



STOCKTAKING OF **FARMER** **FIELD** **SCHOOLS**

Collective action, self-organization,
and the role of farmers' organizations
in scaling up and institutionalizing FFS

Sub-Saharan Africa



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ACRONYMS

ACC	Adaptation to climate change
AFO	Apex farmers' organization
ANPROCA	National Agency Promoting Agricultural Advisory Services
APFS	Agropastoral field school
CAPAD	Confederation of Agricultural Producer Associations for Development
CMDT	Malian Company for Textile Development
CNOP-G	National Council of Farmers' Organizations – Guinea
DAFI	Diagnostic assessment of farmers' institutions
ESA	East and Southern Africa
FF	Family farm
FFS	Farmer field school
FIFATA	Association for the Progress of Farmers
FUOPAN	SA'A Federation of Unions for Agricultural-Professional Organizations in Niger
FS	Farm school
FUMA	Federation of Maradi Farmers' Unions
GALS	Gender action learning system
GEF	Global Environmental Facility
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
IER	Institute of Rural Economy
INRM	Integrated natural resource management
IPPM	Integrated production and pest management
ISABU	Burundi Institute of Agricultural Sciences
MFI	Microfinance institution
MO	Market operator
MUSO	Solidarity Fund
ONCCS	National Office for Seed Control and Certification
OPVN	Niger Food Products Office
RFO	Regional farmers' organization
SLM	Sustainable Land Management
SOCOPA	Cooperative for Processing, Packaging, and Selling Agricultural Products
SRI	System of Rice Intensification
VSLA	Village savings and loan association

PROJECTS

AD2M	Project to Support Development in the Menabe and Melaky Regions, Madagascar
AROPA	Support to Farmers' Professional Organizations and Agricultural Services Project, Madagascar
DEFIS	Inclusive Agricultural Value Chains Development Programme, Madagascar
IAP/FS	Integrated Approach Pilot Programme on Food Security, Burundi
IARBIC	Intensification of Agriculture by Strengthening Cooperative Input Shops, Niger
PASADEM	Project to Support Food Security and Development in the Maradi Region, Niger
PNAAFA	National Programme to Support Agricultural Value Chain Actors, Guinea
PNSADR-IM	National Programme for Food Security and Rural Development in Imbo and Moso, Burundi
PPILDA	Project for the Promotion of Local Initiative for Development in Aguié, Niger
ProDAF	Programme for the Development of Family Farming, Niger
PRODEFI-II	Project for the Development of Value Chains, Burundi



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SUMMARY

For over a decade, the farmer field school (FFS) approach to agricultural advisory services has been adopted in the vast majority of agricultural development projects funded by IFAD in sub-Saharan Africa. This stocktaking exercise focuses in particular on projects funded by IFAD and FAO in six countries: Burkina Faso, Burundi, Guinea, Madagascar, Mali, and Niger. It also examines the results of a similar study on livestock farmer field schools in Malawi, Rwanda and Zanzibar. Through this assessment, we have sought to understand the extent to which the FFS approach helped peasant farmers engage in collective action, band together and become more autonomous in responding to the problems they face. This assessment has also helped us better understand the role and importance of farmers' organizations and their apex organizations in these processes, and how they could help scale them up and ensure their sustainability by institutionalizing the approach. We divided the FFS into different categories based on their level of farmer participation and the scope of the topics they cover. Some of the projects analysed have "simplified" FFS, which are used to disseminate technologies in order to boost yields for priority crops defined in advance during the project design phase. Other projects have "consultative" FFS, where farmers collectively identify the issues they face in their agricultural practices, and discuss with experts who provide solutions for the farmers to test (development of curricula). "Collaborative" FFS (few of which were in our sample) allow groups to voice their requests and work together to find solutions with the help of a facilitator who is trained in leading adult groups and in helping those groups establish ties with local entities that can help them come up with solutions. The main finding of this analysis is that FFS are underutilized in many of the projects funded by IFAD. Although FFS have the potential to empower farmers to work together to solve the problems they face as those problems arise, the current ways in which the approach is implemented often reduce the level of ownership by farmers and prospects for sustainability.

The study also shows, however, that the involvement of FOs and their apex organizations is highly advantageous in terms of institutionalizing the approach and helping farmers become more autonomous. The potential of FFS is not sufficiently taken into account in the project design phase. Institutionalizing the approach through FOs can help ensure the sustainability of FFS, provided that those organizations receive investment and long-term support. This is well justified, as FFS provide a service that is in the public interest.

The main findings and recommendations are summarized in the table below.

Findings	Recommendations
<p>The FFS approach has been adopted in 89% of the projects funded by IFAD in sub-Saharan Africa (projects with components covering agro-sylvo-pastoral, fishing and rural/value-chain development).</p>	<p>Continue to pursue the FFS approach in projects, taking into account the recommendations of this report.</p>
<p>The FFS approach is underutilized in terms of its ability to help peasant farmers band together and become more autonomous.</p>	<p>IFAD needs to ensure that FFS follow the principles of farmer participation and empowerment, in line with the approach's guiding principles, while keeping open the possibility of adapting to local realities.</p>
<p>The value-chain approach adopted in the projects funded by IFAD encourages the project design teams to separate productive aspects from institutional aspects and aspects relating to the structuring of farmers for aggregation, processing and sales.</p>	<p>Make sure that FFS activities are linked to the upstream and downstream parts of value chains, including for instance FOs in all systems relating to peasant-farmer groups (FFS, formal structuring, sales and supply). The tools used to help FOs develop/mature must include aspects relating to FFS (e.g. service for members and strategy for boosting membership).</p>
<p>The study confirms that when the implementation of FFS incorporates existing organizational dynamics and involves collaboration with existing FO networks, there are better prospects for ensuring the sustainability of the FFS and scaling them up.</p> <p>When apex FOs are sufficiently structured, they help ensure the consistency and sustainability of the FFS approach. Investing in apex FOs, however, requires a commitment over a long period of time before the long-term effects of the investment can be felt.</p>	<p>Work with FAO's FFS team to draw up guidelines/advice for the project design teams, taking into account the particularities of IFAD projects (e.g. FFS approach as part of a broader strategy) in order to ensure that FOs and their apex organizations are included more in designing and implementing the FFS approach. These guidelines should include the following:</p> <ul style="list-style-type: none"> • Ensure that apex FOs are systematically involved in designing and implementing projects. This means that apex FOs must be involved from the project design phase in order to integrate this service for members into their strategic development plans, and it means that medium/long-term collaboration must be established with them in order to ensure the sustainability of FFS and scale them up. • "Learning by doing" (giving apex FOs a role in implementing the FFS approach) will make it possible to adapt the approach to each FO's technical, human and financial capacities. • If apex FOs exist in a particular country but are not present in the project zones, their participation as operators in the implementation of the project should be discussed. • The interaction between those FOs/apex organizations and research centres and extension services should be discussed in each country in order to propose the best form of collaboration.

The project management units and implementing partners for IFAD-funded projects may utilize, where available, human resources trained in the countries by FAO (network of master trainers, list of facilitators and entities trained in the FFS approach). If no such resources exist, some projects call on international/national consultants or NGOs to create tools for training FFS trainers and facilitators – but it would be better to build local capacities.

In countries where national FFS capacities do not exist, IFAD needs to collaborate (including financially) with FAO in order to support the development of national networks. When designing IFAD projects, part of the budget should be allocated to training or to strengthening the capacities of master trainers as well as research, training and advisory bodies.

Collaboration between IFAD and FAO should also enable them to find models to ensure the viability of national networks of facilitators.

Concerning access to funding, the introduction of financial services associated with FFS (e.g. mutual solidarity funds, savings and loan associations, access to loans through microfinance institutions, etc.) was also noted as having a positive effect on members' financial capital and on their ability to engage in collective action.

To make FFS more effective, the use of savings and loan associations should be systematically facilitated, with the possibility of coupling them with collective income-generating activities in order to ensure the group's financial operations. It is better to strengthen existing dynamics by promoting/strengthening funding models that are already used in villages by FOs or local communities.

Concerning human and social capital, FFS have an impact on farmer's capacity-building, self-confidence and leadership. But the impact of FFS on farmers' human and social capital cannot be measured using the information collected by the project teams.

The system for monitoring and evaluating projects should be reviewed in order to incorporate aspects relating to the improvement of social, human and financial capital through FFS. Collaboration must be developed with FAO's teams in order to work on those indicators.

The study shows that the organizational and empowering effects of FFS depend in part on the content of the training modules and on how farmers' insight is gradually incorporated into the training materials.

In connection with FAO study conducted in the Sahel on the content of FFS training modules, and in order to improve the quality of FFS training content for master trainers and facilitators, the content of curricula used in existing FFS promoted through IFAD-funded projects should be assessed. The assessment should allow for additional collaborations with projects carried out by FAO or any other organizations, such as NGOs and apex organizations with FFS expertise.

It also depends largely on the quality of the training received by the master trainers and the facilitators (duration, content, supervision, etc.)

Some of the apex FOs questioned in the study continue to promote the FFS approach "in their own way" after the end of the project.

The FFS approach adopted by apex FOs after the end of projects should be **analysed in more detail** in order to understand the recommended "adaptations" and how well they continue to address farmers' needs.



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INTRODUCTION

Farmer field schools (FFS)¹ are part of an approach that seeks to provide collective and mutual learning opportunities for adults. The idea is to promote “learning by doing” through participatory methods, knowledge and experience exchange, direct observation through hands-on exercises in the field, discussion and decision-making. Instead of passively receiving technologies passed down to them, farmers are empowered to find solutions to the problems they face in their productive activities and enterprises. In order to develop a curriculum specially tailored to a particular area, an FFS group must first collectively analyse the problems that need to be addressed. FFS address a growing number of technical subjects: soil, crop and water management; seed production and varietal trials; livestock farming; agropastoralism; aquaculture; agroforestry; nutrition; value chain and connection with markets; collective organization; etc.

FAO, other multilateral institutions (such as IFAD), and a number of NGOs have encouraged the development of FFS to address a wide range of challenges and technical fields in over 90 countries.² IFAD promotes FFS in many of the investment projects it funds, and has acquired substantial experience in FFS over the years, particularly in sub-Saharan Africa, where FFS are playing an increasingly predominant role in agricultural advisory services. In terms of their effectiveness, FFS have been a success throughout Africa, and demand for them continues to grow. Although a lot has been done and learned about FFS – particularly in connection with the 30th anniversary celebrations in 2019³ –, no experience assessment has been conducted nor has any attempt been made to draw lessons from IFAD’s experience. Such an assessment is appropriate and desirable not only because of the frequency and sheer number of FFS activities

1 www.fao.org/capacity-development/news-list/detail/en/c/1129922/

2 www.fao.org/farmer-field-schools/overview/en/

3 www.fao.org/3/ca5131en/ca5131en.pdf

in IFAD's portfolio, but also because of the way in which FFS are promoted and funded as a "component" of investment projects. The "FFS through projects" approach faces major challenges when it comes to ensuring the sustainability of FFS and scaling them up beyond those projects.

Central among those challenges is the institutionalization of FFS. Institutionalization is defined as the process by which new ideas and practices are adopted by individuals and organizations to become an integral part of "the norm". Some countries, such as Kenya and Uganda, have made progress in terms of incorporating FFS into public policies and systems for agricultural advisory services. Other countries have indicated that they would like to do the same. But other methods for institutionalizing and scaling up FFS still need to be explored – particularly institutionalization through farmers' organizations (sustainable farmer-led institutions that IFAD also invests in throughout Africa).

Scaling up and institutionalizing FFS presents a big opportunity for countries in the region. That is why the Rural Institutions desk and the Sustainable Production cluster of IFAD's technical division (PMI) are currently finalising a joint assessment of livestock farmer field schools in the East and Southern Africa (ESA) portfolio. This stocktaking aims to expand the analysis to cover farmer field schools in the West and Central Africa (WCA) region with a focus on crops and agropastoral systems, and to incorporate the observations, conclusions and recommendations of both assessments.



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OBJECTIVES, STRATEGIC QUESTIONS AND INITIAL HYPOTHESES

The objective of this work is to assess the projects funded by IFAD in sub-Saharan Africa (Burundi, Guinea, Madagascar and Niger) as well as projects carried out by FAO,⁴ and to explore whether the FFS approach facilitates the emergence of collective actions and self-organization to address the problems farmers face. It also seeks to offer insight into existing (or potential) relationships between farmers' organizations (FOs) partnered with investment projects and FFS, particularly with regard to institutionalization, sustainability and scaling up.

We have three working hypotheses: i) that certain aspects of the FFS approach, particularly collective and mutual learning and self-discovery, are conducive to promoting collective action and self-organization among farmers; ii) that self-organization is in itself a means of institutionalizing and scaling up FFS, when farmers go beyond grassroots organization to form unions and apex organizations; and iii) that the adoption and promotion of FFS by existing FOs could expand the role of those organizations to include offering their members services to help them overcome the challenges they face (and in doing so, make those FOs more attractive and long-lasting).

If those hypotheses are confirmed by the assessment, it would mean that convergence and synergies do exist between FFS and FOs and should therefore be pursued more systematically between the "FFS components" and "FO capacity-building components" of investment projects funded by IFAD. In particular, apex FOs could be recognized as privileged partners in helping define, implement, institutionalize and ensure the sustainability of FFS.

⁴ Because of FAO's extensive experience and expertise in FFS, particularly in this region, the analysis was expanded to include FFS projects funded by FAO in other countries of interest (Burkina Faso and Mali).



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METHODS

The first step was to conduct a document review of 26 projects funded by IFAD in 13 different countries in the WCA and ESA regions (see list in appendix 1). Four of those countries were then selected for a more in-depth analysis. The objective was to select countries where past or current projects might offer insight on the focus of our research and on the proposed hypotheses. The following criteria were used to select the four countries:

- Presence of farmer field schools (FFS) or agropastoral field schools (APFS);
- Main results of the FFS;
- Existing ties between FFS members and FOs;
- Role of FOs in implementing the FFS;
- Impact of FFS on collective action and self-organization; and
- Interest/ownership by the government and institutions.

After the initial analysis of the projects in IFAD's portfolio in sub-Saharan Africa, the following countries were selected: Burundi, Guinea, Madagascar and Niger. The analysis also takes into account the results of the assessment conducted in East and Southern Africa on livestock farmer field schools in Rwanda, Malawi and Zanzibar.⁵ A working group was also created. The group is made up of technical experts from FAO and IFAD who are familiar with FFS. An initial meeting was held after the four countries were selected to define the scope of the study. FAO projects in the selected countries were included in the analysis, and Mali and Burkina Faso were added because FAO has had relevant experience there concerning our work. In all, this stocktaking analyses data from 14 projects funded by IFAD (10) and FAO (4) in six countries. The FAO-IFAD technical committee also gathered at the July 2021 meeting, when the study's initial results were presented.

5 IFAD Stock-taking exercise Livestock Farmer Field Schools (L-FFS), East and Southern Africa (March 2021).

A literature review was conducted covering various available works on FFS and project documents from the six selected countries. A template for semi-structured interviews was created (see appendix 2) for the project teams, FOs, and entities in charge of FFS, and interviews were organized via Zoom and WhatsApp (see list of people interviewed in appendix 3). Discussions were also held with experts from FAO and other organizations. This document is based on the analysis of those interviews. It is essentially a qualitative evaluation as only a small amount of quantitative data has been collected at this stage, aside from the data available in the project supervision reports, mid-project reviews and evaluation reports. Also, given the current COVID-19 pandemic, it has not been possible to plan missions in the field to discuss with FFS participants about the information that was collected. It should be noted that this analysis covers farmer field schools and agropastoral field schools, and that any information on livestock farmer field schools is from the above-mentioned study in East and Southern Africa.⁶

6 Another IFAD project in the NEN region (Jordan) is presented in appendix 4.



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ASSESSMENT OF FFS ANALYSED IN THE SELECTED COUNTRIES

The table below shows how many FFS were set up by the end of each project, or, if the project is still in progress, based on the latest available data from the supervision or completion reports (not planned FFS, only those actually up and running).

Table 1 Projects analysed, number of FFS established, main topics covered and results noted by the projects

Country	Projects	FFS established	Topics covered	Main results of the projects
Burundi IFAD	PNSADR-IM (2014-2022)	413 (327 rice/SRI/86 milk)	Milk and rice value chains, techniques for boosting rice and milk production	Adoption of techniques with higher yields
	PRODEFI-II (2015-2021)	144 (35 food crops/109 milk)	Boosting rice and milk production, ACC, biodiversity and resilience	Adoption of techniques with higher yields
Burundi FAO	IAP/FS (2017-2022)	106	Nutrition, SLM/INRM (agroforestry, rotations, contour lines, intercropping, etc.) value chains	Effects on nutrition
	Tamp Kagera	N/A	SLM, catchment management, INRM, agricultural diversification	More dialogue between stakeholders, significant improvement in land management, and fewer conflicts
Guinea IFAD	PNAAFA (2013-2019)	86 (36 rice/50 market gardening) ⁷	Improving production techniques for rice and market gardening; production of compost; rice and horticulture nursery; density, doses, and application of pesticides and mineral fertilizers	Greater social cohesion; higher yields; better communication; acceleration of agricultural advisory services
Madagascar IFAD	AD2M-I AD2M-II (2015-2022)	892 1,129 (rice, maize, dry grains, honey and market)	Technical intensification, improved varieties (rice, bean, lima bean, maize), conservation agriculture, agricultural equipment (plough, cultivator, furrower), beekeeping, profit and loss statement and cost price, integrated pest management	Farmers are more resilient, better water management in rice cultivation, dissemination of new varieties, adoption of techniques, better understanding of profit and loss statement
	AROPA (2009-2019)	865	Food security, improved techniques	Greater production and productivity, household food security, market integration
	DEFIS (2018-2024)	860 FFS 301 FS	Seed production; value chains for pigs, beekeeping, beans, cereals, compost, etc.	Use of certified and high-performance seeds, efficient irrigation system and rational use of water, crop care and erosion control, biological pest control, semi-intensive livestock farming
Niger IFAD	PPILDA (2002-2013)	N/A	Local innovations for soil fertility management (<i>zai</i> , half-moons), ANR, varietal diversity (improved and local varieties), fertilizer micro-dosing, pest control, etc.	Increase in practices for managing soil fertility, higher yields for rainfed crops; good understanding of crop varieties and pest-control techniques.
	PASADEM (2012-2018)	107	Agricultural intensification, soil-restoration technique, improved varieties	Greater productivity, seed diversification, rate of adoption, but questions concerning sustainability
	RWUANMU (2013-2018)	503	Market gardening, nurseries, crop-management techniques, fertilizer micro-dosing, biopesticides, organic fertilization, water management (plastic films)	Peer learning deemed satisfactory
	ProDAF (2015-2023)	995 (515 cereals/480 market gardening)	Soil preparation, ACC, biopesticides, fertilizer micro-dosing, improved varieties	High rate of adoption for the techniques and practices taught at FFS; high female participation
	GCP-NER-043-LDF	767	Better agropastoral production, ACC, agroforestry, ANR, variety with short planting-to-harvest cycle, composting, organic and mineral fertilizer, biopesticides and aqueous extracts, NPK micro-dosing, etc.	Improvement in ACC, FFS have a structuring effect in communities; stronger collective action
Regional FAO Mali	GCP-RAF-482-EC	80	Integrated pest management (IPM) for cotton	Lower production costs; improvement in the health of cotton farmers; structuring effect and greater social cohesion

⁷ Few FFS were set up during this now completed project because the FFS approach was introduced late in the project (two years before the end). FFS were not initially planned in learning and advisory-services initiatives.



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FFS PARADIGM AND VARIATIONS IN IMPLEMENTATION

FFS first appeared in Indonesia in the 1990s as an alternative to conventional top-down approaches in agricultural extension services. By taking a participatory approach and giving participants an opportunity to conduct experiments, FFS marks a paradigm shift in agricultural advisory services. Initially the aim of FFS was not only to disseminate new techniques, but also to improve farmers' problem-solving skills and help them draw on their endogenous knowledge in order to "empower them to solve problems for themselves" (Kenmore, 1996). FFS therefore seek to have an impact on group and individual learning and to help farmers improve their skills and become more autonomous, while also promoting collective action and self-organization (Fris-Hansen and Duveskog, 2012). Implementing this approach involves collectively identifying priority problems and establishing curricula for a growing season on a group plot with weekly meetings supervised by a facilitator (Pontius et al., 2002). The facilitator may be a technician from the national agricultural council, a private advisor (e.g. NGO), or a peasant-farmer facilitator from an existing FFS and/or FO.

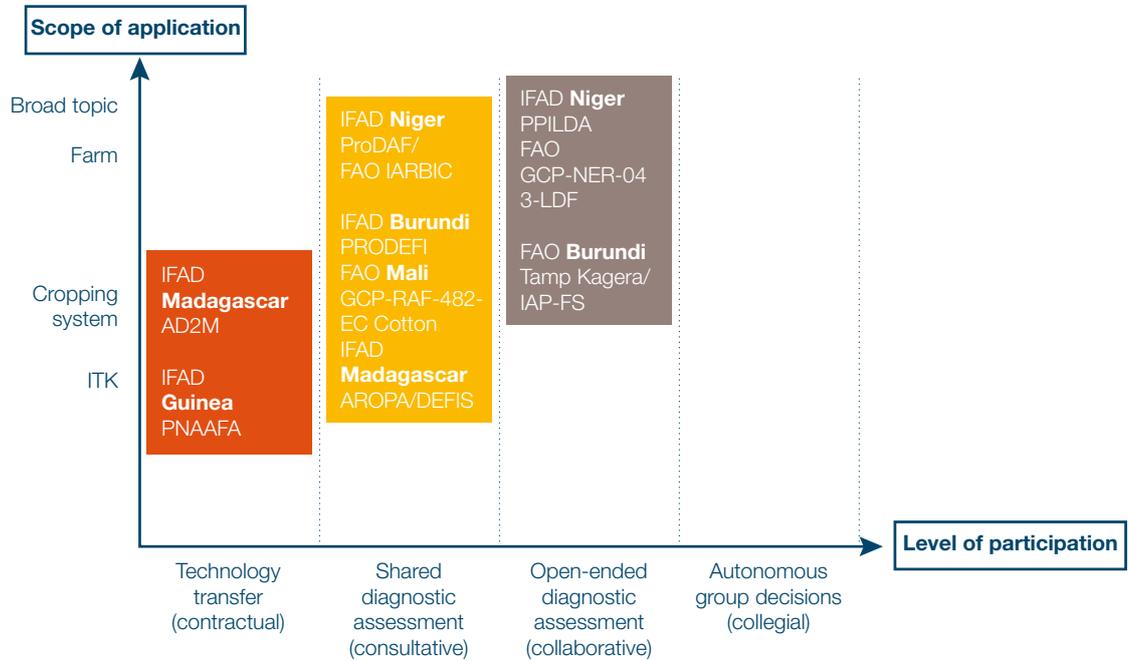
The entry point for FFS is often the introduction/testing of a new technique or technology (e.g. improved variety, integrated pest management, etc.) by a group of farmers, comparing it with a conventional method (farmer field plot). Other aspects essential to the approach include: agroecosystem analysis, participatory identification of problems to solve, special topics identified in the community and reported by facilitators to be dealt with during their refresher courses, and group energizer and ice-breaker activities (Duveskog, 2013). Those group activities are important for strengthening group cohesion, communication, participation, mutual understanding and leadership. FFS are coupled with exchange visits and open-day events where results are presented, thus facilitating dissemination to non-members. In some cases, a self-evaluation is conducted within the FFS in order to critically assess the process and results obtained, and consider what actions to take.

In scaling up the approach in over 90 countries, there has been significant variation in FFS implementation depending on who is in charge of dissemination, what the objectives (and expected results) are, and how well the approach is understood by the teams in charge of designing and executing the projects. According to a meta-analysis by Waddington et al. (2014), joint agro-ecosystem analyses were performed in only 60 per cent of FFS, and exchange visits between FFS were organized in only half the sample from their study. Moreover, the group dynamics were promoted in only 30 per cent of the cases analysed. The results show that there is great variation in how the approach is implemented, which may make it easier to understand the existing dynamics.

Bakker et al. (2021) identify four types of FFS that differ from one another in terms of farmer participation and scope of application (field, farm, catchment, etc.): contractual FFS, consultative FFS, collaborative FFS, and collegial FFS. Contractual FFS are used for technology transfer, teaching new practices and facilitating the adoption of innovations previously identified through agricultural research or by experts. Participation is limited to a consultation with an outside source to assess the needs for a given crop. With consultative FFS, farmers are consulted on their understanding of a situation or problem, but the final decision regarding the topics and curriculum is made by the projects or experts. Lastly, collaborative FFS offer farmers greater autonomy. It is the farmers who, with help from the facilitator, identify which topics to focus on, define the curricula, and identify local innovations developed by farmers. FFS content is therefore not established in advance. The topics change over time, sometimes addressing broad subjects such as farm management, human health, and landscape and catchment management. Collaborative FFS place farmers in a position where the needs of local farmer groups are voiced and where critical thinking helps build a vision for all farm systems, and sometimes even for an entire territory. Collegial FFS is the most advanced stage. The group is in charge of making its own decisions and choosing topics and curricula for the field schools. The facilitator's role is only to encourage the group and make sure it has the right tools.

The diagram below, inspired by Bakker et al. (2021), shows the different projects analysed in this work. They are organized by level of farmer participation and scope of application for the topics covered in the FFS, based on the project documents and interviews with the project directors. Although most projects focus initially on crop-management techniques for a particular crop or on a cropping system, this entry point facilitates speedy mobilization of farmer groups and should allow for scaling up to farm level. FFS that do not allow for scaling up seem destined to terminate after just a few crop or livestock cycles. It appears that it is ultimately the farmers' level of participation and autonomy that makes it possible to expand the topics of interest and mobilize FFS participants. Are some topics more effective than others in terms of making the approach as participatory as possible? Without being able to offer a conclusive answer, some analysis results show that approaches such as integrated production and pest management (IPPM), sustainable land management (SLM), catchment management, adaptation to climate change (ACC), and agroecology result in higher farmer participation because the farmers themselves are required to select which technologies to use in order to solve specific problems at certain sites. The interdependent nature of those topics also requires greater collective action.

Diagram 1 Type of FFS implemented in the projects funded by IFAD and/or implemented by FAO, broken down by level of farmer participation and scope of application of the topics covered





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CONTRIBUTIONS OF FFS

The grey literature shows that FFS have a positive impact on boosting agricultural productivity, improving soil fertility, reducing poverty, improving organization at community level, collective action and the autonomy of farmers. FFS also help reduce farmers' fears concerning the risks associated with adopting new technologies (Pallis, 2006; Settle et al. 2016). More specifically, the projects are analysed in the scientific literature using the analytical framework of Van Der Berg et al. (2020). That framework analyses the outputs, outcomes and impacts of field schools based on four pillars: natural capital (ecosystem management, yields, diversification, food security and resilience), financial capital (income, costs, profits, savings, loans, assets, financial security and poverty reduction), human capital (skills, knowledge, critical thinking, confidence, quality of life), and social capital (networking, social relationships, collective action, leadership, self-organization, autonomy, access to services, etc.). Although that information is not fully available in the documents that were consulted, we analyse in the following paragraphs the contribution FFS has had on natural, financial, human and social capital in the projects studied.

Analysis of the logical frameworks of the projects in this assessment shows positive results for **natural capital**: Adoption of technologies and production/productivity are increasing. Table 2 presents an overview of the FFS indicators obtained through the project supervision/evaluation reports. It shows that FFS facilitated the adoption of technologies, with adoption rates ranging from 22 per cent to over 80 per cent, and increases in yield between 30 per cent and 50 per cent depending on the project and speculation.⁸ Unlike FAO's FFS projects, it is difficult in the projects funded by IFAD to fully attribute the increase in productivity to the innovations introduced by FFS, as other investments contribute significantly to those improvements in yield. For example, improvements

⁸ It should be noted, however, that these increases in yield are not always directly attributable to the adoption of technologies through FFS, but also to hydro-agricultural infrastructure, the provision of inputs and agricultural equipment through projects, literacy training, etc.

in hydro-agricultural infrastructure and in water users' management of irrigated areas have just as much of an impact on rice yields as the introduction of the system of rice intensification (SRI) through FFS. Also, in order to figure out whether the increases in yield are significantly linked to project-related investments (as opposed to climate factors, for instance), the results for members participating in FFS should be compared to the results for non-members, and the differences in yield should be analysed.

Moreover, the "rate of adoption for technology" indicator is somewhat hazy. It does not appear to be measured the same way in all projects. Some projects record the number of technologies adopted, while others record the overall rate of adoption. Also, are those rates of adoption mainly attributable to FFS, or are there other factors that may be combined in order to help farmers lastingly introduce those innovations (e.g. access to funding, access to inputs, etc.)? Moreover, it is difficult to gauge from the project documents that were reviewed the effects of FFS on farmers' decisions with respect to changing the practices they use in their crop and/or livestock systems, and throughout the entire farm. The methods used to evaluate the projects give only a partial view of the complex process of introducing innovations in rural areas (Glover et al., 2016). This has also been observed in a number of other projects (Bakker et al., 2021), which confirms the interest in understanding the temporal dynamics of changing farmers' practices, by identifying drivers of change, obstacles to adopting changes, and the adaptation of practices to suit the farmer's priorities (Mawois et al., 2019). A more in-depth analysis might also show the impact of the approach for each type of FFS. The case study by Bakker et al. (2021) on the agroecological transition in the Sahel shows that collaborative FFS create more possibilities for farm-level changes with the introduction of innovations going far beyond what is tested in the FFS. Bakker et al. (2021) show that collaborative FFS in Togo were instrumental in the adoption and introduction of compost, biopesticides and legumes in cropping systems, whereas the consultative FFS that were analysed in Burkina Faso only helped farmers adopt organic fertilization. The fundamental difference between those two projects is the way in which the FFS approach was implemented. In Burkina Faso, the curricula used in FFS to improve soil fertility were designed by experts and disseminated in a standardized fashion across a large region. That strategy resulted in lower farmer participation and weaker decision-making power for farmers in terms of which practices to favour based on their priorities, constraints and preferences. In Togo on the other hand, AVSF's strategy involved setting up FFS without defining their content in advance (during the project design phase). This collaborative approach to FFS meant that facilitators had to make an effort to listen to the farmers and (re)formulate their requests in order to identify, based on the issues raised, solutions that were manageable for farmers. It also showed that farmers are capable of working together to solve their problems over time.

The livestock farmer field schools developed through IFAD-funded projects in the ESA region have had a number of effects on natural capital:⁹ higher quantity and better quality of fodder, better genetics and animal health, higher volume of milk produced and sold, better fattening performance for cattle and goats, introduction of climate-smart practices in livestock farmer field schools, etc.

9 IFAD Stock-taking exercise Livestock Farmer Field Schools (L-FFS), East and Southern Africa (March 2021)

Table 2 Main monitoring and evaluating indicators for FFS, as recorded by the projects

Indicator (M&E) Project country	% increase in yield	Rate of adoption for technology
Burundi		
PNSADR-IM	40% to 50% rice and milk	N/A
PRODEFI	> or = 50% rice, bean, maize, banana	N/A
Tamp Kagera	> 30%	Fewer land conflicts
IAP-FS	N/A	N/A
Guinea		
PNAAFA	Not directly attributable to FFS	N/A
Madagascar		
AD2M-I & -II	> 50% rice (79% SRI, 53% without control of water), 50% green bean, lima bean and groundnut	60% for crops, 42% SRI/improved rice cultivation, 22% fertilizer
AROPA	30% bean, 64% potato, 100% rice in improved cultivation system, 150% rice in SRI	Lower mortality for fish larvae and poultry, lower post-harvest losses
DEFIS	Data not yet available	Data not yet available
Niger		
PPILDA	30% to 50%	N/A
ProDAF	> 30% for rainfed crops, 40% for onion, cabbage, tomato and 50% for other crops	50%: 87% seeds with a short planting-to-harvest cycle, 47% ANR, 60% compost, and 50% to 80% for ACC
FAO GCF ACC	N/A	72% of target groups adopted at least 2 technologies
Mali		
Cotton project	Relatively insignificant compared with "conventional" crop-management techniques for cotton	92.5% of farmers adopted IPPM

With regard to **financial capital**, although the information is not systematized, FFS have been noted to have an effect on the cost structure of farms. According to the results of FAO projects (Settle et al., 2014), the adoption of IPPM in the cotton sector (Mali, Burkina Faso) helped lower production costs by reducing/eliminating the use of insecticides (and biopesticides). This led to savings of US\$386,000 over an eight-year period in Mali's Bla region alone (or a 47,000-litre reduction in pesticide use). Higher gross margins were achieved thanks to the reduction in production costs (estimated at 20 per cent), which helped boost cotton income. Higher incomes for food crops (millet, sorghum, cowpea, sesame) are also mentioned in Niger, following the adoption of soil fertility management and fertilizer micro-dosing (PPILDA, PASADEM, ProDAF). The introduction of financial mechanisms to complement FFS (e.g. mutual solidarity funds, savings and loan associations, access to loans through microfinance institutions, etc.) was also noted as having a positive effect on members' financial capital. In several projects, small loans were used to set up income-generating activities on farms and in other areas.

It is difficult to measure the actual benefits of FFS in terms of **human and social capital** based on the information available in project reports. Those reports sometimes indicate positive results for FFS members' technical and social capacities, but that information is not systematized. In Madagascar, access to local agricultural advisory support was an important achievement of the DEFIS programme (in continuity with the AROPA project), which promoted knowledge-sharing between farmers through FFS. Many FOs and a few NGOs were entrusted with running FFS and farm schools (FS). The programme entered into 15 agreements with regional FOs, apex FOs (national), and NGOs, that were in charge of organising and overseeing training in the FFS and FS. Since the start of the programme, 336 technicians have provided support and advice to 62,841 family farms.¹⁰ As this example shows, the information remains at a level of product indicators. Also, the review of the project documents shows that the information needed to answer our initial question is unavailable. That information is often patchy and does not provide a comprehensive understanding of the actual situation. It is often by examining qualitative information available in certain sufficiently detailed assessment documents, or by interviewing stakeholders in the field, that those benefits can be measured. In Niger, stakeholders previously involved in the IFAD-funded PPILDA project said that thanks to the FFS created through the project, certain peasant-farmer leaders became important human and social resources in their respective localities. Some of those leaders, for instance, were elected as municipal advisors to defend the interests of their communities. The groups formed through those FFS now make up a solidarity and community-support network thanks to the income they are able to generate through different activities developed by the FFS (sale of improved seeds and food products, fattening, various services).

Important information is therefore lost in the project reports concerning financial aspects, and in particular concerning the contribution of FFS to the development of farmers' social and human capital. Monitoring and evaluation indicators provide little information on the effects and impacts of FFS on collaboration, empowerment, and adaptation to local conditions (e.g. participants' capacity to innovate). A study conducted by Van Der Berg et al. (2020) proposed indicators to better understand the impact of the field-school approach in terms of human and social factors. Those indicators are summarized for information purposes in the following table (and could be refined for use in designing projects).

10 Aide-Mémoire mission de supervision DEFIS, June 2021.

Table 3 Indicators for measuring the human and social impacts of FFS

Indicators (human and social capital)	Description
Capacities for innovation and experimentation	Innovation beyond the aspects taken into account in FFS, adaptation at farm level
Confidence in oneself and in life	Change in attitude, positive view of their ability to change things, enthusiasm/motivation, ambition and critical thinking.
Improvement in quality of life	Comfort and joy felt by participants in their life (family health, comfort and ability to send their children to school). For example, the reduction in pesticides through IPPM and diversification/nutrition introduced through FFS have an impact on family health.
Acquisition of social skills	Ability to speak in public, listen to others without interrupting, respect the opinions of others, help neighbours, etc.
Trust, connections and relationships	Impact on gender equality, decision-making and leadership, building solidarity and group cohesion.
Collective action and networking	Actions relating to group supply, processing and/or sales. Collective income-generating activities, joint work for planting, amenities, etc. savings and loan groups, emergence of associations, cooperatives or any other type of formal organization.
Dissemination outside FFS	Dissemination of practices to others
Emancipation	On the issue of gender, improvement in women's decision-making power and conjugal relations.
Access to services and markets	Measuring the improvement in farmers' access to services (techniques, advisory support, etc.) and in their ability to sell their products, through their organizational capacities and negotiating power.



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SELF-ORGANIZATION AND COLLECTIVE ACTION

FFS is a method that encourages “learning by doing” through hands-on field work. By allowing farmers to conduct experiments as a group, led by a facilitator whose role is to help them question themselves and improve their analytical skills, FFS help create a group dynamic and encourage horizontal knowledge-sharing. The idea is to meet regularly in order to see how the crops are progressing by observing them, testing ideas and coming up with responses as a group. Exchange visits are also organized at field plots, bringing together different groups that have taken the same approach. The visits are an opportunity for the farmers to raise new questions and share their knowledge. Developing ideas together and learning from one another is conducive to finding collective solutions and to helping farmers become more autonomous. But the benefits in terms of collective action and scaling up will vary depending on how the approach is implemented (selection of beneficiaries through FOs or not, type of provider, objectives, experience in the country, etc.). FFS is time-consuming and requires a lot of interaction compared with more “vertical” approaches. The project teams and implementing partners need to have a good understanding of the FFS approach and fully adhere to its principles and objectives.

“Technology transfer” FFS (also referred to as “simplified” FFS) for facilitating swift adoption of technical innovations without focusing on building the human and social capital needed to solve future problems that farmers will face on their farms. In the PNAFAA programme in Guinea, the cascade strategy is used to implement innovations. The leaders of village grassroots groups receive training in groups of 20 (two people from each grassroots group). Their training focuses on innovations identified by the project to address the needs of farmers. Those leaders then replicate what they learned in their own fields or in the fields of other members of the group/FFS.

Coupled with radio broadcasts, this FFS adaptation has helped create a “ripple effect” resulting in the swift adoption of those innovations by “strategically seeking out roadside field plots in order to make the results more visible”.¹¹ According to the national council of farmers’ organizations in Guinea (CNOP-G), which is in charge of implementing the PNAFAFA programme, the creation of simplified FFS has only a marginal impact on the extent to which farmers band together collectively, as the approach aims above all to introduce technologies. The FFS disappear once the technologies identified by the project are adopted, as the only mission of the FFS is to introduce innovations. The growth from one rice-growers’ union to 17 structured unions, and from one market-gardeners’ union to 19 structured unions in the Faranah region is not attributable to FFS. Rather, it is attributable to other tools put in place by the apex organization with support from the PNAFAFA programme to help farmers band together collectively (e.g. diagnostic assessment of farmers’ institutions). The phenomenon is also attributable to the fact that the farmers have an interest in receiving support through the project.

Likewise, the “simplified” FFS set up in Madagascar through the AD2M-I project after the mid-term review, relayed and improved on through the AD2M-II project, helped obtain a fast response to the adoption of technical innovations in the value chains identified and supported by the project: rice, bean, lima bean, onion, groundnut, maize, honey and pork. The field schools are led by an agricultural technician trained in agricultural, economic, and technical aspects relating to the intended speculation, in group dynamics, in preparing observation materials and in crop budgets. Knowledge is passed on through hands-on learning where a group of roughly 20 people tests an innovation on an individual field plot, comparing it with conventional techniques used on an adjacent plot. Exchange visits for farmers are organized on field plots where the effects of the different techniques can be clearly seen. According to our interviews, FFS are not places where collective action is sparked. Experimentation occurs on individual field plots. When the farmers are informed of the importance of banding together as cooperatives to sell their products to market operators, it is at the instigation of the project teams. NGOs in charge of FFS facilitate the creation of cooperatives in order to offer group sales and team up with an MO. A few peasant-farmer leaders appear to emerge from the FFS to galvanize those cooperatives dealing with MOs. In these two examples, the field-school approach appears to have shifted away from its philosophy by abandoning the collective element and simply resembling field plots for demonstrations conducted by peasant-farmer leaders.

Consultative and collaborative FFS are more conducive to the emergence of peasant-farmer leaders and FOs. The interviews showed how peasant-farmer leadership could emerge or be strengthened through consultative FFS, and especially collaborative FFS. A notable example is the creation of groups, unions and apex organizations for seed producers from farmer field schools. FFS make it possible to train other farmers interested in seed production, and thus help respond to demand from members (farmer groups) that have tested improved varieties, effective crop-management techniques, or non-members that have seen the results in the fields of FFS members. In Niger, the first seed-producer groups in the Maradi region were created through FAO’s IARBIC project, and were subsequently strengthened through the IFAD-funded PASADEM project. Those groups are now structured within departmental unions and within a regional federation in Maradi: SA’A. Those well-structured groups manage input shops that were set up or strengthened through the ProDAF programme (see case study 1 below). A similar dynamic has been observed in Burundi, through the PRODEFI project, where some FFS have used the structuring support fund made available through the project to specialize in high-quality seed production with support from

11 According to what project stakeholders said, as no data are available or directly attributable to FFS. The project carried out many other activities (amenities for rice and market-gardening fields, provision of inputs, roads, access to loans, etc.).

ISABU (Burundi Institute of Agricultural Science) and ONCCS (National Office for Seed Control and Certification). Those field-school leaders have banded together to form cooperatives and unions. In Mali, it was observed that many farmer-facilitators who were trained in the FFS approach through FAO's FFS/ACC project (GCP/MLI/033/LDF) took on new responsibilities either within their municipality or within FOs (FAO, 2018).

Case study 1 – NIGER

Emergence of leaders and structuring up to apex level, Maradi seed producers¹²

The SA'A federation of Maradi comprises 25 unions of 244 grassroots FOs, for a total of 11,000 members (45 per cent women). The federation has one internal leader per union who works in conjunction with the network of FFS facilitators created and supported by FAO in Niger. The network of millet, cowpea, sesame, groundnut, and sorghum seed producers comprises FOs that belong to SA'A and that are the beneficiaries of FFS set up through FAO's "input" project (1998–2008) and IARBIC project (2009–2015). The FFS approach allowed members of the federation to place group orders for large volumes of inputs. SA'A is therefore now in charge of the group supply of 1,500 tonnes of fertilizer for its members each growing season. As its members saw their production of food crops increase, thanks in particular to their use of improved seeds and fertilizers, they came up with a plan for the group sale of cereals (in addition to seeds) through contracts with the OPVN (Niger Food Products Office), the Nigerien government's food crisis unit and the WFP. The apex organization has been managing the aggregation and storage of roughly 3,000 tonnes of millet and sorghum each year since 2012. The FFS approach has not only led to the adoption of improved cereals seeds by 80 per cent of members, but has also made it possible to offer a whole range of services: farmer field schools, input shops and cereal banks.

¹² Based on our interviews with the SA'A federation.

In Burundi, the conclusions of the sustainable land management project (Tamp Kagera FAO/GDT) stated that field schools have a structuring effect on peasant-farmer leadership. Organising the FFS around a board comprising at least one chair, one secretary, and one treasurer allowed for collective actions going well beyond the field school: medical insurance, access to funding, purchase of goods for members, etc. The leaders of the groups included in the FFS were consulted by local leaders and were invited to various meetings, and visitors came to share experiences with them. The FFS transformed into associations, and sometimes even assumed cooperative status thanks to their leaders. In this project, FAO put in place the right elements in order for the FFS to be as collaborative as possible. The SLM promoted by the project for the management of catchment areas required joint responsibility and a mutual effort to seek out technologies and organizations adapted to the particularities of each area.

Case study 2 – MALI

How the introduction of FFS/IPPM in Mali's cotton sector led to the emergence of the Bla Farmers' Network (*Réseau des Producteurs du Bla*, or "RPB").

In 2003, FAO launched an FFS/IPPM project for cotton farmers in the Bla region of Mali. The objective was to offer alternatives to the use of dangerous insecticides through IPPM. The analysis shows that over an eight-year period the use of dangerous insecticides fell by 92.5 per cent throughout the Bla region, while only 34 per cent of farmers (1,461) across 4,324 farms received training through FFS (Settle et al., 2014). Production costs decreased by 20 per cent compared to farms using crop-management techniques recommended by the Malian Company for Textile Development (CMDT).

In 2010, peasant-farmer facilitators from FFS decided to monitor pest populations in their communities and surrounding areas. They conducted transects at critical points during the cotton-growing season to count the number of pests. That number was then broadcast on local radio to help farmers make the right decisions to combat the pests. Those activities were made possible thanks to a loan taken out by the peasant-farmer facilitators and repaid using contributions from grassroots cooperatives. That same year saw the emergence of *Réseau des Producteurs du Bla*, a union of 149 grassroots cooperatives (6,700 farms) all using zero pesticides.¹³ Its president is a peasant-farmer facilitator for FFS who, in response to the CMDT's increasing reluctance to promote IPPM (because of the financial losses it generates for the company, which no longer pre-finances pesticides), defends "zero pesticide" production.

Today, RPB continues to promote IPPM through the expansion of FFS in its region. Since 2015, funding has come from member contributions (2,300 CFA farm). The funding is used to organize training sessions and refresher courses for peasant-farmer facilitators. RPB works with the Institute of Rural Economy (*Institut d'Economie Rurale*) and ICRISAT on seed production for OPV cereals (millet, cowpea and maize) and hybrid cereals (sorghum). It allows its members to purchase improved varieties through credit sales. The union also sells sesame, aggregating production in order to be able to negotiate better prices with traders.

13 Source: interview with the president of *Réseau des Producteurs du Bla* (June 2021).

Collective action and self-organization. Although they are essential to the FFS approach, collective action and the establishment of long-lasting organizations are aspects that receive little attention in the field schools of the projects funded by IFAD. Just like in any initiative, some FFS lead to the banding together of farmers while others stop after a few growing seasons. What are the factors that bring about the need and desire to initiate collective actions over the long term? According to various managers from apex FOs (FIFATA, SA'A, CAPAD, etc.) and project directors, **using grassroots FOs as an entry point for FFS is conducive to better ownership of the opportunities offered by the approach and contributes to its sustainability.** This is especially true when the field school is a space for sharing information, listening to one another, and making group decisions (e.g. collaborative FFS). Managers of agricultural organizations have noticed that collaboration is easier when the people involved in the FFS are already used to working collaboratively within grassroots groups, religious associations, informal support groups, family groups, etc. Mboka Ingoli (2017) concludes in his sociology thesis that *"field schools have a greater chance of success when there is not only a strong commitment to collective action but also a deeply rooted multiplex network at local level"*.¹⁴ In other words, the more the members of an FFS mobilize relations of various types and qualities, the more they are capable of creating a spontaneous and informal dynamic for sharing knowledge and savoir-faire. This conclusion supports the idea that the more FOs are used as an entry point for the field-school approach, the more likely it is that the FFS will be long-lasting.

According to the experience of the NGO AVSF¹⁵ in northern Togo, the creation of FFS necessarily requires working with FO leaders, especially at the start, to create the right dynamic and communicate about the system. It is important to have strong leaders serving as catalysts within the group, but they are no replacement for good group cohesion. AVSF has identified several key factors to encourage participation and collective action within field schools: i) socio-cultural context favouring collective action (e.g. existence of collective support groups for field work); ii) choice of experiments within FFS based on problems raised by farmers, and changes to FFS based on their own decisions or preferences (in addition to the concrete solutions provided in response to the problems raised); iii) consideration of non-agricultural issues when choosing which topics to cover (e.g. division of work between men and women); iv) abandoning comparisons with farmer field plots, which only reflect the practices of a small group of farmers; v) the importance of exchange visits to provide a boost for the groups, and discussions between farmers; and vi) a context in which farmers do not wait for projects but look to get involved in the proposed actions. In the projects funded by IFAD in Niger, consideration of local agricultural practices and savoir-faire among the topics to cover was a key driver of the FFS collective dynamic.

In Madagascar, the FIFATA national federation of 11 regional apex organizations (11 of 22 regions), or 6,000 grassroots FOs and 300,000 farms, says, based on the AROPA programme, that facilitators and peasant-farmer relays must be selected by the FFS constituent group in order to promote self-organization and long-lasting actions; those relays should be part of the community. Promoting peasant-farmer relays facilitated the emergence of peasant-farmer leaders, who are often already recognized in their community at social, educational and religious level, etc. Once they have strengthened their technical capacities, those leaders have greater legitimacy to support the emergence of new FOs. Several regional unions were established. They are made up of municipal unions, which themselves are made up of local/village unions formed through FFS.

14 A multiplex network is a social network in which different relations can coexist and overlap within a connection between two individuals. Those individuals may be relatives, neighbours, colleagues, partners in an association, partners in a relationship, or friends (Mboka, Ingoli, 2017).

15 Experience-assessment report on AVSF's field schools in northern Togo: supporting the joint development of peasant-farmer innovations and agricultural advisory services. February 2019, AFD Process of reflection on agricultural advisory services.

In the Ihorombe region, three regional unions (RFO) were created thanks to support from FIFATA through the AROPA project: union of fish farmers, union of onion farmers, and union of gasy chicken farmers. The peasant-farmer leader of the union of gasy chicken farmers is currently a member of FIFATA's board of directors. Likewise, thanks to support in the field schools for gasy chicken (e.g. local construction of chicken coops, supplementation/feeding techniques for chickens, construction of chicken coops using local materials, etc.) and to organizational efforts, a regional union of gasy chicken farmers was created in the Haute Matsiatra region. That entity not only helps sustain the actions promoted by the programme, but it also addresses specific collective needs with respect to producing and adding value to products (e.g. group sale of chickens, group order of vaccines, etc.). The introduction of FFS made it possible to better structure the support of RFOs belonging to the apex organization at the local-organization level. RFO technicians help peasant-farmer relays/leaders draw up their annual work plan with regard to aspects such as production, supply, storage and local sales. Social and organizational aspects are also addressed during this planning phase (e.g. pond restoration, field cleaning, end-of-year celebration, etc.) and are reflected in the FFS.

After the withdrawal of the IFAD-funded AROPA programme, the peasant-farmer relays and **groups found ways to continue to pay for agricultural advisory services**. Under AROPA, 75 per cent of FFS were created through grassroots FOs belonging to FIFATA, which greatly facilitated the work. Collective initiatives to make FFS and grassroots organizations more financially independent emerged spontaneously: for instance, the establishment of collective income-generating activities, such as fish farming on a shared pond and the collective cultivation of a field plot with a view to selling the crops produced. The creation of funds for members is a central point that can give rise to collective actions for acquiring inputs or purchasing animals. In any case, it can help promote greater autonomy. FIFATA also has the power to facilitate access to funding for its members, by negotiating conditions of access to financial products with banks and MFIs.

The same observation is also made by CAPAD in Burundi, which recommends coupling FFS with the development of solidarity and loan funds (internal tool promoted by CAPAD). Those funds help strengthen solidarity within field schools by giving farmers the means to introduce innovations into their crop or livestock systems, and to support other people who need social support. In this model, savings come from members: 80 per cent of contributions go to investments in credit, and 20 per cent to social action. Sometimes this internal mobilization tool evolves towards a credit union, which, once is big enough, may be linked to an MFI, still through the FFS members, who are jointly liable for loan repayments. It is the financial component that strengthens the group and makes it possible to plan collective action beyond learning. In the case of the PRODEFI project, FFS initiated collective actions, such as: income-generating activities, collective acquisition of pre-basic seeds from ISABU and inputs, production preservation, and sale of seeds. Some even developed the community solidarity chain for small livestock by themselves using grant funds (US\$400) from PRODEFI and/or financial products.

Through the FAO ACC project funded by the GEF in Niger, some APFS form formal groups after two or three years of operation to develop initiatives to encourage self-funding and self-promotion, such as collective APFS crop-cultivation works, collective development of cash crops, tontine and regular contributions. The village savings and loan associations (VSLA) promoted by the project helped galvanize APFS groups, strengthen social ties between members, and develop solutions initiated by the groups to address their savings, credit and investment needs. For example, the group members created collective income-generating activities for the production and processing of groundnut and the production of sesame and cowpea in order to continue to pay into the VSLAs. It was also noted that there was better social cohesion and better information exchange between APFS with VSLA than those without VSLA. These group dynamics can also be seen in the ProDAF programme, where, at the instigation of the project funded by IFAD, the most dynamic young farmers from FFS receive training through farmer advisory support groups (*groupement d'appui conseil agricole paysan*, or "GACAP"). Participation of at least three years in an FFS is required, and training is funded so that the young farmers can expand their range of skills. In the Maradi region, 11 GACAP were established and are now grouped together in a regional advisory support union. The Zinder and Tahoua regions have eight and 20 GACAP, respectively. Their objective is to widely disseminate the innovations successfully introduced in the FFS (e.g. agricultural techniques, assisted natural regeneration, etc.), provide jobs for young farmers, and remedy the weak supervision of agricultural extension services in the regions in question. Those GACAP have contracts with the ProDAF programme, and more recently with other projects, but their sustainability still needs to be solidified.

Other collective initiatives from livestock FFS were noted in Burundi, Malawi and Rwanda (2021):¹⁶ marketing groups were established, such as marketing groups for milk in Malawi, dairy cooperatives and platforms in Rwanda, and marketing platforms for beef in Malawi. Moreover, the constitution of agricultural advisory FOs was established from peasant-farmer facilitators in Malawi, Rwanda and Zanzibar. It is difficult at this stage to quantify those self-organization movements, but their legitimacy stems from grassroots farmer movements for the most part. Moreover, the creation of savings and loan funds and other types of access to funding (e.g. matching grant, village challenge fund, etc.) in those countries, in connection with collective action and self-organization, was vitally important for investing in the individual and collective activities of livestock farmers. In Rwanda, the combination of several different methods with a focus on improving social and human skills in field-school curricula (e.g. IFAD's Gender Action Learning System, or "GALS" method; and the Values Based Holistic Community Development approach developed by Heifer Int.) contributed to the resilience and social responsibility of peasant-farmer groups.

16 Stocktaking exercise livestock farmer field school (L-FFS) – East and Southern Africa, IFAD, March 2021.



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WHAT ROLE CAN FOS PLAY?

What favours the positioning of FOs versus FFS? *Initial involvement of apex organizations gives them greater credibility while ensuring coherence and laying the foundation for long-lasting FFS and long-lasting results.* As previously noted, the cohesion of the group formed for the FFS approach depends on existing interactions both inside and outside the group. If the chosen group already forms a grassroots FO or a cooperative, the chances of success increase. According to an FAO evaluation (2016) of the IARBIC project, which facilitated the creation of 1,054 input shops (785 of which are operational), some of which are associated with FFS and some of which are not, 93 per cent of FFS whose initial working capital increased (+16 per cent) belonged to affiliated FOs. Despite variations in ownership of FFS by participating FOs, the clear and strong involvement of apex organizations had an influence on the sound management of the working capital of FFS. FOs affiliated with apex organizations are more involved in supervising their input shops, and those shops are managed better. Strategically, therefore, it is worth involving apex organizations, which help renew FFS through better management, and it is also worth training master trainers within the apex organizations themselves so that those trainers can go on to train peasant-farmer facilitators from grassroots FOs.

Despite those recommendations, FAO's ACC project in Niger did not initially target apex organizations as implementing operators, but rather state agricultural advisory agents. Midway through the project, given the difficulties encountered by the Ministry in implementing APFS, FAO signed agreements with the following apex organizations: the SA'A Federation (Maradi and Zinder), the Federation of Unions of Peasant-Farmer Groups in Niger FUGPN-Mooriben (Dosso), the Federation of Market-Gardening Cooperatives in Niger FCMN-Nya (Tahoua), the Regional Federation of Onion-Farmer Unions FRUIPOAM-ANFO (Tillabéry) and the Centre for Services in Support of Peasant-Farmer Cooperative Organisations CSA/OCP (Zinder). Despite their late involvement, those organizations delivered top-quality work. The evaluation mission of this project (2021) once again recommends supporting apex organizations as early as the initial

project design phase and over the long term in order to build their capacities and the range of agricultural advisory services they offer to members. The recommendations of this evaluation go further in terms of vision: going beyond the project approach by proposing a list of APFS to develop and long-term partnerships with apex FOs.

Getting apex FOs involved as early as the project design phase is also advantageous because they are capable of monitoring things once the projects come to an end. Following the completion of FAO's OSRO/BDI/702/UK project in Burundi, CAPAD continues to work with FFS groups in order to provide local advisory support. It also tries to support the creation of new FFS with help from its technicians, peasant-farmer facilitators, and their connections within national agricultural advisory services and research centres. CAPAD incorporated the FFS approach into its strategic development plan, supported by different NGOs and donors. SA'A in Maradi also continues to provide services for the development of new FFS and in support of existing FFS. FIFATA in Madagascar and RPB in Mali also share that desire to continue to provide advisory support services. But those apex organizations still need support in order to be able to implement strategies to ensure the financial sustainability of their work. Peasant-farmer facilitators are mostly paid in kind or through funds generated collectively by the groups. A more in-depth analysis of solvency levels and needs would be useful. Also, during the interviews, several apex organizations mentioned the way in which they adapted the FFS approach depending on their experience in the field and their constraints (but this should be analysed further in order to better understand what each one has done).

Apex organizations are interested in FFS because it allows them to diversify the services they offer to members. FAO trained master trainers within apex organizations (SA'A, Mooriben, CAPAD, RPB) so that they can in turn train peasant-farmer facilitators in their pools of FOs and grassroots groups. Ensuring long-lasting actions and scaling up FFS could be achieved by expanding training for peasant-farmer facilitators. Doing so is less costly than training state agents, and peasant-farmer facilitators are generally much more involved and available than state agents when it comes to running field schools. The conclusions are the same for all projects that have supported training for peasant-farmer facilitators: when they are well trained, they have good teaching skills and are well able to run field schools. Their geographic and sociological closeness with the beneficiaries, their commitment, and the highly positive perception they have of their new advisory role should be counted as positive factors with regard to effectiveness. But that training has a cost. And depending on the project, the time commitment may vary by up to a factor of three. For simplified FFS, facilitator training lasts five days. For consultative FFS, training lasts between seven and ten days. For projects where FFS are collaborative, training lasts 21 days and is divided into several sessions (plus annual refresher courses lasting several days). It is clear that devoting more time to training and refresher courses for facilitators based on requests from FFS means FFS will be better able to offer high-quality learning opportunities from a technical standpoint and in terms of the participatory process. It also seems essential to set up a system for monitoring facilitators so that needs can be addressed as they arise.

Involving apex organizations as implementing operators and/or partners gives them *the possibility of expanding their bases while affiliating new members.* By setting up FFS in new geographic areas, federations were able to raise awareness among grassroots groups and unions, and register new members (FIFATA, SA'A, CAPAD). Rather than being seen as "creating a conflict of interest" (case of ProDAF and PRODEFI), this strategy should be an integral part of the theory of change promoted by the projects. For example, CAPAD is not involved in the implementation of FFS in the projects funded by IFAD in Burundi (left to the NGO ACORD), even though it gained valuable experience with FAO. It is, however, solicited for aspects relating to the structuring of

Case study 3 – BURUNDI

Integration of FFS into CAPAD's strategic development plan

CAPAD is a national apex organization founded in 2003 comprising 164 agricultural cooperatives for cereals, tubers, fruits, legumes, bananas, vegetables and livestock. It represents 153,814 agricultural households throughout the country (84 municipalities in 17 provinces). It supports its members by proposing actions to improve the governance of cooperatives and to add more value to their agricultural production through technical supervision. It focuses its work on sustainable agricultural production and agroecology through FFS. It is developing strong expertise in strengthening the capacities of female leaders (62 per cent of members are represented by women) and improving adult literacy skills. Access to loans is also a priority service offered to members. CAPAD is also the majority shareholder of SOCOPA, a cooperative that seeks outlets for the processing and sale of the products of its member cooperatives. To that end, SOCOPA has developed a range of agricultural products on the market: white rice, cornflour, cassava flour, enriched flour for children, liquid hot pepper, double concentrated tomato, banana juice, wine and beer.

CAPAD's experience with field schools is significant because to date each cooperative has at least 15 FFS with 10 to 20 farmers, meaning there are roughly 3,115 FFS associated with solidarity funds (*mutuelles de solidarité*, or "MUSO"). According to CAPAD, supporting cooperatives that work with FFS/MUSO is easier than supporting cooperatives that don't. Members of the former are more motivated and mobilized, which allows each cooperative to plan its growing season based on identified needs and to implement those plans through field schools in particular. It is a tool that helps strengthen members' technical capacities and facilitate collective action with a focus on procurement and adding value to products. Peasant-farmer relays receive training from CAPAD technicians that is tailored to their needs, and then transfer that knowledge to FFS members. After the success of the FFS/MUSO, CAPAD integrated the development and support of FFS into its strategic development plan as a priority approach to technical advisory services, structuring and learning. CAPAD receives technical and financial support from various technical and financial partners. The "hill" group (local group comprising farmers from 10 households situated on hills close to one another) is the entry point through which the FFS approach is introduced, with support from trained technicians from the apex organization and peasant-farmer relays. Each hill group identifies a peasant-farmer relay (called the pilot farmer) whose mission is to relay techniques to the other members of his or her group through demonstrations performed on his or her farm or in a shared field belonging to his or her group. FFS helped spearhead the strong adoption of agroecological practices by farmers belonging to CAPAD and non-members, such as the application of straw mulch over crops, the use of biopesticides, compost piles, etc.

farmer groups into marketing cooperatives and aspects relating to access to loans. Its presence in the PAIVA-B, PNSADR-IM, and PIPARV-B projects allowed for solidarity and loan funds to be included in their requests, which was not initially planned. The perception that some project managers have of a conflict-of-interest risk for FOs involved in FFS is based on an erroneous paradigm where field schools are seen as a solely technical approach, despite the fact that they also help farmers band together when apex organizations are involved. Wouldn't it be better, then, to involve FOs as early as the FFS design and implementation phases with a view to helping peasant farmers band together? Moreover, the emergence of peasant-farmer leadership could receive even more support through the participation of apex organizations. The case of Madagascar is interesting in this regard, as it shows how a programme over the course of ten years (AROPA) was able to support and strengthen, through FFS among other things, the structuring of peasant farmers, and create partnerships with existing regional unions in order to support new actions focusing on identified needs (e.g. the DEFIS project relies on RFOs created after AROPA to set up corn FFS to improve the diet of gasy chickens).



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CHALLENGES OF INSTITUTIONALIZATION

Institutionalizing the FFS approach is a core focus of this work, because it appears to be the best way to move away from a project-based mindset and ensure that actions are long-lasting and can be scaled up. Institutionalization is defined as the process by which new ideas and practices are adopted by individuals and organizations to become an integral part of “the norm”. It is part of a relatively long and complex process requiring changes at individual level as well as at institutional level (FOs, government agencies and players from the private sector). Institutionalization requires that the different players involved reach a consensus regarding the need to ensure the quality of the FFS approach by creating an environment favourable to its implementation while keeping in mind that it is a means of achieving a goal: to ensure that farmers are capable of working together to find solutions to problems regarding their production and their lives as those problems arise. That consensus based on a paradigm shift does not always enjoy unanimous support and is an obstacle to the process of institutionalizing FFS. Two other obstacles also present real challenges to FFS sustainability: (1) scaling up too quickly without sufficiently taking into account farmers’ expectations and thus causing farmers to lose interest, and (2) investing based on a “project mindset” without a longer-term vision (FAO, 2020).

As previously mentioned, some apex FOs have integrated the field-school approach into the range of services they offer to members with more or less ease. Still, it is essential to continue to provide support over the long term to help strengthen technical, organizational, and financial capacities so that those organizations are able to deliver a quality service to their members. The development of field schools should be seen as a service that is in the public interest, thus requiring long-term investment from governments and technical and financial partners. Institutionalization involves integrating this approach into national policies/strategies, and financial, human, and technical resources are required to implement the approach.

Analysis of government policies in the countries studied shows that Burkina Faso, Mali, Madagascar and Niger integrated the FFS approach into their national strategy for agricultural advisory services, mentioning field schools as an approach to promote. Rwanda and Malawi also partially integrated FFS and farmer business schools into their national policies and programmes. But at this stage, among the countries examined in this study and those examined in the IFAD assessment in the ESA region, only Burkina Faso allocated national funds to a specific budget for the implementation of FFS. The results, however, are mixed for Burkina Faso. Observations in the field show that the application of field schools in a standardized and, to a certain extent, “inflexible” manner does not lead to good results in terms of farmers’ participation, collective action and autonomy (“technology transfer” FFS versus “collaborative” FFS). The same observation was also made in other countries, particularly in Indonesia, where the transition from a top-down approach to agricultural advisory services to a completely opposite approach based on collaborative and flexible learning created too many difficulties to ensure the long-term success of FFS (Van Der Berg et al., 2020). Should efforts therefore be made to ensure at all costs that governments are the only entities in charge of implementing this approach? Like FAO (2015), we recommend looking at the institutional landscape in order to create an environment favourable to the implementation of FFS over the long term. Institutionalization therefore involves not only integrating the approach into national policies and strategies, but also investing in agricultural advisory services training, national institutions, partnerships with training and research centres (training agricultural managers and technicians), and collaboration with stakeholders in rural development, such as FOs and their apex organizations, which are key players. If the main objective of the FFS approach is to create the right conditions for farmers to be able to work together to solve the problems they face, then what organizations would be better able to provide that service to their members than FOs? Keeping in mind that this is a service in the public interest, it is absolutely feasible and realistic for states and donors to be in charge of funding FFS through grants to FOs and apex organizations.

In the countries where FAO has developed national capacities in the FFS approach (network of master trainers and facilitators, awareness-raising/involvement of research centres, universities and agricultural extension services and national guide), it is easier to implement FFS because training and advocacy work has already been done in advance. In Niger, a national field-schools guide was adopted by the government in June 2021. It outlines the framework and principles of the approach in order to help the government and technical development partners harmonize and scale up field schools. The master trainers trained by FAO are then solicited by various projects to train facilitators, as was the case in the ProDAF programme. The PRODEFI project also benefited from the work done in advance by FAO, which consisted in training and updating the list of master trainers and instructors, now monitored by MINEAGRIE. In Mali, FAO gained valuable field-school experience in collaboration with the government. The other projects and programmes that adopted the approach rely on the facilitation capacities created by the IPPM/FFS programme and the ACC/FFS¹⁷ project of FAO. But there is no formal network of rural trainers in West and Central Africa. The experiments initiated by FAO seeking to institutionalize FFS/APFS by, among other things, creating a sub-regional network of trainers-facilitators have not yet been concluded owing to a lack of long-term human and financial resources, to test an operational and sustainable model.¹⁸ The current lack of a network for trainers in rural areas raises a crucial question concerning the professionalization of trainers and the longevity of their essential role in institutionalizing the approach.

17 GCP/MLI/033/LDF

18 FAO plans to revive this work on a viable model for institutionalizing FFS/APFS in 2022.

It should be noted that certain international NGOs, such as CARE, OXFAM Novib and AVSF, have acquired field-school expertise, which they apply with flexibility in order to obtain maximum farmer participation.

Research centres and universities such as ISABU in Burundi, University of Niamey, ICRISAT, etc. are also committed to this approach. They regularly send masters students to train at FFS and to continue research in participatory adult education, technical results, etc. Although the countries analysed have not yet integrated the FFS approach into basic training for extension agents/technicians, or refresher courses, some FAO projects that are currently being developed (particularly in Mali, Burkina Faso and Senegal) do include those aspects in their design.¹⁹ Several countries, however, have pools of technicians that are trained state agents, such as Mali, Niger, Burkina Faso, Burundi and even Guinea (ANPROCA).

Cost constraint for making the approach operational. Analysing the FFS approach solely in terms of the “cost of extension services” is an error, because FFS can offer advantages well beyond the adoption of technical solutions. It is in reality a system for training adults that does much more than simply disseminate technical knowledge. But econometric evaluations tend to consider FFS to be too costly compared to other forms of agricultural advisory services. According to our interviews, implementation costs per FFS, including awareness raising, trainer training, facilitator training, refresher courses, installation costs (e.g. initial capital, supplies), and monitoring vary between US\$800/1,200 for “simplified” FFS and US\$2,000/2,500 for the other types of FFS, with lower costs in the second and third years (equipment acquired in year 1, and reduced monitoring in years 2 and 3). It would be interesting, however, to see how those costs could be shared so that FOs only have to cover a small portion of them (e.g. facilitator training), while networks of trainers could be created at national level. Currently, given those financial aspects, apex FOs that continue to support members use the resources they have to provide advisory support at a low cost. CAPAD develops “demonstration” field schools coupled with an advisory-support approach, with pilot farmers who test new techniques on their farms. In Mali, two semi-autonomous development entities, namely the Niger Office (*Office du Niger*, or “ON”) and the Ségou Rice Office (*Office Riz Ségou*, or “ORS”), have their own teams of field-school facilitators. But the number of FFS set up has been declining over the years: “Yes, FFS are spreading. But it’s not easy without resources. FFS continue to operate using their own funds”.²⁰

19 That is the case, for instance, with the GEF FAO projects currently being developed in Mali and Burkina Faso.

20 “Integrating Climate Resilience into Agricultural Production for Food Security in Rural Areas of Mali” Final Evaluation Report, FAO, February 2018.

SUMMARY OF FINDINGS AND RECOMMENDATIONS

Findings	Recommendations	Theme
The FFS approach has been adopted by a large proportion of the projects funded by IFAD in sub-Saharan Africa (89% of projects with components covering agro-sylvo-pastoral, fishing and rural/value-chain development).	Continue to pursue the adoption of the FFS approach in projects, taking into account the specific recommendations of this report.	Design of projects with FFS
In the projects funded by IFAD in sub-Saharan Africa, the potential of FFS is often underutilized concerning their capacity to help farmers band together and become more autonomous, and therefore to create opportunities for their continued existence. In some projects, FFS are simply seen as a way of offering agricultural extension services by transferring technical packages to boost the yields of priority crops defined in advance in the project design documents. ²⁴ By contrast, when farmer participation and ownership is promoted in the FFS approach, the FFS cover a broader range of topics, and effects are noted in the structuring of farmers in rural areas.	IFAD needs to ensure that the implementation of FFS in the projects it funds follows the principles of farmer participation and empowerment, in line with the approach's guiding principles (e.g. participatory diagnosis of problems, collective identification of local innovations, participatory development of curricula, etc.), while remaining flexible in order to be able to adapt to local realities. Give priority as much as possible to the creation of "collaborative" FFS in order to facilitate collective efforts to solve the problems farmers face.	Design and supervision of projects funded by IFAD with FFS
The review of the projects shows the following elements: <ul style="list-style-type: none"> • The value-chain approach in many of the projects funded by IFAD encourages the project design teams to separate productive aspects from institutional aspects and aspects relating to the structuring of farmers for aggregation, processing and sales. • The study confirms that when the implementation of FFS incorporates existing organizational dynamics and involves collaboration with existing FO networks, there are better prospects for ensuring the sustainability of the FFS and scaling them up. • When apex FOs are sufficiently structured, they help ensure the consistency and sustainability of the FFS approach. Investing in apex FOs, however, requires a commitment over a long period of time before the long-term effects of the investment can be felt (one or two decades). 	Work with FAO's FFS team to draw up guidelines/advice for the project design teams, taking into account the particularities of the IFAD projects (e.g. FFS approach as part of a broader strategy) in order to ensure that FOs and their apex organizations are included more in designing and implementing the FFS approach. Work with FAO (FAO eLearning Academy) to develop an online course on the integration of FOs and their apex organizations during the design and implementation phases of projects/programmes that include FFS. ²⁵ These guidelines should include the following: <ul style="list-style-type: none"> • Make sure that FFS activities are linked with the upstream and downstream components of value chains, including for instance FOs in all systems relating to the structuring of farmers (FFS, formal structuring, sales and supply). • Ensure that apex FOs are systematically involved in designing and implementing projects. This means that apex FOs must be involved from the project design phase in order to integrate this service for members into their strategic development plans, and it means that medium/long-term collaboration must be established with them in order to ensure the sustainability of FFS and scale them up. • "Learning by doing" (giving apex FOs a role in implementing the FFS approach) will make it possible to adapt the approach to each FO's technical, human and financial capacities. • If apex FOs exist in a particular country but are not present in the project zones, their participation as operators in the implementation of the project should be discussed. Once it is well in place, the advisory-support service could take charge of aspects relating to the training of trainers. • The interaction between those FOs/apex organizations and research centres and extension services should be discussed in each country in order to propose the best form of collaboration. 	Design of projects with FFS Participation of apex FOs in the modus operandi

24 Which is completely different from the FFS approach designed by FAO and improved over the years, which places at its core the potential for helping farmers band together and become more autonomous.

25 The first introductory course on designing FFS projects/programmes is already online: <https://elearning.fao.org/course/view.php?id=724>. The second course on implementing FFS projects will be available in December 2021.

Findings	Recommendations	Theme
<p>The project management units and implementing partners for IFAD-funded projects may utilize, where available, human resources trained in the countries by FAO (network of master trainers, list of facilitators and entities trained in the FFS approach). If no such resources exist, some projects call on international/national consultants or NGOs to create tools for training FFS trainers and facilitators – but it would be better to build local capacities.</p>	<p>In countries where national FFS capacities do not exist, IFAD should collaborate (including financially) with the FAO team based in Rome²⁶ and in the region in question, in order to support the construction of national networks. When designing IFAD projects, part of the budget should be systematically allocated to training or to strengthening the capacities of master trainers as well as research, training and advisory bodies. More generally, collaboration between the two organizations must seek to find models to help ensure the viability of the national networks of facilitators.</p>	<p>Design of projects with FFS</p> <p>Capacities for implementing FFS in the countries</p>
<p>Concerning access to funding, the introduction of financial services associated with FFS (e.g. mutual solidarity funds, savings and loan associations, access to loans through MFI, etc.) was also noted as having a positive effect on members' financial capital and on their ability to continue to pursue collective action. In several projects, small loans were used to set up income-generating activities on farms and in other areas (for example, FAO's emergency division systematically combines FFS with resilience funds. But this system presents the weakness of seeing FFS only as technical pillars, whereas this study shows that they offer much more).</p>	<p>To make FFS more effective, the use of savings and loan associations should be systematically facilitated, with the possibility of coupling them with collective income-generating activities (depending on existing dynamics) in order to ensure the group's financial operations. In general, it is more useful to promote/strengthen funding models when they are already practised in villages by FOs or local communities, in order to strengthen existing dynamics.</p>	<p>Design of projects with FFS</p> <p>Activities facilitating the financial sustainability of FFS</p>
<p>Concerning human and social capital, FFS have an impact on farmer's capacity-building, self-confidence and leadership. But the impact of FFS on farmers' human and social capital cannot be measured using the information collected by the project teams. Important information concerning a large part of the FFS approach is lost. Monitoring and evaluation indicators provide little information on the effects and impacts of FFS on collaboration, empowerment and adaptation to local conditions (e.g. participants' capacity to innovate).</p>	<p>The system for monitoring and evaluating projects with FFS should be reviewed in order to incorporate aspects relating to the improvement of social, human and financial capital through FFS. Aspects inherent to farmers' participation should also remain at the centre of attention in monitoring and evaluation in order to ensure that the approach continues to be optimally applied. IFAD will contribute to the FAO document review, which proposes the creation of a M&E system (Henk approach). Joint work will then be conducted with FAO's head-office and regional teams to better define FFS indicators in order to stimulate the project design and implementation teams. Attention will be focused on indicators for human and social capital. In projects where technical improvements are not only the result of FFS (e.g. coupled with developments for irrigated areas), it would be important to think more about measuring technical indicators in relation to FFS. Since the adoption of innovative practices is not the only expected result of implementing the FFS approach, it is essential to gain a clearer picture of the other results obtained through this learning approach. For example, in collaborative FFS, how knowledge and experience is passed on to projects and sub-regional teams, and not the other way around.</p>	<p>Design of projects with FFS</p> <p>Monitoring and evaluation system</p>

26 FAO/NSP in Rome: AnneSophie.Poisot@fao.org, Suzanne.Philips@fao.org

Findings	Recommendations	Theme
<p>The study shows that the organizational and empowering dynamic of FFS depends in part on the content of the training modules and on how farmers' perceptions are gradually incorporated into the training materials.</p> <p>It also depends largely on the quality of the training received by the master trainers and the facilitators (duration, content, supervision, etc.)</p>	<p>In connection with the FAO study conducted in the Sahel on the content of FFS training modules, and in order to improve the quality of FFS training in terms of content for master trainers and facilitators, it would be important to assess the content of the curricula used in existing FFS promoted through IFAD-funded projects. This would provide a better understanding of the quality of the materials developed and the diversity of the topics covered, particularly if new topics are incorporated at the request of farmers.</p> <p>The assessment must allow for additional gateways and collaborations with projects in the field carried out by FAO or any other organization, such as NGOs and apex organizations with expertise in the FFS approach.</p>	<p>Implementation and supervision of projects with FFS</p> <p>Content of FFS tools in the field</p>
<p>Some of the apex FOs questioned in the study continue to promote the FFS approach "in their own way" after the end of the project.</p> <p>For example, several FOs mentioned an adaptation on individual plots tended by members and located at several different spots on the village land, instead of the usual collective field compared to a field using peasant-farmer techniques. The experiments therefore more accurately reflect the reality of the different village lands and farms.</p>	<p>The FFS approach adopted by apex FOs after the end of projects should be analysed in more detail in order to understand the recommended "adaptations" and how well they continue to address farmers' needs.</p> <p>That analysis should also provide more insight into the costs involved in implementing FFS in different contexts (e.g. projects, NGOs, FOs, etc.), questions of relevant targeting, and complementarities with other approaches in connection with agricultural advisory support (e.g. demonstration plots, new digital technologies, etc.)</p>	<p>Post-project with FFS</p> <p>Durability, and how FOs can ensure the sustainability of FFS</p>

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APPENDICES

APPENDIX 1 Terms of reference

Farmer field school – Assessment/lessons learned
IFAD-PMI initiative concerning the WCA/ESA portfolio
April 2021

Background

The Farmer Field School (FFS) approach seeks to create learning opportunities for adults by promoting “learning by doing” through participatory methods, knowledge- and experience-sharing, direct observation through hands-on exercises in the field, discussion and decision-making. Instead of being passive recipients of technologies that are passed down to them, farmers are empowered to find solutions to the problems they face in their productive activities and enterprises. In order to develop a curriculum specially tailored to a particular area, an FFS group must first collectively analyse the problems that need to be addressed. FFS address a growing number of technical subjects: soil, crop and water management; seed production and varietal trials; livestock farming; agropastoralism; aquaculture; agroforestry; nutrition; value chain and connection with markets; collective organization; etc.

FAO, other multilateral institutions (such as IFAD), and a number of NGOs have encouraged the development of FFS to address a wide range of challenges and technical fields in over 90 countries. IFAD promotes FFS in many of the investment projects it funds, and has acquired substantial experience in FFS over the years, particularly in sub-Saharan Africa, where FFS are playing an increasingly predominant role in agricultural extension services. In terms of their effectiveness, FFS have been a success throughout Africa, and demand for them continues to grow. Although a lot has been done and learned about FFS – particularly in connection with the 30th anniversary celebrations in 2019, no experience assessment has been conducted nor has any attempt been made to draw lessons from IFAD’s experience. Such an assessment is appropriate and desirable not only because of the frequency and importance of FFS activities in IFAD’s portfolio, but also because of the way in which FFS are promoted and funded as a “component” of investment projects. The “FFS through projects” approach faces major challenges when it comes to ensuring the sustainability of FFS and scaling them up beyond those projects. The institutionalization of FFS lies at the heart of those challenges. Some countries, such as Kenya and Uganda, have made progress in terms of incorporating FFS into public extension policies and systems. Other countries have indicated that they would like to do the same. But other methods for institutionalizing and scaling up FFS still need to be explored – particularly institutionalization through farmers’ organizations (durable farmer-led institutions that IFAD also invests in throughout Africa).

FFS, institutionalization and public policies

Institutionalization is defined as the process by which new ideas and practices are adopted by individuals and organizations to become an integral part of “the norm”. Scaling up and institutionalizing FFS presents a big opportunity for countries in the region. That is why the Rural Institutions desk and the Sustainable Production cluster of IFAD’s technical division (PMI) are currently finalizing a joint assessment of FFS in the East and Southern Africa (ESA) portfolio. More specifically, the hypothesis is that some key characteristics of the FFS approach (such as collective

and mutual learning and self-discovery) are conducive to collective action and self-organization among farmers, and that self-organization is in itself a means of institutionalizing and scaling up FFS when farmers structure themselves beyond the grass-roots level.

Another hypothesis is that if existing FOs adopt FFS practices, it could create a new role for those organizations in terms of giving their members greater responsibilities to solve the challenges they face as farmers. If those hypotheses were confirmed by the assessment, it would mean that convergence and synergies should be pursued between the promotion of FFS and capacity-building for FOs.

In addition to conducting a comprehensive review of how the FFS model developed in the IFAD-WCA/ESA portfolio could generate the expected positive changes, the PMI's Rural Institutions desk is especially interested in evaluating and questioning the institutional viability of FFS. Two options for promoting institutional sustainability will be analysed in particular: (i) adoption of FFS in policy development and (ii) integration of FFS by existing FOs into the range of services they offer their members and as a vision for structuring farmers to develop their membership.

Institutional provisions established for the systematic application of the approach, associated with individuals, organizations, and committed political stakeholders, are essential and absolutely necessary when it comes to scaling up and institutionalizing FFS activities.

Key strategic questions regarding FFS

This FFS Knowledge Management (KM) activity conducted by the PMI division in sub-Saharan Africa has several objectives.

First, it aims to provide an overview of the main characteristics of the implementation of FFS activities in IFAD's projects in the region, and show how effective FFS approaches are in terms of achieving the objectives defined during the project-design phase. It will focus in particular on the following main expected results: (i) adoption of crop-management techniques/best practices taught to farmers; (ii) improvement in the yields, food security and income of poor agricultural households; (iii) promotion/documentation of local/endogenous innovations and of farmers' savoir-faire; and (iv) improvement in farmers' self-confidence/human capital/leadership.

Next, it aims to provide answers to the following key questions:

- To what extent does the FFS approach at local level, particularly the "group learning" component, **favour the emergence of long-lasting collective action**? Are there cases or situations where FFS groups transform into formalized peasant-farmer organizations and/or seek to structure themselves within second-level FOs (apex FOs and federations)?
- **On the institutional sustainability of FFS** as a strategy for scaling up this particular capacity-building mechanism for farmers: What are the different options for the evolution of FFS approaches post-project? Are FFS integrated into public advisory-services policies at national level? Are FFS adopted by FOs as new services for their members? Are other stakeholders (such as NGOs or players in the private sector) integrating FFS into the range of services they offer?
- **On apex FO interest in FFS**: What interest do FOs have in the FFS approach? Do apex FOs develop FFS for their members? Are there cases where apex FOs develop this skill and become service providers in public investment projects for FFS? If that is the case, is it to seize the opportunity of using public funds to implement FFS, or is it to support a strategic vision to use FFS to help farmers/farmer groups band together for organized collective action?

Procedure

This assessment will be performed by the Rural Institutions (RI) desk of IFAD/PMI, with the support of a consultant. It will begin with a document review covering 23 projects in 13 different countries in the WCA and ESA regions (see list in Appendix 1). Technical contributions will also be made by an IFAD-FAO working group (see list of participants in appendix 2) familiar with FFS to help guide the process (highlight key documents relating to the main issues raised in the assessment, help identify key cases to document, etc.).

The assessment will follow the procedure outlined below.

#	Step	Who is responsible	Deadline
1	Design the analysis grid for reviewing FFS experiences in the WCA team	RI Desk (incl. the consultant)	
2	Document review of FFS in the preselected WCA/ESA portfolio (see list in appendix 2)	Stefano (RI Desk intern)	15/03 – 25/04
3	Creation of a technical working group made up of professionals familiar with FFS (IFAD, FAO, etc.) to help guide the process	Fanny (technical specialist at RI Desk based in WCA) and Yamina (consultant)	26/04
4	Identification of 4 countries ²⁷ presenting the most promising cases of FFS within IFAD's WCA/ESA portfolio based on the document review	Involving the technical group	26/04-30/04
5	Design an interview guide to submit to the staff of the project management unit (PMU), the partners in charge of implementing the FFS activities, and the apex FOs from the country (whether they are involved or not), in line with the key strategic questions	Yamina (consultant)	1st week of May
6	Get in contact with the country directors/country teams to gather information/data and facilitate contact with the PMU/partners	Head of the RI team to put the consultant in contact with the country teams	May
7	Conduct interviews with different stakeholders: PMU staff, technical partners in charge of implementing the FFS activity, apex FOs in the area (whether they are involved or not), ministerial department in charge of advisory services, etc.	Yamina (consultant)	May-June
8	Creation of a draft version of the assessment products (AP)	Consultant with guidance from the RI team	Early July
9	Submit the draft AP to the technical group, and discuss the main conclusions	Yamina (consultant) + RI team focal points + IFAD-FAO technical group	Mid-July
10	Finalization of PCs	Yamina (consultant)	Mid-July

²⁷ The countries selected will be those from whose project experiences lessons may be drawn concerning our research topic and its angle of analysis.

List of countries/projects to examine during the document-review stage of the inventory exercise

- Burundi- PIPARV-B, PNSADR-IM and PRODEFI II;
- Cameroon- PADFA;
- Chad- PARSAT and RePER;
- DRC- PASA-NK and PAPAKIN;
- Gambia- NEMA and ROOTS;
- Ghana- RTIMP;
- Guinea- PNAFA BGF;
- Guinea Bissau- REDE;
- Liberia- TCEP;
- Madagascar- AD2MI and AD2MII, DEFIS and FORMAPROD;
- Niger- PASADEM, PRODAF and RUWANMU;
- Nigeria- CASP;
- Togo- PADAT.

List of potential members of the IFAD-FAO working group on FFS

Contact person	Institution	Email
AnneSophie Poisot	FAO/NSP	AnneSophie.Poisot@fao.org
Suzanne Phillips	FAO/NSP	Suzanne.Phillips@fao.org
Arnaud Rouillard	FAOSN	Arnaud.Rouillard@fao.org
Wafaa El Khoury	DPIA	Wafaa.ElKhoury@fao.org
Jaap Van de Pol	DPIA	Jaap.VanDePol@fao.org
Jean-Philippe Audinet	IFAD/ Rural Institutions Desk (global lead)	j.audinet@ifad.org
Zainab Zitta Semgalawe	IFAD/ Rural Institutions Desk (ESA)	z.semgalawe@ifad.org
Elizabeth Ssendiwala	IFAD/ Rural Institutions Desk (APR)	e.ssendiwala@ifad.org
Fernanda Thomaz Da Rocha	IFAD/ Rural Institutions Desk (LAC)	f.thomazdarocha@ifad.org
Marie Edward Mikhail	IFAD/ Rural Institutions Desk (NEN)	m.edwardmikhail@ifad.org
Alice Van Der Elstraeten	IFAD/ Rural Institutions Desk (FO4ACP-KM)	a.vanderelstraeten@ifad.org
Fanny Grandval	IFAD/Rural Institutions Desk (WCA)	f.grandval@ifad.org
Antonio Rota	IFAD/Sustainable Production Cluster (Livestock)	a.rota@ifad.org
Robert Delve	IFAD/Sustainable Production Cluster (Agronomy)	r.delve@ifad.org
Marie Aude Even	IFAD/Sustainable Production Cluster (Agronomy)	m.even@ifad.org
Richard Abila	IFAD/Sustainable Production Cluster (Fisheries)	r.abila@ifad.org
Rikke Grand Olivera	IFAD/Sustainable Production Cluster (Natural Resources)	r.olivera@ifad.org
Audrey Nepveu de Villemarceau	IFAD/Sustainable Production Cluster (Water)	a.nepveu@ifad.org

APPENDIX 2 Interview questions

FFS situation in the project/country

- Overview of the FFS promoted by the IFAD/FAO projects in the country
- How effective are the FFS when it comes to achieving the objectives (productivity, resilience, ACC, technical and social capital)?
- Impact of FFS at community level?
- What system is used to implement FFS (type of facilitators, etc.)?
- What are the main constraints encountered when implementing FFS? (capacity for implementation, costs, etc.)
- Have you noticed anything indicating that FFS should not be implemented?

Collective action

- Do you think the FFS approach has had an impact on the self-organization of farmers supported by the project? In what way?
- In your opinion, what factors have made that possible? The content of the training modules? The quality/nature of the facilitator? The criteria for selecting FFS participants?
- Have FFS helped farmers improve the collective management of their procurement of inputs, storage, or the joint management of agricultural equipment?
- After harvest time, have FFS led to collective action for selling or adding value to their products?
- Were groups involved in FFS created/formalized into FOs/cooperatives, or did they join an already existing entity, such as a union? Are there specific objectives when it comes to forming/joining a FO?
- In your opinion, what factors favour collective action? Are FFS sufficient when it comes to creating long-lasting group dynamics (access to loans, value chain, DIMITRA, income-generating activities, etc.)? What happens to the FFS once the project comes to an end?

Ownership by apex FOs or unions

- How do existing FOs position themselves with respect to FFS? Do they connect with the peasant-farmer leaders of FFS? To achieve what goal?
- Are national and local FOs interested in FFS? Integration of FFS as an extension-services method in the range of services they offer? As a strategy to boost their membership through the structuring of farmers who have not yet banded together?
- When FOs are operators of the FFS component, how does that work? Quality of implementation? If other stakeholders are implementing operators, what factors would facilitate ownership by the FOs?
- Do they limit themselves to their role as facilitator, or do they take advantage of the situation to create grassroots organizations and an offering of services that goes beyond FFS?

Institutionalization

- Who are the implementing operators? What is the level of training, quality of training for trainers, etc. Is there connection with research/innovation and flexibility?
- Is there integration of curriculum and participatory approaches for disseminating FFS at agricultural training centres and universities?
- What ownership has the government taken? Are there research centres and extension-services entities? Are there already, at national level, dynamics for mutual learning between stakeholders (research, extension services, private sector, FOs) and acceptance of multidisciplinary approaches based on farmers' needs?
- Is there integration into policies and programmes, and through what mechanisms (FO lobbying, donors, etc.)?
- What is the role of PPP in the institutionalization of FFS? What are the risks (commercial interests versus farmers' needs)?
- Funding: What funding system exists or could exist to ensure that FFS/FOs have access to funding for agricultural services?

APPENDIX 3 List of people interviewed

Name of person interviewed	Organization	Contact details
Apex FOs		
Mr. Ali Maman Aminou	FUMA Gaskyia Niger	+227 96 49 53 27 fumagaskiya@gmail.com
Mr. Salissou Idi <i>Executive Director</i>	SA'A Niger	+227 96 49 89 86 (mobile) salinatou@yahoo.fr
Mr. Ali Neino	GACAP Union Niger	+ 227 96 80 77 36 (mobile) gie_122@yahoo.fr
Mr. Andriamparany Ranoasy <i>Director</i>	FIFATA Madagascar	+261 33 37 540 31 (mobile) +261 34 80 876 02 paranyfifata@gmail.com
Mr. Jean-Marie Ndayishimiye <i>Technical Coordinator</i>	CAPAD Burundi	+257 22 21 79 02 (office) +257 79 970 470 (mobile) jmndayi@yahoo.fr
Mr. Ibrahima Bah <i>National Technical Coordinator</i> Mr. Issa Diakité <i>Regional Advisor</i>	CNOP-G Guinea	+224 62 25 934 38 (mobile) ibrahima_bahfr@yahoo.fr
Mr. Gaoussu Coulibaly <i>President</i>	Réseau des producteurs du Bla Mali	+223 76 22 90 66 (mobile) gascoul01@gmail.com
Team for projects funded by IFAD		
Mr. Manoa Andriantsilavo <i>Head of Operations</i>	AD2M-I et II Madagascar	+261 33 40 250 55 +261 34 05 41 15 24 rop@ad2m.mg
Mr. Pierrot Randrianaritiana <i>National Coordinator</i>	DEFIS Madagascar	programmedefiscn@gmail.com
Mr. Djibril Tamsir Bangoura <i>Coordinator for PNAFAFA and AgriFARM</i>	PNAFAFA et AgriFARM Guinea	+224 62 21 458 00 djibriltb@yahoo.fr
Mr. Salim Drame <i>Head of Monitoring and Evaluation</i>	PDCVR Guinea	+224 622 12 33 32 +224 657 14 50 53 dramesalim@hotmail.fr
Mr. Hassan Issa <i>Regional Coordinator Dosso</i>	PRECIS Niger	+227 99 71 19 92 +227 96 27 39 65 issa.hassane@prodaf.net
Mr. Harouna Mamadou Traoré <i>Regional Coordinator Zinder</i>	ProDAF Niger	traore.harouna@prodaf.net
Mr. Morou Bodo <i>Regional Coordinator Tahoua</i>	ProDAF Niger	bodo.marou@prodaf.net
Mr. Dominique Nduwimana <i>Expert in FFS and IFAD Consultant</i>	PRODEFI Burundi	nduwimanadominique@yahoo.fr

Implementing operators		
Mr. Yansane Ibrahima Mr. Ibrahim Sane <i>Advisory Support FFS</i>	ANPROCA Guinea	ibrahimayansane@yahoo.fr
Me. Lala Ranaivo Minoosa <i>Chief Coordinator</i>	ONG TOKY Madagascar	tokifampandrosoana@yahoo.fr
Other organizations or consultants		
Mr. Stefano Mondovi <i>Consultant in charge of FFS projects in Africa</i>	FAO Rome	stefano.mondovi@fao.org
Mr. Tiko Hema <i>Monitoring and Evaluation Supervisor for FFS</i>	FAO Regional	tiko.hema@fao.org
Mr. Gilles Mersadier <i>International Consultant</i>	Analysis of curricula for FAO projects	gmersadier@gmail.com
Mr. Jean-Charles Heyd <i>International Consultant</i>	Design and monitoring for AD2M project	jc.heyd@gmail.com
Mr. Patrick Delmas <i>Technical Assistant RECA</i>	RECA Niger	+227 91 00 21 71 delmas.reca.cowiram@gmail.com

APPENDIX 4 Farmer field schools: a learning approach for enhancing farming activities

REGEP Project – Jordan

Farmer field schools (FFS) are considered a learning approach that focuses on participatory methods, exchange of knowledge and experience and practical know-how to encourage innovation and learning-by-doing. Small farmers are continuously seeking solutions to the challenges they face in their farming activities and businesses, while IFAD strives to improve agricultural practices and support the farmers in achieving more sustainable, profitable small businesses.

The Rural Economic Growth and Employment (REGEP) is one of IFAD's projects in Jordan. It was launched in 2016 with the objective of reducing poverty, vulnerability and inequality in rural areas through the creation of productive employment and income generating opportunities for the rural poor households. In collaboration with Jordan's National Agricultural Research Center (NARC), the project supports the farmers by offering FFS services for high-value crops, with the aim of improving agricultural practices and encouraging the adoption of modern technologies. FFS addresses diverse technical topics including soil, crop and water management, varietal testing, food processing, nutrition, value chain and link to markets.

NARC is the project's leading implementing partner for both crop and processing FFS. Overall, NARC succeeded in holding 125 FFS from which 39 are processing FFS. These schools were established across the project's targeted governorates Ajloun, Jerash, Balqa, Madaba and Mafraq. In 2020, a total of 23 FFS were conducted, of which 12 were crop FFS for olives, oregano, grapes, tomatoes and cucumbers. The remaining schools were processing FFS for a variety of traditional products including pickled olives, cucumbers and thyme, pomegranate tea and molasses, apple jam and butter, as well as dried tomatoes and tomato paste.

Processing FFS generate great interest among women, as they represent 99 per cent of these schools members. Crop FFS also have a good representation of women, where 35 per cent of the members are women. Anoud Al Zaghool, a member of the apple FFS in Ajloun Governorate, expressed that the school teaches her "the how to". She received training on producing a number of apple products, including apple butter and jam as well as *khabeesa*, a traditional pudding recipe. Anoud locally produces and buys the apple that she processes from the local market. Most of her products are sold to her neighbours or are used for home consumption. "Producing safe products with no preservatives is becoming a priority for me and my family," she said. She explained that women who were involved in food processing activities were producing a range of healthier snacks for their families and particularly for children such as apple chips and apple butter. Still, Anoud aspires to increase her production, diversity her range of products and reach new buyers through market outlets and exhibitions. She believes that the project will be able to help in linking her to the market in the coming period, which would in turn allow her to increase her sales and income.

The project's FFS has been introducing advanced applied technologies, leading to higher production and better quality and promoting practices that would improve natural resources management. Such techniques include integrated pest management, summer pruning, netting and coverage, better use of fertilizers and improved water productivity. NARC estimates that the adoption of these techniques led to saving inputs in the range between 10 per cent and 30 per cent. It also estimates that a 20-30 per cent increase in productivity can be attributed to the techniques introduced in the FFS trainings, that in addition to an improvement in quality. The FFS accordingly helped the farmers to adopt a number of improved farming, develop new products and enhance safety practices in food processing. In addition to the above, introducing the concept of processing through the FFS allowed for utilizing crop surplus that is considered second category quality produce. This in turn reduces the loss to the farmer's family and allows for employing more family members (particularly women) in the processing of these products and hence providing additional sources of income to the family.

Esra'a Alzubi and her family have a small plot of land of 1 *dunum* (around 0.25 acres) in El-Salt region. Esra'a benefited from the trainings provided to cultivate thyme. She also took the initiative of preparing ground thyme. Esra'a explained that the FFS members also received training on production calculation costs, cash flow, labelling, food packaging and marketing tools. Esra'a underlined however that there are some challenges related to marketing the crops and processed products. **She expressed the need for promoting a more collective approach and for developing stronger market linkages.** "This would support me as well as the other beneficiaries in having better marketing capacities, reduce the transportation costs and the prices of inputs that we need to cover," she explained. She added that her participation in the FFS also gave her the opportunity to be part of the region agritourism.

Despite the COVID-19 pandemic, use of digital technologies (primarily online meetings, e-marketing and linkage workshops) enabled the beneficiaries to continue receiving information and being connected to the FFS. Still, there have been concerns related to the sales and marketing of crops and processed products due to COVID-19 pandemic restrictions. These circumstances have led to lower market capacity and in turn lower sales. Both Anoud and Esra'a recognized the relevance of e-market, especially for food-processed products. In this context, an online platform will soon be launched and will help the beneficiaries to market their products online. This platform is considered a critical next step toward increasing market access, especially with the use of digital technologies, which is becoming key.



International Fund for Agricultural Development

Via Paolo di Dono, 44 - 00142 Rome, Italy

Tel: +39 06 54591 - Fax: +39 06 5043463

Email: ifad@ifad.org

www.ifad.org

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