The common denominator of success in any institutional capacity-development model is effective leadership—setting a conducive internal culture that incentivizes individuals to bring out their best and to support the institute’s objectives. This can be achieved in any model, but especially the policy institute model, because of the range of activities that a policy institute can fulfill in a country’s policy ecosystem, in contrast to the embedded technical advisory model, which may have extremely important contributions but is limited in the range of activities that it can fulfill. For funding organizations aiming to improve the policy enabling environment over the long run and for sustainable development, clearly the locally led policy institute—affiliated with a credible national organization—is likely to be the most suitable model.

### **The influence of the ecosystem on institutional capacity development**

In 2019, there are many more well-trained African policy analysts than there were in 1990, but relatively few are within locally led policy analysis institutions. An important conclusion of this report is that progress in building institutional capacity in Africa is not just a matter of generating more qualified local policy analysts, or following best practice management principles, as important as those are. Institutional capacity development is also greatly influenced by the external environment in which indigenous policy analysis units operate. This “policy ecosystem” determines the scope for locally led policy institutes to develop and thrive. Historical patterns of donor funding may impede the development of relatively new indigenous policy analysis units. In prior decades, it was often concluded that local universities or agricultural policy research institutes were too weak to provide effective guidance to their governments and other local stakeholders and hence development assistance was channeled to international organizations and universities to initiate projects that would provide the needed technical and policy guidance. These substantial grant investments often provided important services to public sector ministries but (with a few notable exceptions) have devoted a small fraction of their budgets to helping African organizations deliver such services themselves. While this approach generally succeeded in providing usually high-quality technical analysis, it tended to entrench the role of international institutes and universities as central players in the agricultural policy ecosystem of many developing countries, and contributed to a vicious circle in which local universities and policy analysis units were perceived as too weak to make them the foundation of agricultural policy grant activities, justifying future grants that maintain their status as peripheral actors in the ecosystem.

Policy analysis is necessary for evidence-based policy discussion, but it is not sufficient. Other organizations and capacities, especially in government (broadly defined to include executive, legislative and judicial branches) are needed to embrace policy analysis and translate it into implementation. This implies that policy analysis institutes need the resources to invest substantially in policy outreach/extension, especially to groups like parliamentarians and ministry officials, as well as to journalists to help inform the general public.

There are several noteworthy examples in which locally led research organizations engaged in agricultural policy analysis have become the central actors in their countries’ agricultural policy space. Examples are Institute of Statistical, Social and Economic Research (ISSER)/University of Ghana, BFAP/University of Pretoria, and IAPRI in Zambia. The national governments of these countries rely on these institutes in many ways, including (a) commissioning the institute to conduct studies to guide policymaking on important policy topics; (b) asking for guidance or participation on special assignments undertaken within government ministries; (c) seconding

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<sup>10</sup> It is possible that different conclusions might have emerged if it were possible to account for the vastly different conditions of the country case studies (e.g., governing administrative structures, political parties, stability of governance, etc.). However, it was not possible in this report to rigorously account for differences in country conditions to assess the viability of alternative policy analysis models.

an individual from the institute to join a government task force; and (d) periodic outreach activities co-organized by the policy institute and a government body. These organizations in many respects play a role in their countries similar to those of think tanks and policy institutes in most high-income countries. However, in many African countries, international groups continue to assume a dominant role in agricultural policy analysis and policy engagement activities with local governments. And in many of these countries, the current structure of external grants in the agricultural policy space does little to build the long-term development of locally led research organizations that play a major role in almost all high-income countries.

### **From studying to implementing capacity development**

Studies of how capacity development can more effectively contribute to policy processes are needed but they are not a substitute for resources devoted to on-the-ground institutional capacity development. Institutional capacity development may be accelerated by shifting the balance of funding meant for capacity development from studying capacity development and one-off workshops to individuals in targeted policy units to actually implementing comprehensive institutional capacity-development activities. This is not to argue that some study of what works and what doesn't in building institutional capacity is not important—it certainly is. But we note that considerable resources are already being allocated to providers of capacity-development knowledge who conduct trainings and workshops designed to capacitate individuals who are tasked with the actual jobs of building their policy institutes, many of which remain under-resourced to implement comprehensive programs to sustainably build their policy institutes. In other words, sustainable funding to the institutes themselves may increasingly be a binding constraint rather than knowledge of how to develop strategic plans, management trainings, capacity-building plans, etc. Especially in recent years, the supply of internationally trained professionals in low-income African and Asian countries has increased dramatically. Many more Africans today possess professional white-collar job expertise related to agri-food systems, both in the public and private sectors, than 25 years ago. Many were educated internationally, possess valuable technical skills, and can operate effectively in their countries given superior knowledge of local culture and connections with centers of local power. Many may certainly benefit from additional training and guidance in various ways, if adequate resources are also provided to effectively implement institutional capacity-development plans.

## ANNEX D: LIST OF MAJOR PUBLICATIONS

### Journal articles

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## ANNEX E: SUMMARY OF FSP PMP INDICATORS

#	Indicator ID	Indicator title	Year 1	Year 2	Year 3	Year 4	Year 5	Years 6-7
			July 15, 2013 to Sept 2014	Oct 2014 to Sept 2015	Oct 2015 to Sept 2016	Oct 2016 to Sept 2017	Oct 2017 to Sept 2018	Oct 2018 to End of project (Jan 2020)
1	Custom	Number of policy research and best practice papers	13	23	42	93	28	55
2	Custom	Number of new data sets informing food security policies available for public use	5	7	7	2	25	38
3	Custom	Number of stakeholder learning forums (national or global) held where findings/best practices are presented	25	70	40	58	39	5
4	Custom	Number of legal frameworks/Regulations/Administrative Procedures/institutional arrangements reviewed and analyzed	16	4	13	19	0	3
5	4.5.2-7 & EG.3.2-1:	Number of individuals who have received USG supported short-term agricultural sector productivity or food security training	563	98	101	467	211	79
6	Custom	Number of institutions where trained individuals are applying new practices	12	36	24	58	30	1
7	Custom	Number of USAID operating units supported	5	6	6	12	13	7
8	Custom	Number of private sector and civil society organizations/entities assisted to participate in policy formulation process	10	8	5	463	5	0
9	Custom	Number of public-private policy and enabling environment consultations held	14	6	4	6	16	0
10	Custom	Number of engagement events with ministry or heads of government implementing agencies (i.e., departments, directorate, division) held or facilitated through USG support	25	7	10	30	13	0

#	Indicator ID	Indicator title	Year 1	Year 2	Year 3	Year 4	Year 5	Years 6-7
			July 15, 2013 to Sept 2014	Oct 2014 to Sept 2015	Oct 2015 to Sept 2016	Oct 2016 to Sept 2017	Oct 2017 to Sept 2018	Oct 2018 to End of project (Jan 2020)
11	Custom	Number of engagement events with parliamentary bodies (e.g., agriculture committees) held or facilitated through USG support	3	1	0	1	4	0
12	Custom	Numbers of new legal frameworks/Regulations/ Administrative Procedures/institutional systems <u>developed</u> or existing frameworks/ procedures/ systems <u>revised</u> to promote policy change agenda	1	1	0	4	0	0
13	Custom	Numbers of new or revised legal frameworks/ Regulations/ Administrative Procedures/institutional systems to promote policy change agenda <u>undergoing the formal</u>	0	1	1	4	0	0
14	Custom	Numbers of new or revised legal frameworks/ Regulations/ Administrative Procedures/institutional systems to promote policy change agenda <u>approved for implementation</u>	0	0	0	3	0	0
15	Custom	Numbers of new policies, legal frameworks/Regulations/ Administrative Procedures/institutional systems implemented	0	2	1	3	0	0
16	Custom	Number of demonstrated uses by policy makers of findings and other outputs generated through USG support in policy, strategy, or program documents	2	1	0	12	6	0

## ANNEX F: LIST OF DATASETS AND STATUS OF SUBMISSION TO DDL

#	Component	Dataset	Status a/	Date
1	C1/2 Asia	Myanmar Aquaculture Agriculture Survey (MAAS)	Submitted	Apr-2019
2	C1/2 Asia	Rural Economy and Agriculture Dry Zone Survey (READZS)	Submitted	Apr-2019
3	C1/2 Asia	Rural Economy and Agriculture Dry Zone Supplemental Community Survey	Submitted	Apr-2019
4	C1/2 Asia	Dry Zone Seed System Survey	Submitted	Nov-2019
5	C1/2 Asia	Shan State Agriculture and Rural Economy Survey (SHARES)	Submitted	May-2019
6	C1/2 Asia	Shan Supplemental Community Survey	Submitted	May-2019
7	C1/2 Asia	Mon State Rural Livelihoods Survey	Submitted	Jun-2019
8	C1/2 Asia	Yangon Mechanization Cluster Survey	Submitted	Sep-2019
9	C1/2 Asia	Rural Economy and Agriculture Dry Zone Off-Farm Surveys: Agricultural Machinery Suppliers	Submitted	Sep-2019
10	C1/2 Asia	Rural Economy and Agriculture Dry Zone Off-Farm Surveys: Agricultural Machinery Outsourcing Service Providers	Submitted	Sep-2019
11	C1/2 Asia	Rural Economy and Agriculture Dry Zone Off-Farm Surveys: Oil Mills	Submitted	Sep-2019
12	C1/2 Asia	Rural Economy and Agriculture Dry Zone Off-Farm Surveys: Pulses and oilseed traders	Submitted	Sep-2019
13	C1/2 Asia	Farmer demand for quality seed and adoption of improved varieties	Submitted	Sep-2019
14	C1/2 Asia	Farmer demand for quality seed and adoption of improved varieties: RRC communities	Submitted	Sep-2019
15	C1/2 Asia	Shan Agriculture and Rural Economy Off-Farm Surveys: Maize Traders	Submitted	Sep-2019
16	C1/2 Asia	Shan Agriculture and Rural Economy Off-Farm Surveys: Agricultural Input Suppliers	Submitted	Sep-2019
17	C1/2 Asia	Shan Agriculture and Rural Economy Off-Farm Surveys: Agricultural Machinery	Submitted	Sep-2019
18	C1/2 Asia	Livestock Value Chain Survey: Pig and Poultry Farmers, Feed distributors, and wholesalers / retailers	Pending	
19	C1/2 Asia	Sagaing Seed sub-sample	Submitted	Oct-2019
20	C1/2 ESA Malawi	2015 Malawi Agriculture and Food Security Policy Processes Baseline Survey	Confirmed	Jan-2018
21	C1/2 ESA Malawi	2017 Malawi Agriculture and Food Security Policy Processes Endline Survey	Confirmed	Mar-2019
22	C1/2 ESA Malawi	2017/18 Malawi Value Chain Studies	Pending	
23	C1/2 ESA Malawi	Malawi - Commodity Balance Sheets - Maize	Submitted	Apr-2019
24	C1/2 ESA Malawi	Malawi - Commodity Balance Sheets - Soybeans	Submitted	Apr-2019

#	Component	Dataset	Status a/	Date
25	C1/2 ESA Malawi	Malawi - Commodity Balance Sheets - Soybean Oil	Submitted	Apr-2019
26	C1/2 ESA Malawi	Malawi - Commodity Balance Sheets - Soybean Meal	Submitted	Apr-2019
27	C1/2 ESA Mozambique	Mozambique - Commodity Balance Sheets - Rice	Submitted	Apr-2019
28	C1/2 ESA Mozambique	Mozambique - Commodity Balance Sheets - Maize	Submitted	Apr-2019
29	C1/2 ESA Tanzania	Quality of Agriculture and Food Security Policy Processes, Stakeholder Survey, Tanzania, 2016	Confirmed	Jun-2018
30	C1/2 ESA Tanzania	Quality of Agriculture and Food Security Policy Processes, Stakeholder Survey, Tanzania, 2019	Submitted	Nov-2019
31	C1/2 ESA Tanzania	Tanzania - Commodity Balance Sheet - Sunflower Meal	Submitted	Apr-2019
32	C1/2 ESA Tanzania	Tanzania - Commodity Balance Sheet - Sunflower Oil	Submitted	Apr-2019
33	C1/2 ESA Tanzania	Tanzania - Commodity Balance Sheet - Sunflower	Submitted	Apr-2019
34	C1/2 ESA Tanzania	Tanzania - Commodity Balance Sheet - Wheat	Submitted	Apr-2019
35	C1/2 ESA Tanzania	Tanzania - Commodity Balance Sheet - Rice	Submitted	Apr-2019
36	C1/2 ESA Tanzania	Tanzania - Commodity Balance Sheet - Maize	Submitted	Apr-2019
37	C1/2 ESA Zambia	Quality of Agriculture and Food Security Policy Processes, Stakeholder Survey, Zambia, 2016	Confirmed	Jun-2018
38	C1/2 ESA Zambia	Large-scale Trader Survey in Zambia	Confirmed	Apr-2019
39	C1/2 ESA Zambia	Quality of Agriculture and Food Security Policy Processes, Stakeholder Survey, Zambia, 2018	Submitted	Dec-2019
40	C1/2 ESA Zambia	Policy preferences survey of rural residents in Zambia	Submitted	Dec-2019
41	C1/2 ESA Zambia	Policy preferences survey of stakeholders in Zambia	Submitted	Dec-2019
42	C1/2 ESA Zambia	Emergent Farmer Survey - Survey of medium to large-scale farmers in six districts in Zambia	Submitted	Apr-2019
43	C1/2 ESA Zambia	Zambia - Commodity Balance Sheets - Maize	Submitted	Apr-2019
44	C1/2 ESA Zambia	Zambia - Commodity Balance Sheets - Soybeans	Submitted	Apr-2019
45	C1/2 ESA Zambia	Zambia - Commodity Balance Sheets - Soybean Oil	Submitted	Apr-2019
46	C1/2 ESA Zambia	Zambia - Commodity Balance Sheets - Soybean Meal	Submitted	Apr-2019
47	C1/2 WA	2009 Social Accounting Matrix for Gambia constructed from national accounts data and other existing data.	Confirmed	Aug-2016
48	C1/2 WA	2009 Social Accounting Matrix for Mauritania constructed from national accounts data and other existing data.	Confirmed	Aug-2016



#	Component	Dataset	Status a/	Date
49	C1/2 WA	2009 Social Accounting Matrix for Liberia constructed from national accounts data and other existing data.	Confirmed	Aug-2016
50	C1/2 WA	2009 Social Accounting Matrix for Sierra Leone constructed from national accounts data and other existing data.	Confirmed	Aug-2016
51	C1/2 WA	CAADP Results Framework Indicators	Confirmed	Feb-2018
52	C1/2 WA Mali	Farm household survey in Sudan savanna of Mali, 2014/15	Confirmed	Jun-2017
53	C1/2 WA Mali	Inventory of processed foods, 2016	Confirmed	Jan-2018
54	C1/2 WA Mali	Quality of Agriculture and Food Security Policy Processes: Stakeholder Survey, Mali 2017	Confirmed	Jun-2018
55	C1/2 WA Mali	Farm household survey in two agro-ecological zones, 2017/18	Submitted	Dec-2019
56	C1/2 WA Mali	Women diet diversity: Survey on the diet diversity of rural women in two agro-ecological zones	Submitted	Dec-2019
57	C1/2 WA Mali	Consumer preferences for dairy: Survey of Malian urban consumers' preferences for dairy products	Confirmed	Dec-2019
58	C4a	Socio-Economic Farm Data - Mozambique/2016, including medium-scale farms	Confirmed	Dec-2018
59	C4a	Socio-Economic Farm Data - Senegal/2016, including medium-scale farms	Confirmed	Dec-2018
60	C4a	Survey of about 1200 households in rural Tanzania. Collect household demographic data, agricultural practices, incomes, soil samples, and household location GPS coordinates	Confirmed	Dec-2018
61	C4a	Socio-Economic Farm Data - Malawi/2014, including medium-scale farms	Submitted	Dec-2018
62	C4a	Survey of all medium-and large-scale farms in eight (8) in rural Tanzania under crop, and GPS coordinates of the villages	Submitted	Dec-2018
63	C4b	Retail survey in 3 cities in Tanzania documenting market share of different types of retail outlets, and rates of change of market share across major food groups in Tanzania. Retail outlets (Supermarket chains, independents, traditional shops, market vendors and street vendors).	Submitted	May-2019
64	C4b	Survey of processors of maize meal and mixed meal products in three cities in Tanzania to examine recent changes in the structure of this important sector.	Submitted	May-2019
65	C4b	Surveys across a range of processed food groups to estimate the size distribution of firms and the labor intensity and competitiveness across that size distribution.	Submitted	May-2019
66	C4b	Stacked surveys of traders and processors in the maize and poultry value chains of Nigeria, combined with testing of food samples for aflatoxin contamination	Submitted	Jan-2020
67	FSP Core	Policy preferences survey of rural residents in Nigeria	Submitted	Dec-2019
68	FSP Core	Policy preferences survey of stakeholders in Nigeria	Submitted	Dec-2019
69	FSP core and Nigeria AA	Quality of Agriculture and Food Security Policy Processes, Stakeholder Survey, Nigeria, 2016	Confirmed	Jun-2018

#	Component	Dataset	Status a/	Date
70	FSP core and Nigeria AA	Quality of Agriculture and Food Security Policy Processes, Stakeholder Survey, Nigeria, 2018	Submitted	Dec-2019
71	FSP core and Senegal AA	Quality of Agriculture and Food Security Policy Processes, Stakeholder Survey, Senegal, 2018	Submitted	Dec-2019
72	Nigeria AA	Tractor sellers in Kaduna state, Nigeria	Confirmed	May-2019
73	Nigeria AA	Tractor owners in Benue state, Nigeria	Confirmed	May-2019
74	Nigeria AA	Irrigators around Abuja, Nigeria	Confirmed	May-2019
75	Nigeria AA	Informal Food Traders Survey, Nigeria	Submitted	Oct-2019
76	Nigeria AA	Kaduna State Government Revenues	Submitted	Jun-2019
77	Nigeria AA	Kaduna State Government Expenditures	Submitted	Jun-2019
78	Nigeria AA	Kaduna State Agricultural Production Data	Submitted	Jun-2019
79	Nigeria AA	Cross River State Nigeria Agricultural Development Project Funds and Expenditures	Submitted	Jun-2019
80	Nigeria AA	Cross River State Agricultural Input Prices	Submitted	Jun-2019
81	Nigeria AA	Cross River State Agricultural Production Data	Submitted	Jun-2019
82	Nigeria AA	Kebbi State Storage and Market Characteristics Survey, Wave 1	Submitted	Jun-2019
83	Nigeria AA	Storage and Grain Market Characteristics Survey Wave 2	Submitted	Jun-2019
84	Nigeria AA	NBS Kebbi State Nigeria Grain Prices Monthly 2000 to 2016	Submitted	Jun-2019

a/ Status as of January 2020. Pending datasets are in the process of finalization and submission.

