

Food Resilience Through Root and Tuber Crops in Upland and Coastal Communities of the Asia-Pacific



FoodSTART+ Grant Completion Report

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Food Resilience Through Root and Tuber Crops in Upland and Coastal Communities of the Asia-Pacific (FoodSTART+)

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Disclaimer

The authors accept full responsibility for the contents of this report. The report does not necessarily reflect the views of the European Commission or IFAD.

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ACRONYMS

AAIGA	Agriculture, Agribusiness and Income Generating Activities
ABS	Aqua-based business school
ADB	Asian Development Bank
AM	Aide Memoire
CCAFS	CGIAR Research Programme on Climate Change, Agriculture and Food Security
CHARMP2	Cordillera Highland Agricultural Resources Management Project
CIAT	International Center for Tropical Agriculture
CIP	International Potato Center
COSOP	Country Strategic Opportunities Programme
CPO	IFAD Country Programme Officer
CPRS	Central Potato Research Station
CTCRI	Central Tuber Crops Research Institute
CRP-RTB	CGIAR Research Program on Roots, Tubers and Bananas
CSSP	Commercial Smallholder Support Project
CSV	Climate smart village
EC	European Commission
EU	European Union
FBS	Farmer business school
FishCORAL	Fisheries Coastal Resources and Livelihood Project
FoodSTART	Food Security Through Asian Root and Tuber Crops
FoodSTART+	Food Resilience Through Root and Tuber Crops in Upland and Coastal Communities of the Asia-Pacific
HARIIP	Hunan Agricultural Rural Infrastructure Improvement Project
HH	Household(s)
IAARD	Indonesian Agency for Agricultural Research and Development
ICAPRD	Postharvest Institute in Bogor
IFAD	International Fund for Agricultural Development
INREMP	Integrated Natural Resources and Environment Management Project
IPGN	IFAD Philippines Gender Network
KLM-PE	Knowledge and Learning Market-Policy Engagement
KM	Knowledge management

LES	Livelihood Enhancement Support
M&E	Monitoring and evaluation
MBMA	Meghalaya Basin Management Authority
Megha-LAMP	Meghalaya Livelihoods and Access to Markets Project
MoA	Memorandum of agreement
MoU	Memorandum of understanding
MSC	Most significant change
NSVCs	Nutrition-sensitive value chains
OFSP	Orange-fleshed sweetpotato
PTM	Potato tuber moth
R4D	Research for development
RTB	CGIAR Research Programme on Roots, Tubers and Bananas
RTCs	Root and tuber crops
SOLID	Smallholder Livelihood Development Project
SRDP	Sustainable Rural Development Project
TAP	Technical Advisory Pool
ToRs	Terms of reference
ToT	Training of trainers
TWG	Technical working group
VCAP	Value chain action plan
VSU	Visayas State University

EXECUTIVE SUMMARY

Despite decreasing poverty rates and rising incomes, millions of people in the Asia-Pacific region still face food and nutrition insecurity, particularly in rural areas. There is a pressing need for innovative approaches to help improve the livelihoods of the rural poor, especially in the communities most vulnerable to climate change. The Food Resilience Through Root and Tuber Crops in Upland and Coastal Communities of the Asia-Pacific (FoodSTART+) was a grant project (2015–2019) implemented by the International Potato Center (CIP) with funding by the European Union and the International Fund for Agricultural Development (IFAD). FoodSTART+ was designed to directly support IFAD's 2016–2025 strategic framework. The project's specific objective is to enhance agri-food system resilience through the introduction of root and tuber crop (RTC) innovations among poor households (HH) in upland and coastal communities of the Asia-Pacific region, which are recognised as the most exposed to the threat of climate change.

Through initial scoping studies FoodSTART+ validated the key role of RTCs for food security, livelihood, and nutrition of rural farmers, HH, and communities in the target sites. Furthermore, the project showed that the importance of RTCs in Asia is likely to increase in the coming decades due to the projected change in land suitability amidst climate change, which can drive the substitution by RTCs of other more vulnerable crops, such as maize and rice. Additional assessments confirmed that RTCs play an important role in diverse Asian agri-food systems and contribute to their resilience and capacity to recover from shocks and stressors, including those related to climate change and increasingly frequent extreme weather events like typhoons. Additional studies, which complemented and expanded the findings of the initial scoping studies, determined the main challenges and opportunities for enhancing production and utilisation of nutrient-rich and resilient RTCs and identified the gender-sensitive innovations to be prioritised by FoodSTART+.

The main strength of FoodSTART+ was its close collaboration with five large-scale IFAD investment projects, implemented by national agencies in four countries: the Meghalaya Livelihoods and Access to Markets Project in India; the Smallholder Livelihood Development Project in Indonesia; the Fisheries, Coastal Resources and Livelihood project and the Integrated Natural Resources and Environmental Management Project in the Philippines; and the Sustainable Rural Development Project in Vietnam. Although the modality of grant-investment partnership varied across investment partners, in all cases the innovations and project activities were jointly identified, implemented, and funded. Relevant capacities of IFAD partner investments were built to take the validated innovations to scale. Innovations introduced by FoodSTART+ include technological innovations (eg, new crop varieties and production practices, alternative processing and product development options); system methodologies for value chain and enterprise development; social innovation through establishment of micro/small enterprises; and institutional learning and change in the modes of collaboration between different project and value chain stakeholders. These innovations have been introduced and promoted primarily through CIP's farmer business school approach. The research for development (R4D) partnerships that were established and maintained throughout the project period were instrumental to foster internalisation and institutionalisation of methods, tools, best practices, and innovations introduced by the grant project; their adaptation to demands and needs of partner investment projects; and ultimately facilitated the impact at scale for more targeted and outcome-focused RTC innovations.

Besides strengthening the capacities of the staff of the investment partners, FoodSTART+ produced a large number (70) of knowledge products, organised events, and regularly participated in activities of IFAD country and regional offices. This facilitated engagement with policymakers and private sector. Moreover, it contributed to increasing their awareness of the vital contribution of RTCs for food and nutrition security in the region as well as of the opportunities and innovations available for building more inclusive, climate-smart, and nutrition-sensitive value chains around these crops.

R4D partnerships, such as the ones catalysed by FoodSTART+, have proven to be of mutual benefit for both the research and the development partners. They can serve as a model for IFAD and other donors for taking research innovations to scale and facilitating their access and adoption by governments for deepening impact within the context of IFAD investments and the broader rural transformation agenda. Relevant lessons learnt, key facilitating factors, and recommendations for successful R4D partnerships are presented in the last section of the report.

HIGHLIGHTS

- Key role of RTCs for food security, livelihood, and nutrition of rural communities in the target sites of partner IFAD investment projects, and Asian agri-food systems at large, validated.
- Contribution of RTCs to resilience of agri-food systems and capacity to recover from climate-related shocks and stressors identified.
- Substitution of some key crops (eg, maize and rice) by resilient RTCs in face of climate change projected under different change scenarios.
- Modes and monitoring tool for R4D (grant-investment) partnership arrangements developed and validated, and ready for application at scale by IFAD.
- Ownership and empowerment of partner IFAD investment projects facilitated by joint identification, implementation, and funding of collaborative activities for enhanced production and utilisation of nutrient-rich and resilient RTCs.
- Methods, tools, best practices, and innovations (technological, commercial, and institutional) introduced by the grant project, adapted to demand and needs of the partner investment projects, internalised by the implementing agencies and, in some cases, institutionalised for impact at scale.
- Capacities of investment projects' staff strengthened for sustainability and scaling of the introduced methods, tools, best practices, and innovations.
- About 3,500 end-users and beneficiaries directly reached by capacity-building activities.
- FBS approach for strengthening farmers' (about 1,000, mostly women) entrepreneurial capacity and participation in value chains adapted and implemented in investment projects, and ready for application at scale.
- Seventy knowledge products published, mostly in collaboration with partner IFAD investment projects as part of knowledge-sharing and capacity building.
- Resilience, food security, and nutrition role of RTCs in partner IFAD investment projects enhanced.
- Strengthened engagement and alignment of the grant with the IFAD regional programme; increased awareness of the potential contribution of RTCs to IFAD's 2016–2025 strategic framework; and promotion of grant-investment partnership mechanisms achieved, including through participation in IFAD supervision and implementation support (6), review (3), and design (1) missions; Country Strategic Opportunities Programme evaluations and stakeholder consultations (4); and the annual country programme review (6).
- Awareness of policymakers and other key stakeholders about the project's findings, innovations, and capacities for science-based decision-making around RTCs enhanced, including through participation in IFAD global-, regional-, and country-level event (eg, the IFAD International Conference on South-South and Triangular Cooperation, APR regional workshop, Mekong KLF, Knowledge and Learning Market-Policy Engagement, and IFAD Philippines Gender Network) and organisation of workshops, symposia, and the first Regional Congress on Root and Tuber Crops for Food Security and Climate Change Resilience in Asia.

1. INTRODUCTION

The Asia-Pacific region is the leading producer and consumer globally of root and tuber crops (RTCs). Nevertheless, these crops are considered secondary to grain crops. RTCs like potato, sweetpotato, and cassava, plus a range of locally important yam and aroid species, are staple foods for poor farming households (HH) in many unfavourable agro-ecologies and remote communities in the region. RTCs contribute directly to food security through their production in smallholder farming systems (increasing food availability, the first of the four dimensions of food security identified by the Food and Agriculture Organisation of the United Nations [FAO]). Furthermore, they are directly consumed in a variety of traditional fresh and processed forms (food utilisation). In addition, RTCs play an increasing role as a source of income (food access) via sales to both urban fresh markets and for processing in a range of food and non-food industries. Opportunities for both women and men to participate in RTC value chains are variable and require much greater research and development attention. RTCs are increasingly recognised as healthy, nutritious, and safe vegetables—for example, orange-fleshed sweetpotato (OFSP)—including in urban markets and casting aside their previous image as a “poor man’s food”, while being increasingly positioned as functional foods and high-demand organic products. Meanwhile, their utilisation as an industrial raw material is expanding beyond starch and animal feed to take advantage of valuable nutritional characteristics (eg, purple sweetpotato noodles and other value-added products in China, Indonesia, and Philippines; OFSP in India, Indonesia, and Philippines). RTCs have also historically served as buffer crops in situations of acute food vulnerability following extreme weather events and natural and socio-economic crises. These crops have the potential to make a large contribution to building food and nutrition security and climate-resilient livelihoods throughout the region.

The Food Resilience Through Root and Tuber Crops in Upland and Coastal Communities of the Asia-Pacific (FoodSTART+) was a grant project (2015–2019) funded by the European Union (EU) and the International Fund for Agricultural Development (IFAD). It built and expanded on the scope of the previous IFAD-supported Food Security Through Asian Root and Tuber Crops (FoodSTART) project (2011–2015). FoodSTART+ was implemented by the International Potato Center (CIP) together with the International Center for Tropical Agriculture (CIAT) and in close collaboration with the CGIAR Research Programme on Roots, Tubers and Bananas (CRP-RTB). The main characteristic and strength of FoodSTART+ was its close collaboration with IFAD-supported investment projects. Accordingly, the research for development (R4D) partnerships that were established and maintained throughout the project period were instrumental for fostering internalisation and institutionalisation of methods, tools, best practices, and innovations introduced by the grant project; their adaptation to demand and needs of the partner investment projects; and ultimately facilitated the impact at scale for more targeted and outcome-focused RTC innovations. Partnerships catalysed by FoodSTART+ can serve as a model for IFAD and other donors for taking research outputs to scale and facilitating their access and adoption by government agencies for deepening impact within the context of IFAD investments and the broader rural transformation agenda.

2. GRANT DESCRIPTION AND IMPLEMENTATION ARRANGEMENTS

2.1 GRANT GOAL, OBJECTIVES, COMPONENTS, AND TARGET GROUPS

FoodSTART+’s overall project **goal** was to enhance food resilience among poor HHs in upland and coastal communities of the Asia-Pacific region, through the introduction of RTC innovations, primarily within the framework of R4D partnerships with IFAD investment projects.

The project's **objectives** were threefold: (1) identify gender-responsive needs and opportunities through vulnerability assessments among food-insecure RTC-producing and –consuming HH; (2) design and implement innovations with partners and local stakeholders that enhance food resilience; and (3) develop and validate effective partnership strategies with IFAD investment projects in promoting RTCs for food security at scale.

The project had five **components/outputs**: (1) subnational geographic target areas combining food vulnerability with significant RTC production and use are prioritised and mapped; (2) effective, mutually beneficial R4D partnerships are identified, established, and monitored; (3) gender-sensitive RTC innovations that respond to 10-year climate change scenarios and expressed needs of stakeholders are identified; (4) R4D actions to promote RTC innovations are implemented and monitored and results documented; and (5) field-based best practices, outcome stories, and success factors are documented and disseminated to support IFAD, CIP, and wider national and regional policy development.

The project's **target groups** comprised both end-users/beneficiaries and next-users/beneficiaries. End-users/beneficiaries included small-scale, low-income farming HH, especially females and youth in these HH in tropical/subtropical and coastal communities where RTCs are locally important for food security and with a focus on those which are under increased threat from climate change, natural disasters, and socio-economic risks. Next-users/beneficiaries included in-country implementing organisations of IFAD investment projects, including their respective partners—national and local government agencies, NGOs, business development service providers, and community groups—and IFAD country offices/programmes.

FoodSTART+'s primary **target countries** were India, Indonesia, Philippines, and Vietnam; China and Myanmar were supplementary target countries. To operationalise the FoodSTART+ partnerships with selected IFAD investments, the project's implementation focused on specific sites targeted by these investments (Fig. 1).



Figure 1. FoodSTART+ implementation sites and IFAD investment project partners.

2.2 GRANT IMPLEMENTATION ARRANGEMENTS

FoodSTART+ consisted of two funding sources: a larger grant from the EU (€1,830,551) and a smaller grant from IFAD (\$200,000). Of the five outputs of the project, the IFAD smaller grant was expected to cover almost exclusively the operational activities only of Output 2 with the aim of establishing R4D partnerships, primarily between FoodSTART+ and the IFAD investment projects.

The EU larger grant, on the other hand, was expected to cover all remaining outputs (details in Table 1).

FoodSTART+ established and maintained effective partnerships with five IFAD investment projects in four countries: Livelihoods and Access to Markets Project (Megha-LAMP) in India; Smallholder Livelihood Development Project (SOLID) in Indonesia; Fisheries Coastal Resources and Livelihood Project (FishCORAL) and Integrated Natural Resources and Environment Management Project (INREMP) in the Philippines; and Sustainable Rural Development Project (SRDP) in Vietnam (see Fig. 1).

Although several activities were implemented in close coordination between CIP and CIAT, CIAT was specifically responsible for the development of the RTC suitability maps (as for output 1) and for the implementation of activities in Indonesia and Vietnam.

As part of the project governance, a [steering committee](#) was established, including IFAD staff. The meetings of the committee were convened during the annual project's partners meetings.

Table 1. FoodSTART+ project outputs, activities, and indicators

Outputs	Activities		Indicators/targets
	EU Large Grant	IFAD Small Grant	
Output 1: Subnational geographic target areas combining food vulnerability with significant RTC production and use are prioritised and mapped	<ul style="list-style-type: none"> Conduct of scoping studies Development of RTC suitability maps Cross learning from previous FoodSTART project Literature review and assessment 	Selection of 5 research (focus) sites linked to IFAD investment projects, for development of R4D action in subsequent outputs.	<ul style="list-style-type: none"> 8 scoping studies completed 5 benchmark sites selected and investment project partners identified for future collaboration 1 regional map and 5 detailed maps of focus site areas 1 launch meeting 1 literature review on food vulnerability/resilience
Output 2: Effective, mutually beneficial, R4D partnerships identified, established, and monitored		<ul style="list-style-type: none"> Participation in relevant Country Strategic Opportunities Programme (COSOPs) and investment project scoping and design missions Rapid review of appropriate partnership mechanisms and modes of collaboration with IFAD investment projects Workshops in target sites to agree on mutually beneficial partnership and engagement process for FoodSTART+ implementation Monitoring of evolving partnership via annual "partnership health check ups" involving project coordination unit and partners Establishment and operation of a technical working group (TWG) to advise and contribute to the design and conduct of outputs 3–5 	<ul style="list-style-type: none"> Three IFAD country COSOPs and investment project design missions that prioritise or incorporate RTC food resilience (in collaboration with IFAD country programmes/offices) Three partnership mechanisms reviewed Two high potential partnership options selected for pilot testing Four comprehensive partnership/collaboration agreements or contracts with IFAD investment projects and other partners Three partnership health check ups completed with positive results Feedback from 3 investment project supervision missions on status of project partnerships One terms of reference (ToRs) for the TWG agreed and implemented Minutes of 3 TWG meetings, with recommendations Input from TWG of 3 Aide Memoire (AM) of supervision missions
Output 3: Gender-sensitive RTC innovations that respond to 10-year climate change scenarios and the identified expressed needs of stakeholders	<ul style="list-style-type: none"> Design of assessment process and instruments increased focus on the dynamic aspects of food security (vulnerability-resilience in time) Assessments implementation in focus sites Assessments report identifying needs and opportunities for enhancing food resilience 		<ul style="list-style-type: none"> One workshop, producing 1 report with assessment process guidelines and specific instruments used (number to be determined in a workshop, depending on process) Five assessments completed Five assessments analysed and reported
Output 4: R4D actions to promote	<ul style="list-style-type: none"> Stakeholder consultations to develop action plan of 		<ul style="list-style-type: none"> Five stakeholder consultations completed and 5 action plans developed

Outputs	Activities		Indicators/targets
	EU Large Grant	IFAD Small Grant	
RTC innovations implemented and monitored and results documented	innovations based on assessment results <ul style="list-style-type: none"> Action plan implementation Capacity building of investment projects Monitoring and evaluation (M&E) plan development and implementation 		<ul style="list-style-type: none"> Five action plans implemented with detailed sub-indicators developed and monitored At least 5 capacity-building events held (one per focus site) and 2 cross-learning visits conducted One M&E plan developed, with development indicators agreed for each investment project
Output 5: Field-based best practices, outcome stories, and success factors are documented and disseminated to support IFAD, CIP, and wider national and regional policy development	<ul style="list-style-type: none"> Development of communications and engagement plan Cross-site synthesis by coordination unit with TWG Knowledge product development and publication Implementation of communications and engagement plan Seminars/workshops for policymakers 		<ul style="list-style-type: none"> One communication plan developed and implemented One publication containing cross-project synthesis/analysis developed from two workshops At least 1 hard copy of the cross-project synthesis/analysis available per site (ie, 5); at least 2 project-wide publications are made; at least 10 additional topic-specific briefs produced; and all publications made available online Participation in at least 3 IFAD country-level meetings per focus site and in relevant RTB and CCAFS meetings (total of 5) during the life of the project Five country-level, cross-sectoral workshops/seminars targeting policymakers are conducted

2.3 CHANGES IN GRANT IMPLEMENTATION CONTEXT, GRANT DESIGN, OR OUTREACH

The main changes in the project implementation of FoodSTART+ included:

- Change in the target sites.* (1) Following discussions of the FoodSTART+ steering committee during the project launch in 2016, China was reclassified from being a primary target country to a supplementary country because exchange rate changes led to a reduced dollar value budget, whereas Myanmar was added as another supplementary country. Only scoping study and mapping work (output 1) were to be conducted in supplementary countries. (2) Upon agreement with the IFAD Vietnam country office, the target sites in this country were reduced from two to one province only (Quang Binh). (3) Upon request by the FishCORAL investment projects, FoodSTART+'s support was extended from one region only (Region 8) to two additional regions (Region 13 and BARMM).
- Change of CIP project coordinator.* Following Dr Gordon Prain's retirement, the project coordination was taken over by Dr Diego Naziri in February 2017.
- Extended duration of the project.* The project was granted a 5-month no-cost extension (closing date extended from July 31st to December 31st 2019) primarily to cater for the low project execution in Year 1 caused by the late disbursement of the EU-sourced funds for implementation, despite the pre-financing of some activities by CIP and CIAT. Furthermore, for the very same reason, and upon discussion with IFAD, it was agreed that some activities, including the scoping studies (as per output 1) could be implemented using already available funds from the complementary IFAD small grant (see 2.2).

3. REVIEW OF PERFORMANCE AND ACHIEVEMENTS BY COMPONENT

3.1 REVIEW OF MAIN ACTIVITIES AND OUTPUTS DELIVERED

The FoodSTART+ logical framework is presented in Annex 1. The summary of accomplishments by outputs and activities is presented in Annex 2. Details of activities carried out and accomplishments are provided in the following sections.

Output 1. Subnational geographic target areas combining food vulnerability with significant RTC production and use are prioritised and mapped

1.1. Six scoping studies produced, based on research sites/investment projects identified in proposal

FoodSTART+ completed seven scoping studies in six countries with the aim to assess the role of RTCs for food security, livelihood, and nutrition in the target sites. Six of the studies were conducted in 2016 in partnership with six IFAD investment projects. They identified RTC-related opportunities and constraints that informed the development of the collaborative action plans with investment projects. Stakeholder validation meetings were held to gather feedback on the main results of the studies, receive input, and refine the recommendations. Following the agreement during the project inception meeting to explore prospects for future partnerships for FoodSTART+, an additional scoping study in Myanmar was completed in February 2017—in this case without an IFAD investment project partner but as a contribution to potential new investment projects as the country opens up further to official development assistance. The results of the scoping studies were published in six scoping study reports. Furthermore, six 2-page briefs were published summarising the key findings and recommendations from the scoping studies (Table 2).

Table 2. Summary information on completed scoping studies

Country	Geographic Target	Investment Project	Agro-ecology	RTCs	Reports Available
India	Meghalaya State	Meghalaya Livelihoods and Access to Markets Project (Megha-LAMP)	Upland	Potato, sweetpotato, cassava, taro	Project report Brief
Indonesia	Maluku and Maluku Utara provinces	Smallholder Livelihood Development Project (SOLID)	Coastal	Cassava, sweetpotato	Project report Brief
Philippines	Eastern Visayas Region	Fisheries, Coastal Resources and Livelihood Project (FISHCORAL)	Coastal	Sweetpotato, aroids	Project report (consolidated) Brief
	Bohol Province	Integrated Natural Resources and Environment Management Project (INREMP)	Upland	Sweetpotato, cassava, yam	Project report (consolidated) Brief
Vietnam	Ha Tinh and Quang Binh provinces	Sustainable Rural Development Project (SRDP)	Upland & coastal	Sweetpotato, cassava	Project report Brief
China	Hunan province	Hunan Agricultural Rural Infrastructure Improvement Project (HARIIP)	Upland	Potato, sweetpotato	Project report
Myanmar	South Shan State	None	Upland	Potato	Project report Brief
	Ayeyarwaddy State		Coastal (delta)	Cassava	

1.2. RTC suitability maps developed based on land use and climate change scenarios

This component was led by CIAT and completed in 2019. Cognisant of the important role that RTCs can play in helping farmers adapt to climate change and variability, this study analysed the future potential of these crops and their likely increasing importance in the face of climate change. In particular, it identified areas in the Asia-Pacific region where considerable climate-related impacts which can threaten the agricultural viability of major crops are expected. The study used climate projections and species distribution modelling approach for eight key crops in all six FoodSTART+ target countries. The analysis included five RTCs (potato, sweetpotato, cassava, yam, and taro) and three key non-RTCs (rice, maize, and banana). In areas where climate-related impacts are very high, it is assumed that the currently cultivated crops may need to be replaced by more resilient crops. The study confirmed that RTCs, particularly cassava and sweetpotato being resilient crops, are likely to be substituted for other crops in the wake of climate change. Figure 2 shows an example of the dramatic change in land suitability projected for maize, unlike sweetpotato. The

national maps and the consolidate regional map, as well as the details of the methodology, are presented in the report (see [here](#)).

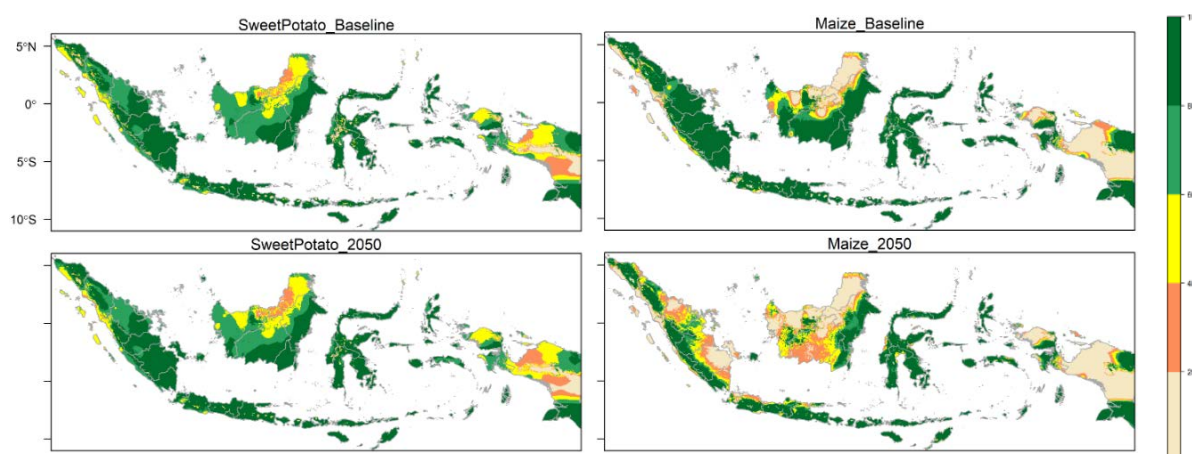


Figure 2. Land suitability for sweetpotato (left) and maize (right) in Indonesia under 2050 climate scenario.

1.3. Cross-learning from previous FoodSTART project facilitated

Two main activities were conducted to facilitate the cross-learning with the previous FoodSTART project. First, at the FoodSTART+ project launch in Manila in February 2016, a key session was held to present and discuss the successful collaboration in northern Philippines between the first phase of FoodSTART and the IFAD investment project Second Cordillera Highland Agricultural Resources Management Project (CHARMP2). The IFAD-Philippines CPO, the Agriculture, Agribusiness and Income Generating Activities (AAIGA) coordinator for CHARMP2, and FoodSTART staff participated in a panel discussion to share lessons learnt and provide recommendations for effective IFAD grant-investment partnerships. A video showcasing examples of the CHARMP2-FoodSTART collaboration was shown.

Second, the project organised a cross-learning on farmer business schools (FBS) to provide practical exposure to the IFAD investment partners that had expressed an interest in implementing FBS in their project sites and help build their capabilities to effectively do it. The visit, co-organised by FoodSTART+ and CHARMP2, was held in the Philippines in early 2018 and attended by senior representatives of FishCORAL, INREMP, Megha-LAMP, and SOLID (Photo 1). In addition, representatives of the IFAD-funded investment project Convergence on Value Chain Enhancement for Rural Growth and Empowerment Project (ConVERGE) in the Philippines, and Fostering Climate Resilient Upland Farming Systems in the North East Project (FOCUS-Mizoram) in India, also participated in the visit at their own cost. Forty-two participants joined the visit and were exposed to the Philippine FBS experience in the Cordillera Region (ie, CHARMP2) and with Tarlac-Pampanga FBS groups. See report [here](#).



Photo 1. FBS cross-learning visit to CHARMP2, partner from previous FoodSTART and first IFAD investment project to adapt FBS as an approach in their livelihood component. The FBS group are involved in cassava food products.

1.4. Literature review and assessment of approaches to food vulnerability and resilience conducted

The literature review on food vulnerability and resilience was completed in 2018. The study reviewed, assessed, and synthesised key elements of the concepts of food vulnerability and resilience available in literature and identified different theoretical and methodological approaches and their challenges. The study highlighted that no approach is entirely suitable to holistically evaluate food system vulnerability, and resilience is a fairly new concept in the context of food and nutrition, thus little consensus exists around it. As a result, metrics and measurement tools are still under development. The authors conclude that there is a need to further enrich the resilience discourse in food security through the development and testing of reliable, systemic, and dynamic metrics and through the use of more empirical data (quantitative and qualitative). The report can be accessed [here](#).

1.5. Five research (focus) sites linked to IFAD investment projects are selected, for development of R4D action in subsequent outputs

FoodSTART+ conducted exploratory visits to all the target IFAD investment projects in five countries (India, Indonesia, Philippines, Vietnam, and China) in May–June 2015. During the visit the project sought to build R4D partnerships with six IFAD investments (Megha-LAMP, SOLID, FishCORAL, INREMP, SRDP, and HARIIP). The partnerships with IFAD investments were confirmed during the FoodSTART+ inception meeting held in early 2016, with the preparation of preliminary collaborative action plans. During this meeting the five benchmark sites were selected and China reclassified as a supplementary site (see 2.3).

Output 2. Effective, mutually beneficial R4D partnerships identified, established, and monitored (small grant component, with staffing contributions from the EU grant)

2.1. Participation in relevant COSOPs and investment projects scoping and design missions

Besides participating in several IFAD annual country programme reviews and supervision missions to investment partners (see 2.4), FoodSTART+ staff contributed to IFAD COSOP evaluations and stakeholder consultations. Furthermore, project staff provided input to relevant review missions as well as the design of new investment projects. This resulted in strengthened engagement and alignment with the IFAD regional programme, the prioritisation and incorporation of RTCs for enhanced nutrition and resilience, and the promotion of grant-investment partnership mechanisms. Table 3 shows all activities in which FoodSTART+ staff participated during project implementation.

Table 3. FoodSTART+ contribution to COSOPs-related activities, IFAD review, and design missions

Country	Activity/Date	FoodSTART+ Staff Involved	FoodSTART+ Contribution and Recognition
India	Megha-LAMP Review Mission (August 2016)	H. Chulet, Research and Development Officer	The contribution of FoodSTART+ to the review was appreciated, resulting in a follow-up invitation to participate in further review mission.
	Megha-LAMP Review Mission (June–July 2018)	A. Kharlyngdoh, Research and Development Officer	
	Project design of FOCUS investment in Nagaland and Mizoram (May 2017)	D. Naziri, Project Coordinator	Feedback and input provided to project design of new FOCUS investment project in Nagaland and Mizoram, resulting in increased attention to opportunities for RTC-livestock integration (eg, through silage technologies).
Indonesia	SOLID Review Mission (November 2017)	H. Koostanto, Research Associate	Building on the results of the nutrition-sensitive value chains (NSVCs) study to which the FoodSTART+ staff and a technical advisory pool (TAP) expert contributed, and following the review mission, SOLID has increasingly paid attention to RTCs as key crops for achieving nutrition outcomes. Similarly, IPDMIP project design and operational

Country	Activity/Date	FoodSTART+ Staff Involved	FoodSTART+ Contribution and Recognition
			guidelines have been reviewed to explore integrating NSVCs and RTCs.
Philippines	Country Strategy and Programme Evaluation CGIAR grant meeting (April 2016)	A. Bertuso, Senior Research Associate	<ul style="list-style-type: none"> FoodSTART partnerships with CHARMP2 and RaFPEP-IRPEP CIP FoodSTART contributed to CHARMP2 in FBS and enterprise development FBS as an innovation for scaling up through investment projects (CHARMP2) <i>(Source: Philippines Country Strategy and Programme Evaluation Report. Nov. 2016)</i>
	Country Strategy and Programme Evaluation National workshop (November 2016)	A. Bertuso, Senior Research Associate	
	Stakeholders consultation for the IFAD Country Strategic Opportunities Programme 2018–2022 (June 2017)	A. Bertuso, Senior Research Associate	IFAD will continue to collaborate with CGIAR institutes in the Philippines and that have demonstrated capability to provide technologies of relevance for small rural producers. These include the International Rice Research Institute, World Agroforestry Centre, CIP, and CIAT. Instruments for such collaboration will include regional grants (with emphasis on concrete linkages with operations) and agreements at project level. <i>(Source: Philippines COSOP 2017–2022, June 2017)</i>
	Corporate level evaluation by the Independent Office of Evaluation of IFAD (June 2019)	D. Naziri, Project Coordinator A. Bertuso, Senior Research Associate	Grant-investments partnerships promoted by FoodSTART+ were noted. Project's initiatives to reinforce gender mainstreaming were acknowledged and appreciated. Relevant documentation shared for inclusion in mission report.
Lao PDR	Project design of PICSA investment (March 2019)	D. Naziri, Project Coordinator	Participation in project design of new PICSA investment project in Lao PDR, to explore potentials for integrating RTC innovations and livelihood opportunities in project design and/or investment project's activities. As a result, PICSA focal point attended the final FoodSTART+ event to familiarize with available RTC technologies and innovations (see 5.5)

2.2. Rapid review of appropriate partnership mechanisms and modes of collaboration with IFAD investment projects conducted

A key conceptual contribution of FoodSTART+ was the development of different modes of partnership arrangements to systematise the collaboration between an IFAD grant and investment projects in Asia. During initial interactions with the targeted investment projects, discussions were held about the most appropriate options and arrangements that could be established for the proposed partnership. The results of these discussions were brought to a special session on partnership arrangements held during the inception meeting in February 2016. In this initial discussion three modes of partnership arrangements were identified, namely *embedded*, *neighbourhood*, and *provisional*. In 2017 two partnership arrangements were selected for pilot testing in consultation with the relevant investments: *embedded* (India and Vietnam) and *neighbourhood* (Philippines and Indonesia). For Megha-LAMP and SRDP, a staff hired by FoodSTART+ was based at the office in the investment projects. In the Philippines FoodSTART+ staff was located in a national research organisation partner, the Philippine Rootcrop Research and Training Center (PhilRootcrops) based in Visayas State University (VSU), which is geographically and collaboratively close to both FishCORAL and INREMP investment projects. For Indonesia the FoodSTART+ staff was initially planned to be based at the Postharvest Institute in Bogor (ICAPRD), which was designated as Indonesian Agency for Agricultural Research and Development (IAARD) focal institution for FoodSTART+ to promote and facilitate partnership interaction with SOLID. However, delays in setting up the office kept this from materialising, and the FoodSTART+ staff was not based at a partner organisation. In mid-2018, following the resignation of the embedded FoodSTART+ staff in India, and considering the limited duration left for project implementation, a

government (Meghalaya Basin Management Authority, MBMA) staff already involved in FoodSTART+ was officially designated as CIP-MBDA focal point. Therefore a fourth type of partnership arrangements emerged (*designated*, see Box 1).

Box 1: Modes of partnership arrangements with IFAD investments

Embedded: Research project staff posted and based in the offices of the investment project in its operational area, to be the active promotor and facilitator of partnership interactions.

Neighbourhood: Research project staff based in an institutional setting with reasonable physical and collaborative access to investment projects, especially where more than one investment project is involved and/or where management of the investment project is split between local, provincial, and national levels. Involves locating the promotor and facilitator of the partnership in an institutional setting.

Provisional: Research project staff based close to the national headquarters of investment project to facilitate interaction with its leadership.

Designated: A government staff of the investment project's implementing agency designated as focal point for FoodSTART activities. Important for maintaining regular communications and decision-making interactions where appointment of an external, hired staff has provided difficult.

Table 4 summarises information on the partnership arrangements with IFAD investment partners established to ensure close collaboration in the four target countries. A brief on good practices to take agricultural innovations to scale through partnership with IFAD investments has been produced by FoodSTART+. Among others, it highlights how locating staff at or close to the implementing agencies helps to facilitate and deepen the collaboration (see [here](#)). Deeper analysis of the partnership arrangements is presented in the partnership paper (see 5.2).

Table 4. Partnership arrangements with IFAD investment projects

Country	Name of FoodStart+ Staff	Position	Gender	Location	Partnership Mechanisms
India	Handerson Chulet*	Research and Development Officer	Male	Megha-LAMP Shillong, Meghalaya	Embedded
	Adelbert Kharlyngdoh*	Research Assistant	Male	Megha-LAMP Shillong, Meghalaya	Embedded
	Bashisha Kharchandy	MBDA Officer	Female	Megha-LAMP Shillong, Meghalaya	Designated
Indonesia	Haryanti Koostanto	Research Associate	Female	Bogor, Java	Provisional
Philippines	Guada Marie Babilonia	Research Assistant	Female	VSU Leyte, Eastern Visayas	Neighbourhood
Vietnam	Le Thi Hang	Research Assistant	Female	SRDP, Dong Hoi, Quang Binh	Embedded

* Both resignations due the desire of staff to move to a secure, permanent position within the Indian public sector.

2.3. Workshops in target sites have agreed on mutually beneficial partnership and engagement process for FoodSTART+ implementation

Six collaborative action plans with investment projects were initially prepared during the project inception meeting in 2016. These action plans were developed building on findings of the scoping studies jointly conducted with IFAD investment project teams, and further refined in stakeholder validation meetings and mini-workshops. The five collaborative action plans with Megha-LAMP, SOLID, FishCORAL, INREMP, and SRDP were revisited and finalised for operationalisation during the FoodSTART+ partners' meeting in May 2017 in Hanoi, Vietnam. They were then reviewed and updated during the partners' meeting in September 2018 in Shillong, India. The sixth action plan (with HARIIP), as explained earlier, was not followed up. In support of these action plans, partnership agreements were finalised with the investment projects or research partners, depending on the mechanism mutually selected (see previous section). Table 5 lists the different partnership/ collaboration agreements in each FoodSTART+ primary target country.

Table 5. Summary of partnership/collaboration agreements with investment projects and partners

Country	Partner institutions	Agreements	Remarks
India	MBMA	Memorandum of understanding (MoU)	MoU signed between CIP and MBMA (Megha-LAMP implementing agency)
Indonesia	IAARD	MoU	MoU signed between CIAT and IIARD with Postharvest Institute in Bogor (IAAPRD) as designated focal institution
Philippines	VSU	Memorandum of agreement (MoA)	MoA signed between CIP and VSU to formalise hosting of FoodSTART+ project staff
Vietnam	Provincial People Committee of Quang Binh	Letter of support	Provincial People Committee was the overall authority for the implementation of SRDP in the province

2.4. Evolving partnerships monitored

FoodSTART+ adapted the Partnership Health Check-up tool, originally developed by CIP in sub-Saharan Africa. The tool (consisting of two forms, for investment project and FoodSTART+ staff, respectively) was used to monitor organisational contributions to partnerships, the degree of mutual support, transparency and accountability, and overall partnership efficiency. The tool was reviewed and refined by FoodSTART+ in February 2017. This was used in succeeding partners' meeting in May 2017 and September 2018, and then in 2019 following the project's close out. The FoodSTART+ partnerships with investment projects received extremely positive feedback from partners (see Table 6 for highlights). Some actions were taken to address the identified weaknesses, such as by enhancing the communication and engagement with additional research organisations—for example, the Central Potato Research Institute and the Central Tuber Crops Research Institute (CTCRI) in India.

Table 6. Highlights of the partnership health check-up

Year	Investment project representatives	FoodSTART+ Project Team
2017	<ul style="list-style-type: none"> Average overall rating: 4.34 (on a 1–5 Likert scale) Highest rating (4.88) was given to (1) support received by own organisation to partnering with FS+ and (2) level of honesty and trust in the partnership Lowest rating (3.00) referred to communication with external stakeholders, such as research organisations, not formally engaged in FoodSTART+ 	<ul style="list-style-type: none"> Average overall rating: 4.38 Highest rating (5) given by all respondents in relation to the understanding of the vision of R4D integration which the grant-investment partnership pursues Lowest rating (3.33) referred to the internal project communication among partner
2018	<ul style="list-style-type: none"> Average overall rating: 4.43 Highest rating (4.75) was given to (1) clarity about their role in this collaboration, (2) support received by own organisation to partnering with FS+, and (3) responsibilities in their organisation's partnership with FoodSTART+ Lowest rating (4.00) referred to internal project communication among partners 	<ul style="list-style-type: none"> Average overall rating: 4.34 Highest rating (4.9) in relation to the understanding of the vision of R4D integration and clarity about their role in the collaboration Lowest rating (3.5) in relation to information about the overall investment project activities
2019	<ul style="list-style-type: none"> Average overall rating: 4.69 Highest rating (5.00) was given to (1) awareness of the responsibilities in the partnership and (2) transparency and inclusiveness of decision-making in the partnership Lowest rating (3.67) referred to communication with external stakeholders, such as research organisations, not formally engaged in FoodSTART+ 	N/A

Furthermore, FoodSTART+ continued to generate feedback on the partnerships from participation in investment projects supervision missions. Remarks on FoodSTART+ partnership in AM included:

- **SOLID.** The AM of the supervision mission (2016) recommended the promotion of RTCs as a locally relevant and accessible means to support food security and improved nutrition in SOLID sites and agreed on FoodSTART+ RTC-related suggestions, highlighting the capacities of CIAT FoodSTART+ to assist SOLID with aspects of both RTC production and processing.
- **FishCORAL.** The AM of the follow-up and implementation support mission (2017) noted the

partnership with FoodSTART+ in training community facilitators on FBS and business planning. The AM of the supervision mission (2019) recommended the scaling up of aqua-based business school (ABS) in all project sites (see Box 2).

- **Megha-LAMP:** the AM of the supervision mission (2017) noted the scoping study and the potential of FoodSTART+ to contribute to the investment's achievements by supporting seed potato production, methods for enhancing soil fertility, introduction of bio-inputs to control field and storage pests, as well as silage technologies for animal feeding.

In addition to the above, as part of the partnership engagements, FoodSTART+ has also participated and received positive feedback during Megha-LAMP supervision mission (2019); and FishCORAL and CHARMP2 implementation support missions (2017). FoodSTART+ also participated and contributed to the supervision mission of the Commercial Smallholder Support Project (CSSP) in Vietnam (2019). As a result the CSSP-Bac Khan project director attended the final FoodSTART+ event to learn about available RTC technologies and innovations that can contribute to this investment project (see 5.5).

Box 2: Excerpts on FoodSTART+'s contribution and recognition from aide memoire of implementation support and supervision missions

"As being done in Region VIII, the project in partnership with CIP-FoodSTART+ should explore RTC or other related livelihood/enterprises in other target regions, e.g. ARMM".

(Source: Aide memoire. FishCORAL Project Follow-up and Implementation Support Mission. 24 May-05 June 2017)

"An innovative model in promoting livelihood and fishery enterprise projects, the ABS approach has generated positive results for those included in the pilot stage. CFs trained by the International Potato Center (CIP) and its partner Visayas State University (VSU) as ABS focal points have been appointed in the regions who are also tasked to expand the coverage of livelihood projects to be covered by the ABS approach. There is a positive feedback among the staff and the review mission on the usefulness of the ABS and there appears to be more demand for continued use of the tool as a template for capacity building, design and business planning preparation of livelihood projects financed by FishCORAL. Current coverage of ABS is very limited in relation to the total number of livelihood projects that need to be covered, thus the need to provide more resources to this approach".

(Source: Aide memoire. FishCORAL Supervision Mission. 10-21 June 2019)

2.5. A TWG established and operationalised to advise and contribute to design and conduct of Outputs 3–5

FoodSTART+ was ably supported by a pool of recognised experts (TAP, formerly TWG) which was formed and first convened during the inception meeting in 2016. During the partners' meeting in May 2017, the TORs and membership of TAP were revised. Seven experts with diverse and relevant specialisations and experience were part of TAP (Table 7). TAP expertise was instrumental to successful implementation of FoodSTART+ activities. In the course of project implementation, TAP experts were deployed 54 times, covering all FoodSTART+ sites and IFAD investment projects. They contributed as technical advisors, facilitators, and resource persons in various activities related to outputs 1, 3–5. These included scoping studies, value chain studies, FBS/ABS training and monitoring, and gender-responsive studies/assessment (see next sections). TAP members were also mobilised as key resources for reviewing and providing input into reports and other knowledge products. Figure 3 shows the deployment of TAP experts by output and year. Appendix 1 provides details of all contributions of TAP members to FoodSTART+ activities.

Table 7. TAP of FoodSTART+

Name	Education /Background	Field/Work Experience	Nationality/Gender
Dr Gordon Prain (former CIP)	PhD Anthropology	Former Leader of Social and Health Sciences Global Programme, CIP	British (Male)
Dr Christopher Wheatley (former CIP)	PhD Horticulture, MSc Food Industry Marketing and Management	Value chains, marketing, project design	British (Male)
Dr Julieta Roa	PhD Social Sciences	Value chains, RTCs, policy issues	Filipino (Female)

Name	Education /Background	Field/Work Experience	Nationality/Gender
(former VSU)	MSc Public Affairs in Strategic Planning and Policy		
Dr Nozomi Kawarazuka (CIP)	PhD Development Studies, MA Development Studies	Gender and nutrition	Japanese (Female)
Dr Julian Gonsalves International Rice Research Institute	PhD International Sustainable Agriculture	Climate change, climate-smart agriculture, schools, nutrition	Indian (Male)
Dr Gerry O'Brien (Newcastle University)	PhD Food Science	Food safety, nutrition	British (Male)
Dr M. Anantharaman (former CTCRI)	PhD Agriculture MSc Agriculture	Value chains, market analysis, roots and tuber crops. Former Head, Extension and Social Sciences, CTCRI	Indian (Male)

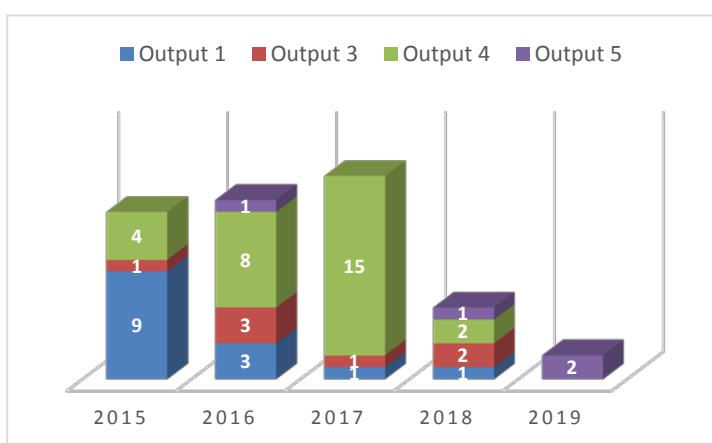


Figure 3. TAP contribution to FoodSTART+ by outputs.

Output 3. Gender-sensitive RTC innovations that respond to 10–20-year climate change scenarios and expressed needs of stakeholders are identified

3.1. Design of efficient and effective assessment process and instruments, based on previous FoodSTART experience and the increased focus on the dynamic aspects of food security (vulnerability-resilience in time)

The assessment process has been variable between different sites depending on the needs of the investment project partners. For instance, during the stakeholder and action plan development workshops, FishCORAL and INREMP decided that no assessments were needed but that the collaboration with FoodSTART+ should move directly to the provision of training and the support of FBS implementation. Overall, three assessment instruments were developed. Building on the “Value Chain Training and Farmer Business School Learning and Planning Workshop” conducted in India with Megha-LAMP in 2016, ToRs for the potato value chain study were developed, detailing the scope, approach, methodology, and tools to be adopted. The ToRs were subsequently used and adapted for conducting other value chain and market assessments (see 3.2). Furthermore, two assessment guides were developed by the CIP gender advisor: (1) gender checklist for introducing new RTCs technologies to men and women and assess their gender responsiveness (see [here](#)) and (2) production of gender-responsive participatory videos: a guide for facilitators (see [here](#)).

3.2. Implementation of assessments in focus sites

The following assessments were completed for the FoodSTART+ project:

- **India.** Three assessments were conducted in Meghalaya: (1) potato value chain assessment; (2) cassava value chain assessment—both studies implemented with Megha-LAMP and led by Dr Anantharaman, TAP member; and (3) rapid assessment of FBS from a gender perspective led

by Dr Nozomi Kawarazuka, CIP gender advisor and TAP member.

- **Vietnam.** Two assessments were jointly implemented with SRDP and led by CIAT MSc students: (1) study on cassava and sweetpotato cropping practices and farmer communications networks in Quang Binh and (2) cassava and sweetpotato rapid market appraisals in Quang Binh province. Furthermore, a rapid assessment of the importance of sweetpotato to enhance resilience to typhoons in central Vietnam was also conducted, after the typhoon Doksuri hit project sites in September 2017.
- **Philippines.** Two assessments were implemented: (1) rapid assessment of FBS from a gender perspective, implemented with INREMP and led by CIP gender advisor and (2) quantitative assessment of the contribution of RTCs for enhanced resilience and disaster recovery after typhoons, implemented in INREMP sites and led by Dr Marcel Gatto, CIP impact assessment specialist. Furthermore, FoodSTART+ staff contributed a chapter entitled “Gender, Climate Change, and Root and Tuber Crops: A Case Study in Eastern Visayas, Philippines” that was published by SEARCA and CCAFS in 2019. Primary data collection through focus group discussions was conducted in FishCORAL sites in Region 8.
- **Crosscutting.** Two assessments were conducted cutting across FoodSTART+ target countries: (1) assessment of gender dimensions of RTC farming practices in target sites conducted by CIP gender advisor with input from FoodSTART+ facilitators in the four primary target countries and (2) literature review of the contribution of RTCs to climate change resilience in Asia (with field validation in Megha-LAMP and FishCORAL sites).

3.3. Assessment reports that identify needs and opportunities for enhancing food resilience of focus site communities

From the assessment studies conducted, several knowledge management (KM) products were published by the project (Table 8).

Table 8. KM products produced from assessment studies by FoodSTART+

IFAD Investment Project/Country	Title of Assessment Studies/Videos	Type of KM Product	Responsible Person
Megha-LAMP India	Potato production, marketing, and utilisation in Meghalaya	Report Brief	Dr Anantharaman, TAP member
	Cassava production, marketing, and utilisation in Meghalaya: Results of a value chain assessment	Report	Dr Anantharaman, TAP member
	Study on gender responsiveness of FBS innovations in India	Report	Dr Nozomi Kawarazuka, Gender Advisor/TAP member
SRDP Vietnam	Cassava and sweetpotato cropping practices and farmer communication networks in Quang Binh Province, Vietnam	Report	Ms Kate Wilkins, Master student at UC Davis Ms Nguyen Nam, undergraduate student at Dickinson University
	“Sweet deliverance by sweetpotato” has been produced highlighting the role of sweetpotato for enhanced resilience to typhoons in Central Vietnam	Video	Ms Madelline Romero, CIAT Communications Coordinator for Asia
FishCORAL Philippines	Gender, Climate Change, and Root and Tuber Crops: A Case Study in Eastern Visayas, Philippines	Book chapter	Ms Arma Bertuso, CIP Senior Research Associate
INREMP Philippines	Study on gender responsiveness of FBS innovations Philippines	Report	Dr Nozomi Kawarazuka, Gender Advisor/TAP member
	RTC for enhanced resilience to typhoons (advanced draft)	Journal article	Dr Marcel Gatto, CIP Impact Assessment Specialist
Crosscutting	Gender dimensions of farming practices in root and tuber crops and proposed gender and social considerations for interventions	Report	Dr Nozomi Kawarazuka, Gender Advisor/TAP member
	Literature review of the contribution of RTCs to climate change resilience in Asia (forthcoming)	Working paper	Dr Gordon Prain/TAP member

Output 4. R4D actions to promote RTC innovations implemented and monitored and results documented

4.1. Stakeholder consultations in focus sites to develop action plan for implementation of innovations based on assessment results (compatible with work plans of investment projects)

As part of the scoping study, eight stakeholder validation workshops were conducted from late 2015 to early 2016. As reported in activity 2.3, during the workshops the scoping study results were presented and validated in order to identify potential opportunities and innovations on RTCs that could be potentially exploited by investment projects and other stakeholders. Actions plans from these validation workshops were further reviewed and refined during the FoodSTART+ inception meeting in February 2016 and in mini-workshops by FoodSTART+ staff and investment projects. Collaborative action plans with Megha-LAMP, SOLID, FishCORAL, INREMP, and SRDP were reviewed, revised, and finalised during the second FoodSTART+ partners' meeting in May 2017, and then reviewed and updated during the third partners' meeting in September 2018.

4.2. Action plan implementation

Following the delays incurred in 2016, implementation of the agreed collaborative action plans with investment projects eventually started in 2017 and, in particular after the partners' meeting in May. Below a summary of implemented activities is presented. A total of 2,101 (64% women) farmers and other value chain actors were directly reached through these activities (see Appendix 2 for communities' beneficiaries).

Megha-LAMP, India

- Action research and field demos on potato organic cultivation and use of bio-agents to control major pests and diseases in two locations of East Khasi Hills (Wahlyngkien and Mawngap) were coordinated by Dr Shahid Ali, CIP plant pathologist, who relocated to Shillong to supervise this work. Technical backstopping was provided by Dr Jürgen Kroschel (former CIP-India country manager, entomologist) and Dr Mohinder Kadian (CIP-India, agronomist).
- Action research and demos on organic management of potato tuber moth (PTM), the major potato storage pest in Meghalaya (Fig. 4). An article has been submitted for publication in an Indian peer-reviewed journal.
- Three trainings on production of quality potato planting material under organic conditions (positive selection) in the same locations of East Khasi Hills with Dr Ali as resource person with support from Megha-LAMP staff. This activity included the development of a field identification guide for major pest and disease in both English and local language (see [here](#) for English version).
- Two trainings on PTM management in farmers' country stores in East Khasi Hills by Dr Ali. This activity included the development of a brochure with key recommendations disease in both English and local language (see [here](#) for English version).
- Learning visit and trainings of FBS groups to CTCRI (see [here](#)) and Central Potato Research

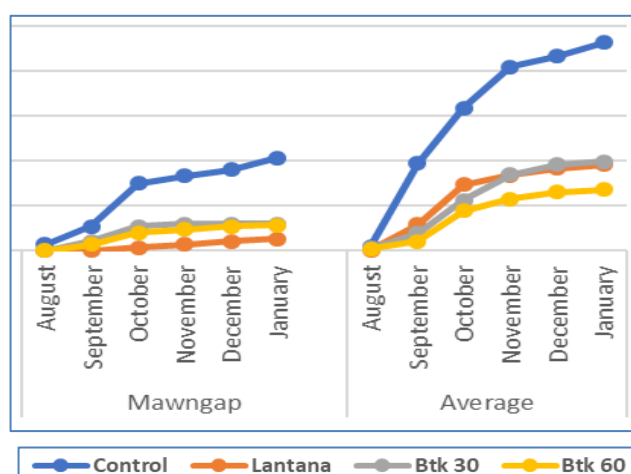


Figure 4. PTM infestation level by different treatments: Lantana and Btk proved to be highly effective to control this potato storage pest.

Station (CPRS, see [here](#)) facilitated by FoodSTART+ country facilitator and TAP member Dr Anantharaman.

- Assessment of women and men farmers' perception of and responses to the state policy on potato organic farming, with research work led by Dr Kawarazuka, gender advisor and TAP member (video [here](#)).
- Introduction and demo plots of new sweetpotato dual-purpose (food-feed) varieties with the technical support of CIP experts Dr Ali and Dr Attaluri Sreekanth.
- Completion of six FBS in East Khasi Hills and West Garo Hills facilitated by FoodSTART+ country facilitator, CIP coordination staff, TAP member, and the Megha-LAMP core FBS team. Business launch held in September 2018.

SOLID, Indonesia

- Five FoodSTART+ launching events at national, province, and district levels and interaction with relevant authorities conducted in 2017.
- Introduction and demo plots of new, vitamin A-rich OFSP and yellow-fleshed cassava in Maluku and Maluku Utara, with technical support by Dr Koko Tjintokohadi of CIP (Photo 2).

- Training of trainers (ToT) on sweetpotato and cassava cropping practices, nutritional value of RTCs, and sensory



Photo 2. Demo plot of sweetpotato varieties (left), net tunnel for sweetpotato clean planting materials (middle), and FBS site (right) implemented with SOLID in Maluku, Indonesia.

evaluation of different preparation methods of RTCs roots and leaves with implications on retaining of nutritional properties in two districts of Halmahera Selatan in 2017.

- Training on net-tunnel construction and management for clean sweetpotato planting materials in Maluku in 2018. This activity included the development of the brochure "High quality sweetpotato planting material production in net-house" in both English and local language (see [here](#) for English version).
- Completion of 10 FBS and RTC products launched in Maluku and Maluku Utara in 2018.

FishCORAL, Philippines

- FoodSTART+ supported FishCORAL to adapt the FBS curriculum into ABS curriculum for implementation in the target coastal communities (Photo 3). A writeshop was conducted in 2017 to review and revise the curriculum accordingly. FoodSTART+ staff and TAP member served as facilitators and resource persons for the event.



Photo 3. One of the series of the ABS curriculum writeshop in November 2017 with FishCORAL (left). An ABS group doing business pitch on their milkfish food products during the business launch in May 2019 (right).

- Twelve ABS groups completed and launched their products in Eastern Visayas (Region 8) in July 2018. Upon request by FishCORAL, FoodSTART+ provided support for additional 24 ABS groups in two more regions (Region 13 and Caraga). However, they have not yet held their business launch due to delay faced by FishCORAL.

INREMP, Philippines

- Technical input provided during the Levelling off Meeting on the Livelihood Enhancement Support (LES) subcomponent of INREMP in 2017. The meeting was attended by INREMP staff and stakeholders with FoodSTART+ team led by Drs Diego Naziri and Julieta Roa (TAP expert). The activity was followed by a half-day mentoring-monitoring meeting with INREMP FBS facilitators tasked to revise their FBS action plan vis-à-vis the LES guidelines
- Completion of six FBS in Bohol province; the FBS business launch was held in May 2018.



Photo 4. Various RTC food products exhibited during the FBS business launch in July 2018 (left). FBS group performing their business pitch on their sweetpotato products during the business launch of INREMP in Bohol, Philippines (above).

SRDP, Vietnam

- ToT in cassava climate-smart cropping practices conducted by the CIAT-Asia team.
- ToT in sweetpotato climate-smart cropping practices (three sessions). This activity included the development of the training manual, "Recommended sweetpotato farming practices in Quang Binh, Vietnam: A way to promote sustainable rural development and food security under a changing climate" (in Vietnamese).
- Training on net-tunnel construction and management for clean sweetpotato-planting materials with technical support from CIP expert Dr Tjintokohadi (Photo 5). The brochure, "High quality sweetpotato planting material production in net-house", was translated into local language and distributed to participants. Two net-tunnels were built and handed over to village leaders, who had been trained accordingly.



Photo 5. Net tunnel training and installation with SRDP Vietnam in Quang Binh province.

- Technical input to SRDP for preparation of VCAPs for cassava and sweetpotato. The rapid market appraisals for cassava and sweetpotato undertaken in 2017 were used as inputs for the formulation of the two VCAPs.
- Technical input to preparation of three RTC-based mini-project proposals to be submitted to SRDP for farmers' livelihood support. Farmers' groups were given methodological and technical support for the design of RTC-related mini-project proposals. These proposals were then submitted by the farmers' groups to SRDP. Unfortunately, they were not selected for funding due to low current price for cassava roots and strong preference for proposals that include a binding agreement with a buyer (with limited room for more dynamic approaches such as FBS). As a result, SRDP is the only investment where FoodSTART+ has not supported FBS.

Note that, with the exception of SRDP, all partner investments have requested FoodSTART+ to introduce and adapt the FBS methodology for strengthening the entrepreneurial capacities of rural beneficiaries and establishing enterprises led by micro- and small farmers. Table 9 provides an overview of FBS/ABS groups established through the collaboration between FoodSTART+ and investment partners. More than 1,000 farmers graduated from FBS/ABS, with women specifically targeted (67%). This approach is expected to be scaled by the investments (and other national agencies) and contribute to achieve their targets related to competitiveness and inclusiveness of value chains.

Table 9. Number of men and women farmers/fisherfolks enrolled in FBS/ABS

Country/IFAD investment project	FBS/ABS	Total Graduates	No. of Male	No. of Female
India – Megha LAMP				
FBS in East Khasi Hills and West Garo Hills	6	165	55	110
Indonesia – SOLID				
FBS in HalSel and SBT	10	221	49	172
Philippines				
FBS INREMP	6	125	33	92
FBS FishCORAL	36	499	196	303
TOTAL	58	1,010	333	677
				67% women

Furthermore, some *crosscutting activities* (Photo 6) included:

- Preparation of the brief “Gender strategies for strengthening food resilience”, providing key recommendations to FoodSTART+ staff and partners to ensure that innovations introduced by the project are gender-responsive. (See [brief](#).)
- Development of the training manual “Recommended sweetpotato farming practices in Southeast Asia: A way to promote sustainable rural development and food security under a changing climate” (in English). (See [manual](#).)
- Development of the brochure “High quality sweetpotato planting material production in net-house” in English. (See brochure [here](#).)

Most of the capacity-building activities reported in the next section were also included in the collaborative work plans. They are not mentioned in this section to avoid double reporting.



Photo 6. FBS and ABS launching: (top left) Philippines (INREMP, July 2018; FishCORAL, May 2019). (Bottom left) Indonesia (SOLID Maluku Utara, October 2018; SOLID Maluku, November 2018). (Upper right) India: Megha-LAMP – September 2018.

4.3. Capacity building of investment project implementers

Upon request of partners, FoodSTART+ focused particularly on building the capacities of staff of the implementing agencies of IFAD investments on methodologies and approaches for value chain development in order to help them achieve their livelihood enhancement's targets. Even before the collaborative action plans were finalised, a number of trainings and workshops were co-organised with investment projects in India and Philippines to build the capacities on value chain methodologies and introduce the FBS approach for enhancing farmers' entrepreneurial capacities. Following the finalisation of the action plans, additional capacity-building activities were organised and facilitated by FoodSTART+ staff and TAP experts. Eighteen trainings related to value chains and FBS were conducted during FoodSTART+ implementation. The complete list of relevant trainings and workshops co-organised with investment projects in the India, Indonesia, and Philippines are in Appendix 3.

Additional technical trainings for staff of investment projects were facilitated by FoodSTART+ staff and TAP experts. These included the following: (1) Training and learning visit on sweetpotato silage and use of other RTCs residues for animal feeding in Vietnam, for Megha-LAMP and FOCUS, India (Photo 7). (2) Training on "Ensiling sweetpotato, cassava and other locally available material for feeding pigs and cattle" in two districts of Meghalaya, India, with Megha-LAMP and FOCUS, and use of training manual developed by FoodSTART+. (3) Training on social analysis and action for improving gender sensitivity in agriculture and integrating social and gender aspects into agricultural research in Vietnam, with the participation of SRDP and FoodSTART+ staff. (4) Training to FishCORAL, INREMP, and Megha-LAMP and piloting on the use of "most significant change" (MSC), a methodology adapted by CIP for capturing outcome stories of project's beneficiaries.



Photo 7. Silage technology training using RTC materials for animal feed with Megha-LAMP held in Vietnam in May 2017 (right) and in West Garo Hills in November 2017 (left).

In addition to the cross-learning on FBS (see activity 1.3), three more cross-learning visits were also carried out to build capacity of investment projects staff:

- Learning visit to CCAFS/CIAT climate smart village (CSV) approach in Northern Vietnam with SRDP, Vietnam; INREMP, Philippines; and SOLID, Indonesia (2017) (Photo 8).
- Learning visit to CCAFS/CIAT CSV approach in Central Vietnam with SRDP (2018).
- Cross-farm visit to RTC production and processing areas and selected FBS in Region 8 for INREMP, Philippines.

Overall, a total of 1,358 (49% women) staff of investment partners were directly reached through these activities (see Appendix 2 for investment partners' participation).



Photo 8. Learning visit to CCAFS-CSV site in Vietnam (left); cross-farm visit to RTC production in Philippines (right).

4.4. M&E plan developed and implemented

FoodSTART+ developed an M&E plan (see [here](#)). The project developed and introduced innovative M&E tools which include:

- Partnership health check-up. The check-up was run three times (see activity 2.4).
- FBS monitoring and mentoring guide. The guide was developed and pilot tested with Megha-LAMP, FishCORAL, INREMP, and SOLID (see [here](#)). It was finalised and published in May 2019. The guide was also adapted by INREMP (see [here](#)) and FishCORAL (see [here](#)). The ABS guide was also produced in local language (Filipino).
- Gender checklist to monitor gender responsiveness of innovations stemming from FBS processes (see activity 3.1).
- MSC methodology for qualitative evaluation of FBS. The staff of FishCORAL, INREMP, and Megha-LAMP were trained on the use of the methodology (see activity 4.3) for collecting outcome stories to be featured in a coffee-table book (see activity 5.3).

Output 5. Field-based best practices, outcome stories, and success factors are documented and disseminated to support IFAD, CIP, and wider national and regional policy development

5.1. Communications and engagement plan developed for target audiences

The communication and visibility plan was finalised (see [here](#)). Some of the venues for promoting and disseminating FoodSTART+ activities and products are:

- FoodSTART+ project website (<http://www.rtb.cgiar.org/foodstartplus/>) launched and regularly updated. Arrangements have been made by CIP to keep the website alive after the project ends.
- Project reports and KM products made publicly available through several sites such as the FoodSTART+ website, dedicated page of the IFAD Asia portal, and CGSpace.
- Blogs and news releases posted in FoodSTART+ website and IFAD Asia portal and disseminated through social media platforms (eg, Facebook/Twitter pages of IFAD Asia, CIP, RTB, and CIAT).

5.2. Cross-site synthesis by project coordination unit with TWG

The partnership approach between a research grant and large-scale investment projects is a key innovation of FoodSTART+. To document this experience and provide recommendations for wider application, a workshop was held in November 2018 with the involvement of FoodSTART+ staff and TAP members in order to identify the key lessons. Building on both the outcome of the workshop and follow-up interactions, the research paper “Research-development partnerships for scaling agricultural innovation: Lessons from IFAD-supported loan-grant collaboration in Asia” was prepared and submitted for publication in a special issue of the high impact factor journal *Agricultural Systems*. The article has received positive feedback by reviewers, and is currently under revision for resubmission by the end of 2019. FoodSTART+ also produced a brief summarising good practices on grant-investment partnerships (see activity 2.2).

5.3. KM product development and publication

FoodSTART+ actively developed and published 70 KM products (excluding training/workshop reports and articles still under review by peer-review journals). These include two books, one book chapter, one article, 14 reports, 10 training manuals, three guides, six brochures, 20 briefs, and 13 videos. A total of 6,290 copies were printed for distribution during project meetings and other events participated in by project staff and partners. As of November 2019, analytics of CGSpace indicate 34,391 views and 6,505 downloads of the material made publicly available (see Annex 4 for the complete list of KM products, which also includes the number of views and downloads for each item.) As expressed by investment project partners, the co-production of most KM products by FoodSTART+ and the investment projects is highly appreciated, as it contributes to both investments’ visibility and capacity building of the own staff for replicating some of the innovative documentation approaches introduced of FoodSTART+. See for instance (1) the [coffee table book](#) on FBS published in 2019 in collaboration with INREMP, FishCORAL, Megha-LAMP, and CHARMP2, a former partner in previous FoodSTART project, and (2) the [FBS Training Manual](#) and [FBS Learning and Monitoring Guide](#) which were then modified and adapted by FishCORAL and INREMP

5.4. Implementation of communications and engagement plan

Knowledge sharing is important for FoodSTART+. The relevant events attended by FoodSTART+ staff from 2015 to 2019 included:

A. IFAD country office activities:

- Philippines: Annual Country Programme Review (ACPOR), IFAD-Philippines Gender Network (IPGN), and Knowledge and Learning Market-Policy Engagement (KLM-PE) from 2015 to 2019 (once every year)
- India: Review of IFAD grant portfolio in June 2017
- Vietnam: ACPOR in February 2018

B. Participation in relevant RTB and CCAFS meetings

- Annual review and planning meeting of the CRP-RTB in March 2017 and October 2019
- CCAFS writeshop for publication on gender and climate change in root crops production areas in Eastern Visayas, Philippines, in October 2017
- CCFAS regional conferences on climate change and scaling in October 2018

C. Participation in other relevant international workshops and conferences to disseminate project’s results

- Philippines: ADB Knowledge Intensive Agriculture Workshop in June 2017
- Indonesia: (1) Workshop on “Synergy in Cassava Value Chain” (ICAPRD-CIRAD); (2) Workshop

on “Role of Research and Policy for Cassava Value Chain” (LIPI); and (3) International Cassava Congress (University Brawijaya-ILETRI).

5.5. Seminars/workshops for policymakers

FoodSTART+ strived to engage with policymakers for disseminating project findings and innovations, and ultimately for promoting science-based decision-making around RTCs. This included participation in and organisation of key events at national, regional, and international levels such as:

- Dr Diego Naziri (project coordinator) and Dr Leonora Verzola (AAIGA coordinator, CHARMP2) participated in the IFAD International Conference on South-South and Triangular Cooperation held in Brazil in November 2017. The CIP-FoodSTART+ FBS approach was selected among the 13 key innovations that can effectively contribute to IFAD’s 2016–2025 strategic framework and presented at a booth at the market place. The event allowed us to showcase the result of a successful partnership between an IFAD grant and IFAD investment project and to briefly discuss the FBS methodology and its tangible outputs with IFAD’s president, Gilbert F. Houngbo (Photo 9).
- CIAT-FoodSTART+ staff contributed to the workshop on “Role of Research and Policy for Cassava Value Chain” (LIPI), held in Indonesia in 2017.
- A small policy workshop was organised by CIAT in SRDP sites in 2018 to share the findings of an analysis of RTC-related policies at national and provincial levels in Vietnam. The workshop aimed to also sensitise policymakers and other stakeholders about the lack of supportive mechanisms, particularly at national level.
- FoodSTART+ staff were actively involved in and managed a booth at two IFAD Mekong Knowledge and Learning Fair events: Da Nang, 2018 and Bangkok, 2019. A presentation was also delivered at IFAD’s regional workshop, “Inclusive and Sustainable Rural Transformation: IFAD’s priorities in the Asia Pacific Region for 2019-21” (Yogyakarta 2018).
- The symposium “Opportunities and Challenges for Organic Potato in Meghalaya and other Northeastern Indian States: Research, Business and Policy Perspectives” was organised in Shillong (Meghalaya) in July 2019 in partnership with Megha-LAMP (Photo 10). The symposium aimed at providing a platform for discussing the challenges for implementing “Meghalaya Mission Organic”, an initiative launched by the chief minister of the state in 2015. The event was attended by 47 participants, including delegates of government, researchers, farmers organisations, extension agents, development practitioners, private sector, certification bodies, and service providers interested in organic farming. They discussed issues related to organic potato production and marketing in Meghalaya and other north-eastern states of India; present examples of applications; and provide a basis to share relevant knowledge, experience, and research innovations (see report [here](#)).



Photo 9. Dr Naziri and Dr Verzola with IFAD’s president, Dr Houngbo.



Photo 10. Participants of the Organic Potato Symposium held in Shillong in July 2019.

As its final event, FoodSTART+ organized the “Regional Congress on Root and Tuber Crops for Food Security and Climate Change Resilience in Asia” on October 17th–18th 2019 in Quezon City, Philippines (Photo 11). The RTC congress was co-organised with the Department of Science and Technology–Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development in collaboration with Philippine Root Crop Research and Training Center (PhilRootcrops) of VSU. A total of 115 people from 11 countries participated in the event which included science sessions and roundtable discussions. In addition, at a knowledge and learning fair RTC innovations were showcased and analysed by participants for potential adoption and scaling in other countries. Besides IFAD investment partners, representatives from five additional IFAD investments in the region attended the workshop and expressed interest in RTC technologies and relevant capacity building in their project sites (see report [here](#)).



Photo 11. Participants of the “Regional Congress on Root and Tuber Crops for Food Security and Climate Change” held in October 2019.

3.2 ASSESSMENT OF PROJECT EFFECTIVENESS IN ACHIEVING COMPONENT OBJECTIVES

FoodSTART+ has successfully completed its activities and achieved the planned outputs as stated in its logical framework (Annex 1). Table 10 shows the level of FoodSTART+ accomplishment by output. The reported completion rate is based on the project accomplishment by activity. Details of the FoodSTART+ accomplishment by activity are provided in Annex 2 and have been discussed in the previous section.

Table 10. Accomplishments of FoodSTART+ by output

Output	Completion (%)
Output 1: Subnational geographic target areas combining food vulnerability with significant RTC production and use are prioritised and mapped	110
Output 2: Effective, mutually beneficial R4D partnerships identified, established, and monitored	115
Output 3: Gender-sensitive RTC innovations that respond to 10–20-year climate change scenarios and expressed needs of stakeholders are identified	160
Output 4: R4D actions to promote RTC innovations implemented and monitored and the results documented	125
Output 5: Field-based best practices, outcome stories, and success factors are documented and disseminated to support IFAD, CIP, and CIAT, and wider national and regional policy development	120

Note: Output completion rate is calculated as simple average of the completion rate of relevant activities, as presented in Annex 2.

4. ASSESSMENT OF IMPACT AND M&E SYSTEM

The goal of FoodSTART+ “to enhance food resilience among poor HH in upland and coastal communities of the Asia-Pacific region, through introduction of RTC innovations, primarily within the framework of R4D partnerships with IFAD investment projects” is aligned to IFAD’s 2016–2025 strategic framework and to its strategic objectives 1 (*Increase poor rural people’s productive capacities*); 2 (*Increase poor rural people’s benefits from market participation*); and 3 (*Strengthen the environmental sustainability and climate resilience of poor rural people’s economic activities*).

FoodSTART+ maintained different kinds of partnerships with five IFAD investment projects: Megha-LAMP in India, SOLID in Indonesia, FishCORAL and INREMP in the Philippines, and SRDP-Quang Binh in Vietnam. Objectives, activities, and outputs were developed in line with investment project needs from project conception (through exploratory consultations during project design and with IFAD country offices’ support). Project success is predicated on the influence/effects of FoodSTART+ on the investment projects. The partner investments are expected to achieve impact at scale in part through using FoodSTART+ innovations and methods such as FBS. Effective grant-investments partnerships were an explicit output of FoodSTART+, and collaborative action plans between FoodSTART+ and the investment projects formed the basis for cooperation, sharing of resources, and the execution of activities. In a few cases these forms of collaboration were formalised via a contract; more frequently they were cemented via strong informal commitments, based on trust, mutual respect, common vision, and shared goals.

Two major development outcomes have been achieved by FoodSTART+:

- **Behavioural change of investment projects** resulting in greater emphasis on RTCs and scaling up/out of FoodSTART+ innovations for enhanced food security and agri-food system resilience (details are provided in section 12).
- **Validation of multiple partnership models** for linking IFAD development-oriented investments to a research grant as an effective approach to accessing and going to scale with innovations for improved livelihoods. This was observed in the positive feedback by investment partners captured through the partnership health check-ups (see activity 2.4).

While impact among end-users/beneficiaries is the main goal of the investment projects rather than FoodSTART+, the grant project directly reached 3,459 (58% women) end-users (see Appendix 2). However, the number of community beneficiaries is likely to be largely underestimated since investment partners do not report to FoodSTART+ the outreach of scaling activities and the impact to which FoodSTART+ innovations and capacity development have contributed to. Furthermore, as additional FishCORAL ABS cycles are concluded and through institutionalisation of innovations introduced by FoodSTART+, we expect development outcomes to further expand, in particular with respect to business capacity among farmer groups and HHs and empowerment/

confidence building, especially among women group members. This expectation is based on the FoodSTART phase 1 experience with CHARMP2 in the Philippines.

The FoodSTART+ M&E system is described in the project's M&E plan (see [here](#)). Feedback from investment partners was gathered three times through the partnership health check-ups tool. In addition to face-to-face, email, and phone interaction as required for dealing with specific issues, representatives of investments regularly participated in the partners meetings organised by FoodSTART+ on annual basis. This allowed participants to discuss opportunities and challenges of the collaboration and facilitate cross-learning among project's partners and, sometimes, additional IFAD investments not formally engaged with FoodSTART+ (eg, FOCUS in India, ConVERGE in the Philippines, and the five additional IFAD investment projects that were represented at the final event organised by the project; see activity 5.5). The progress of project outputs, activities and deliverable was monitored through a traffic-light monitoring system (Fig. 5).

5.2	1 publication of cross-project synthesis: ongoing	Good Practices and Innovations for IFAD Grants-Loans partnership models		Journal article	Pending
5.3	At least 5 hard copy publications, also available online: ongoing	Farmer business schools in a changing world: a gender-responsive and climate-smart manual for strengthening farmer entrepreneurship.	2017	Manual	Completed
		Simplified FBS learning guide		Manual	Advanced draft

Figure 5. Sample extract from traffic-light monitoring system.

As reported in activity 4.4., additional M&E tools developed by the project included the FBS monitoring and mentoring guide (then customised by INREMP and FishCORAL) and the gender checklist to monitor gender responsiveness of innovations stemming from FBS processes. Furthermore, the project introduced the MSC methodology and built the capacities of staff of partner investment projects in using it to qualitative assess the impact of FBS. MSC is being applied by CIP to assess the performance of other IFAD grants in the Latin America and the Caribbean region.

Staff of IFAD country offices (ICOs), in particular the IFAD task manager for FoodSTART+, were able to regularly monitor and evaluate the progress of FoodSTART+ through feedback received by representatives of FoodSTART+ and investment partners during ICOs activities, regional events, and participation in the project's steering committee meetings (Philippine CPO and Vietnam CPO are steering committee's members). Furthermore, a supervision mission was conducted in September 2018 at the time of the second partners' meeting for facilitating interaction with all project partners and gathering their feedback through an IFAD tool for assessment and rating of the project (rating above 4 for all criteria). The AM of the supervision mission provided a very positive feedback about FoodSTART+ (see Box 3).

Box 3: Excerpts from Aide Memoire of Supervision Missions

FoodSTART+ remains relevant to the intended users of its research results namely: the IFAD investment projects, country operations offices, policymakers, and opinion leaders.

FBS were found highly relevant by the IFAD investment projects and stands out as an appropriate technology in helping poor communities to improve their income.

The FBS is highly appreciated by investment projects and beneficiaries as it exhibits flexibility which can be adjusted according to the sequencing of training modules as undertaken by the SOLID project in Indonesia, and can be adapted to other type of commodities as demonstrated in the FishCORAL ABS.

Outputs are being utilised by investment projects through formal collaborative arrangements and implementation plans. Accordingly, first-level development outcomes at end-user level are also in progress in terms of dialogue, value recognition, and adapting RTC innovations into production systems.

(Source: Aide memoire. FoodSTART+ Supervision Mission. 27 August–12 September 2019)

Besides the best practices described above, it is important to note that the project would have benefitted from a more systematic feedback on dissemination of FoodSTART+ innovations by the investment partners. If similar modalities of grant-investment collaborations are to be implemented, a better integration with partners' M&E systems should be explored, in order to allow more accurate reporting of the adoption by and ultimate impact on beneficiaries (important from a research scaling perspective) while keeping the partners' reporting workload to a minimum.

5. PROJECT COSTS, FINANCING, DISBURSEMENT AND CO-FINANCING

Funds Received by CIP:

Payment	Journal	Invoice	Date Received	Currency (€)	Amount (\$)
1	11055624	17000467	Dec-16	512,870	534,930
2	11108699	17000855	Mar-19	625,000	693,626
3	11113071	17000866	Apr-19	19,375	21,632
4	11123018	17000942	Sep-19	544,431	590,685
				1,701,676	1,840,873

Payment and Disbursements:

- First Instalment (First Fiscal Year): Received on December 2016:
 - Report submitted: 03/29/2017; requested donor extension for the submission of report
 - Reported Amount: €346,533
 - Funds Received: **€512,870**
 - Cash position at the end of the year 2016: **€166,337**
- Second Instalment (Second Fiscal Year): Delayed, based on low execution (execution rate at 68%):
 - Report submitted: 02/22/2018
 - Reported Amount: €546,600
 - Funds Received: **€0**
 - Cash position at the end of the year 2017: **-€380,263**
- Third Instalment (Third Fiscal Year): Delayed; our CFO sent an email on December 4th 2018 to IFAD requesting payment of the Withdrawal Applications sent. IFAD confirmed the lack of payment due to the delay of funds to be released by EU.
 - Report submitted: 03/11/2019
 - Reported Amount: €508,845
 - Funds Received: **€0**
 - Cash position at the end of the year 2018: **-€889,108**
- Fourth Instalment (Fourth Fiscal Year): Received second to fourth instalments.
 - Report submitted: 12/15/19
 - Reported Amount: €428,576
 - Funds Received: **€1,188,806**
 - Cash position at the end of the year 2019: **-€128,875**
- Fifth Instalment (Remaining balance): Pending, to be settled once Final Report is approved.
 - Amount to be received: **€128,875**

Budget vs Expenses

Category of Expenditures	Total Budget	Total Spent Y1–Y4	Winding Up Costs	Total Expenses	Balance	Variation (%)
Salary and allowances	867,418	846,021	31,183	877,204	-9,786	101
Consultancies	272,238	256,293	1,051	257,343	14,895	95
Operating costs	111,180	108,275	4,739	113,013	-1,833	102
Workshops	127,480	112,067	26,329	138,396	-10,916	109
Contributions	200,154	192,995	-	192,995	7,159	96
Travel	161,530	147,833	13,216	161,050	480	100
Subtotal (direct cost)	1,740,000	1,663,484	76,518	1,740,002	-2	100
Administrative costs (3.1% of direct costs)	53,940	53,940	-	53,940	0	100
Subtotal (amount disbursed to centre)	1,793,940	1,717,424	76,518	1,793,942	-2	100
Cost Sharing (2%)	36,611	36,611	-	36,611	0	100
TOTAL	1,830,551	1,754,035	76,518	1,830,554	-3	100

6. ASSESSMENT OF GRANT MANAGEMENT AND PARTNERS' PERFORMANCE

As noted in the AM of the IFAD supervision mission, FoodSTART+ was an ambitious, complex, and challenging project to manage, coordinate, and implement. It was managed and coordinated from various locations, with the project coordinator strategically based in Hanoi, Vietnam, for travel purposes to the focus countries and coordination with CIAT's regional office. Meanwhile, the project coordination office was based in the Philippines handling additional technical, administrative, and financial management support in coordination with CIP headquarters in Lima, Peru. Moreover, it worked in four primary target countries and with five investment projects, which were at different stages in their own project cycle and had diverse requirements for technical assistance and capacity building. Implementation effectiveness of the project hinged on the one hand on the ability of FoodSTART+ to work with governments—in this case, the investment projects—and on the other hand on the needs and flexibility of investment projects. And although the FoodSTART+ management worked collaboratively with the investment project partners, there were factors that affected the implementation. These included delays on the approval for the release of EC funds; procedural delay on the written agreement between government and the project (some investment projects though do not require agreements); timing of collaboration (SRDP and SOLID were toward the project completion); changes in management and staff of both FoodSTART+ and investment projects; availability of resources with the investment projects for the collaborative activities; and, RTCs not being explicitly prioritised in the design of the investment projects. In spite of this, the project has successfully completed the implementation and delivery of all its five outputs, achieving the project objectives.

7. ENVIRONMENT AND CLIMATE FOCUS

To achieve its goal of enhancing resilience among poor HH in the Asia Pacific region, FoodSTART+ purposively targeted countries that are highly vulnerable to climate change, and within those the upland and coastal communities. These communities are among the most fragile environments, and RTCs have potential to contribute to their resilience due to their resistance to climate change and related extreme-weather events as well as their ability to help coping with and responding to shocks and stressors. While the projects promoted RTCs by introducing relevant innovations (more details are provided in Section 11), specific assessments were also conducted to validate the role of

RTCs to resilience and provide evidence for decisionmakers, both within the investment partners and beyond. These include the following: (1) the scoping studies conducted in all the target sites which did not only identify RTC challenges and opportunities but also included relevant natural resource and climate data (output 1); (2) the RTC suitability and transformational maps which provide projections on areas where RTCs are likely to replace other crops as a result of changing climate (output 1); (3) the review of literature on food vulnerability and resilience which identifies theoretical and methodological approaches and their challenges (output 1); (4) the literature review and field validation on the role of RTCs for enhanced resilience of Asian agri-food systems in Asia (output 3); and (5) the study on the contribution of RTCs to resilience to typhoon in Philippines, showing the crucial role that RTCs play in coping with and bouncing back after calamities (output 3).

8. GENDER FOCUS

FoodSTART+ put high priority on gender in all areas of project implementation. Dr Nozomi Kawarazuka, CIP's gender advisor and TAP expert, facilitated the development of various tools (eg, a [gender checklist](#) and a guide to gender-responsive [participatory videos](#)) that were used for understanding gender norms and dynamics in project's sites. A [gender-situational report](#) covering the primary target sites was produced and the findings were used to develop the project [gender strategy](#) and a gender action plan for ensuring that gender aspects were addressed by and integrated into the activities of FoodSTART+ and investment project partners (Fig. 6). The project also produced a [video](#) highlighting gender differences in the perception of the upcoming policy on potato organic farming in Megha-LAMP sites. A similar activity was conducted in INREMP sites in Bohol to capture men and women farmers' voices and roles in agricultural activities, and at the same time build their self-confidence and promote social interactions within and among the different groups in the communities. Participation in project activities and technical trainings were designed with careful consideration of gender norms, capacities, and relationships from planning to evaluation. FoodSTART+ also strived to provide technical backstopping and build partners' capacities to ensure that innovations introduced and disseminated by the project, primarily through the FBS processes, accounted for women's needs and interests. This included a specific training on gender in agriculture organised by CIP and CARE and attended by FoodSTART+ and SRDP staff in Vietnam. Women represented 58% of beneficiaries reached by the project (see Appendix 2). In the case of FBS/ABS, the proportion was even higher (67%, see Table 9). In the last year, rapid assessments of FBS impact from a gender perspective were conducted in Megha-LAMP and INREMP sites, confirming that this methodology for inclusive value chains is gender responsive and highly suitable to women. In 2019 a book chapter was published on the relationship between RTCs, gender, and climate change in Eastern Visayas, Philippines.

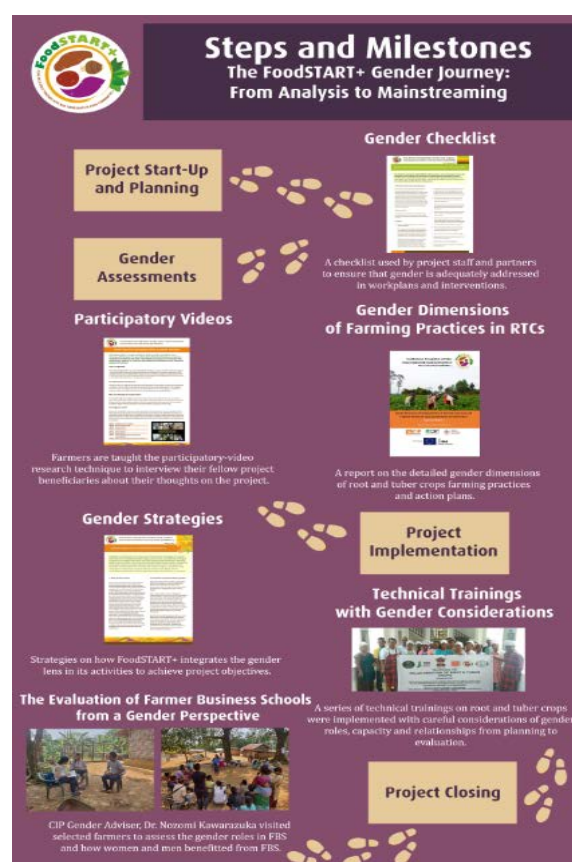


Figure 6. Gender consideration in FoodSTART+.

9. INDIGENOUS PEOPLES

Indigenous people are present in the project sites and sometimes represent the majority of the population. They include Khasi and Garo ethnic groups in the Meghalaya sites, India; Eskaya, Maranaos, and Maguindanaos groups in the Philippine sites; and the Khin groups in the Vietnam sites. Many were involved in the project activities, especially capacity building. However, a weakness of the project was the lack of systematic tools for keeping record and reporting the participation of indigenous people. Therefore, information in this regard is only partial. This should be noted for future projects.

10. KNOWLEDGE MANAGEMENT AND KNOWLEDGE SHARING

The KM and knowledge-sharing strategy was guided by the project's [communication and visibility plan](#) which followed the EC guidelines. As reported in activity 5.3, FoodSTART+ developed and published 70 KM products. These were produced by the own team and in collaboration with investment project partners. They include books, book chapters, articles, reports, training manuals, guides, brochures, briefs, and videos and were disseminated through printed and soft copies. (Annex 4 presents the complete list of FoodSTART+ KM products and the details of their dissemination.) When required, KM products for ToT and rural beneficiaries were translated into local languages to facilitate their use (eg, net tunnel brochure in Bahasa and Vietnamese, ABS learning guide in Tagalo, training manual for sweetpotato climate-smart practices in Vietnamese, field identification guide of potato pests and diseases in Khasi). KM products were extensively used in the implementation of project activities and were highly appreciated by partners. Furthermore, the co-production of this material with partners allowed adapting it to their specificities and needs, and also contributed to building the capacity of partners' staff for developing additional information and KM beyond the boundaries of the FoodSTART+ collaborative activities. The KM products were promoted and distributed during project activities, and key events organised or participated in by FoodSTART+. Organised events include the annual partners meetings, cross-learning visits, the "Organic Potato Symposium" in Meghalaya, the RTC policy workshop in Vietnam, and the final RTC "Congress for Food Security and Resilience in Asia". Events participated in by FoodSTART+ include the IFAD International Conference on S-S and Triangular Cooperation, ACPoRs, KLM-PEs, IPGN assemblies, MKLFs, and the regional workshop on IFAD's priorities in the region.

The project developed and maintained a [project website](#), where KM products can be accessed, and blogs/news are published. As of November 2019, the website recorded 6,390 page views (of which 5,048 unique) by 1,372 users (14.6% returning visitors). Besides the project's website, project achievements and KM products were disseminated through the CGIAR (primarily CIP and RTB) and partners' websites and the IFAD-Asia Portal. The project has also boosted visibility by posting activities and events on social media (eg, Facebook and Twitter pages of CIP, RTB, IFAD-Asia, KLM-PE, and FishCORAL).

11. INNOVATION

During the initial scoping studies and assessments, FoodSTART+ introduced and built the capacities of investment partners to use **methodologies for value chain analyses and market assessments** as well as options for inclusive value chain development.

Through the implementation of the collaborative action plans, FoodSTART+ identified, tested, and promoted **technologies to improve production and postharvest management of RTCs**. These include new nutrient-rich varieties (OFSP and yellow-fleshed cassava) in Indonesia and Vietnam; dual-purpose sweetpotato varieties (for food and feed) in India; use of net tunnels to improve

multiplication of clean sweetpotato-planting material in Indonesia and Vietnam; enhanced seed potato production and storage under organic conditions in India; climate-smart RTC farming practices in Indonesia and Vietnam; and improved cassava and sweetpotato processing for food and feed in Indonesia, India, and Philippines.

A key FoodSTART+ innovation was the adaptation and scaling of the **FBS** methodology developed in the first phase to strengthen value chains and increase farmer incomes. FBS implementation allowed the capacities of local agricultural staff and farmer groups (primarily women) to be built in order to establish demand-driven micro- and small-scale businesses for fresh and processed products. This approach helped improve value adding and marketing of RTCs and other commodities, and ultimately diversify livelihoods for enhanced resilience. FBS were also used as a catalyst for introducing RTC technical innovations as required for effective product development and sustainable businesses. Building on the previous experience of FBS with CHARMP2 (which later scaled up FBS on its own), FoodSTART+ enhanced the curriculum by incorporating climate change and gender perspectives (including a checklist to monitor gender responsiveness of innovations stemming from FBS processes).

The project also supported INREMP and FishCORAL to adapt the curriculum to their specific contexts, namely agro-forestry and fishery, with curriculum renamed as ABS for the latter, and SOLID, in consideration of the limited resources and time available, to prioritising and simplifying the learning modules (Fig. 7). Learning and monitoring guided were produced to support the implementation of the adapted curricula and track the progress. Thirty-four farmer groups graduated from the FBS (12 in FishCORAL, 10 in SOLID, 6 in INREMP, and 6 in Megha-LAMP sites), each launching at least one new product in the market. Additionally, 24 FishCORAL groups are expected to launch their businesses in the coming months.



Figure 7. FBS and ABS products developed by INREMP, SOLID, and FishCORAL which were presented during the business launch as culmination of the FBS/ABS.

FoodSTART+ also introduced **innovative approaches for documentation**. This includes the co-production of research reports and briefs, participatory videos, and facilitating methodologies for social-science research (eg, focus group discussions). The most notable example of innovative documentation is likely to be the MSC approach introduced by FoodSTART+ as an M&E tool for qualitative assessment of project outcomes and impacts. Megha-LAMP, FishCORAL, and INREMP staff were trained in this approach. As an output, a coffee-table book was produced and published featuring the MSC stories of men and women farmers graduated from FBS as well as of FBS facilitators from partner organisations. Investment project partners have expressed their interest in replicating the MSC approach, to complement the existing quantitative M&E tools.

Finally, the main institutional innovations of FoodSTART+ is the **collaborative implementation approach with IFAD investments**. Here, innovations and project activities are jointly identified, implemented, and funded; relevant capacities of IFAD investment partners built in order to take the validated innovations to scale. As presented in activity 2.2, four modes of partnership arrangements with IFAD investment projects were developed and validated by FoodSTART+. The partnerships catalysed by FoodSTART+ can serve as a model for IFAD and other donors for taking research outputs to scale and facilitating their access and adoption by government agencies for deepening impact within the context of IFAD investments and the broader rural transformation agenda (see Box 4).

Box 4: What our stakeholder says about FBS

Everyday, we dream of having a stable job. That's to FBS, we became productive women—from being plain housewife to business women"

—Alvira Gumanoy, FBS graduate, Bohol, Philippines

"The ABS has given me the opportunity to learn about putting up and managing a business. I can say that the things I learned from the books are different from the practical knowledge I gained from ABS."

—Narlito Armada, ABS Facilitator, Samar, Philippines

(Source: Connecting smallholder root and tuber growers to markets through farmer business schools, FoodSTART+ 2019)

12. SUSTAINABILITY, REPLICATION, AND SCALING UP

The grant-investment partnerships as a model for ensuring wider uptake, sustainability, and scalability of high-potential technologies and methodologies show promising results. For instance, through the partnership of FoodSTART+, SOLID increased emphasis on RTCs for achieving its nutrition-related targets and replicated net tunnels for multiplication of clean sweetpotato-planting material by its own. Following the end of SOLID, the provincial government in SBT (one of the FoodSTART+ sites) is providing additional support to three FBS groups to ensure long-term sustainability of the enterprises while the local extension staff continues to promote the new sweetpotato and cassava varieties introduced by FoodSTART+. However, wider scaling is likely to occur through project partners that are still operational. For instance, Megha-LAMP included cassava in its crop clusters; adopted FoodSTART+ value chain's methods and tools to non-RTC chains; and plans to scale out FBS for enhancing livelihoods in additional blocks beyond FoodSTART+ target sites. In the case of FishCORAL, following adaptation of FBS curriculum into ABS, the approach was scaled out in additional two regions (Region 13 and Caraga) not originally targeted by the grant (with ABS target increased from 12 to 36 farmer groups). As for INREMP, following appreciation of the FBS approach, FoodSTART+ was asked to provide additional support for scaling it in additional sites; unfortunately, however, limited grant resources and time have not allowed us to address this request.

The main FoodSTART+ scaling approach builds on strong partnerships with IFAD investments, yet wider innovation dissemination and outreach require the involvement of other stakeholders (eg, governments, international development agencies, and private sector) which provide complementary services and market linkages. In the case of FBS, in addition to the agencies implementing the investment projects, technical support and business development service providers and financial institutions have become involved. Although the expert input and technical innovations initially provided by FoodSTART+ are critical to building capacities for implementation, strategic partnerships with these other stakeholders can provide larger scale benefits. For example, in the Philippines, based on CHARMP2 results, FBS was adopted by institutions beyond the investment project, especially through the Dept. of Agriculture in the Cordillera region. The CHARMP2 experience demonstrates that even after the formal partnership (and any financial and technical support from the grant project) ceases, scaling out of the innovations (FBS) continues and positive outcomes expand. Efforts were made to maximise prospects for similar outcomes from FoodSTART+

partnerships. Recent progress, although still limited, of scaling in Indonesia after the closing of SOLID is encouraging.

Finally, interest for introducing and replicating FoodSTART+ innovations has been expressed by additional IFAD investment projects that have been engaged in specific project activities. These include FOCUS in India, CSSP in Vietnam, WSAP and ESAP in Myanmar, and TRIP II in Tonga, which showed interest in the potential of RTCs to contribute to their resilience, nutrition, and gender objectives. Similarly, IFAD investments in the Philippines like ConVERGE and RAPID that links local commodities with sub-national, national, or regional value chains provide opportunities for adopting the FBS approach at larger scale.

13. LINKAGES TO COSOP STRATEGIC OBJECTIVES INVESTMENT PORTFOLIO AND OTHER DEVELOPMENT INITIATIVES

FoodSTART+ successfully contributed to enhance COSOP strategic objectives by supporting the implementation and achievements of the five IFAD investment project partners, namely Megha-LAMP in India, SOLID in Indonesia, FishCORAL and INREMP in the Philippines, and SRDP-Quang Binh in Vietnam. FoodSTART+ strived to focus on innovations and capacity building that could effectively contribute to the partners' objectives in a tangible and timely manner. The collaborative activities were jointly identified with the partners in order to ensure responsiveness to their demand and needs. The vast majority of the activities were jointly implemented by FoodSTART+ and its partners to strengthen ownership and empowerment and build the capacities of staff for adapting and replicating them. Accordingly, FoodSTART+, despite being a research-grant led by a CGIAR centre, purposively limited upstream research and prioritised technologies and other innovations that could be of immediate use and benefit for the investment partners. By working in diverse countries characterised by marked differences—but in some cases also by striking similarities—FoodSTART+ promoted and encouraged cross-learning and knowledge-sharing through learning visits; project meetings; and larger scale events such as the regional congress on roots and tubers organised by the project (see 5.4) and the IFAD country and regional events attended by project staff.

14. CONCLUSIONS AND LESSONS LEARNT

The initial scoping studies conducted by FoodSTART+ validated the key role of RTCs for food security, livelihood, and nutrition of rural farmers, HH, and communities in the target countries. Furthermore, the project provided evidence that importance of RTCs in Asia is likely to increase in the coming decades due to the projected change in land suitability amidst climate change which can drive the substitution of other more vulnerable crops, such as maize and rice, by RTCs (output 1). The assessments confirmed that RTCs play an important role in diverse Asian agri-food systems and contribute to their resilience to and capacity to recover from shocks and stresses, including the ones related to climate change and increasingly frequent extreme weather events like typhoons (output 3). Additional studies which complemented and expanded the findings of the initial scoping studies, identified challenges and opportunities for enhancing production and utilisation of nutrient-rich and resilient RTCs. The studies allowed gender-sensitive innovations to be prioritised and be introduced into the framework of IFAD investment partners. The establishment and maintenance of effective partnerships with five IFAD investments in the region were ensured by regular interaction and coordination with the implementing national agencies. Further, these were facilitated by FoodSTART+ staff being based within the agencies, or alternatively in their close proximity, including being hosted in research organisations partnering with the investments (depending on the selected partnership arrangement, output 2). The close collaboration with IFAD

investments since the onset was instrumental to ensure that the research and development activities conducted by FoodSTART+ responded to the immediate demand and needs of the partners. Accordingly, the main feature of FoodSTART+ was the collaborative implementation approach of a research grant with IFAD investment projects whereby innovations and project activities were jointly identified, implemented, and funded, and relevant capacities of IFAD partner investments built in order to take the validated innovations to scale.

Innovations that were introduced by FoodSTART+ included technological innovation (eg, new crop varieties and production practices, alternative processing, and product development options); system methodologies for value chain and enterprise development; social innovation through establishment of micro- and small enterprises; and institutional learning and change in the modes of collaboration between different project and value chain stakeholders (output 4). These innovations have been introduced and promoted primarily through the FBS approach. The social and institutional characteristics of FBS—group formation and functioning, close links to the extension system, engagement in both food security and economic activities—enabled it to be easily integrated with the different kinds of livelihood support activities, including allocation of micro-financing present in most of the investment projects.

FoodSTART+ was heavily committed to building the capacities of the staff of the investment partners through ToT, coaching during implementation of the collaborative activities, and cross-learning among investments with which it collaborated. Furthermore, the organisation of events (workshops, symposia, conferences), including the final large regional RTC Congress, and participation in IFAD supervision, review, and design missions as well as numerous activities organised by IFAD country and regional offices, allowed wider dissemination of FoodSTART+ innovations and its 70 KM products (output 5). This also facilitated the engagement with policymakers and private sector. These activities contributed to increasing the awareness about the vital contribution of RTCs for food and nutrition security in the region as well as about the opportunities and innovations available for building more inclusive, climate-smart, and nutrition-sensitive value chains around these crops.

On the basis of FoodSTART+ experience, some conclusions can be drawn for wider application by governments, IFAD, and other donors. Close collaboration between a research grant and large-scale development initiatives, such as the partnerships established by FoodSTART+ between a research grant and IFAD investment projects, are of mutual benefit. From the perspective of the investments, this enables them to access practical innovations which respond to their specific needs and can actually contribute to achieving their objectives while avoiding the “business as usual” trap. In the case of FoodSTART+, this could be appreciated from the regular monitoring of the partnership and the extremely positive feedback received through the annual check-up (output 2). From a research perspective, these grant-investment partnerships are also very valuable. In fact, they offer the prospect to test, evaluate, validate, promote, and take to scale agricultural innovations for the benefit of large numbers of low-income rural HH. The opportunity for this to occur across a wide range of agronomic, environmental, market, socio-economic, and cultural settings where partner investments operate can potentially result in a more robust innovation and a R4D partnership approach. Furthermore, these collaborations facilitate spill-over to other locations and investment projects, and can also feed back to the research process, identifying new topics based on the needs and opportunities of farming HH.

On the basis of interaction of and reflection on lessons learnt by FoodSTART+ staff and TAP members, and discussion with staff of IFAD and partner investment projects, it was possible to identify factors that can facilitate successful R4D partnerships. These include the following:

- A good “fit” or convergence between research capacity and innovations which can be “supplied” by the grant and what “demanded” by the investment project (and outlined in the design document of the investment)
- Ability of the grant to provide innovations that can be adapted to the needs of the partner
- A dedicated liaison officer for each partnership to foster communication and coordination
- A reasonable alignment of the grant and investment project cycles
- A good implementation pace of the investment and capacity to timely mobilise human and financial resources for the collaborative activities
- Limited turnover of staff of both the grant and the investment projects
- Close interaction with and support by a suitable brokering agent (the IFAD country office in the case of FoodSTART+)

There is general consensus that the lack of these factors can hinder successful partnerships. These elements varied across FoodSTART+ partnerships (eg, SRDP and SOLID were toward the project completion, RTCs were not explicitly prioritised in the design of SOLID until its revision following an IFAD review mission with input by FoodSTART+, and high turnover in the staff of Megha-LAMP). And the project has been highly successful in achieving all its outputs, and its innovations were appreciated and, in some cases, institutionalised (eg, ongoing scaling of ABS by FishCORAL and post-SOLID government support to some of the established FBS groups). Learning from this experience, additional IFAD investments in the Asia-Pacific region have expressed their interest in entering in this kind of partnership and engage with similar research-grants projects. This interest can act as a source of innovations and capacity building, and therefore contribute to their implementation and achievements.

Within the context of IFAD’s 2016–2025 strategic framework, FoodSTART+ is in line with the strategic directions on increasing poor rural people’s productive capacities and benefits from market participation and toward strengthening environmental sustainability and climate resilience of their economic activities. To this end, the results both at the investment projects and the latter’s beneficiary levels have demonstrated usefulness and high relevance of the activities and KM products generated by the grant. In addition to the activities and services delivered by the grant to the specific partner investment projects, it has also provided relevant technical expertise to the IFAD country offices in the preparation of COSOPs and in supervision missions of the country programme portfolio.

With CIP as grant holder and project implementer, the FoodSTART+ partnership with investment projects implemented by governments accentuates the IFAD strategy of building on successful partnerships with partners (ie, FoodSTART first phase) with complementary expertise on global issues affecting rural communities.

Finally, with the EU, through the Putting Research into Use for Nutrition, Sustainability and Resilience initiative that is co-financing IFAD in FoodSTART+, the results indicate that impacts on the livelihoods of smallholder farmers and poor rural communities, particularly focusing on nutritional outcomes and resilience to stresses and shocks including those that are climate related, have been demonstrated. The EU co-financing with IFAD has created opportunities for scaling up successful research outcomes through IFAD’s rural development programmes with clear evidence of adoption, replication, and scaling up by national governments implementing the IFAD investment projects.

ANNEXES

ANNEX 1. FINAL GRANT LOGICAL FRAMEWORK

Objectives/Outputs	Indicators/targets	Verification	Assumptions
Goal: To enhance food resilience among poor HH in upland and coastal communities of the Asia-Pacific region, through introducing RTC innovations primarily within the framework of R4D partnerships with IFAD investments.			Macro-economic and socio-political environment in target countries/project locations is conducive to implementation of the project.
Objectives: To identify gender-responsive needs and opportunities through vulnerability assessments among food-insecure RTC producing and consuming HH, and design and implement innovations with partners and local stakeholders that enhance food resilience. Further, the project will develop and validate effective partnership strategies with IFAD investment projects in promoting RTCs for food security at scale.	Partnerships with investment projects have resulted in increased emphasis on RTCs to enhance food security in vulnerable communities, as indicated by (1) documented changes in crop/commodity priorities that benefit RTCs and (2) the number of RTC-based interventions developed and implemented by partners.	<ul style="list-style-type: none"> Partnership agreements/contracts with investment projects Investment project reports and evaluations Project reports 	<ul style="list-style-type: none"> Investment projects commit to partnership with CIP Investment projects are willing and able to adjust priorities in the light of the findings of scoping and assessment studies that justify more investment in RTCs
Output 1: Subnational geographic target areas combining food vulnerability with significant RTC production and use are prioritised and mapped.	<ul style="list-style-type: none"> 8 scoping studies completed 5 benchmark sites selected and investment project partners identified for future collaboration 1 regional map and 5 detailed maps of focus site areas 1 launch meeting 1 literature review on food vulnerability/resilience 	<ul style="list-style-type: none"> Project reports and annexes Maps Review report and recommendations 	Adequate secondary information available, including RTC production statistics.
Output 2: Effective, mutually beneficial, R4D partnerships identified, established, and monitored.	<ul style="list-style-type: none"> 3 IFAD country COSOPs and investment project design missions that prioritise or incorporate RTC food resilience (in collaboration with IFAD country programmes/offices) 3 partnership mechanisms reviewed 2 high potential partnership options selected for pilot testing 4 comprehensive partnership/collaboration agreements or contracts with IFAD investment projects and other partners 3 “partnership health check-ups” completed with positive results Feedback from 3 investment project supervision missions on status of project partnerships 1 ToRs for the TWG agreed and implemented Minutes of 3 meetings of TWG with recommendations Input from TWG of 3 AM of supervision missions 	<ul style="list-style-type: none"> COSOP and investment project design documents Agreements/LOAs/work plans with investment projects Partnership check-up reports Supervision Mission Ams 	<ul style="list-style-type: none"> Relevant COSOP and investment project design processes fall within the timeline of Output 1 Competent project staff to build partnerships with investment projects Investment project management and staff and IFAD country officers committed to establishing and implementing novel partnership arrangements Basis for mutually beneficial agreements exists Partner implementation (stage of project) permits establishment of partnerships
Output 3: Gender-sensitive RTC innovations that respond to 10-year climate-change scenarios and expressed needs of stakeholders are identified.	<ul style="list-style-type: none"> 1 workshop, producing 1 report with assessment process guideline and specific instruments (number to be determined in workshop, depending on process) 5 assessments completed 5 assessments analysed and reported 	<ul style="list-style-type: none"> Project reports and annexes Climate change scenarios (maps) 	<ul style="list-style-type: none"> Logistical support from investment projects as necessary Collaboration with GIS/mapping expertise secured at national and CGIAR levels.

Objectives/Outputs	Indicators/targets	Verification	Assumptions
Output 4: R4D actions to promote RTC innovations implemented, monitored, and results documented.	<ul style="list-style-type: none"> • 5 stakeholder consultations completed and 5 action plans developed • 5 action plans implemented with detailed sub-indicators developed and monitored • At least 5 capacity building events held (one per focus site) and 2 cross-learning visits • 1 M&E plan developed, with development indicators agreed with each investment project 	<ul style="list-style-type: none"> • Project monitoring reports • IFAD supervision mission AM • Project-commissioned evaluation reports of specific interventions • Investment project M&E reports and supervision missions (using relevant RIMS indicators to be mutually agreed) 	<ul style="list-style-type: none"> • Conditions on the ground conducive to implementation • Reasonable level of field staff effort, continuity and competence in investment projects during implementation
Output 5: Field-based best practices, outcome stories, and success factors are documented and disseminated to support IFAD, CIP, and wider national and regional policy development	<ul style="list-style-type: none"> • 1 communication plan • 1 publication of cross-project synthesis/analysis developed from two workshops • At least 1 hard copy publication per site (ie, 5) plus at least 2 project-wide publications, also available online. Additional short topic-specific briefs (at least 10) will be produced for online publication • Participation in at least 3 IFAD country-level meetings per focus site country, and in relevant RTB and CCAFS meetings (total 5) during lifetime of the project • 5 country-level cross-sectoral workshops/seminars targeting policymakers 	<ul style="list-style-type: none"> • Communications and engagement plan • Project reports • Synthesis publication • New proposal documents • Workshop/seminar reports 	Outputs and outcomes of the project are of sufficient relevance, degrees and scale to warrant documentation and publication; and design of follow-on projects.

ANNEX 2. ACCOMPLISHMENTS BY OUTPUTS AND ACTIVITIES

Output/Activity	Indicators	Accomplishments/Outputs	
		Description	Completion (%)
Output 1. Subnational geographic target areas combining food vulnerability with significant RTC production and use are prioritised and mapped			
1.1. Six scoping studies produced, based on research sites/investment projects identified in proposal	8 scoping studies completed* * Reduction of target agreed with IFAD during inception meeting	6 scoping studies with IFAD investment partners in 6 countries (Megha-LAMP in India, SOLID in Indonesia, FishCORAL and INREMP in the Philippines, SRDP in Vietnam, and HARIIP in China) completed in 2016. An additional scoping study in Myanmar conducted in 2017. Scoping study reports and briefs published.	100
1.2. RTC suitability maps developed based on land use and climate change scenarios	1 regional map and 5 detailed maps of focus site areas produced	EcoCrop R script/ algorithm for GIS mapping modified and thresholds for the transformational phase identified through literature review. Validation of EcoCrop parameters conducted. Climate suitability maps of maize, rice, banana, potato, sweetpotato, yam, cassava and taro for 6 target countries finalised. Transformation maps finalized. National and regional maps presented in the report.	100
1.3. Cross-learning from previous FoodSTART project facilitated	1 launch meeting conducted	Project Launch held (February 2, 2016) and attended by FoodSTART+ staff, IFAD country representatives from Philippines and Vietnam, and IFAD investments project staff from Philippines, China and Indonesia. The meeting included a key session and panel discussion about the successful collaboration between the first phase of FoodSTART and the IFAD Investment project CHARMP2 in northern Philippines. The IFAD-Philippines CPO, the AAIGA Coordinator for CHARMP2 and FoodSTART staff who were actively involved in the partnership with CHARMP2 participated in a dedicated panel discussion and a video of the CHARMP2-FoodSTART collaboration was shown. In 2018, a cross-learning visit on FBS was co-organized by FoodSTART+ and CHARMP2, for IFAD investment project partners (Megha-LAMP, FishCORAL, INREMP, and SOLID) and additional IFAD investments (ConVERGE in the Philippines, and FOCUS-Mizoram in India)	150
1.4. Literature review and assessment of approaches to food vulnerability and resilience conducted	1 literature review on food vulnerability/ resilience	Study completed and published in 2018. It synthesizes key elements of the concepts of food vulnerability and resilience available in literature and identified different theoretical and methodological approaches and their challenges. Recommendations for further work building on this study are provided	100
1.5. Five research (focus) sites linked to IFAD investment projects are selected, for development of R4D action in subsequent outputs	5 benchmark sites selected and investment project partners identified for future collaboration	Selection of the 5 benchmark sites completed. They included sites of five IFAD investment projects (namely, Megha-LAMP, SOLID, FishCORAL, INREMP, and SRDP) in 4 countries (India, Indonesia, Philippines, and Vietnam) for the implementation of the collaborative activities.	100
Output 2. Effective, mutually beneficial, R4D partnerships identified, established, and monitored (small grant component, with staffing contributions from the EU grant)			
2.1. Participated in relevant COSOPS and investment project scoping and design missions	3 IFAD country COSOPs and investment project design missions that prioritise or incorporate RTC food resilience (in collaboration with IFAD country programmes/offices)	<ul style="list-style-type: none">India: Participation in LAMP Review Missions (2016, 2018). Input into new IFAD investment in Mizoram (FOCUS)Indonesia: Participation in Review Mission (2016, 2017) resulting in increased emphasis on RTCs. IPDMIP project design and operational guidelines have been reviewed to explore integrating NSVCs and RTCs.Philippines: Input into COSOP IOE evaluation (2016), COSOP National Workshop (2017) and Corporate Level Evaluation (CLE) of IFAD's support to innovation for inclusive and sustainable smallholder agriculture by the IOE (2019)Lao PDR: Participation in IFAD design mission for PICSA investment project (2019)	125
2.2. Rapid review of appropriate partnership mechanisms and modes of collaboration with IFAD investment projects conducted	<ul style="list-style-type: none">3 partnership mechanisms reviewed2 high-potential partnership options selected for pilot testing	3 partnership mechanisms established and pilot-tested. Two FoodSTART+ staff hosted by Megha-LAMP and SRDP (<i>embedded</i>). In the Philippines, a FoodSTART+ staff based with a research partner organisation (VSU), to work closely with FishCORAL and INREMP (<i>neighbourhood</i>). In Indonesia, FoodSTART+ planned to be based at ICAPRD to facilitate interaction with SOLID but, due to delays in setting up the office, this has not materialized and the staff was based closed to at the research partner organization (<i>provisional</i>). A fourth partnership mechanism emerged in 2018 following the resignation of FoodSTART+ staff and appointment of a MBDA staff as focal point (<i>designated</i>).	100
2.3. Workshops in target sites have agreed on mutually beneficial partnership and engagement process for	4 comprehensive partnership/ collaboration agreements or contracts with IFAD investment projects and other partners signed	<ul style="list-style-type: none">5 collaborative action plans with investment projects finalised for implementation.MoU signed between CIP and the MBMA, in charge of implementing the Megha-LAMP project. A memorandum of agreement (MoA) between VSU and FoodSTART+ signed to formalise the hosting of the FoodSTART+ staff. An MoU between CIAT and IAARD signed, and the Postharvest Institute in Bogor (ICAPRD) designated as IAARD/SOLID focal	125

Output/Activity	Indicators	Accomplishments/Outputs	
FoodSTART+ implementation		institution for FoodSTART+ in Indonesia. In the case of Vietnam, no formal agreement required, but a letter of support to FoodSTART+ was provided by the Provincial People Committee of Quang Binh, the implementing authority of SRDP in the province.	
2.4. Evolving partnerships monitored	<ul style="list-style-type: none"> 3 Partnership Health Check-ups completed with positive results Feedback from 3 investment project supervision missions on status of project partnerships conducted 	<ul style="list-style-type: none"> 3 rounds of Partnership Health Check-up completed with positive results (2017, 2018, 2019) Positive feedback on the partnerships from investment projects supervision mission reports, included (1) SOLID supervision in 2016; (2) FishCORAL supervision mission in 2017 and 2019; (3) Megha-LAMP supervision mission in 2017. Furthermore, as part of the partnership engagements, FoodSTART+ participated and provided input to: <ul style="list-style-type: none"> India: Megha-LAMP Supervision Mission (2019) and Review of IFAD Grant Portfolio (2017) Philippines: CHARMP2 Scale up and Implementation Support (SIS) Mission (2017). FishCORAL Follow-up and Implementation Support Mission (2017). Participation in ACPOR (2016, 2017, 2018, 2019) Vietnam: Participation in ACPOR (2018) and CSSP supervision mission (2019). 	125
2.5. A TWG established and operationalised to advise and contribute to design and conduct of Outputs 3–5	<ul style="list-style-type: none"> 1 ToR for the TWG agreed and implemented Minutes of 3 TWG meetings with recommendations Input from TWG of 3 Aide Memoire of supervision missions 	<ul style="list-style-type: none"> TAP (formerly known as the TWG) formed and first convened during the inception meeting in February 2016, and their ToRs developed. During the partners' meeting in May 2017, the ToRs and membership of TAP were revised. TAP members were deployed a total of 54 times for supporting the implementation of activities related to output 1, 3, 4, and 5. 	100
Output 3. Gender-sensitive RTC innovations that respond to 10–20-year climate change scenarios and expressed needs of stakeholders are identified			
3.1. Design of efficient and effective assessment process and instruments, based on previous FoodSTART experience and the increased focus on the dynamic aspects of food security (vulnerability-resilience in time)	1 workshop producing 1 report with assessment process guideline and specific instruments (number to be determined in workshop, depending on process)	Scope, approach, methodology, and tools (ToR) for the potato value chain study developed during workshop in India. These methodology and tools were subsequently used and adapted for conducting other value chain and market assessments (see 3.2). In addition, 2 assessment guides were developed by the CIP gender advisor: 1) Gender checklist for introducing new RTCs technologies to men and women and assess their gender responsiveness; 2) Production of gender-responsive participatory videos: a guide to facilitators.	120
3.2. Implementation of assessments in focus sites	5 assessments completed	<p>The completed assessments are the following:</p> <ul style="list-style-type: none"> India: (1) Potato value chain assessment, (2) Cassava value chain assessment, (3) Gender assessment of FBSs Vietnam: (1) Study on cassava- and sweetpotato-cropping practices and farmer communications networks in Quang Binh, and (2) Cassava and sweetpotato rapid market appraisals in Quang Binh. A rapid assessment of the importance of sweetpotato to enhance resilience to typhoons in central Vietnam was also conducted. Philippines: (1) Gender assessment of FBSs, (2) RTCs for resilience to typhoons, (3) Case study on nexus between RTCs, gender and climate change Cross-cutting: (1) Assessment of gender dimensions of farming practices in RTCs, and (2) literature review of the contribution of RTCs to climate change resilience in Asia (with field validation in Megha-LAMP and FishCORAL sites). 	200
3.3. Assessment reports that identify needs and opportunities for enhancing food resilience of focus site communities	5 assessment reports	<ul style="list-style-type: none"> 7 knowledge products were published presenting the key findings of the assessments conducted as for 3.2: <ul style="list-style-type: none"> Potato production, marketing, and utilisation in Meghalaya: Results of a value chain assessment Cassava production, marketing, and utilisation in Meghalaya: Results of a value chain assessment A rapid assessment of Farmer Business Schools from a gender perspective in Meghalaya, India Cassava and sweetpotato-cropping practices and farmer communication networks in Quan Binh Province, Vietnam A rapid assessment of Farmer Business Schools from a gender perspective in Bohol, Philippines Book chapter "Gender, Climate Change, and Root and Tuber Crops: A Case Study in Eastern Visayas, Philippines" Gender dimensions of farming practices in RTCs and proposed gender and social considerations for interventions 2 additional products are close to finalization: <ul style="list-style-type: none"> Study on the contribution of RTCs to resilience to typhoon in Philippines (advanced draft being submitted to peer-review journal) Literature review of the contribution of RTCs to climate change resilience in Asia (working paper being edited for 	160

Output/Activity	Indicators	Accomplishments/Outputs	
		publication)	
Output 4. R4D actions to promote RTC innovations implemented and monitored and results documented			
4.1. Stakeholder consultations in focus sites to develop action plan for implementation of innovations based on assessment results (compatible with work plans of investment projects)	5 stakeholder consultations completed and 5 action plans developed	Collaborative action plans reviewed and refined during the FoodSTART+ inception meeting and a series of stakeholder validation workshops and mini-workshops in 2016. In 2017, the 2 nd FoodSTART+ partners' meeting was conducted resulting in the finalisation of the action plans 5 partner investments. The action plans were reviewed and updated during the 3 rd FoodSTART+ partners' meeting	100
4.2. Action plan implementation	5 action plans implemented with detailed sub-indicators developed and monitored	<ul style="list-style-type: none"> • Megha-LAMP (100%) <ul style="list-style-type: none"> - Action research and field demos on potato organic cultivation and use of bio-agents - Action research and demos on organic management of Potato Tuber Moth (PTM) - 3 trainings on production of quality potato planting material under organic conditions (positive selection) - 2 trainings on PTM management in farmers' country stores Procurement and multiplication of new sweetpotato dual-purpose (food-feed) varieties, and development of methodology for trials - Learning visit and trainings of FBS groups to CTCRI and CPRS - Assessment of women and men farmers' perception of and responses to the state policy on potato organic farming - Introduction and demo plots of new sweetpotato dual-purpose (food-feed) varieties - 6 FBSs completed and products launched • SOLID (100%) <ul style="list-style-type: none"> - 5 FoodSTART+ launching events at national, provincial, and district levels - Introduction and demo plots of new vitamin A-rich orange-fleshed sweetpotato and yellow cassava - ToTs on sweetpotato- and cassava-cropping practices, nutritional value of RTCs, and sensory evaluation of different preparation methods of RTCs roots and leaves for enhanced nutrition - Training on net-tunnel construction and management for clean sweetpotato planning material - 10 FBS completed and products launched • FishCORAL (100%) <ul style="list-style-type: none"> - Writeshop for ABS curriculum finalization - 12 planned ABS completed and products launched. 24 additional ABS support (pending business launch) • INREMP (100%) <ul style="list-style-type: none"> - Technical input into Levelling off Meeting on the LES subcomponent of the DENR-INREMP. - 6 FBS completed and products launched • SRDP (100%) <ul style="list-style-type: none"> - ToTs in cassava climate-smart cropping practices - ToTs in sweetpotato climate-smart cropping practices (3 sessions) with use of the training manual - Training on net-tunnel construction and management for clean sweetpotato planning material - Technical input to SRDP for preparation of VCAPs for cassava and sweetpotato - Technical input to preparation of 3 RTC-based mini-project proposals to be submitted to SRDP for farmers' livelihood support • Crosscutting <ul style="list-style-type: none"> - Preparation of the brief "Gender strategies for strengthening food resilience" - Development of the training manual "Recommended sweetpotato farming practices in Southeast Asia: A way to promote sustainable rural development and food security under a changing climate" (in English) - Development of the training manual on net-tunnel construction and management (in English) <p><i>Note: Most of the capacity-building activities reported in 4.3 were also included in the collaborative work plans and are not mentioned here to avoid double reporting.</i></p>	100

Output/Activity	Indicators	Accomplishments/Outputs	
4.3. Capacity building of investment project implementers	At least 5 capacity building events held (1 per focus site) and 2 cross-learning visits	<ul style="list-style-type: none"> 18 trainings related to value chains and FBS conducted for staff of IFAD investment partners (6 for FishCORAL, 6 for Megha-LAMP, 3 for INREMP, 2 for SOLID, and 1 for SRDP) Additional technical trainings for staff of investment projects include: (1) Training and learning visit in Vietnam on sweetpotato silage for Megha-LAMP and FOCUS; (2) Training on "Ensiling sweetpotato, cassava and other locally available material for feeding pigs and cattle" for Megha-LAMP and FOCUS; (3) Training on social analysis and action for improving gender sensitivity in agriculture and integrating social and gender aspects into agricultural research in Vietnam, with the participation of SRDP; (4) Training and piloting on the use of the "Most Significant Change", a methodology adapted by CIP for capturing outcome stories of project's beneficiaries, for FishCORAL, INREMP and Megha-LAMP. The cross-learning visits included: <ul style="list-style-type: none"> FBS cross-learning visit in CHARMP2 sites with INREMP, FishCORAL and CONVERGE, Philippines; LAMP, India; SOLID, Indonesia Learning visit to CCAFS/CIAT climate smart village approach in Northern Vietnam with SRDP; INREMP, and SOLID Learning visit to CCAFS/CIAT climate smart village approach in Central Vietnam with SRDP Cross-farm visit to RTC production and processing areas, and selected FBS in Region 8 for INREMP, Philippines. 	200%
4.4. M&E plan developed and implemented.	1 M&E plan developed, with development indicators agreed with each investment project	<p>M&E plan finalized. Innovative M&E tools were developed and introduced:</p> <ul style="list-style-type: none"> Partnership Health Check-up form (see 2.4) FBS monitoring and mentoring guide Gender checklist to monitor gender responsiveness of innovations stemming from FBS processes (see 3.1) Most Significant Change methodology for quality assessment of livelihood impact of FBS. 	100
<i>Output 5. Field-based best practices, outcome stories, and success factors are documented and disseminated to support IFAD, CIP, and wider national and regional policy development</i>			
5.1. Communications and engagement plan developed for target audiences	1 Communication plan	<ul style="list-style-type: none"> Communication plan finalized FoodSTART+ project website launched. Project reports and knowledge products regularly uploaded, and blogs and news published. Knowledge products and blogs also disseminated through social media platforms, e.g., Facebook/Twitter pages of IFAD Asia, CIP, RTB and CIAT 	100
5.2. Cross-site synthesis by project coordination unit with TWG	1 publication of cross-project synthesis/analysis developed from 2 workshops	<ul style="list-style-type: none"> Building on the outcome of a workshop and follow-up interactions the research paper "Research-development partnerships for scaling agricultural innovation: Lessons from IFAD-supported loan-grant collaboration in Asia" was prepared and submitted for publication on a special issue of the high rank journal "Agricultural Systems". 	100
5.3. Knowledge product development and publication	At least 5 hard copy publications plus at least 2 project-wide publications, also available online. Additional short topic-specific briefs (at least 10) will be produced for online publication	<p>70 KM products developed and published as follows: 2 books, 1 book chapter, 1 article, 14 reports, 10 training manuals, 3 guides, 6 brochures, 20 briefs, and 13 videos. A total of 6,290 copies printed for distribution during project's meetings and other events participated by project staff and partners. Analytics of CGSpace only indicate 34,391 views and 6,505 downloads of the material made publicly available.</p> <ul style="list-style-type: none"> 	200
5.4. Implementation of communications and engagement plan	Participation in at least 3 IFAD country-level meetings per focus site country, and in relevant RTB and CCAFS meetings (total 5) during lifetime of the project	<ul style="list-style-type: none"> Participation in IFAD activities: <ul style="list-style-type: none"> Philippines: ACPOR, IPGN, and KLM-PE (2015 to 2019) India: Review of IFAD grant portfolio in June 2017 Vietnam: ACPOR in February 2018 Participation in relevant RTB (2) and CCAFS (3) meetings Participation in other relevant international workshops and conferences to disseminate project's results: <ul style="list-style-type: none"> Philippines: ADB Knowledge Intensive Agriculture Workshop in June 2017 Indonesia: (1) Workshop on "Synergy in Cassava Value Chain" (ICAPRD-CIRAD); (2) Workshop on "Role of Research and Policy for Cassava Value Chain" (LIPI); and (3) International Cassava Congress (University Brawijaya-ILETRI). 	100
5.5. Seminars/workshops for policy makers	5 country-level cross-sectoral workshops/seminars targeting	<ul style="list-style-type: none"> Participation of FoodSTART+ and CHARMP2 in the IFAD International Conference on South-South and Triangular Cooperation, Brazil, November 2017 	100

Output/Activity	Indicators	Accomplishments/Outputs
	<p>polymakers</p>	<ul style="list-style-type: none"> • Participation to the workshop "Role of Research and Policy for Cassava Value Chain" (LIPI), Indonesia, 2017 • Policy workshop organized in SRDP sites in 2018 to share the findings of an analysis of RTC-related policies at national and provincial level in Vietnam • Participation in two IFAD Mekong Knowledge and Learning Fair (2018, 2019) and IFAD's Regional Workshop "Inclusive and Sustainable Rural Transformation: IFAD's priorities in the Asia Pacific Region for 2019-21" (2018). • Symposium "Opportunities and Challenges for Organic Potato in Meghalaya and other Northeastern Indian States: Research, Business and Policy Perspectives" organized in Shillong (Meghalaya) in July 2019 • "Regional Congress on Root and Tuber Crops for Food Security and Climate Change Resilience in Asia", organized in November 2019.

ANNEX 3. REPORT ON KM PLAN: INDICATORS OF ACHIEVEMENTS

Communication Objectives	Communication Tools	Indicators	Status
To increase awareness of partner IFAD investments and the wider research and development community about the identified gender-responsive RTC needs and opportunities, to guide informed and science-based research and development agenda	Research briefs	7 research briefs developed	Achieved
	Maps	5 infographic maps produced and disseminated among project partners, and uploaded in relevant websites and social media accounts	Achieved
	Blog	1 blog featuring the RTC suitability maps	Upcoming
	Consultation workshops	5 consultation workshops conducted to review appropriate partnership mechanisms and models of collaboration with IFAD investment projects	Achieved
	Documentation report	3 documentation reports of “partnership health check-ups” 1 documentation report on workshop for the development of assessment process guideline and specific instrument	Achieved
	Launch meeting report	1 launch meeting report of cross-learning from previous FoodSTART project	Achieved
	Methodological guide	1 methodological guide for assessment process	Achieved
	Technical Report	6 scoping studies completed 1 technical report based on the results of literature review and assessment of approaches to food vulnerability and resilience	Achieved
	Summary brief	1 summary brief based on the results of literature review and assessment of approaches to food vulnerability and resilience	Upcoming
	Assessment report	5 assessment reports that identify needs and opportunities for enhancing food resilience of focus site communities	Achieved
To encourage favourable attitudes among producers, consumers, development practitioners, policy makers and donors toward RTCs as key crops for food and nutrition security and resilience	Policy recommendation document	1 draft policy recommendation document based on evidences gathered from the research	Achieved
	Press and social media release	Press and social media release of completed assessments on identified needs and opportunities for enhancing food resilience of focus site communities	Achieved
	Briefs	5 briefs based on assessment reports that identify needs and opportunities for enhancing food resilience of focus site communities	Achieved
	Video and photo documentation	2 video and photo documentations of assessments in Vietnam, India and ongoing assessments	Achieved
To introduce RTC innovations that will strengthen food resilience and improve adaptation to climate-related shocks in upland and coastal communities	Action Plan	5 action plans developed, implemented and monitored with collaborators	Achieved
	Technical report	5 technical reports on action plans implemented	Achieved
	Training manual	At least 3 training manuals (e.g. for silage making, sweetpotato climate-smart practices and potato production under organic conditions)	Achieved
	News release	At least 5 news on capacity building events held	Achieved
	Posters	At least 2 posters to be used for capacity building events	Achieved
	Blogs	At least 5 blogs on capacity building events	Achieved
	Documentation report	At least 5 documentation reports of capacity building events	Achieved
	Briefs	At least 5 briefs on the results of action plan activities 1 Gender checklist	Achieved
	Brochures	1 project brochure developed At least 2 brochures developed on activities with IFAD investment projects	Achieved
To contribute to the development	Training Manual	At least 2 training manuals developed and used in capacity building activities (e.g. Farmer Business Schools and	Achieved

Communication Objectives	Communication Tools	Indicators	Status
of collaborative multi-stakeholder mechanisms that will enable beneficiaries to practice and apply the proposed RTC innovations		Cross-learning visit)	
	M&E Plan	1 M&E plan developed 1 monitoring and mentoring guide for Farmers Business Schools (produced with input of TAP experts)	Achieved
To promote and disseminate achievements and innovations generated by FoodSTART+ for ensuring their up and out-scaling through the initiatives led by partner IFAD investments and operations of selected IFAD Country Offices in the region.	Scientific article in peer-reviewed journals	At least 2 articles submitted in peer-reviewed journals	Achieved
	Project website launch	Successful project website launch with analytics of visits for 3 months	Achieved
	Participation in exhibits and market launches	At least 2 participation in exhibits and market launches	Achieved
	Participation in scientific conferences	At least 2 participation in scientific conference	Achieved
	Technical report	1 technical report on best practices/success stories of IFAD grants/loans partnerships	Achieved
	Brief	1 brief based on best practices/success stories of IFAD grants/loans partnerships At least 10 short topic-specific briefs	Achieved
	Blog	1 blog based on best practices/success stories of IFAD grants/loans partnerships	Pending publication of the article
	Project-wide publication of stakeholder impact stories using the Most Significant Change approach	1 publication stakeholder impact stories printed and uploaded in relevant websites and social media accounts	Achieved
To align project communication products and events to donor (i.e. European Union and IFAD) requirements).	Communication and visibility plan	1 communication plan developed and submitted to the donor	Achieved

ANNEX 4. KNOWLEDGE PRODUCTS PRODUCED BY FOODSTART+ (AS OF NOVEMBER 2019)

No.	Title of Material	Description	Type of Publication	Link To Publication	Country	Year	No. Produced/ Distributed	No. of Views/Downloads on CGSpace
1	Root and tuber crops: production-use systems and food resilience in agri-aqua and agro-forestry ecosystems in Central Philippines: results of a scoping study	Scoping study report	Report	http://hdl.handle.net/10568/89455	Philippines	2016	20	646/435
2	Roots and tubers for livelihood enhancement in Meghalaya, India. Results of a scoping study.	Scoping study report	Report	http://hdl.handle.net/10568/89457	India	2016	70	629/146
3	Addressing the economic and health challenges facing smallholder communities through roots and tubers in Maluku and Maluku Utara, Indonesia - results of a scoping study.	Scoping study report	Report	http://hdl.handle.net/10568/89466	Indonesia	2016	20	589/91
4	Root and tuber crops in Central Vietnam: an underestimated potential for food and income? Results of a scoping study.	Scoping study report	Report	http://hdl.handle.net/10568/89458	Vietnam	2016	20	601/138
5	Food resilience through root and tuber crops in upland and coastal communities of the Asia-Pacific (FoodSTART+).	Project brochure	Brochure	http://hdl.handle.net/10568/89462	Regional	2017	300	593/26
6	Root and tubers crops: production-use systems and food resilience in agri-aqua ecosystems in Central Philippines. Results of a scoping study.	Brief scoping study	Brief	http://hdl.handle.net/10568/89456	Philippines	2017	200	675/254
7	Root and tubers crops: production-use systems and food resilience in agro-forestry ecosystems in Central Philippines. Results of a scoping study.	Brief scoping study	Brief	http://hdl.handle.net/10568/89509	Philippines	2017	200	647/161
8	Roots and tubers for livelihood enhancement in Meghalaya, India. Results of a scoping study.	Brief scoping study	Brief	http://hdl.handle.net/10568/89454	India	2017	200	665/28
9	Addressing the economic and health challenges facing smallholder communities through roots and tubers in Maluku and Maluku Utara, Indonesia - results of a scoping study.	Brief scoping study	Brief	http://hdl.handle.net/10568/89470	Indonesia	2017	200	665/26
10	Root and tuber crops in Central Vietnam: an underestimated potential for food and income? Results of a scoping study.	Brief scoping study	Brief	http://hdl.handle.net/10568/89459	Vietnam	2017	200	655/18
11	Cassava and sweetpotato cropping practices and farmer communication networks in Quan Binh Province, Vietnam.	Assessment report	Report	http://hdl.handle.net/10568/89464	Vietnam	2017	50	604/135
12	Assessing gaps between existing cassava and sweetpotato farming and climate smart agriculture practices in Quang Binh province, Vietnam.	Assessment brief	Brief	http://hdl.handle.net/10568/89465	Vietnam	2017	100	674/37
13	Farmer business schools in a changing world: a gender-	FBS Manual (2 volumes)	Training	http://hdl.handle.net/10568/89	N/A	2017	190	963/329

No.	Title of Material	Description	Type of Publication	Link To Publication	Country	Year	No. Produced/ Distributed	No. of Views/Downloads on CGSpace
	responsive and climate-smart manual for strengthening farmer entrepreneurship.		Manual	463				
14	Gender checklist for introducing new RTC technologies to men and women.	Checklist for ensuring gender lens	Guide	http://hdl.handle.net/10568/89461	N/A	2017	200	603/42
15	Gender strategies for strengthening food resilience.	Brief on project's gender strategy	Brief	http://hdl.handle.net/10568/89460	N/A	2017	150	653/42
16	Gender-responsive participatory videos: a guide for facilitators	Guide to produce gender-responsive participatory video	Guide	http://hdl.handle.net/10568/92884	N/A	2018	100	605/15
17	Gender-responsive participatory videos: a guide for facilitators (in Vietnamese)	Guide to produce gender-responsive participatory video	Guide	http://hdl.handle.net/10568/92885	Vietnam	2018	50	599/192
18	Gender dimensions of farming practices in root and tuber crops and proposed gender and social considerations for interventions	Analyses of gender dimensions in root and tuber crops in target countries	Report	http://hdl.handle.net/10568/92896	India, Indonesia, Philippines, Vietnam	2018	50	792/247
19	Sweet deliverance by sweetpotato	Documentation of importance of sweetpotato to enhanced resilience to typhoons in Central Vietnam	Video	https://youtu.be/afEFzcl94x4	Vietnam	2018	N/A	183
20	Women and men's farmers perception of the state policy on potato organic farming	Documentation of perception of recent state policy on organic farming	Video	https://youtu.be/GbpkGK3SvYg	India	2018	N/A	130
21	Recommended sweetpotato farming practices in Southeast Asia: A way to promote sustainable rural development and food security under a changing climate	Manual developed for training in climate-smart farming practices	Training Manual	http://hdl.handle.net/10568/93110	Regional	2018	80	930/62
22	Recommended sweetpotato farming practices in Quang Binh, Vietnam: A way to promote sustainable rural development and food security under a changing climate (in Vietnamese)	Manual developed for training in climate-smart farming practices in Vietnam	Training Manual	http://hdl.handle.net/10568/92892	Vietnam	2018	100	620/181
23	Ensiling sweetpotato, cassava and other locally available material for feeding pigs and cattle	Manual developed for training in silage technologies in India and Vietnam	Training Manual	http://hdl.handle.net/10568/92887	Regional	2018	120	595/47
24	Farmer Business School: A Climate-Smart and Gender-Responsive Approach	FBS Brief (general)	Brief	http://hdl.handle.net/10568/92886	N/A	2018	350	644/23
25	Root and tuber crops: Untapped potential for food and nutrition security and rural livelihood development in Myanmar. Results of a scoping study.	Scoping study report	Report	http://hdl.handle.net/10568/92894	Myanmar	2018	20	635/407
26	Root and tuber crops for food security and income generation in Hunan, China: results of a scoping study.	Scoping study report	Report	http://hdl.handle.net/10568/92893	China	2018	20	597/9
27	Root and tuber crops: Untapped potential for food and	Brief scoping study	Brief	http://hdl.handle.net/10568/92	Myanmar	2018	100	366/128

No.	Title of Material	Description	Type of Publication	Link To Publication	Country	Year	No. Produced/ Distributed	No. of Views/Downloads on CGSpace
	nutrition security and rural livelihood development in Myanmar.			898				
28	Potato production, marketing, and utilization in Meghalaya, India: Results of a value chain assessment.	Assessment Report	Report	http://hdl.handle.net/10568/92895	India	2018	90	729/93
29	Potato production, marketing, and utilization in Meghalaya, India: Results of a value chain assessment.	Assessment brief	Brief	http://hdl.handle.net/10568/92897	India	2018	100	603/18
30	Use of the concepts of vulnerability and resilience in relation of food security: A literature review.	Literature review report	Report	http://hdl.handle.net/10568/92891	N/A	2018	40	315/40
31	Net tunnel to protect sweetpotato vine cuttings from pest and disease.	Brochure developed for trainings	Brochure	http://hdl.handle.net/10568/92890	N/A	2018	100	597/288
32	Net tunnel to protect sweetpotato vine cuttings from pest and disease (in Vietnamese).	Brochure used and distributed during trainings in Vietnam	Brochure	http://hdl.handle.net/10568/92889	Vietnam	2018	100	640/406
33	Net tunnel to protect sweetpotato vine cuttings from pest and disease (in Bahasa).	Brochure used and distributed during trainings in Indonesia	Brochure	http://hdl.handle.net/10568/92888	Indonesia	2018	100	580/5
34	Most Significant Change in the Cordilleras: A Pilot Evaluation.	Outcome stories from FBSs in the Philippines captured with MSC methodology	Book	http://hdl.handle.net/10568/93194	Philippines	2018	40	678/106
35	Root and tuber crops in Central Vietnam: an underestimated potential for food and income? Results of a scoping study (in Vietnamese).	Brief scoping study	Brief	http://hdl.handle.net/10568/93233	Vietnam	2018	100	622/86
36	Aqua-based business school with gender and climate perspective: Learning guide.	Shorten and adapted version of the FBS Manual for FishCORAL	Training Manual	http://hdl.handle.net/10568/93437	Philippines	2018	30	651/51
37	Aqua-based business school with gender and climate perspective	Brief of adaptation of Farmer Business School (FBS) approach into Aqua-based business school (ABS) for FishCORAL	Brief	http://hdl.handle.net/10568/93436	Philippines	2018	150	668/26
38	Farmer business school with climate change and gender perspective in agroforestry context: Learning guide.	Shorten and adapted version of the FBS Manual for INREMP	Training Manual	http://hdl.handle.net/10568/96308	Philippines	2018	30	663/44
39	Farmer business school with climate change and gender perspective in agro-forestry context.	Brief of adaptation of FBS approach into agro-forestry setting	Brief	http://hdl.handle.net/10568/96125	Philippines	2018	150	750/39
40	Assessing gaps between existing cassava and sweetpotato farming and climate smart agriculture practices in Quang Binh province, Vietnam (in Vietnamese)	Assessment brief	Brief	http://hdl.handle.net/10568/93232	Vietnam	2018	50	636/43
41	Field guide for identification of major potato pests and diseases in Meghalaya, India.	Material produced for training in India	Training Manual	http://hdl.handle.net/10568/96228	India	2018	140	607/478

No.	Title of Material	Description	Type of Publication	Link To Publication	Country	Year	No. Produced/ Distributed	No. of Views/Downloads on CGSpace
42	Field guide for identification of major potato pests and diseases in Meghalaya, India (in Khasi).	Material produced for training in India	Training Manual	http://hdl.handle.net/10568/96126	India	2018	130	646/77
43	Root and Tuber Crops (RTCs) for food-nutrition and livelihood security amidst climate change in the Asia-Pacific: facts and figures about root and tuber crops.	Brief on the importance of RTCs for nutrition, livelihood and climate change resilience in the region	Brief	http://hdl.handle.net/10568/96269	Regional	2018	350	575/28
44	How FoodSTART+ changed sweetpotato farmer's practice in Quang Binh province?	Outcome story	Video	https://youtu.be/pRtADgh1gfg	Vietnam	2018	N/A	80
45	FoodSTART+ in the West Garo Hills	Documentation of roots and tubers in target site and relevance of Farmer Business School	Video	https://youtu.be/UyMkavarZv8	India	2018	N/A	310
46	RTC Traditional Recipes in Western Meghalaya	Documentation of traditional knowledge	Video	https://youtu.be/PHtGkAqci4E	India	2018	N/A	11
47	FBS in LAMP sites	Documentation of FBS process and outcomes in East Khasi and West Garo	Video	https://youtu.be/rcWRxVK-bzw	India	2018	N/A	83
48	FoodSTART+ Farmer Business School	Overview of FoodSTART+ FBS approach, activities and outcomes	Video	https://youtu.be/xVfHTP8DPbk	N/A	2018	N/A	24
49	Cassava production, marketing, and utilization in Meghalaya, India: Results of a value chain assessment.	Assessment Report	Report	http://hdl.handle.net/10568/97466	India	2018	20	819/397
50	Farmer business school: Product catalogue (English and Bahasa)	Catalogue of FBS products in SOLID sites	Brochure	https://hdl.handle.net/10568/98405	Indonesia	2018	150	470/25
51	Aqua-based business school with gender and climate perspective: Learning guide (Filipino)	Shorten and adapted version of the FBS Manual for FishCORAL	Training Manual	https://hdl.handle.net/10568/98523	Philippines	2018	N/A	521/18
52	Aqua-based business school with gender and climate perspective: Learning guide (Filipino)	Brief of adaptation of FBS approach into ABS for FishCORAL	Brief	https://hdl.handle.net/10568/98522	Philippines	2018	N/A	435/186
53	Good practices and innovations for impact at scale	Good practices for research-development partnerships	Brief	https://hdl.handle.net/10568/100249	Regional	2018	200	496/23
54	FoodSTART+ Asia. Food resilience through root and tuber crops in upland and coastal communities of the Asia-Pacific region. Project profile.	Updated project brief	Brief	https://hdl.handle.net/10568/99425	Regional	2019	180	921/567
55	Aqua-based Business School with Gender and Climate Change Perspective	An overview video of the Aqua-based business school (ABS)	Video	https://www.youtube.com/watch?time_continue=1&v=MoM3eUfduFc	Philippines	2019	N/A	45
56	A rapid assessment of Farmer Business Schools from a gender perspective in Meghalaya, India	Rapid assessment report	Report	https://hdl.handle.net/10568/101577	India	2019	N/A	525/44
57	Promoting Sweetpotato Products	A short clip of FBS graduates in Bohol promoting their sweetpotato products	Video	https://youtu.be/HBYsmFeOKyE	Philippines	2019	N/A	83

No.	Title of Material	Description	Type of Publication	Link To Publication	Country	Year	No. Produced/ Distributed	No. of Views/Downloads on CGSpace
58	Strengthening Entrepreneurship with Farmer Business Schools	An overview video of the benefits farmers receive from the FBS	Video	https://www.youtube.com/watch?v=oxHpGEEax3U	Philippines	2019	N/A	16
59	CLEAP Farmer Business School, Bohol, Philippines	A participatory video produced by farmers of CLEAP FBS group in Bohol	Video	https://www.youtube.com/watch?v=XQlwl3pXSQ8	Philippines	2019	N/A	31
60	LETMULCO Farmer Business School, Bohol, Philippines	A participatory video produced by farmers of LETMULCO FBS group in Bohol	Video	https://www.youtube.com/watch?v=klV9TN4Vl4E	Philippines	2019	N/A	17
61	SCARED Farmer Business School, Bohol, Philippines	A participatory video produced by farmers of SCARED FBS group in Bohol	Video	https://www.youtube.com/watch?v=2PUg_uLufaw	Philippines	2019	N/A	22
62	A rapid assessment of Farmer Business Schools from a gender perspective in Bohol, Philippines	Rapid assessment report	Report	https://cgspace.cgiar.org/handle/10568/105439	Philippines	2019	N/A	205/19
63	Is Vietnam in need of supportive policies for promoting roots and tubers development? Insights from Quang Binh province	Brief on national and provincial RTC-related policies	Brief	https://hdl.handle.net/10568/104047	Philippines	2019	150	120/4
64	Farmer Business School with climate change and gender perspective: Learning and monitoring guide	Shorten version of the FBS manual and monitoring/ mentoring tools	Training Manual	https://hdl.handle.net/10568/103222	Regional	2019	150	322/30
65	Stories from the field: The FoodSTART+ and SOLID collaboration on FBS in Maluku, Indonesia	Collection of stories from SOLID FBS beneficiaries	Brief	https://cgspace.cgiar.org/handle/10568/102485	Indonesia	2019	100	377/45
66	Innovative partnership models to help scale projects	Article published in the special issue on 'Agriculture and Food Security' of iMPACT, a magazine reaching over 30,000 professionals of the development sector	Article	http://assistasia.org/impact_magazine/Ed28_AprJun2019.pdf	Regional	2019	N/A	N/A
67	Transformational adaptation of key root and tuber crops in Asia. Assessing crop suitability amidst climate change by species distribution modelling	GIS maps: Projected RTC land suitability under different climate change scenarios in Asia	Report	https://hdl.handle.net/10568/104048	Regional	2019	30	140/10
68	Recommended organic practices for the management of Potato Tuber Moth (PTM) in traditional country stores in Meghalaya, India (English and Khasi)	Brochure on organic management of PTM in stores	Brochure	https://hdl.handle.net/10568/103799	India	2019	200	226/6
69	Connecting smallholder root and tuber growers to markets through farmer business schools	MSC coffee table book	Book	https://hdl.handle.net/10568/103799	Regional	2019	300	1575/103
70	Gender, Climate Change, and Root and Tuber Crops: A Case Study in Eastern Visayas, Philippines	Chapter of the book "Gender dimension of climate change research in agriculture: Case studies in Southeast Asia", published by SEARCA and CCAFS)	Book Chapter	https://lis.searcaapps.org/lis/book/info/14027	Philippines	2019	N/A	N/A
TOTAL							6,290	34,391/6,505

APPENDIX 1. TAP EXPERTS' CONTRIBUTIONS TO FOODSTART+ ACTIVITIES

Country/Investment Project	Activity	Date	Name	Role	Relevant Output
2015					
Vietnam/SRDP	Project start-up visits	May to June	Christopher Wheatley	Technical Consultant	Output 1
China/HARIIP	Project start-up visits	June	Christopher Wheatley	Technical Consultant	Output 1
Philippines/FishCORAL, INREMP and CoNVERGE	Project start-up visits	June	Christopher Wheatley	Technical Consultant	Output 1
India/Megha-LAMP	FoodSTART+ and Megha-LAMP Scoping Study	Sep 2015 to Jan 2016	Anantharaman	Technical Consultant	Output 1
Philippines/ FishCORAL	FoodSTART+ and FishCORAL Scoping Study	September to December	Julieta Roa	Technical Consultant	Output 1
Philippines/ INREMP	FoodSTART+ and INREMP Scoping Study	September to December	Julieta Roa	Technical Consultant	Output 1
Philippines/ FishCORAL	Stakeholder Validation Workshop in Tacloban, Philippines	December	Julieta Roa Christopher Wheatley	Facilitator	Output 1
Philippines/ INREMP	Stakeholder Validation Workshop	December	Jul	Facilitator	Output 1
2016					
Philippines	Annual Country Program Review	January	Christopher Wheatley	Resource person	Output 5
Vietnam/SRDP	Stakeholder Validation Workshop	March	Christopher Wheatley	Facilitator	Output 1
India/Megha-LAMP	Stakeholder Validation Workshop	March	Julian Gonsalves Gordon Prain Anantharaman	Facilitator/Resource person	Output 1
India/Megha-LAMP	Value Chain Training and Farmer Business School Learning and Planning Workshop	June	Christopher Wheatley Julieta Roa	Resource person/ Facilitator	Output 4
Philippines/INREMP	Value Chain and Farmer Business School Approach Learning Workshop	June	Christopher Wheatley Julieta Roa	Resource person/ Facilitator	Output 4
Philippines/FishCORAL	Training/Workshop on Developing Value Chains and Improving Livelihood in Coastal Communities	September	Julieta Roa	Resource person/ Facilitator	Output 4
Philippines/INREMP	Training of Facilitators on Farmer Business School	October	Julieta Roa	Resource person/ Facilitator	Output 4
India/Megha-LAMP	Orientation for the Potato Value Chain Study	November	Julieta Roa	Resource person/ Facilitator	Output 3
Myanmar	Scoping study	Oct. 2016 to Feb 2017	Christopher Wheatley	Technical consultant	Output 1
2017					
India/ Megha-LAMP	Potato value chain study	January to October	Anantharaman	Technical consultant	Output 3
India/ Megha-LAMP	Cassava value chain study	July to December	Anantharaman	Technical consultant	Output 3
India/ Megha-LAMP	Training of facilitators for Farmer Business Schools	August	Julieta Roa	Resource person/ Facilitator	Output 4

Country/Investment Project	Activity	Date	Name	Role	Relevant Output
India/ Megha-LAMP	Research on understanding gendered perceptions of and responses to State policy on organic potato farming	May, October	Nozomi Kwarazuka	Researcher/ Facilitator	Output 3
Indonesia/ SOLID	FoodSTART+ launching, orientation on FBS and RTC contribution to nutrition	September to October	Christopher Wheatley	Resource person	Output 4
Philippines/ FishCORAL	Training of facilitators for Farmer Business Schools (Region 8, ARMM)	April, December	Julieta Roa	Resource person/ Facilitator	Output 4
Philippines/ FishCORAL	Business planning training cum writeshop (Region 5, Region 8, ARMM, Caraga)	July	Julieta Roa	Resource person/ Facilitator	Output 4
Philippines/ FishCORAL	Aqua-based Business School curriculum writeshop	November	Julieta Roa	Resource person/ Facilitator	Output 4
Philippines/ INREMP	Levelling off workshop on INREMP livelihood component	November	Julieta Roa	Resource person	Output 4
Vietnam/ SRDP	Training of facilitators for Farmer Business Schools and input into preparation of RTC-proposals	September	Julieta Roa	Resource person/ Facilitator	Output 4
Philippines/FishCORAL	Training of facilitators for Aqua-based Business School (ARMM)	December	Julieta Roa	Resource person/ Facilitator	Output 4
	Literature review on food vulnerability/resilience		Gordon Prain	Technical Consultant	Output 1
2018					
	Farmer Business School Cross Learning Visit	January	Julieta Roa Christopher Wheatley	Resource person/ Facilitator	Output 4
Indonesia/SOLID	Training of facilitators for Farmer Business Schools	February	Christopher Wheatley	Resource person/ Facilitator	Output 4
Philippines/FishCORAL	Aqua-based Business School curriculum Finalization Writeshop	February	Julieta Roa	Resource Person	Output 4
Philippines/FishCORAL	Training of facilitators for Aqua-based Business School (Region 8 and Caraga Region)	February	Julieta Roa	Resource person/ Facilitator	Output 4
India/Megha-LAMP	Farmer Business School Monitoring Visit	April	Julieta Roa	Resource Person	Output 4
India/Megha-LAMP	Gender-responsive participatory video	May	Nozomi Kwarazuka	Resource Person	Output 3
Philippines/INREMP	Farmer Business School Stakeholder Validation Workshop	June	Julieta Roa	Resource person/ Facilitator	Output 4
Philippines/INREMP	Farmer Business School Monitoring Visit	June	Julieta Roa	Resource person	Output 4
Indonesia/SOLID	Farmer Business School Monitoring Visit	July	Christopher Wheatley	Resource person	Output 4
Philippines/INREMP	Farmer Business School Business Launching	July	Julieta Roa	Resource person/ Facilitator	Output 4
Philippines/FishCORAL	Aqua-based Business School Refresher Course and Monitoring (Region 8)	September	Julieta Roa	Resource person	Output 4
India/Megha-LAMP	Farmer Business School Business Launching	September	Julieta Roa Christopher Wheatley Nozomi Kwarazuka Gordon Prain	Resource person/ Facilitator	Output 4
India/Megha-LAMP	Training of facilitators for Farmer Business School	September	Julieta Roa	Resource person/ Facilitator	Output 4
Indonesia/SOLID	Farmer Business School Monitoring Visit and SOLID HaSel business launch	October	Christopher Wheatley	Resource person	Output 4
Philippines/FishCORAL	Aqua-based Business School Monitoring (ARMM)	November	Julieta Roa	Resource person	Output 4

Country/Investment Project	Activity	Date	Name	Role	Relevant Output
General	Workshop on Farmer Business School Monitoring Tools	November	Julieta Roa Christopher Wheatley	Resource person	Output 4
General	Workshop on Partnership paper	November	Julieta Roa Christopher Wheatley Gordon Prain	Resource person	Output 5
India/Megha-LAMP and Philippines/FishCORAL	Agri-food system resilience and the role of RTCs: a literature review	September to November	Gordon Prain	Technical consultant	Output 1
2019					
Philippines/FishCORAL	Aqua-based Business School SVM and SVW (Region 8)	January and April	Julieta Roa	Resource Person	Output 4
India/Megha-LAMP	Study on gender responsiveness of FBS innovations	April	Nozomi Kwarazuka	Resource Person	Output 3
Philippines/FishCORAL	Farmer Business School business launch	May	Julieta Roa	Resource Person	Output 4
Philippines/INREMP	Study on gender responsiveness of FBS innovations	May	Nozomi Kwarazuka	Resource Person	Output 3
India/Megha-LAMP	Organic Potato Symposium	July	Anantharaman	Resource Person	Output 5
General	RTC Congress/FoodSTART+ final event	November	Gordon Prain, Julie Roa, Anantharaman, Julian Gonsalves	Resource Person	Output 5

APPENDIX 2. SUMMARY OF FOODSTART+ OUTREACH

Activity	No. of Male	No. of Female	Of which Youth	Ethnicity
DIRECT BENEFICIARIES (communities)				
India				
FBS in East Khasi Hills and West Garo Hills	55	110	35	Khasi, Garo
Gender-sensitive participatory video	4	4	2	Khasi
Training on silage	27	40	N/A	Khasi, Garo
Positive selection (1)	25	30	N/A	Khasi
Bordeaux mix preparation	33	52	N/A	Khasi
Positive selection (2)	2	11	N/A	Khasi
Training on GAP for organic seed potato production at CPRS	26	14	N/A	Khasi
Seed potato storage training (1)	23	30	32	Khasi
Positive selection (3)	9	25	N/A	Khasi
Seed potato storage training (2)	8	24	N/A	Khasi
Sweetpotato dual-purpose varieties demo plot	25	30	N/A	Khasi
Indonesia				
Demo plots of newly introduced orange sweetpotato and yellow cassava for enhanced nutrition and capacity buildings on improved farming practices (Hal Sel)	29	29	N/A	N/A
Demo plots of newly introduced orange sweetpotato and yellow cassava for enhanced nutrition and capacity buildings on improved farming practices (SBT)	19	54	N/A	N/A
Participatory sweetpotato performance evaluation	21	24	N/A	N/A
Participatory cassava performance evaluation	14	16	N/A	N/A
Net-tunnel training of clean SP planting material	16	17	N/A	N/A
FBS in HalSel and SBT	49	172	N/A	N/A
Philippines				
Stakeholder validation workshop in Bohol	6	1	N/A	N/A
Stakeholder validation workshop in Reg 8	6	5	N/A	N/A
Training on sweetpotato and cassava agronomic practices	16	47	20	Bol anon, Eskaya
Training on sweetpotato and cassava processing/food safety	10	62	30	Bol anon, Eskaya
Training on product packaging and labelling	14	12	20	Bol anon, Eskaya
Training on basic financial literacy, marketing, entrepreneurship, product costing and pricing	14	12	20	Bol anon, Eskaya
FBS INREMP	33	92	35	Bol anon, Eskaya
FBS FishCORAL ARMM	50	77	N/A	Maranao, Maguindanaon
FBS FishCORAL Region 8	98	152	N/A	Waray, Visayan, Cebuano
FBS FishCORAL Region 13	48	75	N/A	Visayan, Cebuano
Stakeholder validation workshop 2 in Bohol	10	15	N/A	N/A
Vietnam				
Cassava cropping practices training	7	2	N/A	Kinh
Sweet potato cropping practices ToT (1)	6	16	N/A	Kinh

Activity	No. of Male	No. of Female	Of which Youth	Ethnicity
Sweet potato cropping practices ToT (2)	8	18	N/A	Kinh
Sweet potato cropping practices ToT (3)	8	17	N/A	Kinh
Learning and exchange visit in My Loi CSV	15	15	N/A	Kinh
Net-tunnel training of clean SP planting material	6	17	N/A	Kinh
Sweetpotato mini-project proposal in Cao Canh	4	10	N/A	Kinh
Sweetpotato mini-project proposal in Vinh Xuan	0	15	N/A	Kinh
Cassava mini-project proposal in Cao Quang	5	10	N/A	Kinh
SUB-TOTAL DIRECT BENEFICIARIES (communities)	749	1,352		
DIRECT BENEFICIARIES (investment partners)				
India				
Stakeholder validation workshop	12	4	N/A	N/A
Ensiling sweetpotato, cassava and other locally available material for feeding pigs and cattle	31	27	N/A	Khasi, Garo
Positive selection (1)	5	1	N/A	Khasi
Bordeaux mix preparation	3	0	N/A	Khasi
Positive selection (2)	23	30	32	Khasi
FBS training of facilitators	10	8	N/A	Khasi, Garo
Training on Good Agricultural Practices (GAP) for Organic Seed Potato Production at CPRS, Shillong	7	4	N/A	Khasi
Training on value addition of cassava, yam and tuber crops at CTCRI, Kerala	10	3	4	Khasi, Garo
FBS cross-learning visit in the Philippines	8	0	N/A	Khasi
ToT on positive selection	5	4	N/A	Khasi
Training in FGD for assessing role of RTC in resilience	2	2	N/A	Khasi
FBS training of facilitators (2 nd batch)	13	4	N/A	Khasi
Indonesia				
Scoping study validation workshop	15	10	N/A	N/A
FoodSTART+ launch in Maluku Utara Province	9	6	N/A	N/A
FoodSTART+ launch in Maluku Province	7	9	N/A	N/A
FoodSTART+ launch in HalSel	8	9	N/A	N/A
FoodSTART+ launch in SBT	11	5	N/A	N/A
Net-tunnel training of clean SP planting material	3	4	N/A	N/A
FBS training of facilitators	15	15	N/A	N/A
FBS Refresher course	16	12	N/A	N/A
FBS cross-learning visit in the Philippines	2	3	N/A	N/A
Philippines				
Stakeholder validation workshop in Bohol	18	12	N/A	N/A
Stakeholder validation workshop in Reg 8	10	13	N/A	N/A
ABS curriculum drafting writeshop	12	15	10	Maranao, Waray, Visayan, Cebuano
ABS curriculum finalization writeshop	3	8	5	Maranao, Waray, Visayan, Cebuano

Activity	No. of Male	No. of Female	Of which Youth	Ethnicity
ABS Training of Facilitators	24	58	75	Maranao, Waray, Visayan, Cebuano
Training/Workshop on developing value chains and improving livelihood in coastal communities	8	27	30	Waray
FBS Training of Facilitators	13	21	27	Bol-anon and Eskaya
Business Plan Development Training cum Writeshop in Regions 5 (Bicol region), 13 (CARAGA), 8 (Eastern Visayas), and ARMM	90	105	143	Maranao, Waray, Visayan, Cebuano, Bicolano
ABS Monitoring-Mentoring and Refresher for ARMM.	13	3	14	Maranao
Learning workshop on Value Chain and FBS approach	17	6	11	Bol-anon
Training of Facilitators on FBS Approach with Climate Change Perspective	17	12	24	Bol-anon, Eskaya, Cordilleran, Cebuano
Levelling-off on the implementation of Livelihood component of INREMP Bohol with DTI	27	15	26	Cebuano
FBS cross-learning visit in the Philippines	13	10	N/A	N/A
Stakeholder validation workshop 2 in Bohol	25	20	N/A	N/A
Most Significant Change Training	2	7	N/A	N/A
Facilitation and follow-up MSC training for INREMP	8	18	N/A	N/A
Training in FGD for assessing role of RTC in resilience	2	2	N/A	N/A
ABS Coaching and Monitoring workshops	35	68	N/A	N/A
Vietnam				
Stakeholder validation workshop in Quang Binh	21	10	N/A	Kinh
Stakeholder validation workshop in Ha Tinh	18	8	N/A	Kinh
Cassava cropping practices training	8	2	N/A	Kinh
Sweet potato cropping practices ToT (1)	5	0	N/A	Kinh
Sweet potato cropping practices ToT (2)	7	2	N/A	Kinh
Sweet potato cropping practices ToT (3)	6	3	N/A	Kinh
Learning and exchange visit in My Loi CSV	9	3	N/A	Kinh
Net-tunnel training of clean SP planting material	8	3	N/A	Kinh
FBS ToT	11	5	N/A	Kinh
FGD in Hien Ninh	5	5	N/A	Kinh
FGD in Quang Chau	6	8	N/A	Kinh
FGD in Quang Thach	7	8	N/A	Kinh
FGD in Can Loc	6	5	N/A	Kinh
FGD in Xuan My	5	7	N/A	Kinh
FGD in Xuan Lien	6	7	N/A	Kinh
Gender Training (SRDP)	1	0	N/A	Kinh
Policy seminar	11	10	N/A	Kinh
SUB-TOTAL DIRECT BENEFICIARIES (investment partners)	692	666		
TOTAL BENEFICIARIES	1,447 (42%)	2,018 (58%)		

NOTE: The number of community beneficiaries is likely to be largely underestimated since partner investments do not report to FoodSTART+ the outreach of scaling activities (for instance, additional net-tunnels built by SOLID or participants to value chain training in Megha-LAMP sites who are adopting methods and tools learnt during the training for conducting VCAs on other commodities, eg ginger, turmeric, pepper, etc.).

APPENDIX 3. VALUE CHAIN AND FBS RELATED CAPACITY BUILDING ACTIVITIES

Country/ Investment Partner	Activity	Date	Facilitators and Resource Person
India Megha-LAMP	Value Chain Training Course	June 2016	Dr Julieta Roa Dr Anantharaman Dr Christopher Wheatley
	Farmer Business School (FBS) orientation workshop	June 2016	Dr Julieta Roa Dr Anantharaman Dr Christopher Wheatley
	Value chain assessment refresher	November 2016	Dr Julieta Roa
	Training of Facilitators (TOF) on FBS approach	August 2017	Dr Julieta Roa Ms Arma Bertuso
	Refresher course on FBS approach (incl. monitoring/mentoring of pilot FBS groups)	April 2018	Dr Julieta Roa, Ms Arma Bertuso
	TOF on FBS approach	September 2018	Dr Julieta Roa Ms. Arma Bertuso
Philippines FishCORAL	Training/Workshop on Developing Value Chains and Improving Livelihood in Coastal Communities	September 2016	Dr Julieta Roa Ms Arma Bertuso
	TOF on FBS approach for Region 8	April 2017	Dr Julieta Roa Ms Arma Bertuso Ms Guada Babilonia
	TOF on FBS approach for ARMM	December 2017	Dr Julieta Roa Ms Arma Bertuso Ms Guada Babilonia
	Business Plan Development training cum writeshop for Region 5, Region 8, Caraga, ARMM	July 2017	Dr Julieta Roa Ms Arma Bertuso Ms Guada Babilonia
	TOF on Aqua-base Business School (ABS) approach for Region 8	April 2018	Dr Julieta Roa Ms Arma Bertuso Ms Guada Babilonia
	TOF on ABS approach for Caraga Region	May 2018	Dr Julieta Roa Ms Arma Bertuso Ms Guada Babilonia
Philippines INREMP	Learning workshop on Value Chain and FBS	June 2016	Dr Julieta Roa Ms Arma Bertuso
	TOF on FBS approach	October 2016	Dr Julieta Roa Ms Arma Bertuso Ms Guada Babilonia
	FBS market matching and refresher course	November 2016	Dr Julieta Roa Ms Arma Bertuso Ms Guada Babilonia
Indonesia SOLID	FBS orientation and planning conducted in SOLID sites	Sep-Oct 2017	Dr Diego Naziri Dr Christopher Wheatley
	TOF on FBS approach for Maluku and Maluku Utara	February 2018	Dr Christopher Wheatley Ms Arma Bertuso Ms Haryanti Koostanto
Vietnam SRDP	TOF on FBS approach	September 2017	Dr Julieta Roa Ms Le Thi Hang



The International Potato Center (known by its Spanish acronym CIP) is a research-for-development organization with a focus on potato, sweetpotato, and Andean roots and tubers. CIP is dedicated to delivering sustainable science-based solutions to the pressing world issues of hunger, poverty, gender equity, climate change, and the preservation of our Earth's fragile biodiversity and natural resources.

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