

Supporting rural households during the pandemic

Results and evidence from IFAD's Rural Poor Stimulus Facility (RPSF) projects, 2020-2022

by
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Key messages

The COVID-19 pandemic severely disrupted the global economy and affected households across multiple dimensions of welfare. In response, IFAD launched a multi-donor response entitled The Rural Poor Stimulus Facility (RPSF) in April 2020 with the goal to improve food security and increase overall welfare conditions of vulnerable households. Results from rapid assessments of RPSF projects (2020-2) indicate that RPSF helped households to maintain or increase most development indicators such as production, sales, income, food security, resilience and asset ownership. It is estimated that overall the RPSF portfolio helped between 2.2 and 2.9 million households for the different indicators. The impact of RPSF is measured using a quasi-experimental approach for the case of Gabon and Bangladesh. The results confirm that RPSF improved welfare conditions, mainly food security, of beneficiary households in these countries.

Overall, the findings from rapid assessments suggest future emergency response programs should put a larger emphasis on investing in ensuring stronger and more effective market linkages. Emergency response measures should also focus on investments that increase production along with sales and total income. Because asset accumulation takes time, future program design should consider how to support improving asset accumulation related longer-term outcomes. In terms of the type of support provided and the targeting approach, digital projects can reach more households (i.e., large outreach), but interventions are usually lighter touch and thus are more likely to bring fewer benefits (i.e., may have small impacts). This needs to be considered when designing emergency response facilities. An area for improvement is strengthening interventions that increase the ability of households to adopt advice. Investments should also be designed so that they are able to take on board a better understanding of barriers faced by households. Additional support might also be required whenever households experience multiple shocks and investments/facilities should be able to both leverage these but also program these quickly.

1. Introduction

The COVID-19 pandemic was an unprecedented shock that affected most countries and households around the world. Developing countries were especially hard-hit since income losses were larger, and in particular among youth, women, self-employed, and casual workers with low levels of education (Bundervoet, Dávalos and Natalia Garcia, 2021). The crisis also reversed declining global trends on poverty and inequality. Poverty increased for the first time in a generation, and inequality rose since disadvantaged groups experienced a disproportionate decline of their incomes (World Bank, 2022).

The emergency nature of the pandemic required a quick and comprehensive response to effectively support livelihoods of rural households. In response, IFAD launched a multi-donor response entitled The Rural Poor Stimulus Facility (RPSF) in April 2020 with the goal to improve food security and increase overall welfare conditions of vulnerable households by ensuring timely access to inputs, information, markets and liquidity, and ultimately accelerate the recovery.¹ As such, RPSF was designed around four pillars or priority areas of support for smallholder producers and poor rural households (Figure 1): i) providing inputs and basic assets for production; ii) facilitating access to markets; iii) delivering targeted funds through finance institutions; and iv) using digital services to deliver agriculture-related information. There were various types of support provided under each pillar, which varied by project. For example, the first pillar included the distribution of food packs to households, but also the provision of basic inputs such as seeds, fertilizers and feed concentrates for animals. Projects financed under the facility were implemented either as new standalone projects or through provision of additional resources to already existing projects.

IFAD allocated US\$ 89.0 million to RPSF entailing 64 projects in all five regions, including 55 single country projects and nine multi-country projects. Around 95 percent of resources were used to finance projects in lower or lower-middle income countries, and half of resources were allocated to countries with fragile situations, spread across the four pillars of RPSF.

To understand the contribution effects of RPSF projects, data was collected from a sample of beneficiary households for selected projects with the aim of reporting Tier 1 development indicators in the RPSF Results Measurement Framework (RMF). These are

¹ See <https://www.ifad.org/en/rpsf>.

production, sales, income, number of meals consumed, resilience and number of assets owned.

Figure 1. Pillars of RPSF projects



This note describes the aggregate results generated using this data, together with the results of each project from data collected in these rapid assessments. It also evaluates the impact of two projects (in Gabon and Bangladesh) that complemented the rapid assessment endline data with baseline data and used a quasi-experimental approach to shed light on *causal* impacts of RPSF project on household welfare.

The next section describes rapid assessments of projects. Section 3 presents aggregate results, while Section 4 presents the causal impact estimates of RPSF in Gabon and Bangladesh. Finally, Section 5 contains concluding remarks.

2. Rapid assessments

An institutional effort was made to understand the effects of the pandemic as well as of RPSF projects on targeted rural households. Rapid assessments (RA) were designed by the Research and Impact Assessment (RIA) to interview a sample of beneficiary households for each selected project. The main objective of RAs was to collect timely and high-quality data which would be comparable across the different countries where selected RPSF projects were implemented.²

Twenty per cent of the 64 RPSF projects were selected to undergo a rapid assessment and report against Tier 1 development indicators. This sample of projects was chosen (13 projects across 20 countries) with the aim of having a geographical balanced sample across

² It is important to note that RAs provides a measure of contribution (i.e., not causal) effects of COVID-19 and the RPSF project.

the whole portfolio and including at least one project from each regional division (see Annex 1 for details on projects selected).

2.1 Sampling design and survey instrument

For each selected RPSF project, the aim of RAs was to interview –at endline– a representative sample of up to 600 beneficiary households (see Annex 2 for details on data collection). The final household sample varied depending on the budget available and the size of the project. The sample selection process considered a stratified random sampling approach where the main strata corresponded to at least the two main dimensions of analysis: sex (male/female) and age (youth/adult) of the household head.³ Depending on the project, the sample was also stratified by region or type of support. From the sample frame that was obtained using Monitoring and Evaluation (M&E) data of RPSF projects, a representative sample of households was selected for interview.⁴

The core element of RAs consisted of a short and standardized questionnaire that was designed to capture self-reported and subjective information on Tier 1 indicators. Information on each indicator was asked twice; once in relation to COVID-19, and another time in relation to the RPSF project. This was designed with the aim of capturing the potential contribution effect of i) COVID-19 and ii) the RPSF project. This information was captured in the data collected in the following way:

- **Potential contribution effect of COVID-19:** Beneficiaries were asked about self-reported changes on each Tier 1 indicator during the period between the start of the COVID-19 pandemic in the country and before the start of the RPSF project.⁵
- **Potential contribution effect of the RPSF project:** Beneficiaries were asked about self-reported changes on each Tier 1 indicator on the day of the interview relative to the time when RPSF project rolled out.⁶

³ A youth head of the household was defined as someone aged between 18 and 34.

⁴ The sample design was adjusted in some cases to reflect the changing conditions of projects and countries. In Ethiopia, conflict increased the risk of collecting data in some regions, and so a decision was made to exclude insecure districts from the sample frame, with the sample selected being only representative of secure areas. In Pakistan, floods affected locations in which interviews were already scheduled. Flooded districts were replaced with other non-flooded districts where data collection activities could be carried out. Similar to the case of Ethiopia, the resulting sample was only representative of beneficiaries from non-flooded areas in Pakistan.

⁵ The standardized response options included i) a total loss; ii) reduced; iii) stayed the same; or iv) increased. Respondents were only able to select one of these options.

⁶ The standardized response options included i) reduced further; ii) stayed the same; iii) increased but still below COVID-19 level; iv) returned to level before COVID-19; or v) increased above the level before COVID-19.

3. Aggregate results

RPSF beneficiaries were poor rural smallholder farmers affected by the disruptions of COVID-19. Among countries selected for a rapid assessment, the average household had 5.8 members; 17 percent of these had a household head aged between 18 and 34 years, while 29 percent were headed by a woman. Moreover, these projects had an average duration of 10.8 months.

The contribution effect of COVID was obtained by aggregating estimates across the sample of projects selected for a rapid assessment and weighting by the number of beneficiary households supported in each country. As expected, the results indicate sharp reductions in various indicators from a group of countries selected for a rapid assessment (Figure 2). Households were more often affected on production, sales, and total income, with a decline more pronounced in Djibouti, Kenya, Pakistan, and Sierra Leone (Table A.2 in Annex 3). Overall, the pandemic had a smaller negative effect on the number of assets owned by households compared to other indicators. This suggests that over half of households did not sell assets to cope with the shock, either because they did not need to, or because market conditions were also poor for selling assets owned.

The contribution effect of RPSF was also obtained by aggregating estimates across the sample selected for a rapid assessment but considering two scenarios: including and excluding digital-only projects. There are two multi-country projects focused exclusively on digital services (LAC and the PxD project). Due to the unique nature of digital activities, they had a large coverage of beneficiary households, and ultimately accounted for nearly 82 percent of outreach among the group of countries selected for a rapid assessment. As such, their individual results carry a heavy weight in the aggregate estimates. For this reason, Figure 3 presents results for the whole sample of countries selected for a rapid assessment while Figure 4 considers results excluding digital-only projects.

Overall, results point to a strong recovery from COVID-19 on various indicators of welfare after the start of RPSF activities as a majority of beneficiary households reported that RPSF helped them to maintain or improve on Tier I indicators. Results are relatively similar when disaggregating households led by women and youth.

The observed pattern among RPSF beneficiary households is larger improvements on production and meals consumed, compared to the other four indicators. RPSF activities had relatively less impact on asset ownership. This could be associated to the fact that

asset accumulation and other longer-term outcomes may require more support and time to materialize, which might be out of the scope of emergency-response programs, such as RPSF. In addition, a lower share of households in Kenya maintained or improved on these indicators after RPSF (Table A.3 in Annex 3). This seems to be potentially associated to a severe drought during spring 2021.

Figure 2. Aggregate estimates in relation to COVID-19

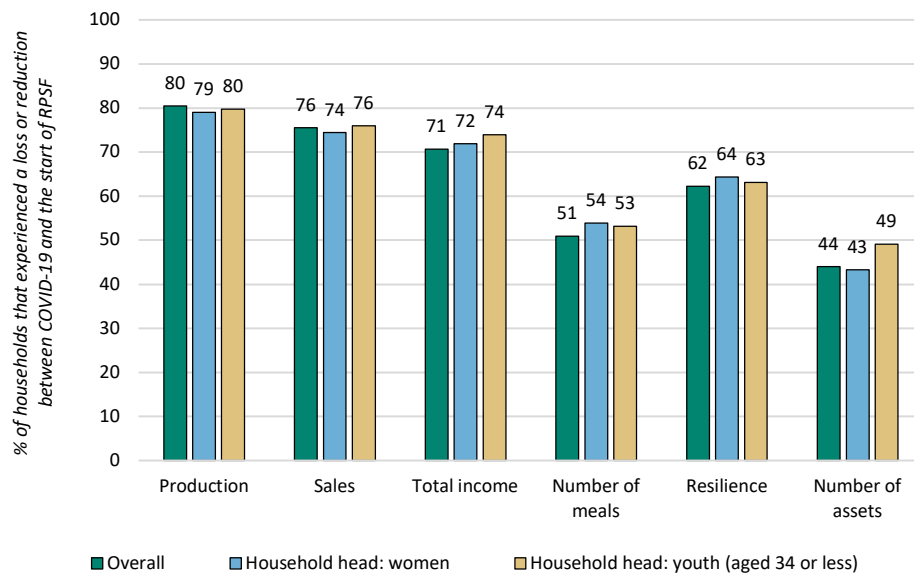
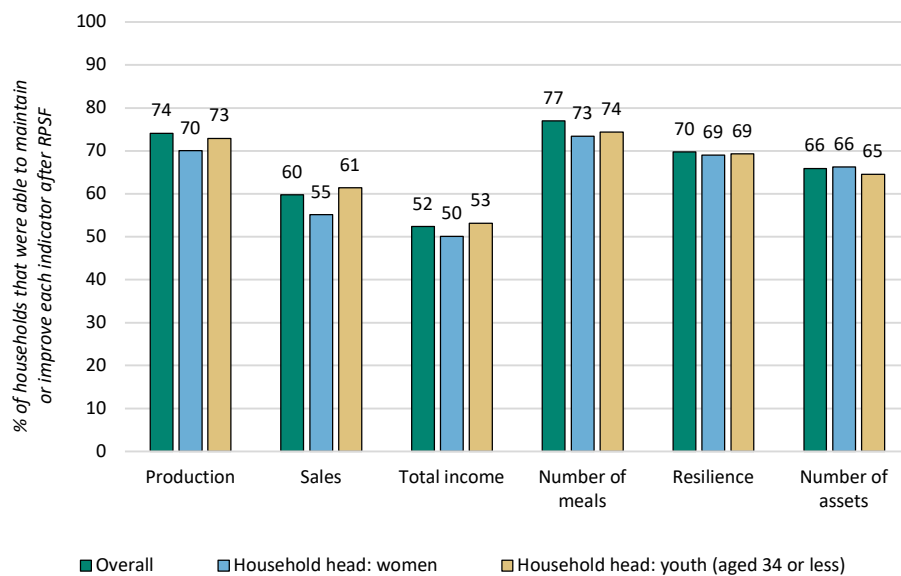


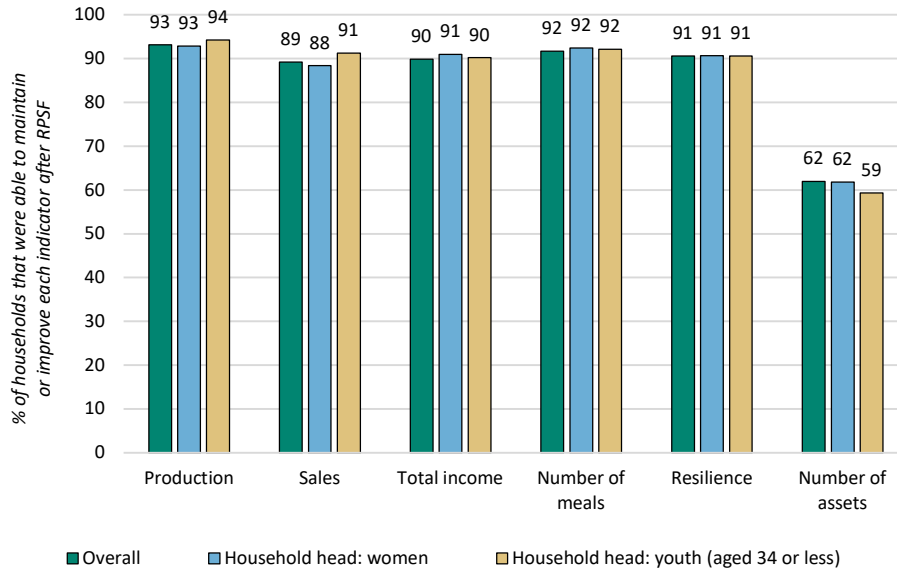
Figure 3. Aggregate estimates in relation to RPSF (outreach-weighted average estimates for the full sample of projects selected for a rapid assessment)



Moreover, comparing Figure 3 and 4 suggests that while digital projects can reach more beneficiaries, the types of interventions are of lighter touch and thus bring fewer benefits. This result is also important for IFAD as digital interventions are innovative and a focus

of IFAD’s learning. This can be a consideration for future projects designs, as IFAD evaluates the balance between objectives, risks, and innovations.

Figure 4. Aggregate estimates in relation to RPSF (outreach-weighted average estimates for projects selected for a rapid assessment excluding digital-only projects)



Using aggregate results from rapid assessments (Figure 4), a measure of the number of households is obtained that benefited across the whole portfolio.⁷ This extrapolation exercise assumes that the share of households reporting that an indicator stayed the same or increased after project activities began is the same for the group of countries not selected for a rapid assessment interview. Overall, it is estimated that the whole RPSF portfolio helped improve outcomes between 2.2 and 2.9 million households for the different indicators (Table 2).

Table 2. Extrapolation estimates in relation to RPSF for the whole portfolio
Millions households reporting the indicator was maintained or increased after RPSF

Production	Sales	Total income	Number of meals	Resilience	Number of assets
2.8	2.4	2.2	2.9	2.7	2.3

⁷ In a first step, for each country where a rapid assessment was implemented, the number of households that benefited from RPSF was obtained directly by multiplying the respective share from data collected by the number of beneficiaries. Then, the results from Figure 4 were used to multiply against the remainder of the portfolio (which did not have digital-only projects). Finally, the estimates from these two steps were added to obtain a measure of the total number of households that benefitted from RPSF.

4. Evidence of impact on household welfare

Rapid assessments involved conducting interviews only after the project had been completed or at endline. In addition to endline data, the projects of Gabon and Bangladesh had already conducted a baseline survey on the same group of households and asked the same set of question for certain indicators. Thus, in this section, information from before and after the project is exploited to obtain a measure of the impact of RPSF on household welfare using a quasi-experimental approach.

4.1 Empirical strategy

The focus is on estimating the effect of intensity of treatment rather than considering treatment and control groups. To do this, a continuous difference-in-differences strategy is employed that exploits the variation in the amount and timing of support received. This involves a before-and-after comparison across households with different intensity of the treatment measured by i) the number of items of support received from RPSF; and ii) the month in which the support was received (Table 3.1).

Table 3.1 Measures for the intensity of treatment

Measure	Description
Number of items of support	No. of items received from RPSF support
Timing of support	Month in which RPSF support was received

In this way, the main measures for the intensity of treatment are based on self-reported measures. The empirical strategy exploits the fact that the number of items of support provided and timing of when it was received varies across households, so the intensity of treatment differs. In Gabon⁸ and Bangladesh⁹, 31 percent and 44 percent of the respective samples received only 1 item from the project, while the rest received more than 1 item. Table 3.2 shows the share of households that received the number of items of support offered by the two projects. Similarly, support was received by households for the first

⁸ The project financed (at design stage) the following activities: livestock (chicken, pig, sheep); livestock equipment and materials (production and biosecurity), drugs and vaccines, professional equipment for support and support structures; food, vitamin mineral supplements, professional equipment and training sessions for farmers, on livestock and financial management.

⁹ The key activities (at design stage) included the following: providing inputs and basic assets for production of crops, livestock, and fisheries; facilitating access to markets to support small-scale farmers in selling products in conditions where market functions are restricted; targeting funds for rural financial services to ensure sufficient liquidity and to ease repayment requirements to maintain services, markets, and jobs; promoting the use of digital services to deliver key information on production, weather finance and markets.

time during a period spanning across 5 and 9 months in Gabon and Bangladesh respectively.

Table 3.2: Distribution of items of support across households

Number of items	Gabon	Bangladesh
	% of households	% of households
1	31.3%	44.4%
2	25.5%	39.8%
3 or more	43.2%	15.8%

These measures for the intensity of treatment are used in a continuous-treatment difference-in-differences (DiD) model that compares outcomes for households before-and-after the introduction of RPSF as a function of the intensity of treatment (i.e., more support and for a longer period). The DiD estimating equation is the following:

$$\ln(y_{it}) = \alpha_l + X_{it} + \beta(I_i \times post_t) + \varepsilon_{it} \quad (1)$$

where (y_{it}) is one of several outcome variables in household i in period t . Location fixed effects (α_l) , which correspond to province for Gabon and district for Bangladesh, and account for time-invariant unobservable factors are included. X_{it} correspond to a vector of household characteristics, such as sex of the household head, number of members in the household and ownership of assets. I_i is the continuous intensity of treatment measure for each household. $post_t$ is a dummy taking the value of one after RPSF, and zero otherwise. The coefficient of interest is β which captures the impact of the RPSF program on outcomes. The identification strategy relies on the exogeneity of the variation in the amount and timing of support received after controlling for confounding factors such as local shocks. So, the intensity of treatment may vary across households due to unobservable factors correlated with the outcomes.

4.2 Casual estimates

Outcomes that can be captured using the same question and response option at baseline and endline are used for this analysis. This is only a limited number of indicators that also vary between the case of Gabon and Bangladesh. For the former only certain aspects of food security can be considered, namely i) fear of not having enough food; ii) skipping meals; and iii) eating less. For Bangladesh the number of outcomes available is larger and includes i) if income stayed constant or increased; ii) fear of not having food; iii) hunger;

iv) not having enough food; v) worried about not having enough food; and vi) skipping meals.

The estimates for the average treatment effect of the RPSF program are reported in Table 4 for Gabon and in Table 5 for Bangladesh. The most complete specification is considered, including controls as described in equation 1. As explained above, the main estimates are based on two different measures of the intensity of treatment (presented as separate rows in Table 4 and 5), which were converted to natural logarithm and standardized for ease of interpretation.

Table 4. Impact of RPSF on household welfare for Gabon

	Fear not having enough food	Skipping meals	Eating less
	(1)	(2)	(3)
Intensity: amount of support	-0.011 (0.083)	-0.105** (0.044)	-0.024 (0.075)
Intensity: timing of support	0.133 (0.172)	-0.322* (0.157)	0.239 (0.196)
Fixed effects	Province	Province	Province
Controls	Yes	Yes	Yes
Clusters	9	9	9
Observations	126	126	126

Note: The table presents DiD results from the most complete specification. The dependent variables are in each column. The reported coefficients correspond to the interaction between the respective intensity and a dummy equal to 1 for the post-period of RPSF. N/A: Not applicable. Standard errors in parentheses clustered at the Department level; *** p<0.01, ** p<0.05, * p<0.1.

For Gabon, no significant effect are found on the fear of not having enough food and households eating less. However, a significant coefficient for skipping meals is found. This is the case for both intensity measures considered. The result suggest that a one standard deviation increase in the number of items of support received from RPSF project had an impact of reducing the number of households reporting they had been skipping meals by 10.5 percent. Similarly, a one standard deviation increase in the number of months since the support was received also had an effect of reducing households skipping meals by 32.2 percent. Overall, it is found that the RPSF project had a positive effect on improving food security conditions of beneficiary households in Gabon.

In the case of Bangladesh, it is found that the RPSF project was successful at improving not only food security conditions but also income. The point estimates of the outcomes considered are statistically significant and of similar magnitude when comparing coefficients from both intensity measures. The DiD estimates suggest that a one standard deviation increase in the number of items of support received by beneficiary households increased their chances of at least maintaining their income by 29 percent, while a similar set of benefits are observed on food security indicators, whose

estimated impact ranges from 8.4 percent to 13.0 percent. These results indicate that RPSF had a direct impact on improving the welfare conditions, mainly on food security, of beneficiary households in Bangladesh.

Table 5. Impact of RPSF on household welfare for Bangladesh

	Income constant or increased	Less fear of not having food	Less hungry	Less often not having food to eat	Less worried about not having enough food	Less often skipping meals
	(1)	(2)	(3)	(4)	(5)	(6)
Intensity: amount of support	0.286*** (0.033)	0.102*** (0.028)	0.099*** (0.029)	0.095** (0.037)	0.130*** (0.036)	0.084** (0.039)
Intensity: timing of support	0.357*** (0.032)	0.143*** (0.032)	0.142*** (0.031)	0.132*** (0.037)	0.196*** (0.049)	0.115** (0.040)
Fixed effects	District	District	District	District	District	District
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Clusters	14	14	14	14	14	14
Observations	454	454	454	454	454	454

Note: The table presents DiD results from the most complete specification. The dependent variables are in each column. The reported coefficients correspond to the interaction between the respective intensity and a dummy equal to 1 for the post-period of RPSF. N/A: Not applicable. Standard errors in parentheses clustered at the Upazila level; *** p<0.01, ** p<0.05, * p<0.1.

Overall, the findings from rapid assessments suggest future emergency-response programs could put a larger emphasis on market linkages, as well as the overall income generation structure to achieve increases in production but also in sales and total income. While asset accumulation takes more time, future program design could also consider how to support improvement in some of these longer-term outcomes. In terms of the type of support provided and the targeting approach, digital projects can reach more households, but interventions are usually of lighter touch and thus are more likely to bring fewer benefits. Another area for improvement could be strengthening the adoption of advice and understanding the underlying main barriers faced by households.

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Annex 1: Details of RPSF projects

Agricultural and Rural Development Project PDAR II: Gabon

The project leveraged the Agricultural and Rural Development (PDAR II) project, with a total budget of USD US\$ 444,295.

The project has supported small producers whose production has been strongly affected by the impacts of the Covid 19 pandemic, according to their testimonies during discussions on the ground. Through support the livestock sector and animal production, the project has helped producers recover from the direct or indirect negative impacts of COVID 19 on their animal production systems through the strengthening and to support their existing operations. The activities of distribution to the beneficiaries of animals (poultry, pigs, sheep), animal feed, materials for the construction of animal shelters, veterinary care products (vaccines, vitamins, etc.). Households benefited from the kits and were also trained in poultry, small ruminant and pig farming techniques (direct beneficiaries, volunteers and trainers). Some also benefited from follow-up and advisory support. Other breeders have also benefited from advisory support.

The project directly reached 243 households, impacting more than 1,427 people in provinces of Ngounié, Ogooué-Ivindo and Woleu Ntem. Around one-third receiving direct support were women.

Agricultural Value-Chain Development Project: Sierra Leone

With an overall RPSF financing of \$1,149,940, the goal of the RPSF project in Sierra Leone was to improve the livelihood and COVID-19 resilience of rural households in Sierra Leone.

Specifically, the project supported vegetables and groundnuts production, especially for rural women and Persons with Disabilities (PwDs), by ensuring availability, accessibility, and affordability of agricultural inputs. It provided high yielding and quick maturing vegetable seed varieties, as well as fertilizers, pesticides, insecticides, and some mechanized technology for land preparation (such as automated hand held tillers). Most of the beneficiaries were bulb onion producers. Finally, it supported an improvement to their market access, but establishing linkages with supermarkets and other off takers for vegetable products.

The project supported more than 2,500 households, reaching almost 17,000 people across the regions of Koinadugu, Falaba, Karene, Port Loko and Western Rural. 60 per cent of direct beneficiaries were women, 25 per cent were young, and more than 1,000 were PwDs.

Assistance project for pastoral and agro-pastoral households confronted with the cumulative effects of the COVID-19 pandemic, the lean period and insecurity: Burkina-Faso, Mali and Niger

The WCA regional project covered Burkina Faso, Chad, Mali, Mauritania, Niger and Senegal, with a total budget of US\$ 2.44 million. It was implemented by the Billital Maroobé Network (RBM), a non-profit transnational pastoral organization established in West and Central Africa. RPSF 1 provided support to households directly, while RPSF 2 benefitted focal points and stakeholders of FOs trained or involved in policy dialogue activities.

The overall objective of the project is to sustainably strengthen the livelihoods and resilience of pastoral and agro-pastoral households facing the negative effects of the pastoral lean season, recurrent insecurity and the coronavirus pandemic.

The project focused on two components. For component one, the project worked in Burkina Faso, Mali and Niger, which were the three countries hardest hit by the cumulative crises, and targeted cross-border areas and areas hosting internally displaced persons. Here, the project predominantly provided tailored support packages supported 9,200 households. The project distributed livestock (cattle, sheeps, goats), 2,400 tonnes of animal feed between contributions from IFAD and RBM, and seeds (vegetable, millet, fodders). It also organized a vaccination campaign.

For component two, the project reached 170,500 people through a variety of activities. It focused on data collection to feed into the RBM digital platform, which provides monitoring for the impacts of COVID-19 on the group, and offered trainings and technical support for digital monitoring. It also used digital means such as SMS (with technical support from ORANGE) and radio for transhumant herders awareness on areas such as regulatory measures and their movements. It also organized a pastoral hackathon to support innovation to support relevant challenges, selecting 5 projects.

To implement, RBM put in place memorandums of understanding with nine national pastoral organizations: CRUS-Burkina Faso, RECOPA-Burkina Faso, TASSAGHT-Mali, AREN-Niger, GNAP-Mauritania, BILMPAN-Nigeria, ADENA-Senegal, COPAFIB-Chad and PAEP-Togo. The latter ensured the implementation of project activities in its various areas of intervention. Project activities were implemented in the eight, covering 35 regions, 84 municipalities and more than 345 localities.

The project directly supported almost 180,000 people, nearly half women and a majority of 60 per cent young.

Assuring Resiliency of Family Farmers (ARISE-farmers) amidst COVID-19: Laos and Mongolia

The regional project leveraged national-level farmer organization (FO) platforms and IFAD's Asia-Pacific Farmers Program (APFP). It considered an RPSF allocation of US\$ 2.0 million.

The objective of the project was to strengthen capacities of FOs to manage production support to members by expanding 4Ps partnership to address the market access challenges brought about by the pandemic. The project was implemented by AFA as the Regional Implementing Agency (RIA), which coordinated and worked through national farmers networks. Specifically, the project provided financial support through revolving funds.

RPSF funds supported FOs and their members through the provision of loan assistance at a maximum rate of 3 per cent. The loan amount was used to support the production activities of the farmers such as feeds, biologics, seeds, fertilizers, and other inputs. Meanwhile, some beneficiaries also used the fund to support the working capital of the farmers' organization to increase their capacity to purchase the raw materials produced by their farmer members.

The amount disbursed from the RIA to the national implementing agencies was utilized 156.39 per cent or 1.56 times, which indicates that the majority of the fund was revolved for two cycles. In Southeast Asia, the fund was revolved 162.83 per cent or 1.62 times the total disbursed amount. In this region, Cambodia has the highest utilization rate at 201.54 per cent followed by Laos at 174.24 per cent. Meanwhile, in East, Central and South Asia, the fund was revolved 149.88 per cent or 1.49 times. Mongolia has the highest fund utilization at 288.35 per cent followed by Pakistan at 135.02 per cent. This signifies that the funds disbursed in Mongolia is being revolved on the 3rd cycle.

Through a total of 231 FOs, more than 20,000 farmers directly received funds, more than a third of which were young, and with just under half across Southeast Asia and just over half in East, Central, and South Asia. This impacted more than 100,000 household members.

Development and Expansion of Digital Agricultural Advisory Services for Smallholder Farmers in the Context of COVID: Pakistan, Kenya and Nigeria

This is a multi-country project covering Kenya, Nigeria and Pakistan, implemented through Precision Development, a US-based NGO. Through RPSF financing for US\$3.2 million, the project supported the delivery of personalized agricultural advice to farmers through their mobile phones, establishing a two-way information channel by which farmers can receive low-cost, customized advice to improve on-farm practices, input utilization, pest and disease management, environmental sustainability, and access to markets.

- In **Kenya**, the RPSF project IFAD supported PxD in the expansion of the MoA-INFO platform. This is an advisory service launched in 2018 between the Ministry of Agriculture and PxD, to provide maize, potato, legume, and banana farmers with SMS advisory messages every week throughout the growing seasons. During grant implementation 282,000 new users were added, increasing the number of active users to the SMS based digital advisory platform, including beneficiaries of two IFAD projects in the country. Moreover, new advisory content for cabbage based on IFAD project needs was designed. In the fourth and final quarter of the grant, digital agricultural advisory was provided approximately to 650,000 farmers.

- In **Nigeria**, PxD developed and delivered new digital agricultural advisory content for 12 crops of two IFAD funded projects, the Climate Change Adaptation and Agribusiness Support Programme (CASP) and Value Chain Development Programme (VCDP). Beneficiaries included are spread across 11 states in Nigeria, (Borno, Jigawa, Katsina, Kebbi, Sokoto, Yobe, Zamfara, Ebonyi, Ogun, Niger, and Nasarawa). The content developed included all the target crops for the 2021 wet season (rice, maize, soybeans, cowpea, sorghum, millet, cabbage, and groundnut) of the CASP; as well as rice and cassava, which are priority value chains for the VCDP project, and the CASP dry season crops (tomato, onion, rice, maize and pepper). More than 100,000 people were supported.

- In **Pakistan**, the project provided SMS and voice-based digital agricultural advisory services to roughly 1.3 million smallholder farmers in Pakistan. In order to be able to reach female livestock beneficiaries, PxD engaged with the Rural Community Development Society (RCDS), one of IFAD's partner organizations. As a result, of this engagement, a pilot was developed to provide information on vaccination, artificial insemination, disease identification, and best hygiene practices for at first 3,000 female

livestock farmers, and digital advisory expanded to more than 50,000. Also, during this period, Pakistan was riddled with a viral infection called lumpy skin disease. To mitigate the losses for rural livestock holders, PxD initiated a robust advisory campaign that informed beneficiaries about the disease, its identification and management. Finally, during the floods of September 2022, messages have been tailored to support rural farmer to cope, protect their livestock and in some cases harvest earlier to minimize losses.

Participatory Small-Scale Irrigation Development Programme II: Ethiopia

The project leveraged the existing Participatory Small-Scale Irrigation Development Programme (PASIDP) and was implemented under the leadership of the Ministry of Agriculture. It considered a total RPSF allocation of US\$ 2.24 million to help scaling up PASIDP activities.

The project aimed to minimize the pandemic's negative impacts upon rural poor livelihoods, by providing of farm inputs and post-harvest support, while also reducing need for travel for the most vulnerable beneficiaries. The project provided support to livelihoods through various activities.

Specifically, and in collaboration with the government, IFAD provided access to smallholder farmers through voucher systems with improved seeds (Cereals, pulses and vegetables) as well as fertilizers, agrochemicals and vermi worms; as well as offering extension advisory services. Additionally, and beyond this, some female led households were provided similar inputs, but also benefitted from small ruminants, chickens, and fuel saving stoves – and around 5,000 households impacted by war in the Amhara region were also targeted with similar activities.

Additionally, the project provided employment opportunities for youth, including nursery seedling production, gully rehabilitation, and supporting movement of value chain product from farms to cooperatives. It also constructed 29 storage facilities through consumer cooperatives with market linkages and reach more than 6,500 smallholder farmers to enable them to cope with increased costs and market challenges.

The project also sought to ensure safer and more effective working environments and awareness, in light of the pandemic. It provided safety equipment and trainings for minimizing infections across rural livelihoods, and organized mass media broadcasts on Farm Radio International Ethiopia on COVID-19 mitigation measures in several languages.

RPSF directly supported almost 70,000 households across interventions in four regions Amhara Oromia, SNNPR, and Tigray, and reached an estimated 4.5 million people with the radio broadcasts.

Quick Impact Facility under the Smallholder Agricultural Competitiveness Project for small farmers' resilience to the COVID-19 crisis: Bangladesh

The project was implemented under the existing IFAD-financed Smallholder Agricultural Competitiveness Project (SACP), with a total RPSF financing of US\$ 2.0 million.

The overall aim of the project was to strengthen the resilience of vulnerable populations to the negative impacts of the COVID-19 pandemic.

Activities began with the distribution of homestead gardening kits to 26,000 households in coastal Bangladesh. The kit aimed to enable vulnerable rural people to grow winter vegetables primarily for household consumption, and included vegetable seeds, fertilizers, and small utilities. RPSF-II ensured continued inputs supply to the 26,000 households from the first financing round, while also expanding reach to 28,450 additional households with support for post-harvest activities, with a focus on reaching women farmers. Kits included similar inputs, and added clippers, processes materials with training, vermi-compost separators with training and vans for transport.

It targeted the districts of Bagerhat, Barguna, Bhola, Chattogram, Feni, Jhalokathi, Lakshmipur, Noakhali, Patuakhali, Pirojpur, and Satkhira, supporting almost 55,000 people and their households (about 50 per cent classified as women, and nearly half as youth), and impacted about 140,000 people.

Regional Agridigitalization project in Latin America: FO and RCB

The regional Agridigitalization project was developed in partnership with Agriterra with an RPSF budget of US\$ 2.3 million to sustain the implementation of digital financial solutions and e-trade channels to reduce human contact amid COVID-19.

The overall goal of the RPSF project is to help producers cope with the COVID emergency and recover more rapidly, while generating social, financial, and technical inclusion.

The primary project activities aimed to do this through support to two types of organizations: Producer Organizations (PO) and Rural Community Banks (RCB), also named saving banks – by supporting the organizations themselves as well as their members. PO's are organizations that cultivate crops or produce market products and are organized in associations, and are typically small private companies or cooperatives in rural areas. The characteristics of the producer organizations (PO) have been similar in the five countries. RCB are community banks or rural savings banks whose objective is to provide microfinance to small rural producers. This project only supported RCBs in Guatemala and Honduras.

Specifically, the project supported the conducting of rapid vulnerability assessments for more than 85 POs and 160 RCBs, and recovery and risk management plans for more than 80 POs and more than 65 RCBs. Additionally it provided technical assistance providers with training in digital platforms, provided technical assistance services to POs, improved the internal digital communications systems and provided training on use to 55 POs, supported POs and SMEs including new ones on advice for food safety, traceability, and control of biological risks, trained more than 80 POs and SMEs on digital business environments and linked them to commerce companies, and formed 9 agreements with e-commerce companies to facilitate digital transactions for POs, SMEs and RCBs. Also the project digitalized 150 RCBs through the MiCaja platform. This application facilitates the registration, control, and management of savings and credit processes, helping to operate its management more efficiently.

In total, an estimated 32,000 family farmers were directly supported by the project's assistance to POs and RCBs as members, including 42 per cent of women, and around 25 per cent of youth. As part of this, more than 3,500 people were directly trained in new technologies and 22,000 people connected to new digital platforms across the 5 countries.

Resilience Building of Poor and Vulnerable Households: Pakistan

The RPSF initiative leveraged activities from the existing South Punjab Poverty Alleviation Project (SPPAP) project, with a total budget of US\$ 2.37 million for the establishment of food banks and cash grants.

The RPSF grant funded activity was designed to build resilience, minimise the impacts of COVID-19 on livelihoods and improve food security for rural small households in Pakistan. The development objective of this grant is to sustain income generation opportunities and enhance food security and nutrition of rural households. The project established and strengthened capacity for 100 community food banks, provided communities with inputs (wheat, poultry, hatching units, kitchen gardening kits, nurseries), supported associated training, and also provided cash grants to those receiving enterprise or vocational training of the IFAD financed SPPAP.

The targeted the geographical area of IFAD's funded Southern Punjab Poverty Alleviation Project (SPPAP) covering the districts of Bahawalpur, Bahawalnagar, Rahimyar Khan, Muzaffargarh, Rajanpur, Dera Ghazi Khan, Layyah, Bhakkar, Khushab, and Mianwali, with the majority of activities targeting Mianwali, Bhakkar and Khushab which are characterised by relatively higher incidences of poverty, rainfed agriculture and limited employment opportunities.

The project supported directly supported about 28,000 people, of which 95 per cent were women and 56 per cent were youth – and reached 156,000 household members. Overall, 94 per cent beneficiaries are categorized as extremely and chronically poor.

Support to smallholder farmers to mitigate COVID-19 related shocks by improving their food security, resilience and livelihood status: Rwanda

The project was implemented through the Single Project Implementation Unit (SPIU) of the Rwanda Agriculture and Animal Resources Development Board (RAB), which is the implementing agency of the Ministry of Agriculture and Animal Resources (MINAGRI). With RPSF financing of US\$ 1.4 million, the project contributed to food security of poor vulnerable farmers affected by COVID-19 pandemic in Rwanda.

Specifically, the project acquired and distributed hybrid maize seed, certified beans seed, vegetables seeds, Irish potato and certified sweet potato vines. Farmers also received DAP fertilizers, Urea and NPK. The distribution of inputs was accompanied by provision of farmer advisory services using farmer promoters (volunteer community leaders who provide farmer-to-farmer extension). The project also contributed to increasing by 2.500MT the storage capacity of the existing Warehouse for the National Strategic Grain Reserve (NSGR) in Kicukiro. In addition to the other inputs provided, the project also procured and distributed 250,000 kg of maize and 150,000 kg of beans which helped to feed farmers in need of food assistance during the lockdown initiated by the government to curb the spread of COVID-19.

The project intervention zones were 16 Districts across the Eastern Province (Bugesera, Gatsibo, Kayonza, Kirehe, Ngoma and Nyagatare; Southern Province (Nyanza, Ruhango, Gisagara, Huye, Nyaruguru and Nyamagabe), Northern Province (Rulindo) and Western Province (Rubavu, Ngororero and Rusizi). In addition to facing the impacts of the pandemic, target districts were selected based on the level of drought, poverty, and food insecurity. Approximately 48,000 people were directly supported, more than half of them women, therefore reaching more than 210,000 household members. Rapid assessment methodology.

Sustainable Agriculture Production Programme: Malawi

The project built upon the already existing Sustainable Agriculture Production Programme (SAPP). The RPSF project was implemented from March to December 2021 with a total financing of US\$ 1,521,407. The goal of SAPP's RPSF was to improve food security and resilience of poor rural people by supporting production and market access.

Specifically, the project produced and distributed early generation seed of biofortified varieties of maize, beans and biofortified sweet potato, including for seed multiplication. To ensure quality production, the project also facilitated seed inspection by Malawi's Seed Services Unit. In addition, the project distributed (including for multiplication) legume seeds, maize seeds, vegetable seeds, agro-forestry seedlings and fertilizers; bundles of sweet potatoes; bio-fortified legume and cereal crop varieties, and livestock (including chicks, rabbits and ducks). There were also 48 demonstrations on fertilizers and 84 demonstrations promoting indigenous phosphate, solubilising microbes and rhizobia. The project worked with 47 farmer groups to facilitate their linkage to markets.

In order to promote the use of electronic and digital services, the project promoted 112 radio and TV broadcasting programmes; 43 SMS, WhatsApp, and Facebook based agricultural, nutritional and COVID19 messages. To provide extension support services 8,446 households out of a target of 12,000 households received training to promote integrated homestead farming (IHF) and household approach; 102 ESMPs were implemented.

The project directly supported 43,600 people, with more than half of them being women, and reaching 218,000 household members. Implementation took place in three districts, namely: Nkhotakota, Lilongwe and Balaka.

Top-up to the Resilience of Organizations for Transformative Smallholder Agriculture (ROOTS) project: Gambia

The project leveraged the existing Resilience of Organizations for Transformative Smallholder Agriculture (ROOTS) project, and it was implemented under the supervision of the Ministry of Agriculture. With RPSF financing of US\$ 590,301, the objective of the RPSF funds in the Gambia was to minimize impacts of COVID-19 on livelihoods, resilience and food security.

The funds provided for the supply of inputs and basic assets for production of crops, and livestock. This included the purchase and distribution of 7.3 MT of climate resilient certified rice seed for producers, as well as supported rice seed produces in land preparation for 105 HA, as well as support to livestock owners with additional animals, additional birds, vaccinations and/or feed supplements women and youth small ruminant schemes and small poultry. The project also successfully delivered 1,205 Kg of climate resilient seed (Certified vegetable seed).

To assist with market access, the project provided cash support to more than 80 youth-led SMEs; and supported in logistics to ease transportation of agricultural produce to markets, in digital communication tools using social media platforms (Facebook, WhatsApp, Twitter, Tik-Tok and Instagram). Also, the project successfully supported the provision of sanitizing materials, face masks for women/youth to enable market access whilst also increasing Covid-19 awareness (women groups empowerment, FO, Community radio outreach, Distribution of communication materials).

Through digital the project provided some extremely poor households with cash transfers of 60 to 80 USD and provided nearly 2,000 people with remote training in production practices/ technologies or in other income-generating activities.

The project supported more than 20,000 people, more than half of which were young and a large majority women, and reached 208,000 people.

Water Management Programme (PROGRES) in the Context of COVID: Djibouti

The project had a total RPSF budget of US\$ 413,710. The overall objective of the RPSF funds was to improve poor and rural populations recovery from the impacts of COVID-19 through the provision of inputs. The intervention targeted agricultural, livestock and fish sectors.

Specifically, it provided 250 market gardening households with 732 kg of seeds and fertilizer and 100 sets of small tools. 1,063 agro-pastoral households benefited from 800 heads of goats, 109 tonnes of feed, 400 sets of veterinary products, 120 vaccines and the equipping of 4 wells with solar panels. Also, 625 fishing households benefited from 24 outboard motors, 66 generators, 109 nets, 279 fish-vending kits and 432 lines and hooks.

The RPSF Fund directly supported 1,938 households, and 11,628 people predominantly across the 3 regions of Arta, Tadjourah and Dikhil. Around half of those receiving support were women, and about 40 per cent youth.

Annex 2: Data collection details

The Research and Impact Assessment (RIA) division collaborated with the Programme Management Department (PMD) and country teams to implement rapid assessments. In most cases, a data collection firm was procured locally to contextualize the questionnaire, validate the sample, implement the survey and conduct analysis. Interviews began in August 2021 and were completed by December 2022 (Table A.1). The survey mode included Pen-and-Paper Personal Interview (PAPI), Computer Assisted Personal Interviewing (CAPI) and/or Computer Assisted Telephone Interviewing (CATI).

Table A.1. Details of data collection

Project	Country	Duration (months)	Outreach (HHs)	Dates of interview	Sample size	Survey mode
Agricultural and Rural Development Project PDAR II	Gabon	4	243	August to September 2022	161 (22% headed by women and 4% by youth)	CAPI
Agricultural Value-Chain Development Project	Sierra Leone	10	2,536	November to December 2022	476 (93% headed by women and 34% by youth)	CAPI
Assistance project for pastoral and agropastoral households confronted with the cumulative effects of the COVID-19 pandemic, the lean period and insecurity	Burkina Faso	12	179,742	July to August 2022	400 (25% headed by women and 14% by youth)	CAPI
	Mali			July to August 2022	400 (13% headed by women and 8% by youth)	
	Niger			July to August 2022	400 (15% headed by women and 12% by youth)	
Assuring Resiliency of Family Farmers (ARISE-farmers) amidst COVID-19	Laos	13	20,264	June to July 2022	400 (16% headed by women and 12% by youth)	CAPI & CATI
	Mongolia			June to July 2022	400 (12% headed by women and 11% by youth)	CATI
Development and Expansion of Digital Agricultural Advisory Services for Smallholder Farmers in the Context of COVID (PxD)	Pakistan	6	1,355,674	November to December 2021	582 (39% headed by women and 19% by youth)	CAPI
	Kenya	5	650,156	August to September 2021	365 (35% headed by women and 13% by youth)	
	Nigeria	6	107,542	October to November 2021	330 (39% headed by women and 14% by youth)	
Participatory Small-Scale Irrigation Development Programme II	Ethiopia	9	69,962	May to June 2022	400 (21% headed by women and 25% by youth)	CAPI
Quick Impact Facility under the Smallholder Agricultural Competitiveness Project for small farmers' resilience to the COVID-19 crisis	Bangladesh	19	54,450	September 2022	500 (13% headed by women and 8% by youth)	CAPI
Regional Agridigitalization project in Latin America (LAC)	Guatemala, Honduras and Peru	12	31,746	October and November 2022	713 (256 from FO and 457 from RCB; 11% headed by women from FO and 23% from RCB, while 9% by youth from FO and 23% from RCB)	CAPI
Resilience Building of Poor and Vulnerable Households	Pakistan	9	38,552	August to September 2022	500 (14% headed by women and 13% by youth)	PAPI

Support to smallholder farmers to mitigate COVID-19 related shocks by improving their food security, resilience and livelihood status	Rwanda	15	48,040	April to May 2022	452 (50% headed by women and 18% by youth)	CAPI
Sustainable Agriculture Production Programme	Malawi	12	43,593	July to August 2022	501 (30% headed by women and 21% by youth)	CAPI
Top-up to the Resilience of Organizations for Transformative Smallholder Agriculture (ROOTS) project	Gambia	12	23,126	February to March 2022	500 (17% headed by women and 9% by youth)	CAPI & CATI
Water Management Programme (PROGRES) in the Context of COVID	Djibouti	12	1,938	August 2021	498 (50% headed by women and 26% by youth)	PAPI

Annex 3: Results by project

Agricultural and Rural Development Project PDAR II: Gabon

Contribution effect of COVID-19

- Around 6 out of ten households experienced a sharp decline in food security (number of meals consumed), total income and resilience, prior to the start of project activities. In contrast to this, production and market sales affected a larger share of households. Overall, households were less often affected on the number of assets owned in the aftermath of the pandemic.
- There is large heterogeneity by sex of the household head, where women headed beneficiary households were more affected by the COVID-19 pandemic, compared to households headed by men, in terms of production, sales, number of meals consumed and resilience.

Contribution effect of RPSF

- More than 8 out of 10 households were able to maintain or improve on indicators of interest. The project seemed to have brought benefits to households along multiple dimensions, since a similar share of households reported improvements across all indicators of interest.
- A larger share of households headed by women reported maintaining or increasing production.

Agricultural Value-Chain Development Project: Sierra Leone

Contribution effect of COVID-19

- Around 9 out of 10 households reported negative effects from the pandemic on most outcomes prior to the start of project activities, except for asset ownership.
- Changes reported in relation to COVID-19 do not differ by sex and age of the household head.

Contribution effect of RPSF

- Households were able to maintain or improve on every indicator of interest after the RPSF project was implemented, including on asset ownership.
- Moreover, these results are similar when comparing households by sex and age of the head.

Assistance project for pastoral and agro-pastoral households confronted with the cumulative effects of the COVID-19 pandemic, the lean period and insecurity: Burkina-Faso, Mali and Niger

Burkina Faso

Contribution effect of COVID-19

- More than 7 out of ten households experienced a sharp decline due to COVID-19 on production, total income, food security (number of meals), resilience and number of assets

owned. However, market sales were less often affected by the pandemic, as only 4 out of 10 households reported a loss or reduction in the indicator.

- The group of households headed by women and youth were more vulnerable after the pandemic, since a larger proportion reported a total loss or reduction on their capacity to cope against other shocks (resilience), compared to households headed by men and adults, respectively.

Contribution effect of RPSF

- After the start of RPSF activities, indicators of interest maintained or increased for almost 9 out of 10 households, with the exception of number of assets owned which only benefited less than 4 out of 10 households.

- Households headed by youth and adults experienced similar benefits after the implementation of the project. Contrary to this, households headed by women, compared to men, reported less often to maintain or improve the number of assets owned.

Mali

Contribution effect of COVID-19

- Around 8 out of 10 households reported losses due to COVID-19 on production, market sales, total income, resilience and number of meals consumed. A lower proportion of households also reported losses on the number of assets owned (6 out of 10 households).

- Households headed by a youth member were more affected by the pandemic, compared to those headed by adults, since they report more often being affected on production, number of meals consumed, resilience and number of assets owned. Contrary to this, households headed by women reported less often a sharp decline in terms of production and total income, compared to those headed by men.

Contribution effect of RPSF

- Indicators of interest shown substantial improvements after the implementation of the RPSF project, with around 9 out of 10 households reporting to maintain or improve production, sales, income, number of meals consumed and resilience. However, the project seems to only have benefited half of households in terms of the number of assets owned.

- There is a significant level of heterogeneity by sex and age of the household head. A smaller share of households headed by women, compared to men, reported benefits on production. Those headed by youth experienced mixed results, reporting less often to maintain or improve resilience, but more often benefits on production.

Niger

Contribution effect of COVID-19

- Around half of households experienced a sharp decline on production, total income, food security (number of meals consumed) and resilience, with an even larger share of households reporting being affected on sales. Further, most households (9 out of 10) sold assets prior to the start of project activities.

- There is large heterogeneity by sex and age of the household head. Women headed beneficiary households were less affected by the COVID-19 pandemic, compared to

households headed by men, in terms of market sales and resilience, but more affected on total income. In addition, youth headed beneficiary households, compared to households headed by adults, were more affected on the number of meals consumed and resilience.

Contribution effect of RPSF

- More than 7 out of 10 households were able to maintain or improve on indicators of interest, with the exception of the number of assets owned.
- Changes after project activities also show a significant level of heterogeneity by sex and age of the household head. Those headed by a women experienced mixed results, reporting less often to maintain or improve market sales, but more often benefits on the number of meals consumed. Moreover, the income of youth headed households did not improve as much as that of adult headed households.

Assuring Resiliency of Family Farmers (ARISE-farmers) amidst COVID-19: Laos and Mongolia

Laos

Contribution effect of COVID-19

- More than 80 percent of beneficiary households experienced a sharp decline in production, market sales and resilience due to COVID-19, prior to the start of project activities. Households were less affected on total income and the number of meals consumed.
- Overall, women and youth headed beneficiary households seem to have been more affected by the COVID-19 pandemic, compared to those headed by men and adults, respectively. The former group was more likely to report production and income were reduced or lost, although they were less often affected in terms of the number of meals consumed. Moreover, a larger share of youth headed households, compared to adults, experienced a negative effect on the number of meals consumed.

Contribution effect of RPSF

- The majority of households were able to maintain or improve on indicators of interest. The strongest benefits were observed on production, sales and asset ownership. However, total income and resilience did not fully recover, since only between 50 and 60 percent of households reported having maintained or improved on these indicators.
- Women headed households benefitted more on production and total income, and less in terms of resilience, compared to households headed by men. The group of youth headed households was less likely to maintain or improve on production, compared to the group headed by adults. Despite this, they more often reported maintaining or improving on total income.

Mongolia

Contribution effect of COVID-19

- Around five out of ten households experienced a sharp decline in production, market sales and income due to COVID-19, prior to the start of project activities. Overall,

households were less often affected on the number of meals consumed (given the use of livestock for own consumption), their resilience to other shocks and ownership of assets.

- There is some heterogeneity by sex and age of the household head. Women headed beneficiary households were less affected by the COVID-19 pandemic, compared to households headed by men, in terms of production, sales and total income. Contrary to this, youth headed beneficiary households were more affected compared to households headed by adults, on resilience.

Contribution effect of RPSF

- More than 9 out of 10 households were able to maintain or improve on indicators of interest. Similar benefits were observed across all indicators.
- Moreover, the project improved in a similar way the outcomes of households headed by men and women, as well as those headed by adults and youth.

Development and Expansion of Digital Agricultural Advisory Services for Smallholder Farmers in the Context of COVID: Pakistan, Kenya and Nigeria

Pakistan

Contribution effect of COVID-19

- Around two thirds of households experienced a sharp decline in production, market sales and income due to COVID-19, prior to the start of project activities. Households were less often affected on the number of meals consumed, assets owned and their resilience to other shocks.
- Women headed beneficiary households were equally affected by the COVID-19 pandemic, compared to households headed by men. Contrary to this, youth headed beneficiary households were less affected compared to households headed by adults in terms of production and resilience.

Contribution effect of RPSF

- A large share of households was able to maintain or improve on indicators of interest. The strongest benefits were observed on production, food security (number of meals), resilience and number of assets, in line with the objective of the project. Total income also showed improvements after the project was implemented, but fewer households reported improvements on this indicator.
- At the same time, a lower share of beneficiary households headed by women, compared to those headed by men, reported having maintained or improved production and market sales after the program was introduced. This suggests it is harder for women-headed households to recover even with project support, although it could also imply that additional interventions may be required for these households to obtain the same results as other beneficiaries. Moreover, a larger share of beneficiary households headed by youth, compared to adults, reported having maintained or improved total income and resilience.

Kenya

Contribution effect of COVID-19

- COVID-19 has led to a sharp reduction in various Tier I indicators of welfare, prior to the start of project activities. Women and youth headed beneficiary households were more adversely affected by the COVID-19 pandemic, compared to households headed by men and adults respectively.

Contribution effect of RPSF

- A large share of households were able to maintain or improve on indicators of interest. The strongest benefits were observed for production and food security (number of meals) in line with the objective of the project. Sales and asset ownership also showed improvements after the project was implemented.

- At the same time, a lower share of beneficiary households headed by women and youth reported having maintained or improved welfare in Kenya after the program was introduced. This reflects the larger impacts of the pandemic experienced by these groups, making it harder for them to recover even with project support, although it may also imply that additional interventions may be required for these households to obtain the same results as other beneficiaries.

- Further benefits may have been hindered by severe drought experienced in 2021 during the “long rains” season (from late-April, May and early June), which may have hindered the adoption and/or success of the advice provided through the project.

Nigeria

Contribution effect of COVID-19

- Prior to the start of project activities, COVID-19 led to a sharp reduction in various Tier I indicators of welfare, mainly on production, market sales, total income, food security (number of meals) and resilience.

- Compared to households headed by men, women headed beneficiary households were more adversely affected by the COVID-19 pandemic in terms of total income and food security. Similarly, households headed by youth, compared to adults, were more often affected in terms of production, sales, total income and resilience.

Contribution effect of RPSF

- More than 8 out of 10 households were able to maintain or improve on all the indicators of interest, after the project was implemented.

- Women and youth headed households benefited at least the same as households headed by men and adults respectively after the program was introduced.

Participatory Small-Scale Irrigation Development Programme II: Ethiopia

Contribution effect of COVID-19

- Around one out of two households experienced a sharp decline in production, market sales, income and assets owned due to COVID-19, prior to the start of project activities. Overall, households were less often affected on the number of meals consumed and their resilience to other shocks.

- There is large heterogeneity by sex and age of the household head. Women headed beneficiary households were more affected by the COVID-19 pandemic, compared to households headed by men, in terms of number of meals consumed and resilience. In addition, youth headed beneficiary households were more affected compared to households headed by adults, on production, sales and income.

Contribution effect of RPSF

- More than 9 out of 10 households were able to maintain or improve on indicators of interest. The strongest benefits were observed on production, sales, income, resilience and food security (number of meals), in line with the objective of the project.

- Asset ownership was also maintained or improved after the project was implemented, but fewer households reported improvements on this indicator. Further, a lower share of beneficiary households headed by women reported having maintained or improved the number of assets owned, compared to those headed by men.

- Adult and youth beneficiary households equally reported having maintained or improved on indicators of interest.

Quick Impact Facility under the Smallholder Agricultural Competitiveness Project for small farmers' resilience to the COVID-19 crisis: Bangladesh

Contribution effect of COVID-19

- Around 5 out of ten households experienced a sharp decline due to COVID-19 in food security (number of meals consumed) and resilience, while a larger share of households was affected on production, sales and total income. Overall, households were less often affected on the number of assets owned.

- Youth headed households were more often affected by COVID-19 with respect to production, market sales and total income, while women headed households were more affected on the number of meals consumed and resilience.

Contribution effect of RPSF

- After the project was implemented, more than 8 out 10 households reported maintaining or improving on every Tier I indicator considered. The benefits were more often reflected in production and food security (number of meals consumed), and less often on total income and number of assets.

- All women and youth headed households experienced improvements on market sales, resilience and number of meals consumed. Yet, the recovery of total income after RPSF was less pronounced among households headed by youth, compared to those headed by an adult.

Regional Agridigitalization project in Latin America: FO and RCB

Farmer organizations (FO)

Contribution effect of COVID-19

- Around 7 out of 10 households experienced a decline on production, sales and income due to COVID-19, with a smaller proportion being affected in terms of number of meals consumed, resilience and assets owned.
- Overall, selling assets was not a common coping strategy. However, youth headed households relied more often on selling assets, which could have also helped them to maintain their resilience to other shocks. Women headed households were more affected, compared to men headed households, in terms of resilience.

Contribution effect of RPSF

- At least 7 out of 10 beneficiary households reported to have maintained or improved all their indicators after the start of RPSF activities. Improvements in the number of assets owned were less frequent, compared to the other indicators of interest.
- All youth headed households interviewed reported to have maintained or improved their total income and the number of meals consumed.

Rural community banks (RCB)

Contribution effect of COVID-19

- The COVID-19 pandemic seems to have primarily affected productive activities and total income, and less often sales, food security (number of meals consumed) and asset ownership.
- Households headed by women reported being less often affected in terms of market sales, compared to those headed by men. Youth and adult headed households were equally affected in all the dimensions considered.

Contribution effect of RPSF

- At least 7 out of 10 households declared to have maintained or improved indicators of interest after the introduction of RPSF, with the exception of market sales.
- In line with being less affected by COVID-19, a smaller share of women headed households also report improvements in terms of production, market sales and total income.

Resilience Building of Poor and Vulnerable Households: Pakistan

Contribution effect of COVID-19

- The pandemic had a negative impact on most beneficiary households, and across all indicators of interest, with the exception of assets owned.
- Youth headed households reported more often a decline in the number of assets owned, relative to households headed by adults, while those headed by a women experienced less often a reduction in this indicator.

Contribution effect of RPSF

- Most indicators show substantial improvements after the RPSF project was implemented. Production, sales, income, number of meals consumed, and resilience stayed the same or increased for the majority of households. Further, almost 8 out of 10 households maintained or increased the number of assets owned.
- In most dimensions, households headed by women and men, and youth and adults benefitted equally from the RPSF project. Only households headed by youth were less likely to maintain or increase their ownership of assets, compared to those headed by an adult.

Support to smallholder farmers to mitigate COVID-19 related shocks by improving their food security, resilience and livelihood status: Rwanda

Contribution effect of COVID-19

- Nearly eight out of ten beneficiary households experienced a sharp decline in production, market sales, income and number of meals consumed due to COVID-19, prior to the start of project activities. Households were less often affected on the number of assets owned and their resilience to other shocks.
- Women headed beneficiary households were more affected by the COVID-19 pandemic on the number of meals consumed, compared to households headed by men. Youth headed beneficiary households were also more affected compared to households headed by adults in terms of income.

Contribution effect of RPSF

- Most households were able to maintain or improve on all the indicators of interest.
- Compared to beneficiary households headed by men, those headed by women were not only more affected by the pandemic in terms of food security, but also less likely to maintain or improve the number of meals consumed after the program was introduced.
- Moreover, a smaller share of beneficiary households headed by youth, compared to adults, reported having maintained or improved the number of assets owned. This suggests it is harder for youth-headed households to recover even with project support.

Sustainable Agriculture Production Programme: Malawi

Contribution effect of COVID-19

- Losses due to COVID-19 were affecting around 9 out of 10 households in all dimensions considered in the analysis.
- Specifically for the number of assets owned, all the households experienced a decline in this indicator due to COVID-19, regardless of gender and youth status of the head of the household.

Contribution effect of RPSF

- More than 7 out of 10 households were able to maintain or improve on all indicators of interest, namely production, sales, total income, resilience, number of meals and asset

ownership. Households seem to have benefitted more in terms of production and number of assets owned, compared to other dimensions of welfare.

- Youth headed households experienced greater progress on production, market sales, total income, resilience and number of meals consumed.

Top-up to the Resilience of Organizations for Transformative Smallholder Agriculture (ROOTS) project: Gambia

Contribution effect of COVID-19

- Most households experienced a sharp decline in production, market sales, income, assets owned and their resilience to other shocks due to COVID-19, prior to the start of project activities. However, households managed to sustain food security conditions and were less often affected on the number of meals consumed.
- Youth headed beneficiary households were more affected by the COVID-19 pandemic in terms of sales and income, compared to households headed by adults. Contrary to this, women headed beneficiary households were less affected, compared to households headed by men, in terms of income and resilience.

Contribution effect of RPSF

- Around 7 out of 10 households were able to maintain or improve on most indicators of interest. The number of assets also showed improvements after the project was implemented, but fewer households reported improvements on this indicator.
- At the same time, a higher share of beneficiary households headed by women, compared to men, reported having maintained or improved the number of assets owned after the program was introduced. Moreover, a larger share of beneficiary households headed by youth, compared to adults, reported having maintained or improved sales, total income and number of meals consumed.

Water Management Programme (PROGRES) in the Context of COVID: Djibouti

Contribution effect of COVID-19

- COVID-19 has severely affected welfare conditions, as captured in most Tier I indicators. Women and youth headed beneficiary households were equally impacted by the COVID-19 pandemic, compared to those headed by men and adults, respectively.

Contribution effect of RPSF

- Most indicators show substantial improvements after the RPSF project was implemented. Production, sales, income, number of meals consumed, and resilience increased for the majority of households. Further, almost 6 out of 10 households maintained or increased the number of assets owned.
- In most dimensions, households headed by women and men, and youth and adults benefitted equally from the RPSF project.

- Yet, households headed by women were less likely to maintain or increase their ownership of assets compared to men. Contrary to this, household headed by a youth person more often maintained or increased the number of assets owned.

Table A.2. Estimates by country in relation to COVID-19

Country	% reporting production was lost or reduced after COVID			% reporting sales were lost or reduced after COVID			% reporting tot. income was lost or reduced after COVID			% reporting no. of meals were lost or reduced after COVID			% reporting resilience was lost or reduced after COVID			% reporting selling assets after COVID		
	Total	Women head	Youth head	Total	Women head	Youth head	Total	Women head	Youth head	Total	Women head	Youth head	Total	Women head	Youth head	Total	Women head	Youth head
Gabon	74	81	71	75	86	71	65	67	57	54	72	57	63	72	57	20	11	14
Sierra Leone	98	98	97	97	97	96	96	96	95	98	98	97	95	95	94	7	7	6
Burkina-Faso	81	86	80	45	36	40	90	89	91	73	77	75	71	79	80	75	81	75
Mali	79	66	87	91	86	90	80	72	83	86	88	93	78	78	83	62	64	67
Niger	54	51	49	71	63	68	60	68	62	43	44	57	48	41	62	91	88	96
Laos	87	92	91	97	95	100	63	77	59	55	49	63	82	86	85	8	11	2
Mongolia	55	38	58	55	38	58	54	38	56	0	0	0	16	19	23	3	2	2
Pakistan	74	71	69	68	67	68	62	61	64	37	38	39	52	55	46	32	32	40
Kenya	98	100	100	91	93	90	85	92	90	67	72	69	81	82	94	65	65	67
Nigeria	82	80	91	77	80	82	72	77	78	69	73	73	59	58	67	8	8	11
Ethiopia	53	49	69	54	50	69	47	46	57	36	43	34	41	51	44	66	56	65
Bangladesh	75	77	83	83	78	88	81	77	88	57	71	60	56	65	57	24	5	14
LAC-FO	79	79	87	79	79	78	77	76	78	34	38	30	58	72	39	43	45	57
LAC-RCB	77	73	79	59	53	64	79	81	79	43	45	43	66	65	66	43	41	41
Pakistan	100	100	100	99	99	100	94	97	98	100	100	100	100	100	100	30	24	48
Rwanda	83	82	81	79	80	78	76	75	81	92	94	90	61	63	54	11	11	21
Malawi	95	95	93	94	93	94	94	93	93	89	88	87	95	96	93	100	100	100
Gambia	89	87	91	86	87	96	83	74	91	55	59	53	87	81	89	100	100	100
Djibouti	99	100	98	99	100	99	100	100	99	97	98	97	100	100	100	43	53	36

Table A.3. Estimates by country in relation to RPSF

Country	% reporting production was maintained or increased after RPSF			% reporting sales were maintained or increased after RPSF			% reporting tot. income was maintained or increased after RPSF			% reporting no. of meals were maintained or increased after RPSF			% reporting resilience was maintained or increased after RPSF			% reporting the no. of assets was maintained or increased after RPSF		
	Total	Women head	Youth head	Total	Women head	Youth head	Total	Women head	Youth head	Total	Women head	Youth head	Total	Women head	Youth head	Total	Women head	Youth head
Gabon	89	94	86	88	94	100	84	86	100	89	94	100	89	92	100	84	89	86
Sierra Leone	99	99	99	99	99	99	99	99	100	95	95	94	100	100	100	97	97	98
Burkina-Faso	98	99	100	86	91	89	98	99	98	99	100	98	99	99	100	40	34	42
Mali	95	92	100	96	92	97	90	88	87	91	92	87	91	90	80	54	52	50
Niger	83	80	81	72	66	74	85	86	79	90	97	85	87	93	83	14	15	9
Laos	84	92	74	98	98	100	59	65	67	78	72	80	50	40	54	93	91	98
Mongolia	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	98	98	98
Pakistan	77	74	76	57	51	58	48	47	53	82	80	84	74	76	80	75	76	71
Kenya	51	41	48	39	33	42	25	17	17	52	42	40	41	35	27	43	43	48
Nigeria	89	89	89	87	84	89	94	96	96	85	88	80	86	88	87	100	100	100
Ethiopia	98	99	98	97	98	96	95	98	97	95	94	96	93	94	94	60	55	60
Bangladesh	100	100	100	100	100	100	97	98	93	100	100	100	99	100	100	85	97	93
LAC-FO	92	97	96	89	86	91	91	93	100	98	100	100	92	90	96	75	93	83
LAC-RCB	86	82	89	64	57	68	85	80	86	94	94	93	88	86	90	75	77	73
Pakistan	98	100	98	97	96	98	100	100	100	100	100	100	100	100	100	78	79	58
Rwanda	97	96	98	90	90	91	93	91	94	88	85	91	92	90	94	92	92	83
Malawi	82	83	87	78	75	85	72	75	80	71	73	78	75	71	87	86	83	85
Gambia	78	75	80	73	74	82	69	73	82	88	87	96	77	72	76	49	55	49
Djibouti	100	100	100	100	100	99	100	100	100	100	100	100	100	100	100	57	47	64



Investing in rural people