IFAD
Investing in rural people

# LESSONS LEARNED FROM SUPPORTING PLURALISTIC EXTENSION SERVICES

## in Asia and Africa

ISBN 978-92-9266-275-2
Printed October 2022

IFAD
Investing in rural people

# LESSONS LEARNED FROM SUPPORTING PLURALISTIC EXTENSION SERVICES

## in Asia and Africa

**Originators: Putso Nyathi and Marie-Aude Even**

Email: p.nyathi@ifad.org
Email: m.even@ifad.org

**Contributors:**

Rasheed Sulaiman, CRISP, Agricultural Extension in South Asia (AESA)

IFAD peer reviewers: Lorna Grace (Lead Regional Technical Specialist, Rural Finance, Markets and Value Chains), Fanny Grandval (Senior Regional Technical Specialist, Rural Institutions), Arnoud Hameleers (Country Director, Bangladesh) and Ilaria Carlotta Firmian (Lead Technical Specialist, Indigenous Peoples and Tribal Issues)

IFAD: Robert Delve (Lead Global Technical Advisor, Agronomy, technical review and backstopping), Esha Singh (formerly Country Technical Analyst for Asia and the Pacific, led India APDMP, Afghanistan learning centre and ICT4D case studies), Elizabeth Ssendiwala (Senior Regional Technical Specialist, Institutions, India CMRC and Cambodia ASPIRE case studies), Guyo Roba (Country Technical Analyst for East and Southern Africa, economic analysis in East and Southern African case studies), Zainab Semgalawe (Lead Regional Technical Specialist, Institutions), Paxina Chileshe (Regional Climate and Environment Specialist) and Peter Ekblad (Junior Professional Officer, Beijing Hub, case studies from China, Pakistan and Afghanistan)

IFAD consultants: Sanjeev Shrestha (case studies from Nepal) and Emmanuel Jouve (Cambodia ASPIRE)

CBE-Bern-WOCAT: Nicole Harari (WOCAT case study and integrated farm systems in Cambodia)

IFAD country teams also contributed to the selection and development of case studies for the projects in the Asia and the Pacific region (Afghanistan, Bangladesh, Cambodia, China, India, Indonesia, the Lao People's Democratic Republic, Myanmar, Nepal, Pakistan, Viet Nam, the Philippines, Sri Lanka) and East and Southern Africa (Burundi, Eswatini, Kenya, Malawi, Uganda, Zambia).

The development of the lessons learned also benefited from collaboration with several FAO colleagues. The team collaborated with the IFPRI-FAO study on human capital and benefited from cross-learning. IFAD also contributed to an event organized by FAO on entrepreneurship in extension that contributed to lesson 3. Finally, events and exchanges organized with the FAO-Farmer Field School platform informed box 7 and lesson 6.

# CONTENTS

## FIGURES



## TABLES

# DEFINITION OF KEY CONCEPTS

## EXTENSION AND ADVISORY SERVICES (EAS) OR RURAL ADVISORY SERVICES (RAS)

These include all activities that provide the information and services needed and requested by farmers and other actors in rural areas that assist them in developing their own technical, organizational and management skills and practices to improve their livelihoods.

## PLURALISTIC EAS

EAS over the years have become pluralistic, with increasing participation and coexistence of multiple providers representing the public sector, the private sector, NGOs and producer organizations offering diverse types of services that are funded from diverse sources.

## PRIVATE EXTENSION SERVICE PROVIDER (PESP)

This refers to the broad range of extension service providers working at the field level that complement government extension systems. These can be: (i) commercially oriented for-profit private business companies and individual entrepreneurs selling input and services; or (ii) socially oriented not-for-profit service providers such as NGOs and farmer organizations.

## PUBLIC-PRIVATE-PRODUCER PARTNERSHIP (4P)

A 4P arrangement ensures that smallholder producers are respected partners and have a voice in cooperation between a government, business agents and small-scale producers. These work together to reach a common goal or carry out a specific task while jointly assuming risks and responsibilities, and sharing benefits, resources and competencies.

## PRODUCER ORGANIZATION (PO)

POs are autonomous, membership-based professional/business organizations made up of smallholder producers. They are established at different levels – grass-roots/community level, regional and subregional levels, national and global levels – on either a commodity or a territorial basis. They include farmer groups, producer associations, primary cooperatives, unions and federations (IFAD, 2016b).

# ABBREVIATIONS AND ACRONYMS

| | |
|---|---|
| 4P | public-private-producer partnership |
| AESA | Agricultural Extension in South Asia |
| AMD | Adaptation to Climate Change in the Mekong Delta, Viet Nam |
| APDMP | Andhra Pradesh Drought Mitigation Project, India |
| ASPIRE | Agricultural Services Programme for Innovation, Resilience and Extension, Cambodia |
| BDT | Bangladesh Taka |
| CHARMP | Cordillera Highland Agricultural Resource Management Project, Philippines |
| CMRC | community-managed resource centre |
| EAS | extension and advisory services |
| HVAP | High Value Chain Agricultural Project in Hill and Mountain Areas, Nepal |
| ICT | information and communication technology |
| ICT4D | information and communication technology for development |
| KCEP | Kenya Cereal Enhancement Programme, Kenya |
| KCEP-CRAL | Kenya Cereal Enhancement Programme - Climate-Resilient Agricultural Livelihoods, Kenya |
| NADeP | National Agribusiness Development Programme, Sri Lanka |
| PACE | Promoting Agricultural Commercialization and Enterprises, Bangladesh |
| PESP | private extension service provider |
| PRELNOR | Project for the Restoration of Livelihoods in the Northern Region, Uganda |
| PMU | programme management unit |
| SAPP | Sustainable Agricultural Production Programme, Malawi |
| SMLP | Smallholder Market-led Programme, Eswatini |
| VODP | Vegetable Oil Development Programme, Uganda |
| WOCAT | World Overview of Conservation Approaches and Technologies |

# EXECUTIVE SUMMARY

IFAD is committed to reaching and improving production capacities of the poorest farming households, especially those living in the most marginalized areas with limited access to public or private extension services. To achieve that, IFAD invests in production technical support, rural institutions, market and finance access as well as required infrastructure through its loan projects. A large part of such investments is dedicated to strengthen advisory services which help to develop the technical, business, social and organizational skills of smallholder farmers. Around 271 ongoing IFAD-funded projects include support for crop development, and 68 per cent of such financing is dedicated to crop advisory services. Similarly, 60 per cent of market-related investments are dedicated to support business development services and quality market linkages. Almost 70 per cent of rural institutions investments support the development of community and farmer organizations.

However, most public extension services are generally underfunded and understaffed, mainly focus on production-related advisory services and, therefore, cannot meet broader needs for advisory services. Most IFAD loan projects invest in "pluralistic extension advisory systems" that complement public extension through the engagement of private extension service providers (PESPs) that support farmers with the needed broader skillset and bring up emerging issues around climate change, nutrition and sustainable development. In this study, the private sector[1] includes a wide range of actors and entities, such as commercial entities (suppliers of agricultural inputs, consultancy firms, individual consultants, aggregators, organizations specialized in food processing and sales) and socially oriented private organizations, such as NGOs, producer organizations and farmer-trainers (IFAD private sector strategy, 2019-2024).

This report provides 10 lessons on the selection and engagement of PESPs, improving efficiency, measures to reach last-mile farmers and sustainability of services from 23 IFAD loan projects that invest in improved crop production and related value chain development through different private extension services. In addition, the document reviews the role of the public sector in fostering inclusive pluralistic extension and advisory services (EAS).

The lessons are summarized as follows.

## Lessons on the selection, delivery of advisory services and inclusivity of PESPs

- **Context-specific selection of PESPs is a crucial step to ensure the right partners are engaged** to meet the needs of the targeted beneficiaries, and to identify technologies that need to be promoted. Their selection takes into account the diversity of target farmers (poverty level, access to land and irrigation, assets, language,

1. The IFAD private sector strategy includes for-profit private companies, private and institutional investors, commercial banks and investment funds (private equity funds, debt funds, blended finance funds and impact funds); other financial vehicles that are majority-owned and/or managed by private entities; and state-owned enterprises that have sound financial and governance structures and comply with private sector practices. This definition, therefore, also includes farmer cooperatives, NGOs, small and medium-sized enterprises, etc.

level of education, gender, etc.); the context (such as degree of commercialization, remoteness, poverty levels and type of value chains); the existing capacities and gaps in public extension; the maturity of the PESP; additionality, scope for PESPs to consider social and environmental thematic areas and the possibility of becoming sustainable service providers for smallholder farmers.

- **Bundled services are key to impact and inclusion.** Most PESPs have bundled services through "one-stop service centres" (in which a single PESP provides extension services on various topics beyond production alone), multi-stakeholder platforms and coalitions of PESPs (which bring together specialized PESPs to provide advisory services related to their areas of specialization), which facilitates articulation with both public extension and target farmers.
- **To reach "last-mile" farmers, grass-roots service providers are used.** They can be either social entities (volunteer lead farmers, community extension workers, grass-roots organizations) or "agroentrepreneurs" such as produce buyers and input dealers.
- **Inclusive targeting requires good knowledge of targeted beneficiaries**, as well as meaningful engagement of beneficiaries alongside inclusive governance, and monitoring and feedback mechanisms to ensure PESPs are providing beneficial services for all partners. Strong producer organizations are required to use such inclusive governance mechanisms to negotiate and implement fair public-private partnerships. Attentive selection and training of PESPs strengthens inclusion. Some projects use differentiated approaches to ensuring social inclusion by engaging business-oriented service providers for market-ready farmers and service-oriented service providers such as producer organizations and NGOs to support subsistence farmers.
- **Partnering with research and incentivizing business-oriented PESPs helps introduce and scale up new technologies and mainstream environmental and climate-related issues.** PESPs often need adaptive research support to identify locally relevant solutions, and the IFAD loan projects often link PESPs with research centres. The programme enters into specific memorandums of understanding with research centres to ensure this support. Additionally, value chain partnerships use innovative ways to stimulate/incentivize PESPs to integrate climate-smart practices in their services (e.g. through investments in "green" inputs and organic value chains).
- **Tapping into the potential of information and communication technology (ICT) in extension service delivery and management has proven its worth.** Use of ICT is increasing sharply, notably due to the mobility constraints related to COVID-19. ICT solutions are diverse and can help deliver better extension services by: (i) improving monitoring, feedback and targeting; (ii) facilitating the bundling of services and linking demand and offer; (iii) improving the quality of services (embedding climate advisory, tailored agronomic advisory, etc.); and (iv) facilitating remuneration of PESPs. However, the digital divide is still acute, both in access to digital technology and in farmers' capacity to use digital means. In addition, many still do not trust such external advisory and prefer learning from their peers. Therefore, ICT options should be embedded in pluralistic extension systems and used to further empower last-mile extension workers to support fellow farmers.

## Lessons on the sustainability and efficiency of PESPs

PESPs use a diversity of revenue streams for financial sustainability. While some PESP services can be considered one-off initial investments, other services need to be maintained beyond the project and may require sustainable incentives and revenue streams. Projects should support PESPs to develop exit strategies and business plans from an early stage, building on the following lessons:

- **Enhancing economic viability of PESPs improves sustainability and** can be done by: (i) increasing cost-efficiency by carefully delineating and reviewing investments and operational costs and improving outreach systems through, for example, last-mile service providers; (ii) identifying and combining different sustainable incentives and revenue streams comprising: (i) non-monetary incentives; (ii) membership fees; (iii) fee-based services; and (iv) transaction fees (i.e. incorporating the cost of extension advisory in other commercial transactions; paravet providing services while conducting paid vaccination, cooperative organizing extension services that are paid based on profits of other commercial transactions, input provider setting demonstrations).
- **Leveraging cofinancing is crucial: extension services create value beyond revenue generated, and such benefits should be quantified.** This can help bring on board **cofinancing partners** that benefit from such services (value chain, input dealers, service providers and credit institutions). Partnerships between financial institutions, value chain actors and PESPs can provide win-win opportunities that help farmers and value chain actors to cofinance PESPs, among other investments. Economic incentives and standards can help mainstream the environment and social inclusion in PESPs.
- **Investing in financing capacities and financial inclusion can increase the economic viability of PESPs.** For instance, projects can include financial literacy training, support farmers to better assess the cost-benefit of technologies and value added in investing in such improved practices. It can incorporate the village savings and loan association approach and encourage farmer groups to invest the savings to facilitate investments in advisory services and inputs. Access to credit and such saving will consolidate the capacity of beneficiaries to pay for commercial PESPs, to support local youth and groups to invest in agricultural extension services and incentivize other value chain partnerships, including value chain finance. In addition, this can also be beneficial to financial institutions that often have limited outreach and expertise in rural areas, to identify relevant and less risky agricultural investments.
- **Strong last-mile institutions, partnerships and networks are crucial for outreach and sustainability of extension systems but require early engagement and capacity-building.** Most projects rely on grass-roots farmer organizations to sustain extension services. However, capacity-building is normally done late in the project's life – hence, not allowing enough time for maturity. IFAD guidelines on institutions provide useful tools for projects to support existing farmer organizations as much as possible (rather than creating new ones), assess farmer readiness/maturity for weaning, and adopt phased and targeted approaches. Supporting progressively suitable federations and partnerships with government structures, value chain actors, apex organizations and relevant networks is also key to sustaining grass-roots institutions.

- **Strengthening monitoring and evaluation systems is crucial to enhance effectiveness and sustainability of PESPs:** tracking cost and benefit can assess and improve PESPs' cost-effectiveness and identify how to improve services. In addition, it can demonstrate the value they create is key to leveraging amplifying partnerships and cofinancing from both public and private actors.

## The role of the public sector in pluralistic EAS

Achieving financial sustainability takes time and may not be achievable with only private financing, notably for the poorest farmers and less commercial value chains and services. This is true both for IFAD-supported pluralistic systems and for the private sector. Public investments are important to increase financial viability through dedicated subsidies, vouchers, initial investments, and support for public extension services. Projects and governments can also facilitate partnerships and private cofinancing with value chain and rural financing institutions.

Therefore, governments play an important role in fostering an enabling environment for inclusive and sustainable pluralistic extension systems. This review identified three key areas for governments:

- **Establishing, coordinating and monitoring pluralistic extension systems that can help match the demand for and offer of services.** The process of developing viable public-private-producer partnership (4P) business proposals requires strong negotiation and clarity in the cofinancing arrangements and expectations of the commitment and value added of each partner, their willingness to include extension advisory services, the business model and the final expected outcomes. Many IFAD loan projects foster pluralistic PESPs through multi-stakeholder platforms and service centres, notably where the private sector is weak. Sustainability often requires public investment.
- **Providing initial or permanent investments, incentives and revenue streams.** Governments play a role in sustaining the structures developed during the project's life, and in creating positive enabling environments for PESPs to consider social and environmental issues. In the IFAD loan projects reviewed, governments: (i) provide targeted public investments in farmer groups' development and training infrastructure, as well as vouchers to help farmers pay for PESPs; (ii) mainstream and incentivize the use of last-mile service providers in extension delivery (i.e. integrating lead farmers into government extension services, and supporting lead farmers to host demo plots post project and participate in government-led activities such as exchange visits); (iii) support research and innovation, wider capacity development and education efforts; and (iv) ensure quality control mechanisms.
- **Quality assurance.** Governments invest in research and extension linkages, help build quality harmonized extension curricula that integrate social and environmental concerns, and provide long-term access to training and capacity development for extension workers and last-mile providers. In addition, they invest in monitoring, evaluation and certification systems to ensure the quality of services and responsiveness to farmers' needs.

Building on the lessons listed above, brief **guidance is provided on how to enhance pluralistic EAS during design and start-up, and in the course of project implementation.**

- **At the design stage**, projects need to identify gaps in EAS delivery and conduct a mapping exercise to identify potential PESPs that meet different target groups' needs, build on existing systems and embed relevant information and communication technology for development (ICT4D).
- **At start-up**, the project should prioritize the recruitment of PESPs and develop realistic phased planning with quality monitoring systems to identify what works and address issues. Timely recruitment of service providers is also crucial to ensure maximum benefits. In some projects, procurement of service providers tends to take too long or to come too late in the programme, hence delaying access to EAS. Projects should design strategies to mitigate the key risks associated with late start-up.
- **During implementation**, after agreeing on clear and measurable deliverables, it is important to closely monitor and evaluate the performance of PESPs, and include feedback mechanisms for improvement.
- **It is important to pay attention to the exit strategy and sustainability from the start.** Exit strategy and sustainability plans need to be considered from the design phase. This can be done by reviewing existing institutions and core needs, addressing identified gaps and engaging in policy processes that are necessary to provide the enabling environment required. Prototype PESPs using a business model canvas approach (see figure 1) help strengthen efficiency and sustainability by clarifying from the start the value proposition, mechanisms to reach the last mile and obtain feedback on performance, and identify required partnerships, capital and operating costs and revenue streams. Such an exit strategy includes different phases to reach sustainability, acknowledging that the investment project phase may focus on the initial investments required in infrastructure and institutional and technical capacities to deliver extension through updated curricula, strengthened farmer groups and last-mile extension workers. Financial viability may focus on recovery of operating costs once such more expensive investments have been carried out and partners have seen the added value of services.

# INTRODUCTION

@IFAD/Robert Grossman

IFAD is committed to reaching the poorest farming households, especially those living in the most marginalized areas with limited access to public or private extension services. To achieve this, IFAD provides loans for governments to invest in production technical support, rural institutions, market and finance access, and necessary infrastructure. A large part of such investment is dedicated to strengthen advisory services which can help develop the technical, business, social and organizational skills of smallholder farmers while addressing nutrition, gender and social inclusion, and mainstreaming environment and climate change. For instance, 271 ongoing IFAD-funded projects include support for crop development, and 68 per cent of such financing is dedicated to crop advisory services. Similarly, 60 per cent of market-related investment is dedicated to support business development services and quality market linkages. Almost 70 per cent of investment in rural institutions supports the development of communities and farmer organizations.

Though public extension systems do exist in most countries, they are generally underfunded (OECD and FAO, 2016) and face a myriad of challenges to respond to such broader needs for advisory services, including: (i) limited capacity to reach all farmers effectively, due to their low outreach and ageing workforce; (ii) a predominant focus on production, with limited capacity to respond to emerging challenges related to organizational development, mechanization, post-harvest, storage, market linkages, information and communication technology (ICT) solutions, nutrition, food safety, ecosystem services, water conservation, adaptation to climate change, etc.; (iii) insufficient training in new extension approaches that are needed to solve these current challenges; and (iv) a sectoral focus on delivering government services, with difficulties in coordinating a variety of institutions to help farmers undertake the sustainable transitions required.

Therefore, most IFAD projects invest in "**pluralistic extension and advisory services**" (EAS) – defined as extension models that **include both government and private organizations and which recognize specific roles for the public sector to ensure quality services and respond to farmer needs** (USAID, 2019; Blum, Cofini and Sulaiman, 2020). In this study, in line with the IFAD definition of the private sector, private extension service providers (PESPs) include a wide range of actors and entities, such as commercial entities (suppliers of agricultural inputs, consultancy firms, individual consultants, aggregators, organizations specialized in food processing and sales) and private organizations, including social services (IFAD private sector strategy, 2019-2024). More explicitly, the latter comprise NGOs, producer organizations and farmer-trainers. Indeed, IFAD specifically emphasizes the concept of public-private-producer partnerships (4P), recognizing the crucial roles of such producer organizations in both articulating the demand from farmers and responding to such demand to the last mile.

Several studies (FAO, 2021; IDH, 2020; 2021; USAID, 2019; Grow Asia, 2020) have reviewed pluralistic extension systems, but not within IFAD's specific context and objectives of working through government services and producer organizations, and targeting poor people in rural and remote areas. A portfolio review of United States Agency for International Development (USAID) initiatives found varying levels of success and a lack of information on impact, outreach and quality of extension services provided through pluralistic services (USAID, 2019).

With the outbreak of COVID-19 in 2020 and the subsequent restrictions on movement and gatherings, ICT has become very important in EAS to reach farmers. Fewer studies have also reviewed how ICT can address some of the limitations identified in both public and private extension.

There are even fewer studies that have looked at the cost-effectiveness and sustainability of pluralistic extension systems over time or beyond a project life. For example, the USAID review of its portfolio in 28 countries found that none of the project documents provided much insight into the effectiveness and sustainability of the lead farmer positions used to provide EAS. To be sustainable, PESPs require a business model, and a conducive environment to continue delivering services. Conventional models rely on the willingness and capacities of the beneficiary to pay for the service. This modality works well for specific services that can be embedded in other transactions (i.e. paravet, input and seed sales including extension services). However, it is more difficult to recover fee-based services, notably for staple value chain, subsistence and resource-poor farmers, who are IFAD's core targets (IDH, 2021; USAID, 2019). In most cases, such modalities also exclude the poorest farmers and specific sectors. The IDH (2021) study on PESPs' business models identified that only 17 per cent of companies engaged in extension service delivery recovered all costs incurred on extension. On average, 25 per cent of revenues came from extension fees, and 18 per cent from grants (IDH, 2020; sample of 41 private sector delivery entities, including value chain actors). However, the IDH study concentrated on the private sector, with mixed attention to the inclusion of the poorest farmers or the role that public-private partnerships can play to make such private sector services more inclusive and sustainable. There is a need, therefore, to review alternative revenue models and possible roles of public investment to support sustainable and inclusive PESPs.

## Purpose of the study, target audience and scope of lessons learned

This document provides lessons and best practices to strengthen the design and implementation of projects that engage with PESPs to develop efficient, inclusive and sustainable pluralistic extension systems. The selected projects were either completed or past mid-term review, to enable lessons to be drawn. The target audience includes staff providing technical assistance to projects, consultants supporting such areas of work, and country teams and project teams working on EAS.

This document presents lessons learned from 23 IFAD-funded projects that have invested in pluralistic EAS in the regions of Asia and the Pacific and East and Southern Africa through various public-private mechanisms (table 1). These projects intervened in a variety of mainly crop value chains (staple and high-value crops, exports, organic produce, etc.) in different agroecological environments (semi-dryland, irrigation context, coastal areas, mountains, etc.). Most loan projects covered both production and value chain training, development of farmer organizations, strengthening value chain linkages, enhancing access to water, inputs, finance and markets, as well as specific interventions to address gender issues, nutrition and adaptation to climate change. The projects deliver extension services through a variety of private entities which were classified under two broad categories depending on the type of institution, their goal and financing mechanisms:

- **Socially oriented service providers**, which provide extension services with a social objective and often "not for profit", with often a similar legal status to a farmer cooperative (e.g. NGOs, producer organizations, social enterprises)
- **Commercially oriented service providers**, which provide extension services on an income-generating basis. These include specialized PESPs providing paid extension services and value chain actors integrating extension services as part of their business models (e.g. agro-dealers, aggregators, ICT service providers, financial institutions).

In line with IFAD's mandate and due to the often insufficient level of government extension staffing, the document notably reviewed mechanisms employed to strengthen last-mile delivery at the community level. In addition, the document also reviewed the different modalities through which governments foster pluralistic extension systems through multi-stakeholder platforms and pluralistic service centres, by contracting PESPs and by working directly with community extension workers or last-mile farmers. Table 1 provides a list of the projects reviewed.

**TABLE 1** IFAD-funded projects reviewed for this study

| Country | Project | Nature of pluralistic extension service provision | Project status |
|---|---|---|---|
| **EAST AND SOUTHERN AFRICA** | | | |
| Burundi | Agricultural Intensification and Value-enhancing Support Project (PAIVA-B) | Strengthening farmer organizations and increasing productivity and incomes | Completed |
| Eswatini | Smallholder Market-led Programme (SMLP) | Market-led production support through contracting | Ongoing |
| Kenya | Kenya Cereal Enhancement Programme - Climate-Resilient Livelihoods Window (KCEP-CRAL) | Value chain support through partnerships | Ongoing |
| Malawi | Sustainable Agricultural Production Programme (SAPP) | Productivity enhancement through a lead farmer approach | Ongoing |
| Uganda | Programme for the Restoration of Livelihoods in the Northern Region (PRELNOR) | Productivity enhancement through production and market linkages | Ongoing |
| Uganda | Vegetable Oil Development Programme (VODP2) | Market-oriented production support through private extension support | Completed |
| Zambia | Smallholder Productivity Promotion Programme (S3P) | Productivity enhancement through pluralistic extension services | Completed |
| **ASIA AND THE PACIFIC** | | | |
| Afghanistan | Support to National Agricultural Priority Programme 2 (SNaPP2) | Service centre and public-private partnership | On hold |
| Bangladesh | Promoting Agricultural Commercialization and Enterprise (PACE) | Business cluster, local service provider and rural finance along value chain clusters | Ongoing |
| Cambodia | Agricultural Services Programme for Innovation, Resilience and Extension (ASPIRE) | Pluralistic extension policy supporting farmer-to-farmer training, community workers, cooperative services, value chain services, local service providers and business clusters | Ongoing |
| China | Sustaining Poverty Reduction through Agribusiness Development in South Shaanxi (SPRAD-SS) | Pluralistic cluster with decentralized public extension and public-private partnership, innovative information and communication technology for development (ICT4D) platform | Ongoing |
| India | Andra Pradesh Drought Mitigation Project (APDMP) | Producer-led service centres (750 farmers each) providing links to both extension services (including ICT) and seeds, bio-inputs, mechanization and access to market | Completed in 2022 |
| India | Jharkhand Tribal Empowerment and Livelihoods Project (JTELP) | Efficient last-mile system through local facilitators and youth groups, backstopped by ICT4D | Completed |
| India | Community-Managed Resource Centre (CMRC) reviewed in CAIM project and Tejaswini | Integrated service centre managed by a self-help group federation and in partnership with a bank | Completed |
| Indonesia | Rural Empowerment and Agricultural Development Scaling-up Initiative (READSI) | Value chain partnership with Mars, including farmer-to-farmer training, local service providers and cocoa service centres | Ongoing |
| Lao People's Democratic Republic | Strategic Support to Agriculture and Food Security (AFN) | Lead farmer and community extension focused on nutrition | Ongoing |

**TABLE 1** IFAD-funded projects reviewed for this study

| Country | Project | Nature of pluralistic extension service provision | Project status |
|---|---|---|---|
| **ASIA AND THE PACIFIC** | | | |
| Myanmar | Fostering Agricultural Revitalization in Myanmar (FARM) | Integrated service centre led by the government but mandated to foster pluralistic extension systems | Completed |
| Nepal | High-Value Agriculture Project in Hill and Mountain Areas (HVAP) | Value chain project that conducted local identification of PESPs and developed various pluralistic extension systems | Completed |
| Nepal | Adaptation for Smallholders in Hilly Areas (ASHA) | Community-driven and -targeted climate adaptation through local government, groups and lead farmers | Ongoing |
| Pakistan | Economic Transformation Initiative – Gilgit Baltistan | Value chain partnership between a farmer group and Momo, a private dairy company | Ongoing |
| Philippines | Cordillera Highland Agricultural Resource Management Project (CHARMP) | Community-driven forest and livelihood project in mountain areas delivered through a partnership between the local government and producer organizations | Completed |
| Sri Lanka | National Agricultural Development Programme (NADeP) | 4P between cooperative and value chain actors, embedding advisory services and access to rural finance | Completed |
| Viet Nam | Climate Change Adaptation in the Mekong Delta (AMD) | Research extension partnership for locally relevant community-supported agriculture and extension embedded in public extension, lead farmers within a farmer union and enterprise through value chain partnership | Completed |

## Methodology

To draw lessons from a wide range of IFAD projects, a team of practitioners and experts adapted the "business model canvas" (figure 1) to review activities, resources, costs, delivery, partnerships and sustainability. The business model canvas was initially proposed by Alexander Osterwalder and has been widely used by the private sector, but also by social and environmental enterprises, to develop and improve their value proposition and business model. It offers a unique framework that enables them to see how different elements are required and connected to create, deliver and capture value for target beneficiaries/clients. In addition, as it is broadly used, it contributes to a shared language and understanding of business models across actors. Canvas, examples and training programmes are also easy to find online.[2] The extension service assessment was framed around nine building blocks of the business model canvas and grouped around its three core pillars:

- **Pillar 1: Delivering adaptive and flexible value propositions** (green in figure 1) comprises identification of needs of "customer segments" (here, our target beneficiary farmers and value chain targets), development of a "value proposition" responding to customer needs (e.g. development of tailored extension and business services), identification of delivery channels to reach customers (here, extension agents, lead farmers, agrovets, ICT platforms, etc.), and "customer relationship" mechanisms to ensure the "value proposition" is always adapted and useful to the end-users (here, stakeholder feedback systems, participatory planning, etc.)
- **Pillar 2: Implementation requirements** (blue) identifies the different activities required (for extension, this may entail training, demonstrations, etc.), the resources to invest in (e.g. required training of extension staff, investment in curricula,

2. See various web links in the references section.

training infrastructure), and the partnership required (e.g. government extension staff may need to partner with value chain actors, farmer organizations)

- **Pillar 3: Main running costs and possible revenue streams** (yellow) to sustain extension services
- Government and project role to design and deliver such pluralistic extension systems (red).

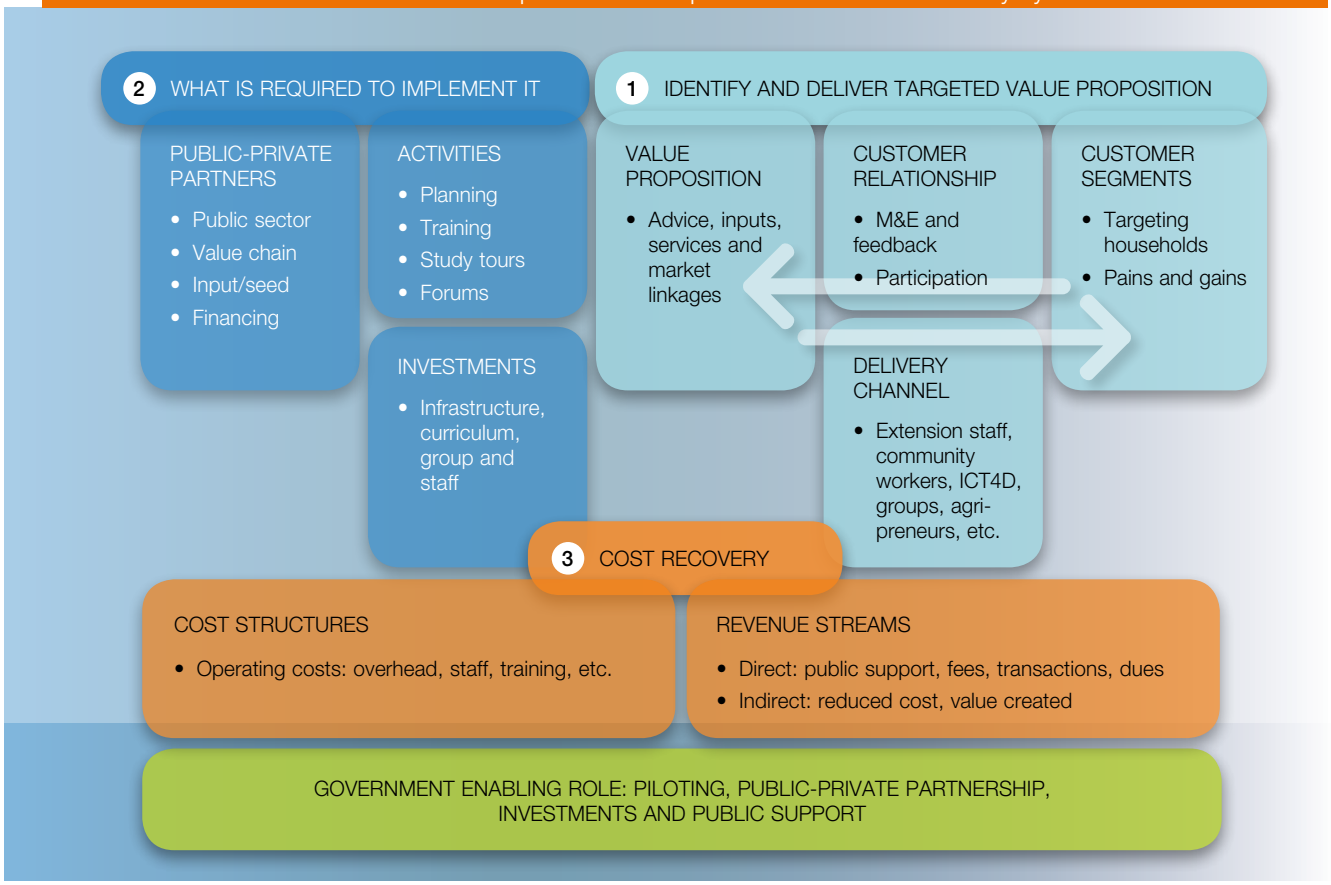
## Organization of the lessons

The 10 major lessons learned through this review process cover the following three aspects that are also consistent with the business model canvas framework:

- **Models of pluralistic extension services** and how PESPs can be selected and engaged along a value proposition responding to target farmers/customer segments (lessons 1 and 2)
- **Actions to reach and empower the last mile** (including poor people in rural areas, women, youth, etc.) through quality "delivery channels" and "customer relationships"(lessons 3 and 4) and to enhance inclusion of environmental and climate change aspects (lesson 5)
- **The efficiency and cost-effectiveness** of the partnerships deployed and the factors that contribute to positive performance and economic viability (lessons 7, 8 and 9 along with activities, resources and the related cost recovery section of the business model canvas).

Finally, the document provides enabling factors, including the role of ICT to enhance the efficiency, inclusion and sustainability of PESPs (lessons 6 and 10).

**FIGURE 1** Business model canvas adapted to review pluralistic extension advisory systems



# LESSONS LEARNED **1**

## Selection, delivery of services and inclusivity of PESPs

@IFAD/Susan Beccio

## LESSON 1: PROJECTS USE DIFFERENT TYPES OF PESPs DEPENDING ON LOCAL CONTEXT AND NEEDS

- IFAD investment projects employ different private entities to provide EAS, including NGOs, producer organizations, private organizations, and value chain and financial institutions.
- Each entity may have different strengths, weaknesses and shared interest in providing extension services.
- Selection of the right PESPs depends on the locally identified demand for and offer of services, and considers capacity gaps and long-term interest in providing extension services.

IFAD loan projects employ a diversity of private entities to provide EAS, including NGOs, producer organizations, private organizations, and value chain and financial institutions. The selection depends on the analysis of strengths, types of advisory services required, weaknesses and shared interest to provide EAS, as depicted in table 2.

**TABLE 2** PESP additionality and limitations, and their shared interest in service provision

| PESP ADDITIONALITY AND LIMITATIONS | EXAMPLE |
|---|---|
| **PRODUCER ORGANIZATIONS AND COMMUNITY INSTITUTIONS** | |
| **Added value to serve farmers**<br>• Trusted by communities; similar language and culture<br>• Social capital: being part of a group/network<br>• Can serve poorer farmers and remote areas where there is limited scope for commercial services<br>• Less expensive, as it often includes volunteer work (leaders, etc.)<br>**Interest for PESPs:** Increased quality of services to members, and capacities to engage in other commercial activities and partnerships (value chain, etc.); increased membership and revenue<br>**Limitations:** Fewer technical and organizational capacities for addressing complex new issues; normally very little innovation; need to be fertilized | **In India**, several projects invest in community service centres managed by producer organizations or women's self-help groups to deliver services to their members (such as inputs, seeds, mechanization, soil testing, market/climate advisory, agribusiness and financial inclusion) while generating revenues for the organization (through members' dues, sales of inputs, seeds and mechanization services, fees for services, etc.).<br>In **Uganda, the Project for the Restoration of Livelihoods in the Northern Region (PRELNOR)** recruited producer organizations. The producer organizations benefited from increasing membership and improved quality of services due to capacity-building received from the project. Farmers had improved access to extension services. |
| **SPECIALIZED SERVICE PROVIDERS (INCLUDING RESEARCHERS, NGOS)** | |
| **Added value to serve farmers**<br>• Specific expertise (ICT4D, climate-smart technologies, farmer field schools, etc.)<br>• Eligible for grants; suited to support social and public entities<br>**Interest for PESPs:** Resource mobilization; converging mandates (i.e. social and environmental NGOs); strengthening their own capacities, visibility and partnerships<br>**Limitations:** Limited revenue mechanisms to continue post project; focused on strengthening their own capacities | **In Zambia**, the Sustainable Productivity Promotion Programme (S3P) identified local service providers Total Land Care (TLC) and Community Markets for Conservation (COMACO) to complement public extension services. They are trusted locally and bring experience in participatory approaches and climate-smart technologies. Both organizations are known leaders in conservation and the use of farmer field schools. |

**TABLE 2** PESP additionality and limitations, and their shared interest in service provision

| PESP ADDITIONALITY AND LIMITATIONS | EXAMPLE |
|---|---|
| **UPSTREAM VALUE CHAIN ACTORS** | |
| **Added value to serve farmers**<br>• Market-oriented advisory services include access to markets for organized value chain and high-value crops<br>• Potential for cofinancing, as banks have more trust in value chain actors<br>**Interest for PESPs:** Extension services help improve the volume, quality and reliability of their sourced products against their needs; working with smallholders and providing services can help them achieve their social and environmental responsibility and certification requirements<br>**Limitations:** Fewer prospects for staple crops, remote areas and poor farmers. Farmers may do side selling, thereby breaking trust and contracts | **In Indonesia**, Mars needs to source quality and stable cocoa and demonstrate its social and environmental responsibilities. It invested in research, innovation and a curriculum for cocoa production through a dedicated cocoa academy and cocoa villages and workers. The IFAD project fostered a dedicated partnership with Mars to jointly facilitate the training of extension officers and lead farmers of IFAD projects in the cocoa academy and leverage their value chain experience. On the other hand, Mars may benefit from increased sourcing options from smallholders gathered in stronger producer groups.<br>**In Eswatini**, the Smallholder Market-led Programme (SMLP) engaged two semi-private organizations to provide extension services to farmers who produce vegetables and beans through an outgrower scheme model. The farmers sign a contract to sell their produce to the extension service providers. |
| **DOWNSTREAM ACTORS SELLING INPUTS (SEEDS, EQUIPMENT, ETC.)** | |
| **Added value to serve farmers**<br>• Ensuring long-term access to inputs, specific skills and services (operation and maintenance services)<br>• Several already invest in research, extension/demonstrations in their own outreach system<br>• Potential for cofinancing<br>**Interest for PESPs:** Increase outreach and sales of inputs; potential co-benefit in capacity development and research; help them meet social and environmental responsibilities and standards<br>**Limitations:** Advice may not always be neutral, due to overriding business interests (linked to specific products; sales motivation, etc.); cost recovery may not be transparent | **In Kenya**, the Kenya Cereal Enhancement Programme - Climate-Resilient Agricultural Livelihoods (KCEP-CRAL) engages conservation agriculture service providers who provide extension services on the technology and provide mechanization services at a fee that is included in the programme's e-voucher for ripping and spraying.<br>**In Uganda**, the Vegetable Oil Development Programme (VODP2) partnered with seed providers, which set up demonstration gardens and held field days to share knowledge with farmers and would benefit from seed purchases by farmers following demonstrations. |
| **FINANCIAL INSTITUTIONS** | |
| **Added value to serve farmers**<br>• Providing access to credit to invest in suggested inputs, services and technologies<br>• Strengthening financial and business literacy, and inclusion in the banking system through account opening<br>• May cofinance extension to de-risk agricultural credit<br>**Interest for PESPs:** Facilitate outreach and farming knowledge; extension can decrease farming risks and increase farmers' income, thereby "de-risking" farming credit and improving the "bankability" of farmers<br>**Limitations:** Often weaker agricultural expertise; may exclude less bankable and non-cash value chains | **In Bangladesh**, several projects are directly managed by the Palli Karma-Sahayak Foundation (PKSF), a network of microcredit NGOs. As they engage in pluralistic extension and climate-resilient value chain development through the project, farmers may need loans to invest in new opportunities that have been tested and found profitable and resilient through the project. In addition, as they work with the project and receive financial training, they become more bankable; therefore, almost half of beneficiaries obtained a loan from the microcredit NGOs, which also benefited through increased and diversified portfolios. |

Considering such diversity of options, loan projects invest in early and careful analysis of the context, the extension needs of different target groups (livestock vs crop farmers, subsistence vs commercial, gender/age specifics, etc.; see lesson 3), and potential PESPs. In value chain projects, quality value chain assessments are crucial to identify the different stakeholders engaged in such value chains and their specific service needs to upgrade the value chain from production to marketing. In addition, capacity gap analysis needs to be conducted for government actors and available PESPs to identify the capacity development and services required to meet such demand (see box 1 for an example).

**BOX 1** Example of mapping offer of and demand for services in Nepal

**In Nepal**, the High Value Agriculture Project in Hill and Mountain Areas (HVAP) supported the development of value chains in poor and remote upland areas from 2011 to 2017. For each value chain, the project identified the needs in terms of training, inputs, information, finance, market access, etc. The project quickly realized that public extension services had insufficient staff and technical capacities. It, therefore, conducted a thorough review of the demand for and offer of services, in collaboration with the multi-stakeholder platforms being organized along the value chains. Service provider mapping surveys assessed the service requirements of the value chain actors, the status of service providers, gaps/opportunities, and business support required. Based on this review, the project decided to invest further in building the capacities of community resource persons (village agriculture and livestock workers, local resource persons, lead farmers), who had been trained in a previous project and could be easily mobilized. In addition, it identified local private service providers, cooperatives, input dealers and value chain actors that were already providing different kinds of services but needed capacity development.

# LESSONS LEARNED **2**

@IFAD/Susan Beccio

## **LESSON 2**: PROJECTS USE PESPs TO BUNDLE DIFFERENT SERVICES TO ENHANCE IMPACTS

- Farmers benefit most from projects that can effectively bundle different services across the value chain.
- Depending on the context and the existing strengths of PESPs, projects can bundle services by: (i) supporting integrated service providers or service centres aggregating different services; (ii) supporting platforms and the engagement of various PESPs; or (iii) integrating PESPs within value chain contracts.

Successful projects bundle different services which can be implemented through different PESPs, including access to technology, finance and markets along the value chain to create different values for the beneficiaries in terms of enhanced productivity, income and job creation. Indeed, to be able to implement proposed innovations and technologies, farmers usually need additional support to access recommended seeds, inputs, services and often finance to acquire such additional services. In addition, market incentives may play a crucial role in motivating adoption. Even if it is difficult to attribute specific costs to specific results in such bundling, box 2 demonstrates the value created by projects adopting such an integrated approach.

**FIGURE 2** Services provided by PESPs

**BOX 2** Documented value for money of bundled services in Bangladesh, Burundi and Uganda

**The Promoting Agricultural Commercialization and Enterprises (PACE) project in Bangladesh** is implemented by a network of microcredit organizations that supports the development of climate-resilient value chains by providing bundled services for local business clusters comprising farmer groups, lead farmers, local service providers and key value chain actors. The data show a productivity increase of 20-30 per cent for safe vegetables (where safe production was promoted, with fewer chemicals, hence lower production costs). Between 57 per cent and 67 per cent of farmers engaged in such activities obtained credit from associated microcredit organizations. Service providers were able to sell "fee-based extension", while lead farmers developed agribusiness and services alongside input production. The project support cost per farmer per year was around BDT1,100 (approximately US$13) but generated additional net profits for farmers of up to BDT10,000 across three main cropping seasons. Building on such impressive results, several local microcredit partner organizations are now integrating the "value chain facilitators" beyond the investment project to bundle technical and financial services.

**In Burundi, the Agricultural Intensification and Value-enhancing Support Project (PAIVA-B)** introduced the System of Rice Intensification (SRI) in 2009 through an integrated extension approach. The project partnered with two NGOs, each with specific services. The NGO ACORD's role was to develop community organizations and provide a household mentoring approach and farmer field schools to promote SRI, resulting in a tripling of rice yields. The producers formed an association and chose internal facilitators to popularize the approach in other regions. The role of the other NGO, CAPAD, was to develop the capacities of cooperatives and facilitate access to credit for trade and inputs, recording an impressive 100 per cent repayment rate for trade credit. Popularization of the SRI enabled seed multiplier groups to produce 75 per cent of rice seeds required by the project, 84 per cent of them being checked and certified by the national control and seed certification organization. This activity significantly improved sustainable access to seeds for producers in the project target area.

**In Uganda, the Vegetable Oil Development Programme (VODP2)** also promoted a bundled approach by selecting PESPs that had the right expertise to provide a wide range of advisory services beyond just production support in extension service promotion. In this approach, each of the PESPs provided advice on production, post-harvest management and business skills, and supported bulking and collective marketing. Across the four hubs where the project was implemented, average yield increased by 40 per cent for sunflower, 75 per cent for soybeans and 65 per cent for sesame between 2012 and 2017. Area under sunflower increased dramatically to 33,016 ha in 2018, up from 3,507 ha in 2012, and under soybean to 26,875 ha, up from 3,503 ha in 2012.[3] Around 60 per cent of the farmers reached were women, against a target of 30 per cent.

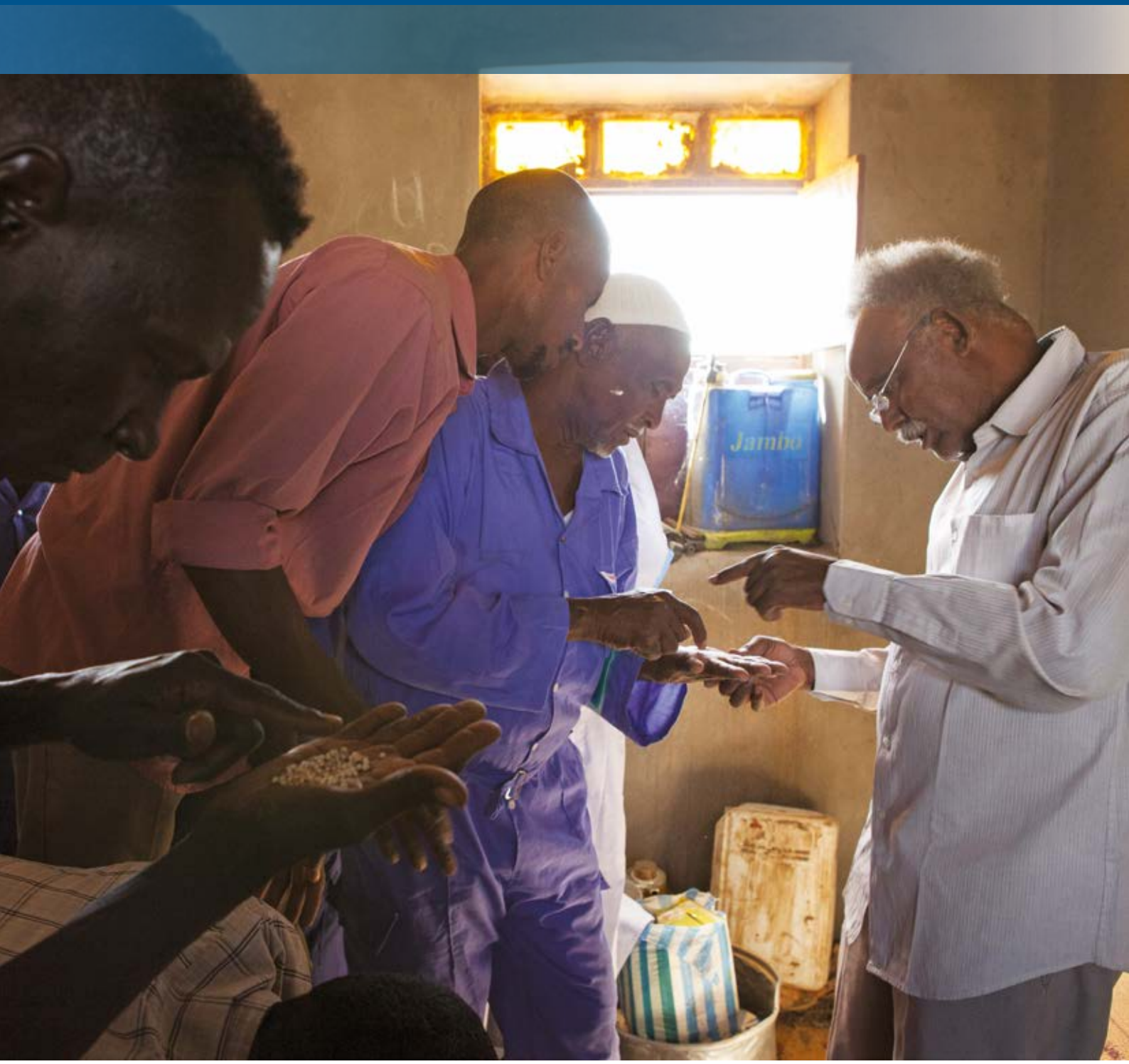
**To facilitate such bundling, projects employ different coordination mechanisms.** This is important for PESPs to respond more efficiently and effectively to the demands along the value chain and to address the varied policy priorities (job creation, poverty reduction, export, etc.). However, it is more complex to organize integrated service delivery, as few service providers have the necessary capacity to provide bundled services. Depending on the context, three main types of mechanisms were identified to facilitate integration of different PESPs in IFAD projects (table 3).

3. Supervision mission report (September 2019) and process evaluation report (2018).

**TABLE 3** Mechanisms to "bundle" different services

| | "One-stop shops" | Coalition/platform of specialized PESPs | Integrate extension in value chain contracts |
|---|---|---|---|
| **Examples** | **In Uganda**, VODP2 partnered with PESPs, each providing integrated extension support for the oil seed value chain on production, aggregating produce, and market linkages as a package. PESPs were encouraged to partner and learn with each other to cover all required services.<br><br>**In Asia**, several projects invested in local service centres developed by producer organizations or government, often alongside decentralization reforms and in remote areas (i.e. knowledge centres in Myanmar, farmer learning resource centres in Afghanistan, community agricultural extension centres in Nepal and a producer organization-led model in India). | **In Kenya**, KCEP-CRAL contracted specialized PESPs to build capacities of farmers along the value chain as follows: research institutions for technology development; climate change-focused organizations to support climate resilience; banks to enhance financial literacy, savings culture and credit availability; mechanization service providers; and bulk buyers/aggregators on post-harvest management.<br><br>**In Cambodia**, the Agricultural Services Programme for Innovation, Resilience and Extension (ASPIRE) project established local business clusters with producers engaged in specific commodities (chicken, vegetables, etc.) and multi-stakeholder platforms, facilitating business relationships between producer groups, input and production services, and market and finance partners. These platforms enabled over 200,000 farmers to access diversified extension channels. | **In Eswatini**, the SMLP contracted parastatal agencies (semi-public enterprises to undertake commercial activities) to organize extension services and buy produce for the designated crops through contract arrangements.<br><br>**In Sri Lanka and Viet Nam**, projects incentivize partnerships between cooperatives and value chain actors through dedicated cofinancing and infrastructure investment. In return, value chain actors often cofinance extension services (i.e. organic coconut in Viet Nam) and help farmers access finance from banks. |
| **Context fit and advantages** | Broader territorial/natural resource management support in remote/less commercial areas and subsistence farming (so single value chain partnerships and purely commercial PESPs are not appropriate or available). | Different types of service providers available and scope for commercial PESP operations, as well as engagement and cofinancing from value chain actors; help build on various available offers and facilitate more flexible arrangements. | Well-structured value chains with leading firms and established markets requiring production quality/volume (i.e. export crops, high-value crops, organic standards, animal production with high health standards, corporate responsibilities, plantations requiring long-term planning and sourcing of cocoa, coffee, etc.). |
| **Limits and cautions** | Existence of service providers that can provide integrated extension services on the full value chain rather than on production alone. Supporting new service centres may raise sustainability issues and require long-term institutional support (including from government) and lasting business models for cost recovery. Also, they should not compete with and replace emerging PESPs. | The Programme Management Unit (PMU) should be strong enough to procure, manage and coordinate the service providers, and producer organizations should be mature enough to request and procure services. In addition, an exit strategy needs to be considered from the start. For instance, in Cambodia, the platforms were initially set up by the project but were then run by one of the coalition members. However, government support and oversight remain necessary. | Not feasible for all value chains and geographic targeting (remote areas and low-value crops are less attractive). It requires commercial farmers/groups that can aggregate production in sufficient volumes and quality. Specific support may be needed to develop group capacities and incentivize the private sector to work with these farmers (cofinancing, market infrastructure reducing transaction costs or risks along the value chain). Finally, such partnerships require trust and mechanisms to enforce contracts. |

# LESSONS LEARNED **3**




@IFAD/Marco Salustro

## LESSON 3: PROJECTS EMPLOY DIVERSE "LAST-MILE DELIVERY CHANNELS" THAT REQUIRE DEDICATED INVESTMENTS

- Locally trusted community-based extension systems are crucial for effective peer learning, trust and outreach.
- Producer/community groups are a key pillar of such local systems and generally receive technical support from dedicated lead farmers, community extension workers or local service providers/agroentrepreneurs.
- To provide quality and sustainable services, projects need to integrate such systems within extension service provision and ensure sufficient investment in required capacity development and backstopping.

**Strong and trusted last-mile extension systems are crucial to achieving enhanced outreach, efficiency, inclusion and impact of extension services.** Indeed, IFAD's mandate is to reach the communities at the "last mile", focusing on marginalized poor people and those living in remote areas. These areas are often characterized by limited public services (extension staff, rural roads, mobile phone coverage, etc.) and often weak private extension outreach. In addition, such areas may have cultural and language characteristics that government staff may not fully grasp. Finally, peer-to-peer learning and trust are central to adult learning; therefore, extension systems need to recognize producers as both innovators and development actors.

Therefore, both **public extension and private service providers (NGOs, value chain, financing institutions, etc.) often engage with one or several of such last-mile institutions and service providers** to both improve outreach and foster trust and social dynamics:

- **Working with producer groups and community institutions:** Almost all projects work with small groups of 15-30 farmers, who often share a common interest in a topic. These groups are often trained together and are supported to develop collective actions (savings and credit, market access, value addition, etc.). Such groups are an essential pillar to build farmers' capacities for collective action, enhance access to local services, build local social networks and promote peer-to-peer learning. For instance, in Bangladesh, the National Agricultural Technology Programme 2 works with over 40,514 common interest groups specialized in crop, livestock or fishery that are the main target of various extension services. In Viet Nam, village institutions also play a key role in planning extension and project activities in an integrated way, mobilizing converging resources to implement priority activities and help selection and targeting of activities.
- **Identifying and promoting community-based facilitators:** To overcome the shortfall in local extension agents, projects select, train and provide stipends for local people, particularly educated rural youth, to provide extension services. For example, in Uganda's PRELNOR project, 200 community-based facilitators were trained and are supporting around 54,000 farmers organized in over 1,800 farmer groups. Similar community extension workers are core to several projects in Asia.
- **Using lead farmers:** Another approach is to identify and train recognized farmers in the community who can host agronomy demonstrations, help organize farmers for extension training and facilitate peer-to-peer learning of community members. They are often considered "volunteers" but often receive in-kind remuneration through inputs for demonstrations, transport and lunch fees, access to training, and increased social status and networks. In Malawi, the Sustainable Agricultural Production Programme (SAPP) uses one lead farmer to work with 15-20 follower farmers.

- **Using "commercially oriented" local service providers (agroentrepreneurs):** These extension agents deliver specialized extension services for a fee or integrate services within sales of other services (agro-inputs, marketing services, off-farm sales, veterinary services, ICT service delivery, etc.). In Kenya, the Kenya Cereal Enhancement Programme (KCEP) has trained conservation agriculture service providers as last-mile providers of advisory services, particularly related to the mechanization services they lead. They are paid through an e-voucher package cofinanced by the project and farmers. Working with the Food and Agriculture Organization of the United Nations (FAO), the programme has built their capacity on conservation agriculture and business skills, and linked them to financial institutions for possible financing.

It is important to note that such categories are not strict and are dynamic in time, as long-term sustainability requires remuneration and motivation mechanisms from farmers, government and PESPs (see lesson 8). Often, lead farmers may also be group leaders and may develop remuneration mechanisms post project (alongside input and seed sales, for instance). Similarly, surveys in Indonesia and Cambodia have shown that several community extension workers become agroentrepreneurs or agents of private companies.

**Note: Such last-mile service providers are very important in improving outreach, but they require a lot of capacity-building and mentoring to meaningfully support farmers.** In addition, it is important to identify how such last-mile workers will be integrated and coordinated in project/extension delivery from national to local levels. All IFAD-funded projects identified mechanisms to integrate last-mile PESPs in extension/project delivery though clear linkages with higher levels of public or private extension services (see an example from Bangladesh in box 3).

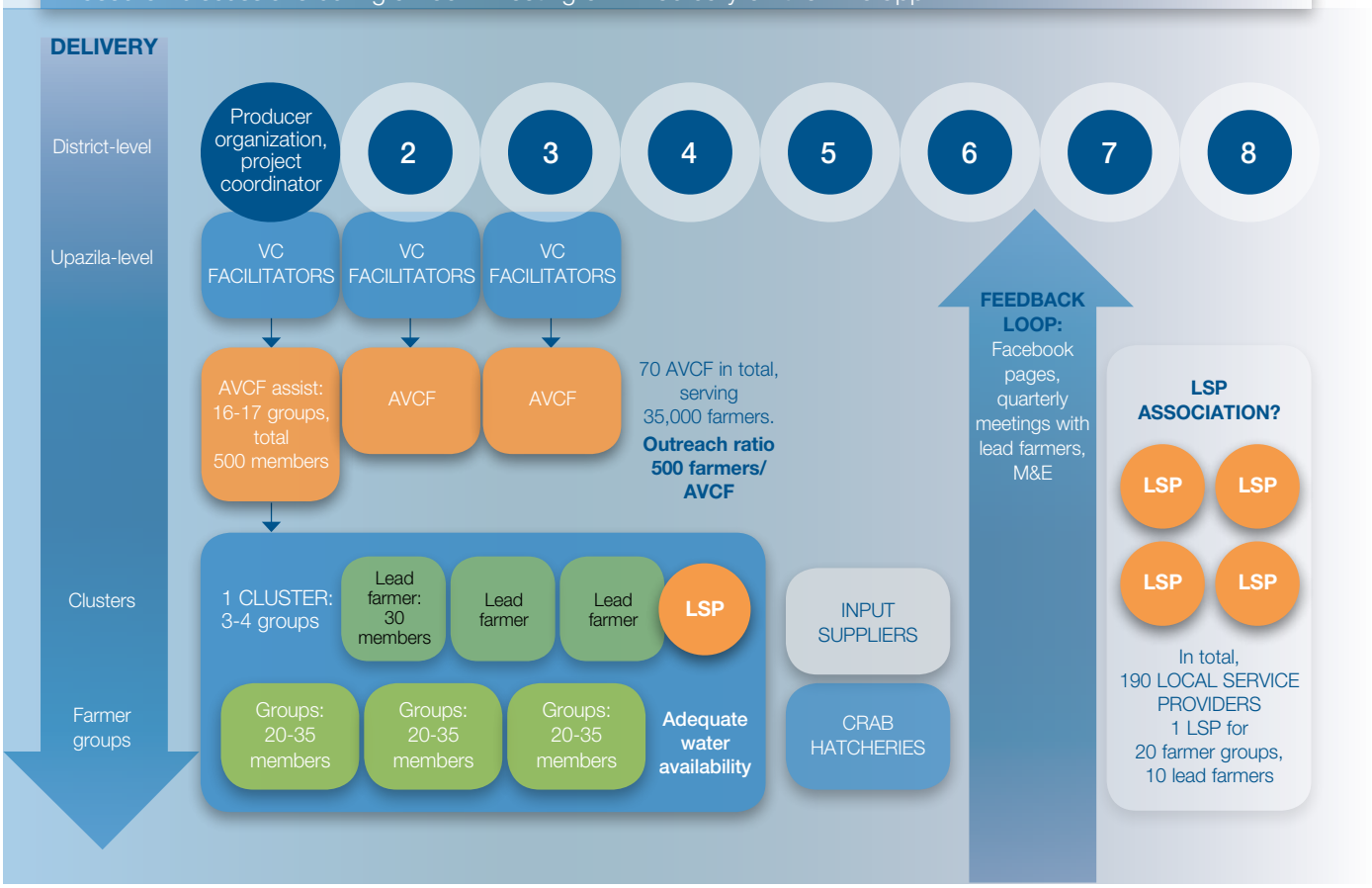
@IFAD/Isaiah Muthui

## BOX 3 Last-mile delivery in the PACE project, Bangladesh

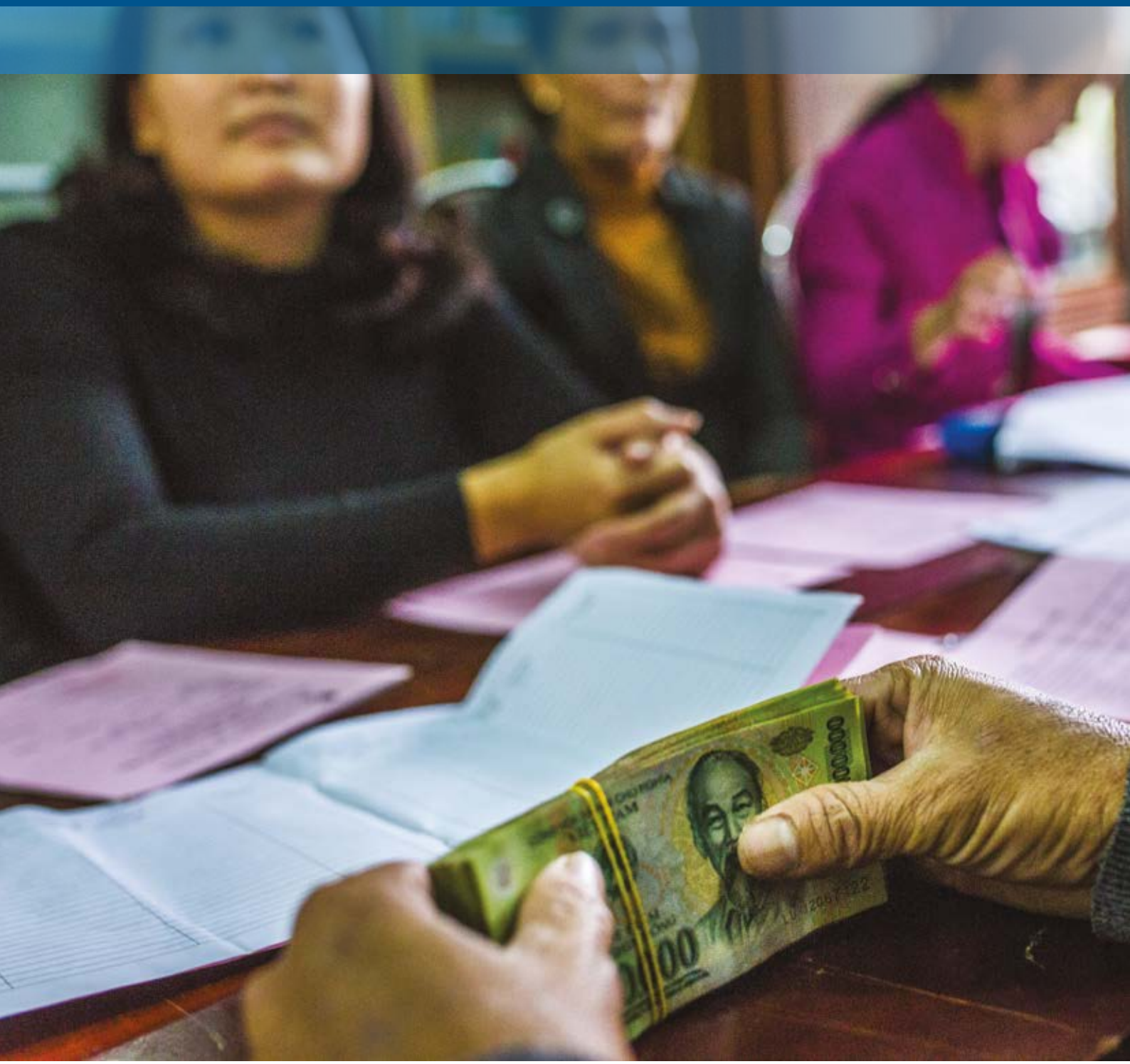
In Bangladesh, the PACE project manages to reach over 235,000 households along 5 value chains by relying on a decentralized network of partner organizations (microcredit NGOs) and their existing outreach system from district all the way to local farmer group and efficient cascading of trainings, meetings and feedback.

Each partner organization has one value chain expert who supports 8 value chain assistants supporting 600 farmers grouped in 3-4 local clusters gathering 3-4 farmer groups each. In addition, they trained over 5,500 local service providers to provide extension services while producing and selling local inputs/seedlings/day-old chicks, etc.

Based on discussions during a Zoom meeting on 2 February on the Miro app



# LESSONS LEARNED **4**



@IFAD/Minzayar Oo/Panos

## **LESSON 4**: PROJECTS EMPLOY DIFFERENT MECHANISMS TO IMPROVE TARGETING AND MAKE SERVICES DEMAND-DRIVEN

Dedicated mechanisms are required to improve targeting and demand-driven services:

- Quality mapping and registration of different target farmers provide a quality baseline and targeting.
- Last-mile workers are selected and trained depending on different target farmers (i.e. gender, etc.).
- Mechanisms are integrated to ensure regular participatory planning and feedback mechanisms, and ideally support farmer groups/communities to recruit PESPs directly.
- Quality monitoring and accountability are key to tracking and ensuring impacts for different farmers.

To respond effectively to beneficiary needs, PESPs should have quality mechanisms to identify segmented demands and adapted services, as well as processes to engage with target farmers and be accountable through quality monitoring (IDH, 2020; FAO, 2021). The business model canvas also considers that the core pillar of a good private business model is to know customers, provide services that respond to their needs, and have good customer feedback mechanisms to ensure constant adaptation to customers' needs and demands. Not all projects adopt this approach well, and few case studies portray exemplary integrated systems with both participatory planning and a quality monitoring and accountability system. Some good practices were identified in our review of IFAD projects, as follows.

**First, inclusive PESPs know their target audience and tailor services accordingly.** In addition to an initial baseline assessment and beneficiary profiling developed alongside the project targeting strategy, projects and PESPs can develop registries and specific mechanisms to know and interact with their clients and beneficiaries. For instance, in India, the Andhra Pradesh Drought Mitigation Project (APDMP) has supported the development of producer organizations that organize extension and market services for around 700-800 nearby farmers. The executive board members (10-15 elected farmer executives) spent significant time identifying targeting criteria. Initial registration of members enabled the board members to identify which segment the farmers belonged to, between landless, marginal and small farmers, medium farmers, women and men, crop vs livestock farmers and the "poorest of the poor". This initial assessment and registration was found to be crucial by executives to map their members' issues and needs and ensure they targeted services accordingly. Registration also provides access to contact numbers so that any member can be reached.

Second, projects and PESPs ensure that extension delivery channels (last-mile extension workers, staff, ICT, etc.) are adapted to identify target farmers by:

- **Selecting the right extension agents to target specific groups:** In many areas, there may be gender or ethnic gaps that are considered when selecting last-mile extension agents. For instance, to ensure outreach to women, many projects promote women as last-mile agents, as they can reach out to other women more easily. For digital innovations and new technologies, many projects rely on youth, who may be more educated and open to such ideas and can become strong agents of change.

- **Adopting differentiated approaches and delivery channels for different segments of farmers:** For instance, the Smallholder Market-led Programme - Climate-smart Agriculture Resilient Livelihoods (SMLP-CSRAL) in Eswatini applies a targeted approach to inclusion. Climate-smart agricultural activities such as conservation agriculture and permaculture are promoted through the mainstream public extension system, targeting households with a food deficit. Extension services to market-oriented farmers are provided through PESPs and focus on efficient use of improved inputs, good agricultural practices and market access.
- **Training extension staff on social issues and gender mainstreaming** strategies to help them adopt specific targeting mechanisms such as quotas, generation of disaggregated data, etc.

Third, inclusive projects empower target beneficiaries to participate actively in extension systems by:

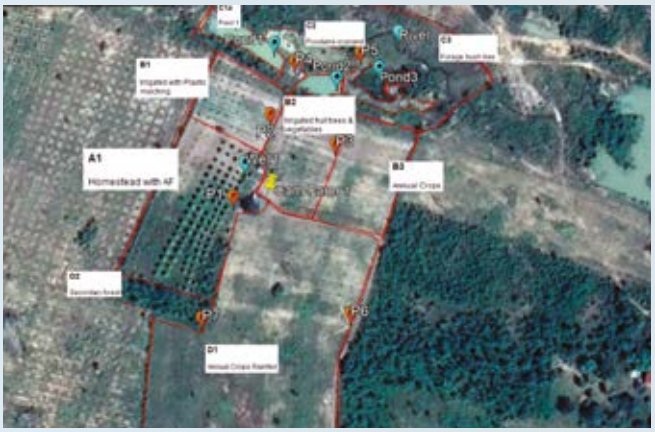
- **Strengthening producer organizations' capacities and voices within value chain partnership mechanisms:** In Sri Lanka, projects support explicit 4P with dedicated support to cooperatives to participate meaningfully in the value chain partnership. The evaluation of the National Agribusiness Development Programme (NADeP) showcased that strengthening the role of cooperatives in such partnerships enhanced the relevance and effectiveness of these partnerships (IFAD, 2018).
- **Engaging farmer groups in participatory extension planning:** Under the PRELNOR extension services arrangements in Uganda, beneficiary farmer groups actively participate in determining the learning areas. Through guided self-appraisals, farmer groups come up with group action plans that guide farmer capacity development; thus, extension services are packaged to address farmers' needs. This results in a high turnout for training sessions by farmers but requires that the group action planning is adequately supported to identify clear needs.
- **Empowering beneficiaries to directly recruit and supervise service providers:** In the Support to National Agricultural Priority Programme 2 (SNaPP2) in Afghanistan, community development councils were involved in recruiting all community extension workers. Similarly, in West Africa, several projects facilitate direct contracts between producer organizations and PESPs, thereby enhancing ownership and accountability for producer organizations.
- **Establishing multi-stakeholder governance and feedback mechanisms:** In India, community-managed resource centres are governed by leaders of women's self-help groups, who meet every month to review work being done by their field staff and plan activities. In Bangladesh, the National Agricultural Technology Programme 2 is piloting farmer information centres managed by last-mile government extension workers. Farmers can visit these information centres to seek advice and can register their needs and complaints in a log book maintained at the centres. Every year, they support a very decentralized planning process, starting with the plans of small farmer groups, aggregated into union extension plans which form the basis of Upazila needs-based extension plans reviewed by a multi-stakeholder district extension committee. The government is considering this process for replication.

**Finally, projects have strong accountability mechanisms based on disaggregated and decentralized monitoring and evaluation systems** to track social inclusion gaps and successes.

- **Strong disaggregated and decentralized monitoring and evaluation systems** help track social inclusion gaps and assess the success of interventions from a social perspective (see the example in box 4 and the IDH blog (https://www.idhsustainabletrade.com/publication/idh-farmfit-data-lessons-learned-how-to-use-farm-level-data/) demonstrating the need for farm data to improve extension service delivery). For instance, in Viet Nam, in the Adaptation to Climate Change in the Mekong Delta (AMD) project, climate-smart models are identified and piloted alongside participatory research. Results are evaluated by a multi-stakeholder committee (including farmers). However, project evaluation identified some inclusion gaps and recommended systematic social and environmental screening, checking whether innovations can actually be adopted and are beneficial to target beneficiaries, including poorer households or women.
- **Other initiatives seek to empower farmers themselves to evaluate whether technologies are suitable for them.** In Nepal, the ASHA project promotes farmer field schools which empower farmers to experiment with different agronomic innovations and discuss results collectively. Several IFAD projects support farmers to use a farm diary, which includes very detailed data on farmers' adoption, impact on productivity and environmental changes. Such disaggregated data also empower farmers themselves to see better what works for them. Private actors also invest in quality data. In Indonesia, the IFAD Rural Empowerment and Agricultural Development Scaling-up Initiative partners with Mars in the cocoa value chain. It is piloting the tool they have developed for cocoa farmers to keep records and prepare business plans which are also used and analysed to inform their agricultural activities.

**BOX 4** Strengthening monitoring for evidenced-based social and environmental inclusion

In Cambodia, in Scaling Up Climate-resilient Agriculture (SUCRA) – within the ASPIRE project – IFAD is collaborating with the World Overview of Conservation Approaches and Technologies (WOCAT) to support a representative network of integrated farm systems (IFSs) that will implement more intensive on-farm experimentation and farm records. A **participatory analytical framework and assessment** of IFS-based farms has been developed to assess the **impact of the IFS implementation** concerning biophysical and socio-economic factors and to identify the **suitability of IFS practices** for different landscapes and farmers. The added value of the approach is to combine participatory implementation and monitoring of farms with farmers and integrate capacity development for both researchers and farmers to adopt a systemic perspective in the implementation of IFSs. The approach is implemented in a representative landscape to draw lessons applicable to other farmers in similar landscapes. It can be integrated into public extension systems, as has been done in France and Brazil.



# LESSONS LEARNED **5**

@IFAD/Marco Salustro

## LESSON 5: LINKING PESPs TO RESEARCH AND VALUE CHAIN ACTORS TO HELP INTEGRATE AND SCALE RELEVANT CLIMATE-SMART TECHNOLOGIES

- Dedicated partnerships with research are needed to develop locally relevant climate-smart agronomic innovations.
- Partnerships with PESPs are key to facilitating the scaling of such innovations by:
  - Strengthening production of adapted seeds, technologies and inputs by local groups and agripreneurs
  - Embedding innovations and practices within value chain partnerships and standards
  - Developing dedicated "green financing" mechanisms to finance proven innovations.

To develop and promote inclusive and climate-smart innovations, most projects (six out of seven in East and Southern Africa) partner with researchers to undertake dedicated assessments, value chain studies and participatory adaptive research to test and disseminate inclusive, resilient and green agricultural innovations. For instance, IFAD collaborates with CGIAR centres and national agriculture research centres in East and Southern Africa to implement technology generation through adaptive trials on climate-smart technologies that embed co-learning and validation of new technologies. Key to this process is implementing on-farm planned comparisons to test various options across different conditions and locations to identify what works best for whom. This facilitates co-learning across multiple stakeholder groups or communities of practice. Such an approach helps small-scale producers select adaptation solutions best suited to their specific contexts to build their resilience to climate change while improving food security. Examples of technologies and practices tested include push-pull,[4] a biological method for the control of armyworm in Kenya, integrated soil fertility management, improved varieties (Malawi), sustainable land management practices (Uganda), use of cover crops (Zambia), and conservation agriculture in most countries.

To facilitate the scaling of such innovations by PESPs, some projects provide dedicated training and incentives to integrate new technologies within value chain services, as follows.

- **Training and engaging PESPs to produce and disseminate adapted seeds:** In Uganda, Malawi, Kenya, Burundi and Zambia, PESPs are linked to national and international research centres and universities to support the release of new, improved and climate-resilient crop varieties, seed multiplication and certification, and co-production and testing of locally adapted seeds. To facilitate dissemination, research institutes also provide technical training to grass-roots extension staff and produce reference materials and manuals in Kenya, Uganda, Malawi and Zambia.
- **PESPs are also supported to produce bio-inputs that are often not available locally:** In Nepal, Jumla district has been declared organic by the government. This in turn has created a high demand for organic inputs and practices among the producers, but the existing agrovets were unable to meet the demand. The HVAP project trained local agrovets and facilitated linkages between organic input suppliers/importers and local agrovets, who can then supply organic inputs locally and respond to training needs to implement organic practices. In some cases a few local agroentrepreneurs were also trained to produce local bio-inputs. Similarly, in India, selected youth entrepreneurs received extensive training from a local research station in the production of relevant bio-inputs. They received cofinancing support from projects to become bio-entrepreneurs to facilitate further adoption of relevant bio-inputs.

4. http://www.push-pull.net/planting_for_prosperity.pdf.

- **Incentivizing PESPs to promote sustainable agricultural practices in specific niche value chains:** In Viet Nam, the AMD project partnered with a university, which helped document, develop and test over 130 climate-smart production packages adapted to the changing climate in the Mekong delta. The best-performing practices were incorporated in guidelines adopted and used to train local extension agencies but also lead farmers and the farmers' union. In addition, the project promotes the integration of such practices within dedicated value chain partnerships. For instance, it helped facilitate partnerships with private actors engaged in the organic coconut value chain. In many cases, the organic enterprises led and financed the required technical extension services to help farmers convert to organic agricultural practices.
- **Incentivizing the adoption of "green practices" through dedicated "green financing":** Often, green finance actors struggle to identify the relevant "green bankable proposals" that can be financed. Therefore, partnerships between research, extension and banks can help identify and document relevant models that can be scaled up through rural finance. In Viet Nam, AMD supported farmers to adopt climate-smart technologies identified in participatory research through dedicated financing windows implemented in collaboration with women's development funds. In India, GIZ collaborated with research institutions and with the national agricultural bank to identify a list of bankable climate-smart agricultural investments that could be scaled through the bank. Several IFAD projects and green funds are currently supporting partnerships with banks to identify and finance more specifically green and climate-smart practices through dedicated screening mechanisms and incentives (e.g. lower interest rate, dedicated technical assistance).

# LESSONS LEARNED **6**

@IFAD/Minzayar Oo/Panos

## LESSON 6: ICT IMPROVES THE EFFICIENCY, INCLUSION AND SUSTAINABILITY OF PESPs' LAST-MILE DELIVERY

- Use of ICT is increasing sharply, notably due to the mobility constraints related to COVID-19.
- ICT solutions are diverse and can help deliver better extension services by: (i) improving monitoring, feedback and targeting; (ii) facilitating the bundling of services and linking demand and offer; (iii) improving the quality of services (embedding climate advisory, tailored agronomic advisory, etc.); and (iv) facilitating remuneration of PESPs.
- However, the digital divide is still acute, both in access to digital technology and in farmers' capacity to use it and interest in doing so, since many still trust their peers more than black box advisory.
- Therefore, ICT options should be embedded in pluralistic extension systems and used to further empower last-mile extension workers to support fellow farmers.

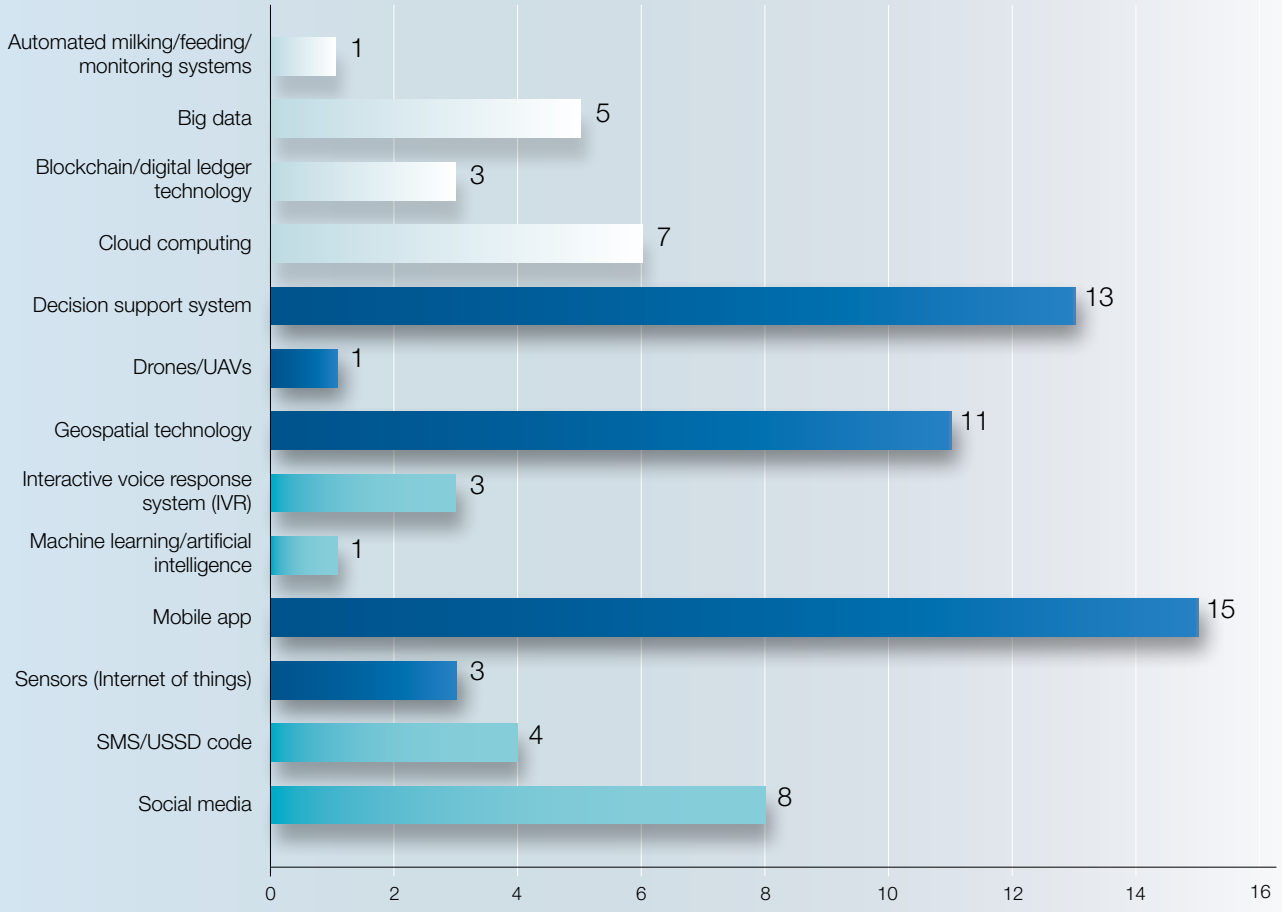
Traditional ICTs such as radio and television have always been used by EAS to reach many farmers with relevant information. Advances in digital technologies, enhanced access to mobile phones and the COVID-19 pandemic have further accelerated the use of ICTs in reaching farmers. In East and Southern Africa, advancements in digital extension services were realized with the outbreak of COVID-19 in 2020 with the deployment of several ICT applications, including the use of radio, resource centres equipped with televisions, mobile phone applications and marketing platforms. In a recent stocktake of IFAD projects in the region of Asia and the Pacific, 54 digital solutions were identified across 14 countries (IFAD, 2021). Half of the solutions identified (49.4 per cent) aim to improve access to information (see figure 3). Mobile apps, decision support systems and geospatial technologies are the most commonly used.

The different IFAD projects reviewed show that ICT options have the potential to improve the efficiency, inclusion and sustainability of PESPs by:

- **Improving targeting and evidence-based adaptation** through electronic and geo-referenced data collection and analysis tools: In Cambodia, the IFAD-funded ASPIRE programme has supported the development of the Chamka app. It includes electronic and geo-referenced tools that facilitate easy and robust data collection and help the government visualize which agronomic practices work best, where and for whom, considering the variability of agroecological and market situations that exist across different contexts. In addition, it allows smallholder farmers to access weather forecasts, newsfeeds, technical extension videos and direct online extension advice. It has also recently piloted digital farmer diaries, to eventually support credit applications to financial institutions.
- **Linking demand with bundled services:** For instance, in China, the Sustaining Poverty Reduction through Agribusiness Development in South Shaanxi project seeks to develop various 4Ps along the value chain. A key innovation has been the promotion of e-commerce and e-tools on a large scale among project beneficiaries. The e-platform facilitates project management, targets and expands partnerships among 4P stakeholders, and integrates services to farmers, including using e-trade, microcredit, microinsurance and extension.
- **Helping improve the quality and scope of advisory services to address locally specific climate and environmental issues:** This can include examples such as sharing localized weather forecasts and adapted crop advisory, obtaining localized soil data and adapted fertility advisory, and access to a repository of possible innovations and good practices from across the world or nearby. New tools are able to recognize pests and diseases and offer specific advisory, but also help monitor pest and disease outbreaks. Finally, several tools offer access to online databases of available innovations (i.e. access to extension videos, the WOCAT database of sustainable land management practices, etc.).

- **Facilitating continuous and farmer-to-farmer learning:** For instance, in West Africa, IFAD has been supporting a platform dedicated to linking farmer organizations and service providers that provide access to training materials (https://www.weconnectfarmers.com). Many Facebook groups have emerged to facilitate farmer-to-farmer exchange and learning.
- **Facilitating remuneration of PESPs and developing new revenue mechanisms:** Adapted digital financing tools can help farmers and entrepreneurs enter into transactions remotely and integrate remuneration for the service provided. Some initiatives even use records of ICT-based transactions to demonstrate creditworthiness (based on track records of transactions, etc.) and award credit accordingly, providing more opportunities for farmers to pay for or deliver services. ICT tools can also build in new services and revenue mechanisms for PESPs. For instance, in Cambodia, the Chamka app is paying some lead farmers to extend services to other farmers. In India, the RUDI network has developed an app which helps women entrepreneurs manage their business and collect revenues.

**FIGURE 3** ICT4D in IFAD projects in Asia and the Pacific region



**Most farmers have different constraints to accessing and using ICT, such as limited ownership of mobile phones, low literacy levels and inadequate digital infrastructure. Therefore, IFAD-funded projects employ adapted mechanisms that consider** low literacy and internet access – for instance, simple voice-based tools which can be channelled through basic phones and radios (see the Malawi example in box 5). In addition, a recent report from Grow Asia (2020a) shows that even in countries with high levels of ownership of smart phones and internet access, very few farmers use and trust complex applications. They first use digital social networks to learn from their peers. Therefore, ICT often requires its own last-mile delivery mechanisms through trusted intermediaries and peer exchange.

Beyond reaching remote farmers with information in a cost-effective manner, projects have been able to use ICT **to enhance the capacity of PESPs and link them to other PESPs, clients and other value chain actors**. The use of ICT such as forming WhatsApp groups among personnel at different levels in an organization can help in monitoring the performance of interventions and in taking corrective action. Specific apps could be developed to record field-level data. Setting up e-platforms for various stakeholders to interact and exchange products and services is another area worth exploring, as this will reduce the cost of transactions, leading to more efficient service delivery. Specific experiences are discussed in box 5.

**BOX 5** Examples of integrating ICT in extension

In Malawi, where mobile network penetration is still low, rural resource centres equipped with ICT equipment and radios are reducing the digital divide, as farmers can access video advisory services at any time at the resource centres, and general advisory services from radio programmes. Through the Department of Agriculture Extension Services (DAES), SAPP has developed a mobile application called DAESv1, which is accessible through android mobile phones and tablet computers. SAPP reports that 71 per cent of households (against a target of 50 per cent) reported an increase in production, and 57 per cent of beneficiaries were satisfied with extension services provided by the project.

In Kenya, the KCEP Regional Programme Coordination Unit (RPCU) formed a communication group using WhatsApp to bring together the RPCU offices, county directors of agriculture, sub-county agriculture officers, ward agriculture officers, agro-dealers, farmer trainers, financial institutions and value chain actors. The WhatsApp group greatly transformed the flow of information, ensuring real-time communication and faster feedback on ongoing activities. Improved coordination among stakeholders resulted in timely access to inputs and early planting by farmers. In 2020, 68 per cent of farmers reported increased production due partly to improved coordination and timely implementation of farm activities.

Similarly, in India, when staff could not visit fields due to COVID-19, the Jharkhand Tribal Empowerment and Livelihoods Project (JTELP) used a WhatsApp group and simple video tutorials to backstop and train community facilitators. Through this interactive approach, community facilitators could ask questions, consult on field issues by sharing photos, and share innovations and results of their work. This new process has greatly enhanced the backstopping and communication with facilitators while decreasing supervision costs. Also in India, the APDMP project has been using voice messages to share agricultural advisory services. The project completion report stated that over 35 per cent of beneficiaries received such advisory, and even up to 60 per cent in some districts. To bridge the gap, farmer executives have created WhatsApp groups which manage to cover over 90 per cent of their members and enable them to increase outreach. Use of local television was also mentioned as a potential additional step. Interactions with executives of four producer organizations showed that ICT has transformed the way they work and access information to improve their practices. However, it also does not replace the importance of the regular monthly local meetings between executives and between executives and members.

# LESSONS LEARNED **7**

@IFAD/Susan Beccio

## LESSON 7: TRACKING EXTENSION COSTS AND BENEFITS HELPS INCREASE COST-EFFECTIVENESS

- To improve efficiency and sustainability, it is important to track extension costs, separating investment costs from operating costs (overheads, last-mile staff and training), which may require different cost recovery.
- To reduce costs, projects should: (i) optimize the use of last-mile extension workers but consider the investment and supervision costs required; (ii) improve the use of overheads by increasing the scope or scale of services; and (iii) improve outreach of training through efficient cascading systems and dissemination modalities.
- Higher costs are sometimes needed to ensure sustainable impacts, so costs should be reviewed against benefits and sustainability.

**Most projects do not systematically track extension support costs and benefits during the project duration. Yet such data can be crucial to identify issues and improve cost-effectiveness and sustainability.** It is, therefore, important to track initial investment costs in infrastructure, equipment, curriculum development and staff capacities separately. Indeed, such costs have longer-term returns, often contribute to public good and are best covered by long-term loans. On the other hand, it is important to review operating costs separately to determine the cost coverage required to ensure sustainability post project. Such costs should also distinguish between overhead fixed costs (which may be improved by working on outreach and the scope of services) and training delivery costs (which may be improved by working on last-mile service efficiency, revenue mechanisms and types of training). Box 6 provides some examples of cost analysis along such lines.

### BOX 6 Analysing costs of PESPs in IFAD projects

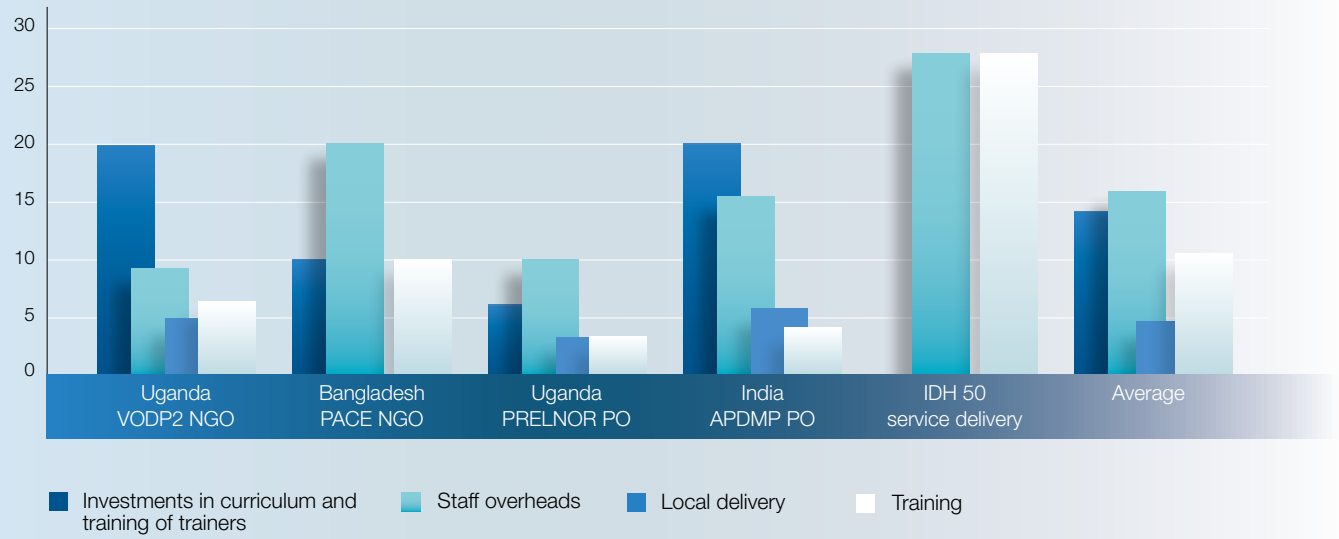
The overall costs of developing and implementing pluralistic extension systems were estimated in four projects: two farmer organization-led models providing integrated services (PRELNOR in Uganda and APDMP in India), and two NGO-led models (VODP2 in Uganda and PACE in Bangladesh). Four categories of costs were identified, separating initial investment costs from operating costs:[5]

- The initial investment costs in extension infrastructure (training centres and equipment, vehicles), participatory research, development of training curricula, and training field workers
- The overhead costs (administrative costs to run an extension centre, salaries of support staff and supervisors)
- Training costs were estimated by separating: (i) the local direct staff delivery costs (i.e. salaries/incentives and transport costs for last-mile extension workers); and (ii) the additional cost of organizing thematic training (demonstrations, farmer field schools, etc.).

Total costs ranged between US$23 and US$66 per farmer per year (figure 4), which is close to the average found in the IDH farmfit database, which features a review of 50 private service deliveries (IDH, 2021).

5. The approach sought to align with a similar approach used by IDH in its farmfit benchmarking database, which enables service providers to calculate and benchmark their cost recovery in a comparable manner.

**FIGURE 4** Example of costs in selected extension systems




*Source:* Project annual workplan, budgets and expenditures

Building on such differentiated analysis, various lessons were identified to decrease extension costs:

- **Using last-mile service providers enhances outreach and cost-effectiveness.** Often, extension systems based on last-mile extension entities such as lead farmers, producer groups and local service providers are cheaper (per unit) than those relying on paid and more educated staff. In the IFAD projects reviewed, the local delivery cost was the lowest cost in the four cases. In addition, the last-mile delivery cost is sometimes embedded in the business model of the last-mile agent and, therefore, not directly financed by the project (i.e. in PACE in Bangladesh, last-mile service providers provide extension for a fee or cross-subsidize it by embedding it into sales). Similarly, when reviewing 50 PESPs, IDH identified that many cut costs and limit organizational complexity by (gradually) transferring the responsibility for service delivery to lead farmers or farmer groups. For instance, in Côte d'Ivoire, it was found that Olam reduced the procurement costs of cashew by 25 per cent by empowering farmer groups to take over service provision.
- **Notwithstanding the above, considerable initial investments are needed to identify gaps and build the capacities of groups and last-mile agents**, and a minimal level of supervision and follow-up remains required. For instance, in Uganda, PRELNOR uses district-level farmer organizations to provide extension services with moderate costs. The project invests in assessing the farmer organizations' capacities and provides training where needed. Farmer organizations offer extension services through 1,800 farmer groups, training 54,000 farmers thanks to community extension workers who receive only small payments (US$7 per farmer, including US$3.50 for demonstrations/specific training costs). However, 70 per cent of the costs are for the technical specialists and training of trainers, who support community extension workers.

- **Overhead costs make up between one third and one half of the total extension cost per farmer and include mostly fixed costs that are highly sensitive to outreach and the scope of services.** The IDH database shows, for instance, that PESPs serving more than 10,000 farmers have 30 per cent lower overhead costs per farmer than those engaging fewer than 10,000 farmers. It also suggests that PESPs have improved the efficiency of service delivery by increasing the scope of the service delivery model, thereby using the same resources to deliver several different services or building on existing groups and infrastructure (IDH, 2020). Similar lessons can be identified in the IFAD projects reviewed. For instance, the APDMP cooperative model in India was the most expensive system, as it had not reached sufficient outreach, had several paid staff and had no clear volunteer outreach model (no sub-farm model or lead farmers). As the project ended, it laid off three community mobilizers, drastically reducing overhead staff costs and improving the overall cost per farm, thereby improving the prospect of cost recovery, which was achieved by over half of producer organizations. In contrast, the Myanmar knowledge centre relied mainly on government officers allocated by the project who were supposed to remain beyond the project. Therefore, it shows apparently low additional overhead costs, which include some form of direct in-kind subsidies from the government.
- **Training costs for end farmers represent around 20-30 per cent of operating costs in the cases reviewed (between US$5 and US$15 per farmer) and depend on the intensity of the training and its outreach (all farmers vs training of trainers model).** They cover activities such as demonstrations, thematic training and farmers' visits. In addition, several projects include more intensive and costly approaches such as farmer field schools or mentoring approaches targeting individual households, such as gender-sensitive household mentoring approaches. The average training cost per farmer is often low, as it combines intensive training costs for lead farmers and assumes that training and innovations will then reach other farmers through cheaper dissemination mechanisms such as field days, farmers' exchanges within existing groups and networks, and mass media communications (radio, leaflets).

@IFAD/Minzayar Oo/Panos

**Finally, decreasing costs cannot be achieved at the expense of impact. Therefore, extension costs need to be matched with sustainable value created.** Achieving sustainable impacts often requires more intensive training and investment efforts in local institutions. In addition, impactful and more holistic approaches often integrate more intensive and costly training approaches such as farmer field schools and household mentoring, yet these costs can be key to achieving sustainable impacts (see box 7).

**BOX 7** High extension costs for higher impacts by integrating a gender-transformative approach in Burundi

Since 2016, CARE Burundi has implemented the Empowerment through Knowledge And Transformative Action (EKATA) approach, integrated into an agricultural programme to test its effectiveness against a typical gender mainstreaming approach (Gender Light) and a control (with agricultural interventions only) in a modified randomized control trial, funded by the Bill and Melinda Gates Foundation. The EKATA groups had the largest increase in rice production, as well as the largest increase in rice sold. The women's dietary diversity score increased by 3 per cent in EKATA, and decreased by 6 per cent and 1 per cent, respectively, in the control and Gender Light groups. Women also increased their assets and their decision-making in households, and gender-based violence reduced. The gender-transformative approach was only 16 per cent more expensive (US$303 per participant instead of US$263 for a gender-neutral approach) but created twice the value of Gender Light and almost 8.5 times more than the control. Consequently, EKATA had the highest return on investment, at 410 per cent, compared with 270 per cent for Gender Light and 30 per cent for the control.

# LESSONS LEARNED **8**

@IFAD/GMB Akash

## LESSON 8: PESPs USE A DIVERSITY OF REVENUE STREAMS FOR FINANCIAL SUSTAINABILITY

- While some PESP services can be considered one-off initial investments, other services need to be maintained beyond the project and may require sustainable incentives and revenue streams.
- Projects should support PESPs to develop exit strategies and business plans from an early stage, identifying and combining different sustainable incentives and revenue streams comprising: (i) non-monetary incentives; (ii) membership fees; (iii) fee-based services; and (iv) transaction fees.

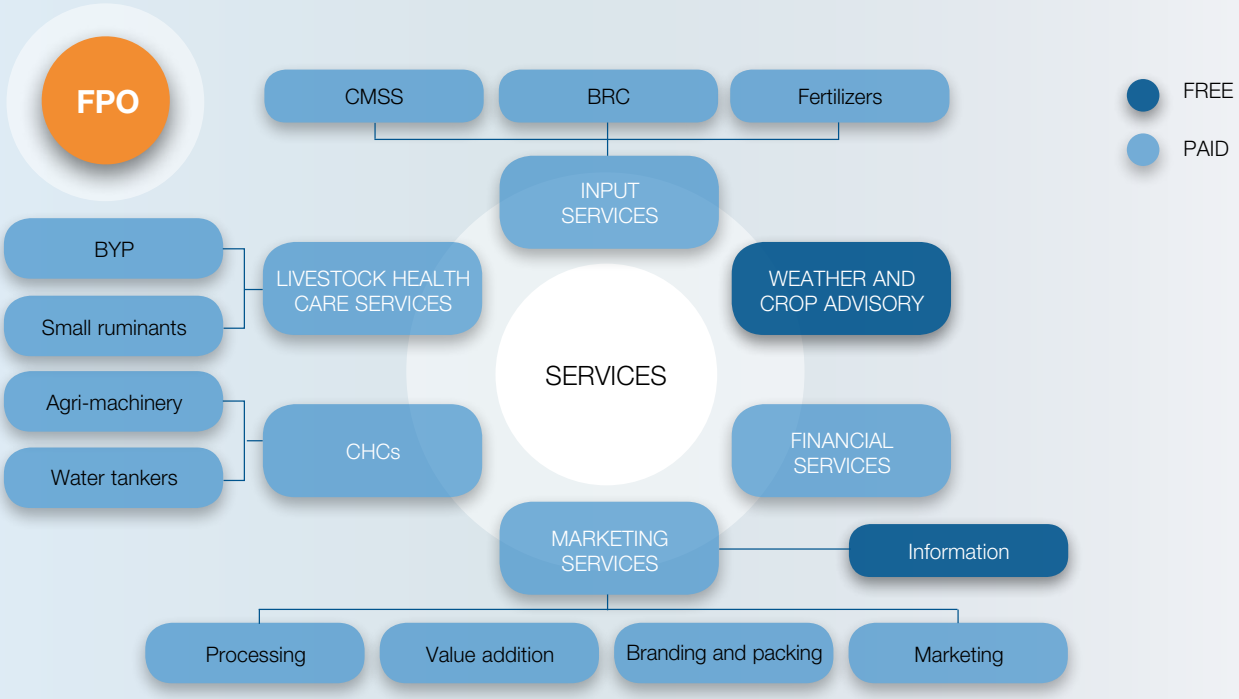
Most PESPs are usually financed or cofinanced for the duration of the project. Some training and services from PESPs can be considered initial investments needed mainly during the early years of the project (i.e. dedicated contracts with NGOs to build the capacities of farmer organizations or the government). However, farmers need sustained access to inputs, services, advisory, finance and markets, which most often requires farmer groups and PESPs to continue to offer minimal services. To continue such services, PESPs usually need a blend of sustainable revenue sources and monetary and non-monetary incentives that cover the cost of service delivery:

- **Grass-roots extension systems partly rely on volunteer work and non-monetary incentives**, such as access to trainings, social recognition, and inputs for demonstrations on their farms. Similar incentives can be maintained post project by providing recognition mechanisms, official certificates and branded items (T-shirts, caps, etc.), in-kind support (inputs for demonstrations) and training/visibility opportunities.
- **Subscription and membership fees** are a revenue model mostly used by cooperatives (annual dues and registration fees) and ICT services when there is a regular service provided to the beneficiaries.
- **Fee-based services can be used by all types of PESPs if farmers can pay for services.** However, fee-for-service arrangements do not tend to work well (USAID, 2019), although some success is reported in high-value crops and for livestock services. For instance, in PACE in Bangladesh, farmers benefiting from engagement in high-value crops were ready to pay for 153 specialized local service providers, who were able to generate full-time income by providing such fee-based advisory. For others, fee-based services often provide partial incomes to the PESPs, which supplement their other agricultural activities (e.g. in Cambodia). In other cases, such services may be cofinanced by a large lead company/aggregator of commercial crops.
- **Embedded payment for extension services within other commercial transactions** (sales of associated inputs/services in the supply/production chain, market sales, and referral fees for access to finance) can be adopted by all types of PESPs. For instance, in Cambodia, Lao People's Democratic Republic and Bangladesh, entrepreneurial lead farmers started developing side businesses along the supply chain, producing and selling seeds, inputs, animal feed or chicks but continuing to provide technical advice to farmers. These embedded services can lead to a less independent advisory role (when coupled with specific sales), so mechanisms have to be created to mitigate such risks and ensure quality. For instance, the government has established certification and standards for input suppliers in India and invested in public soil testing centres which provide neutral advice on input requirements. The Ugandan extension network has developed a "code of conduct" for PESPs.

## BOX 8 Diversifying revenue streams for community extension workers in Cambodia and producer organizations in India

In ASPIRE in Cambodia, the project conducted a survey among 443 community extension workers in 2021. This survey revealed that most started diversifying revenue streams: (i) through their own production activities (around 60 per cent of respondents currently); (ii) by obtaining income from private entities – for instance, for delivering the Chamka app or renewable energy technology (20 per cent and 12 per cent, respectively); (iii) from fees for services from the local government (around 21 per cent) or NGOs (11 per cent); or (iv) by getting paid by farmers for technical advisory (12.5 per cent) or transaction fees for brokering inputs and agricultural products (14 per cent of respondents). Post project, 55 per cent envisage remaining in the area by strengthening such revenue streams (41 per cent farm business, 24 per cent advisory for a fee, 18 per cent brokering inputs, and 18 per cent public jobs).

In India, the APDMP project supports producer organizations to organize services for around 600 farmers. Producer organizations are generating income through farmer membership fees, capital investments and annual dues, as well as diversified economic services (mechanization, seed production, input shops, feed production and sales) and transaction fees on market linkages. This can help cover less commercial services offered such as extension linkages.
In the last two years, the project has supported producer organizations to develop dedicated business plans to improve cost recovery. The project completion report shows that, out of 105 producer organizations supported, 43 were able to meet 100 per cent of their operating costs, and 72 met more than 50 per cent of their costs. The figure below illustrates one successful example of the Rythu Bandhu producer organization.




**Overview of FPO:**

- Located in Vemulapadu in HM Padu, covering APDMP GPs Mohammedapuram, Linganguntla and Vemulapadu covering a geographical area of 3,318 ha, of which 2,139 ha is rainfed
- 3,374 households, of which 78 per cent are small and marginal farmers
- Redgram, bajra, blackgram, korra, andu korra, vegetables and orchards

| Name of the business | Quantity | Revenue generated (₹) | Number of farmers benefited |
|---|---|---|---|
| Seed business | 705 kg | 148,000 | 176 |
| Rice business | 400 bags | 440,000 | 345 |
| Rice bran business | 90 qtl | 180,000 | 183 |
| Tarpaulins | 225 | 337,500 | 225 |
| Pulses | 450 qtl | 1,912,500 | 64 |
| YSR Janata Bazar | 3,225 kits | 322,500 | 3,225 |
| Custom Hiring Centre (CHC) | Net profit | 411,889 | 486 |
| Bio-inputs sales | 625 l/kg | 51,5 | 146 |
| Feed for pregnant ewes | 52 qtl | 94,9 | 153 |

**Many IFAD-funded projects do not carry out strong cost-recovery analysis for extension services or initiate such a process in late phases of projects. It is important to support PESPs to develop exit strategies and efficient business models that can increase the volume and stability of incomes. Options and good practices include:**

- **Increasing outreach of services.** However, this requires that there are enough farmers in the nearby areas who are interested in using these services. For instance, in Bangladesh and India, it was identified that agroentrepreneurs were more likely to generate sufficient income when they could serve a larger number of farmers in nearby areas (so in more densely populated areas and with farmers clustered in the value chain they serve). This option is often more difficult in less dense areas facing high transaction costs (i.e. mountain areas with limited roads or long distances).
- **Diversifying services and revenue streams.** This requires technical capacities of PESPs to diversify services. In Cambodia, community extension workers have started to diversify their revenue sources in view of an exit strategy (see box 8). In India, community-managed resource centres (CMRCs) are achieving financial sustainability through efficient outreach systems relying on federations of women's self-help groups and diversified revenue streams, which include transaction fees on bank loans (1 per cent loan on disbursement and 1 per cent on repayment; see box 9 in lesson 9), membership and service costs on businesses and services supported. In addition, CMRCs often co-own some of the businesses developed by the women's groups (i.e. specific group processing and retail enterprises), thereby strengthening shared interest in managing such businesses correctly and generating additional income for the CMRCs. A similar system was attempted for mixed producer groups in Andra Pradesh alongside diversified agro-services (see box 8).

# LESSONS LEARNED **9**


@IFAD/Ruvin de Silvam

## LESSON 9: PESPs MOBILIZE COFINANCING TO ACHIEVE INCLUSION AND FINANCIAL SUSTAINABILITY

- Achieving financial sustainability takes time and may not be achievable with only private financing. This is true both for IFAD-supported pluralistic systems and for the private sector. However, extension services create value beyond revenue generated, and such benefits should be quantified.
- Public investments are important to increase financial viability through dedicated subsidies, vouchers, initial investments, and support for public extension services. Projects and governments can also facilitate partnerships and private cofinancing with value chain and rural financing institutions.

**Achieving financial sustainability takes time and may not be achievable within one project and with only private financing.** For instance, financial viability is less likely to be achieved when new service centres and organizations are created and need to recoup substantial overheads. It is also more difficult when serving less dense localities or non-commercial sectors. Such difficulties in recovering costs are also observed in the private sector. Indeed, IDH analysed 41 service delivery models[6] and found that only 7 recovered over 80 per cent of their costs, with 3 of those 7 doing so mostly through donor funding. On average, the 41 service delivery models reviewed by the IDH study recovered 25 per cent of their costs through revenues generated from direct service payments, and an additional 18 per cent by grant funding. Whether and how the remaining costs were covered remained largely unclear (IDH, 2020).

**However, extension services create value beyond what is recovered in fees.** For instance, a recent study from IDH reviewed the case of the Union Service Stores Company Limited (USSL) in Tanzania. It was apparently running at a loss, as farmers and cooperatives were charged negligible fees for training, inputs and transportation services. However, by providing such services, USSL increased productivity and was able to retain farmers better, thus enabling a consistently higher quantity of produce to be sourced. When combined with increased sourcing value and service charges, extension services deliver a positive net income for the organization (see figure 5; IDH, 2020).

Therefore, to address such financing gaps, PESPs can seek **public-private cofinancing mechanisms by demonstrating the value that PESPs create for themselves and partners** (other value chain actors, government, etc.). Also, clear benefits and value added from PESP services will influence farmers' willingness to continue paying for the services. Detailed assessment could not be carried out among IFAD projects, but several examples showed **good value for money along the value chain** (see box 9).

Various modalities were seen in IFAD projects to facilitate public cofinancing of extension services, such as the following.

- **Governments can provide vouchers or subsidies** to recruit specific service providers or enable cooperatives themselves to pay for specific services and training. For instance, in Cambodia, ASPIRE tested different co-investment modalities, including specific support to cooperatives to pay for extension services, as well as matching grants and co-investments in value chain partnerships. The project has a component dedicated to policy and evidence, which supported the government to adopt a performance-based

6. As per IDH (2020), service delivery models are supply chain structures which provide services, such as training, access to inputs and finance to farmers to improve their performance and, ultimately, their profitability and livelihoods. They can be managed by different types of companies, ranging from commodity traders and processors to technological and financial service providers. This corresponds to the private sector side of our definition of PESPs (thus excluding NGOs).

**FIGURE 5** Accounting for indirect benefits of improved extension services can demonstrate net value for PESPs


allocation system whereby a decentralized extension budget is pegged to provincial results in terms of adoption rate of innovations by farmers, farmers' income and resilience. Building on trusted results and systems, the project was able to motivate government and other partners to increase investments in pluralistic extension. Progressively, provinces adapted their selection of instruments based on results achieved and local conditions, sometimes shifting almost fully to PESPs.

- **Governments can also support the initial investment costs of public and "socially oriented" pluralistic extension systems** (cooperative, para-public organizations, service centres, etc.). Often, governments play a key role in financing initial investments in training infrastructure (training centres, ICT tools, vehicles, etc.), the development of training material and training of last-mile service providers. In several projects, governments cofinance investments in productive infrastructure (e.g. roads in Zambia, markets in Uganda), which can generate income besides extension (i.e. investing in custom hiring and soil testing, which helps develop sustainable revenue streams for pluralistic extension centres in Nepal).

**In addition, government-facilitated private cofinancing of extension:**

- **Provides aligned incentives for value chain actors to engage with smallholder farmers and cofinance or even lead required extension services.** In many projects, governments provide matching grants, invest in adapted infrastructure that can decrease transaction costs, encourage these enterprises to reach smaller or more remote farmers (by investing in last-mile road or irrigation facilities), and finance part of the initial group training (see the Sri Lankan example in box 9). A number of projects include an infrastructure component to help reach last-mile farmers (rural roads) or invest in climate-resilient water infrastructure and climate services which can de-risk collaborations with smallholders. Both aspects help attract value chain actors to work with smallholder farmers and take charge of part of extension services (e.g. Zambia, Uganda, AMD in Viet Nam).

- **Facilitates partnerships with rural financial institutions to cofinance extension systems and ensure demand that is more viable.** Identifying bankable agricultural investments and supporting less risky agricultural practices is often difficult for banks with little agricultural expertise and an inability to evaluate agricultural value chain risks. Therefore, financial institutions and PESPs can develop win-win partnerships to help farmers enter into profitable and less risky activities (see the Indian CMRC example in box 9).

Both types of partnerships contribute to improving access to bundled services and developing regular income streams, which are also crucial for farmers to contribute to paying for the PESP services.

**BOX 9** Examples of projects leveraging cofinancing from value chain and rural financing institutions in Sri Lanka and India

In Sri Lanka, NADeP supported 17 value chain partnerships between farmer groups, value chain actors and banks in dairy, seaweed, fruit, vegetables and artisanal products. The beneficiary household investment cost (US$1,500 on average) was split between: (i) matching grants provided by the programme; (ii) incentivized credit from participating financial institutions as part of the beneficiary contribution; and (iii) private sector (agribusiness) contributing technical advisory services. Cofinancing played a critical role in augmenting ownership, from both the company (capital, contribution, services, etc.) and producers (through credit and in kind).

In India, following demonstrated positive results achieved by women's self-help groups and their CMRCs, projects managed to facilitate partnerships with commercial banks whereby the CMRC becomes the trusted agent of the bank, screening for bankable clients, building the clients' financial capacities, monitoring savings and credit recovery, and providing services to ensure they develop sustainable rural businesses (i.e. accounting, business advisory, link to extension services, organizational inputs, etc.). In return, the bank rebates 2 per cent of the interest rate to the CMRC. In addition, several members of self-help groups were also able to use loans to invest in different service provision and value addition activities (paravet, input and seed production, aggregating centres, etc.), which could be purchased by other members and provide income for the CMRC and the groups. Therefore, despite such commercially based service provision, broad-based financial inclusion enabled poor members to invest in various businesses and pay for services

# LESSONS LEARNED **10**


@IFAD/Sarah Morgan

## LESSON 10: LONG-TERM SUPPORT AND PARTNERSHIPS ARE REQUIRED TO DELIVER SUSTAINABLE SERVICES TO THE LAST MILE

- Most projects rely on producer organizations and last-mile service providers to ensure sustainable services.
- However, building technically and financially sustainable services takes time, so specific efforts are required to: (i) build on existing institutions; (ii) develop exit strategies and business plans from the start; and (iii) monitor the progress of maturity and sustainability using a dedicated scorecard facilitating targeted support.
- In addition, last-mile service providers benefit from quality and adapted training material (including videos and in local languages) and opportunities to participate in federations, networks and extension systems.
- Finally, the government is key to providing an enabling environment for sustainable and inclusive pluralistic extension systems through dedicated investments, coordination mechanisms and quality assurance.

Most projects' **exit strategies rely on the capacity of farmer organizations and local service providers** to continue providing services to the farmers after the funded project ends. In line with the IFAD toolkit on engaging with farmer organizations (IFAD, 2016b), the following good practices were identified to support more sustainable producer organizations and community workers that deliver quality services.

- **To reach the required level of maturity, producer organizations and local service providers need capacity-strengthening spread over several years.** To reduce this time period, the IFAD toolkit recommends better mapping of existing farmer groups or community workers as entry points. In Uganda, VODP2 assisted existing farmer groups to form cooperatives or higher-level farmer organizations and to develop by-laws specifying clear membership roles and governance mechanisms. Many of these groups also function as village savings and loan associations for income generation and to be financially sustainable.
- **Groups are supported from the outset to develop exit strategies and viable business plans and models, identifying key "value propositions"** and services to be provided to members, the cost involved and clear revenue mechanisms to ensure cost recovery and maintenance of equipment (modules 2 and 3). Indeed, sometimes groups deliver services without accounting for costs. In APDMP in India and the Cordillera Highland Agricultural Resource Management Project (CHARMP2) in the Philippines, several producer organizations were selling seeds, inputs or mechanization services at purchased cost, not integrating any fee for the costs incurred in aggregating produce or to maintain infrastructure over the long term. Similarly, many groups start operating informal savings and credit groups without charging even minimal interest. Similar support can be provided to community extension workers and agripreneurs.
- **Adopting a targeted and phased approach based on differentiated maturity assessment:** In line with module 1 of the IFAD toolkit, several projects use a scorecard methodology to track the maturity of producer organizations and adapt support accordingly. These scorecards can be used to assess the readiness of farmer groups to graduate from the project and, more importantly, can identify early where increased capacity-building is needed to maintain the growth of the group. In Sri Lanka, SAPP designed a targeted and phased approach to support farmer organizations, based on an initial maturity/capacity self-assessment. Based on this, more mature producer organizations already managing sizeable businesses will be supported to engage in value addition and diversification of their services, including in terms of providing inputs, seeds and advisory to their farmers. Newer and weaker groups are supported to develop business plans to enter progressively into partnerships with value chain actors.

**Most often, maturity is not fully achieved in one project cycle, and backstopping efforts are needed post project.** Even if local PESPs become mature, staff and leaders may change or may need to address emerging issues related to evolving market requirements, the changing climate and new digital technologies. Therefore, **projects should institutionalize support and backstopping** to local service providers by:

- **Connecting local producer organizations and service providers with more mature federations** (IFAD, 2014b): IFAD projects in Viet Nam are increasingly developing partnerships with farmers' and women's unions rather than directly contracting lead farmers to facilitate last-mile extension services. The lead farmers selected and trained by the projects are integrated into these unions. In India, self-help groups have been progressively federated at village level and higher-level CMRCs which have sufficient size to recruit extension staff and partner with banks, the government and value chains to provide dedicated support to self-help groups.
- **Facilitating access to quality extension material:** In AMD in Viet Nam and all six of the projects reviewed in East and Southern Africa, development of technologies is associated with quality replication guidelines, including detailed training material facilitating replication by extension services through public research support. Similarly, in Cambodia, ASPIRE collaborated with the Royal University of Agriculture and WOCAT to develop online training for community extension workers to scale up sustainable land management. However, often such material remains too complex, and efforts are required to make it usable at the last mile (including through videos, pictorials and simple factsheets).
- **Institutionalizing access to extension systems, platforms and networks:** Box 10 provides examples of projects where more structured partnerships between producer organizations, lead farmers and government extension have been developed (SAPP in Malawi and CHARMP2 in the Philippines), as well as support from the Global Forum for Rural Advisory Services to national pluralistic extension platforms integrating farmer organizations, government and various PESPs.

**BOX 10** Sustaining technical support to last-mile extension systems and grass-roots institutions

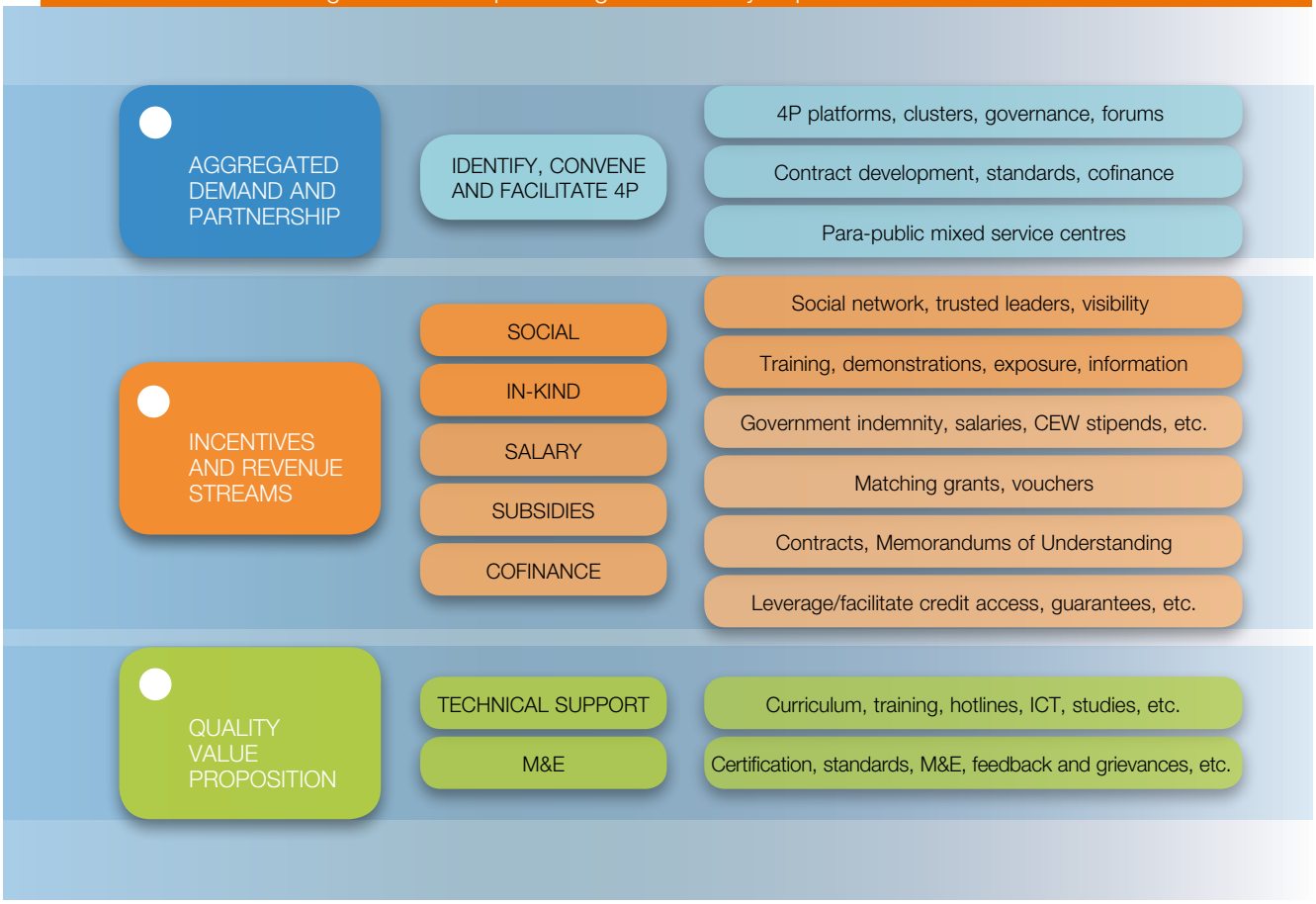
In Malawi, SAPP engages lead farmers to provide extension services to other farmers. To sustain the services of lead farmers beyond the project, the government has developed arrangements with development partners at district level to engage existing lead farmers in their extension services and also integrate them into the government public extension system. The government will continue to support the lead farmers with transport, protective equipment and capacity-building. In CHARMP in the Philippines, producer groups were registered with the Ministry of Agriculture and local government authorities. Formal sustainability plans were signed with local government bodies to maintain required levels of services for such groups.

IFAD has been partnering with the Global Forum for Rural Advisory Services to support a dedicated national platform to improve pluralistic extension systems in Bangladesh and Uganda. The Uganda Forum for Agricultural Advisory Services (UFAAS) was contracted to develop extension guidelines and standards to measure the performance of EAS providers. This led to an ethical code of conduct for EAS providers and procedures for registration and accreditation of providers. A broad membership base of the UFAAS helped ensure the participatory nature of the process and validation of the guidelines, code of conduct and procedures by the diverse actors.

In addition, to engage effectively and sustainably with PESPs, **the public sector has to play a strong role in policymaking, creating an enabling environment, planning, supervision, development of certification systems, and coordination and accountability beyond project duration** (USAID, 2019) (see figure 6). Furthermore, governments need to support initial investments and the development of required partnerships, including cofinancing some training, notably for the poorest farmers and less commercial activities. They should also be willing to invest in a minimum level of supervision, refresher training and follow-up of the activities post project. The role that governments play is especially key in three areas:

- **Establishing, coordinating and monitoring pluralistic extension systems that can help match demand for and offer of services:** The process of developing viable 4P business proposals requires strong negotiation and clarity in the cofinancing arrangements and expectations of the commitment and value added of each partner in the partnership, their willingness to include EAS, the business model and the final expected outcomes. Many projects foster pluralistic PESPs through multi-stakeholder platforms and service centres, which often require longer-term commitment from government to facilitate such linkages.

**FIGURE 6** The role of government in promoting sustainability of pluralistic extension services



- **Initial investments, incentives and revenue streams:** The government has a role in sustaining the structures developed during the project's life, and in providing a positive enabling environment for PESPs to consider social and environmental issues. Governments can provide targeted public investments, and mainstream and incentivize the use of last-mile service providers in extension delivery (e.g. providing minimal stipends, priority access to training and inputs for demonstrations, recognizing their efforts by providing certificates, awards).
- **Quality assurance:** Governments should invest in research and extension linkages, help build quality extension curricula that integrate social and environmental concerns and respond to emerging challenges (climate change, new market requirements, etc.), and provide long-term access to training and capacity development to extension workers and last-mile providers, including dedicated extension material. In addition, they can invest in monitoring, evaluation and certification systems to ensure the quality of services and responsiveness to farmers' needs.

# STRATEGIC RECOMMENDATIONS AND GUIDANCE FOR PROJECTS

Based on the lessons learned, we have formulated the following recommendations for designing and implementing programmes aimed at strengthening pluralistic extension services.

## At the design stage: Conceptualize efficient system-building on demand and existing systems

### Identification of differentiated demand for and offer of service provision up to the last mile

As identified in lesson 1, it is crucial to first accurately assess the demand for and offer of extension services.

#### Identifying differentiated demand of various target groups

- Segment the different target farmers into different demand groups – for instance, by identifying the specific needs of farmers relying on crops vs livestock; land holdings (landless or with small and marginal holdings); irrigation status (rainfed/irrigated); women-headed households, etc. The project may get inspiration from the IFAD guidelines on pro-poor value chains and the recent IDH guidelines on farmer segmentation (IDH, 2021).
- For each category, seek to identify their livelihood systems and participation in targeted value chains, their constraints in farming, their core extension needs, and potential willingness and capacity to pay for services.
- Identify specific constraints in extension delivery, including specific cultural and language/literacy barriers, geographic context (remoteness, market access), their preference for and ability to use different ICT tools, etc.

#### Identifying existing gaps in public extension delivery to address such needs

For instance, quite often there are both technical capacities (e.g. understanding value chains or knowledge related to technologies that can help farmers adapt to climate change) and functional capacities (e.g. mobilizing farmers into groups or facilitating collective action) that prevent public extension services from responding to farmers' needs.

There can also be geographical gaps (limited coverage in more remote areas, etc.) or structural outreach gaps (very few staff trying to cover a large number of farmers).

### Mapping available PESPs, including last-mile service providers, and their capacity gaps

Mapping of available PESPs should be carried out through secondary reports and consultations at both the higher level and the local level (NGOs, local service providers, farmer organizations, lead farmer volunteers, rural/microfinance organizations, specialized service providers, ICT service providers, etc.). Wherever local PESPs, farmer interest groups or producer groups exist, it is crucial to build on their strengths, instead of organizing new groups and entrepreneurs that might take time to evolve and mature to become service providers.

Identification of PESPs should be followed up with an assessment of their thematic and geographic scope, the clients they serve, their capacities, and their strengths and weaknesses to respond to the needs identified. For community-level workers, it is important to also check their levels of education and capacity to use ICT.

Such a mapping will identify PESPs which can be directly contracted to provide specific training and investments needed to make them more relevant to the programme objectives.

### Assessing the potential for sustainability on both offer and demand sides

**Demand:** Is there scope for commercial services? How interested is the government in fostering sustainable pluralistic extension? Are we recruiting a PESP temporarily to build the capacities of sustainable local service providers (government, farmer organizations, entrepreneurs, etc.)?

**Offer:** Do PESPs have a shared interest in delivering such services, and is there a feasible longer-term business model that can be leveraged?

## Identification of the required vertical, horizontal and interactive coordination mechanisms for the last mile

Project design should identify the vertical and horizontal delivery mechanisms needed to ensure provision of the required services to the last mile (see lesson 3 and the example in box 11). These include coordination and support mechanisms, outreach at each level (number of farmers/groups/officers followed at different levels) and feedback loops to improve service delivery. Such delivery mechanisms should include how services will be organized at the community level through farmer interest groups, lead farmers and community-based facilitators/extension workers. These delivery mechanisms should also build on existing institutions and mechanisms at different levels.

### Identifying mechanisms to facilitate bundling of different services

It is often necessary to identify mechanisms to facilitate "bundling" of different services depending on context, as shown in lesson 2 and summarized in table 4.

### Incorporating mechanisms that ensure accountability to users

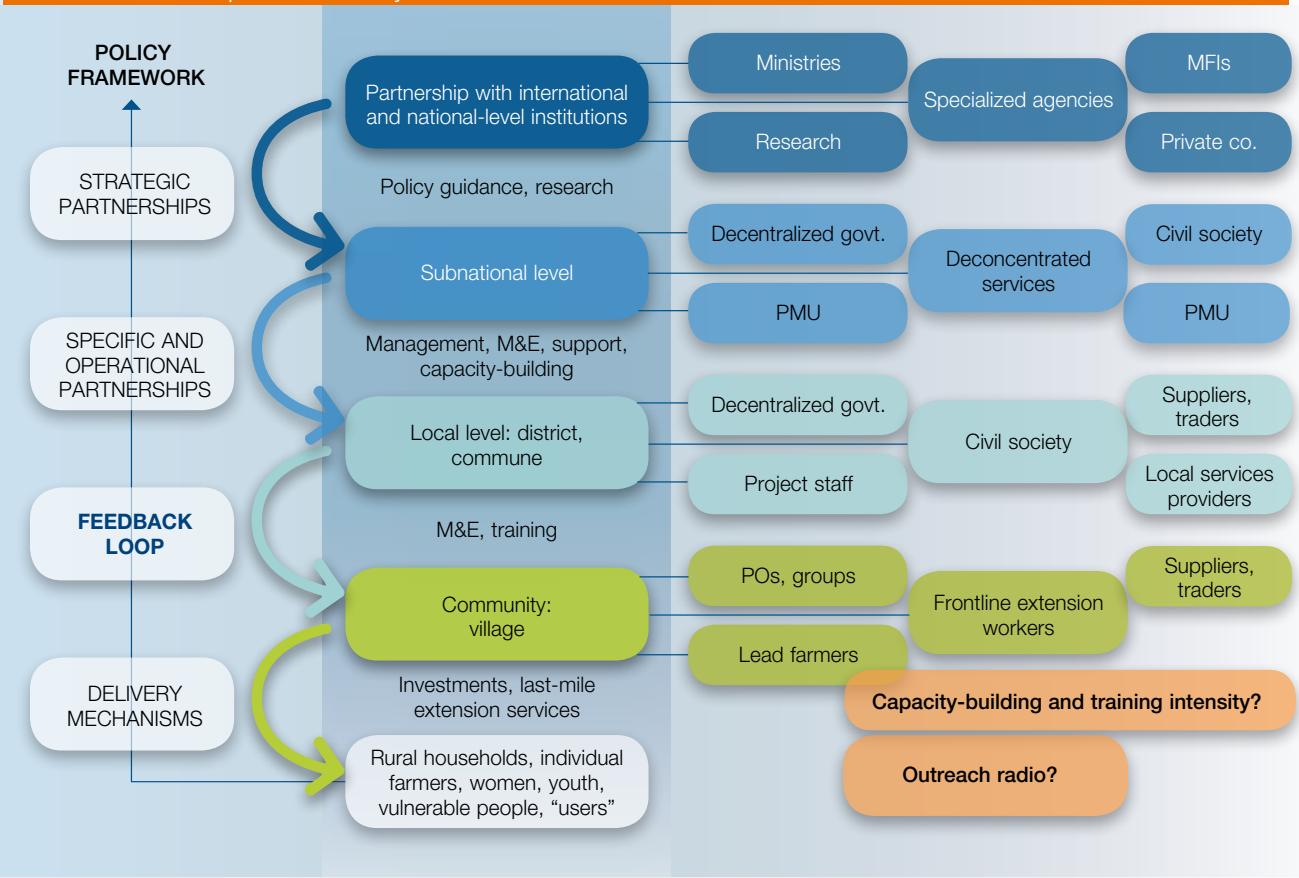
To ensure that the PESPs respond to user requirements, the users should have a say in the governance of service delivery (lesson 4). Therefore, project design should incorporate clear mechanisms and activities that can strengthen such aspects.

- Mechanisms to enable participatory planning and feedback collection: Forming multi-stakeholder governance committees including farmers is one way of making the services demand-driven. Establishment of learning/information centres for farmers and other stakeholders to interact with PESPs can ensure easy access to services for all type of clients.

**BOX 11** Example of a framework to represent vertical delivery mechanisms in extension

Figure 7 provides a general example of vertical coordination, showing different administrative levels (national, subnational and local, to be adapted to a country's actual administrative levels), different main potential partner institutions (from national ministries, research and private actors, decentralized agencies and local private actors to villages/farmers) and the potential roles of the project/PMU (in red) to support and engage such institutions to deliver the project to the last mile, including cascading of training and the outreach ratio of each level. This arrangement can be adapted to each project to clarify delivery and coordination mechanisms required at different levels.

**FIGURE 7** Example of a delivery belt




*Source:* E. Jouve, senior consultant, IFAD.

- Regular monitoring and evaluation of results using socially relevant criteria (e.g. gender, inclusion, etc.) applied to data collected at the decentralized level can help ensure that the PESP interventions are demand-driven and meet the needs of targeted clients.
- Enhancing capacities of user groups to promote inclusive decision-making, recruit PESPs and develop partnerships is also important to make the services demand-driven.
- PESPs may also need capacity enhancement to use different types of approaches to meet the needs of specific target groups; therefore, investing in enhancing these capacities is important.
- An indicator should be included that monitors beneficiary satisfaction and empowerment and which could contribute to the related IFAD core indicators as envisaged in the IFAD stakeholder engagement strategy and core indicators.

**TABLE 4** Summary selection of mechanisms to bundle PESPs depending on context

| CONTEXT/ASSUMPTIONS | MECHANISMS TO BUNDLE/COORDINATE DIFFERENT PESPs |
|---|---|
| • Limited availability and viability of PESPs to serve poor and remote farmers<br>• Availability of organizations with a mix of skills | **"One-stop shops"** to deliver broader support to farmers, including advice (both production and marketing), access to finance and business skills |
| • Different types of service providers available and scope for commercial PESP operations | **Coalition/platform of different specialized service providers** that facilitates the matching of aggregated demand for and offer of services *(In this model, the PMU should be strong enough to procure, manage and coordinate the service providers.)* |
| • Well-structured value chains and an established market with quality specifications exist<br>• Farmers can meet market requirements | **Integrate extension services in value chain and contract farming models.** Most often the value chain actor plays a strong role in cofinancing and organizing such extension services, which are required to lower transaction costs (by helping farmers increase and aggregate production) and to ensure farmers meet market requirements. |

## At the advanced design stage (implementation readiness) and at start-up: Prepare and finalize recruitment

The project should identify PESPs as early as possible in the implementation of the project to avoid implementation delays. Identification of PESPs requires clear procurement procedures and should be prioritized in the procurement plan, the full design document and the project implementation manual. At the advanced design stage, the project can draft terms of reference to fast-track the recruitment process. The project will then need to update terms of reference, advertise for expressions of interest and develop a clear screening process to select the most suitable PESPs.

### Development of a clear and feasible schedule of capacity development activities

To develop terms of reference and refine extension needs and plans in the project implementation manual, the PMU should develop a clear and feasible schedule of capacity development activities that includes delivery and coordination mechanisms across different components and implementation institutions to reach proposed outreach targets.

Based on clear extension development plans, **detailed terms of reference are prepared for service providers** to provide tailored proposals. Bid processes and selection criteria can refer to IFAD guidance on 4P and the private sector strategy and can include the following.

- **Additionality of PESPs:** It is crucial that PESPs offer skills and services in their application that are complementary to those of the government, in terms of outreach, technical skills or access to market.
- **Cost-effectiveness of PESPs:** To assess the cost-effectiveness of potential PESPs, identify the costs involved in promoting and strengthening PESPs in the bid document submitted by PESP applicants from the beginning of the intervention. Cost planning should include general cost categories and a clear outline of expected results in terms of their forecast outreach and impact. PESPs with high overhead costs against limited outreach may not be considered cost-effective. The more cost-effective and impactful the service delivery is, the more likely the interventions are likely to be sustained.

Cost analysis can use the proposed tracking approach, differentiating between initial investment costs and operating costs that may need to be sustained.

- **Shared interest and the prospect of cofinancing and sustainability:** If the partnership can also benefit the service provider, it is very important to clearly identify prospective cofinancing modalities from the service provider and its interest in engaging in such services in the long term or in helping to build the capacities of long-term PESPs (exit strategy). Prospects of cofinancing and cost recovery should also be explored.
- **Due diligence:** On the other hand, it is important to exercise due diligence and address potential conflicts of interest (e.g. if working with input and seed providers, who may not provide neutral advice).
- **Engage beneficiaries in the selection of PESPs where possible:** Design public instruments to recruit NGOs or specialized service providers through a competitive process, based on demand. Where possible, selection can be done by the beneficiaries themselves: either farmers supported to organize extension (ASPIRE in Cambodia and the Agriculture Sector Development Programme (ASDP) in Nepal, which provides vouchers) or a lead enterprise which cofinances such extension services (AMD in Viet Nam, etc.). Beneficiary involvement is crucial when selecting last-mile service providers from local communities, such as community-based facilitators, lead farmers or grass-roots farmer organizations.

**BOX 12** Examples of elements to consider when developing and reviewing capacity development plans

- **Identify extension needs:** Based on the initial baseline assessment, community engagement process, value chain studies, documentation of relevant local innovations or new technologies of relevance to farmers' needs, both technical and functional capacity needs (group management, access to market and inputs, partnerships, etc.) and gaps have to be identified. Once community institutions are developed, such a participatory planning exercise can be conducted annually.
- **Consider the diversity of target beneficiaries (including specific situations of women, youth, etc.) and the need for specific mechanisms to enhance inclusion** (lesson 4), including quotas, adaptation of materials, social inclusion training, recruitment of dedicated female last-mile workers, etc.
- **Identify needs and modalities to improve appropriate training curricula**, building as much as possible on existing curricula and relevant partnerships, such as with research centres.
- **Identify clear training targets and mechanisms along with cascading of training of trainers** (i.e. first training all district supervisors, who will then train an increasing number of trainers). In addition, such training may also include inputs into a systematic, progressive development of farmer organizations.
- **Backstopping and coordination mechanisms** may include regular refresher or coordination mechanisms, ICT remote backstopping systems (WhatsApp groups, hotlines) and provision of quality training material (videos, guidelines, etc.).
- **Monitoring system**
  - To track how capacities are being developed through scorecards and surveys to capture knowledge, attitudes and capacities and identify remaining gaps
  - To assess results of innovations at the end of the major cropping season, track levels of adoption among different target groups, identify potential barriers, and evaluate the profitability and resilience of innovations, such a system may require capacity-building for farmers or at least lead farmers to keep and analyse records.

### Formalization of the partnership

The selected service provider should sign a contract that details its role in the project, duration, and financing modalities, with clear cofinancing modalities and commitment from each partner and the service provider, and clear, specific expected targets, scope of work and geographic location. Ideally, the contract should propose results-based terms, with payment for outputs and outcomes. The contract/agreement needs to be based on a thorough analysis of constraints, opportunities, objectives and the rationale of the partnership, to ensure fair negotiation to finalize the partnership (see the IFAD note on 4Ps).

## At implementation: Careful monitoring and adaptive management to strenghten impact and sustainability

### Monitoring and evaluation

Once the service providers have been recruited and oriented, they submit an inception report detailing how they will implement their duties. Such a plan may entail repeating some of the assessments carried out during design and start-up to collect more up-to-date data, as well as data more specific to the final intervention.

- PESPs will develop an annual workplan and budget detailing activities before receiving cofinancing from the project.
- PESPs will develop a monitoring and evaluation system detailing indicators at both output and outcome levels.
- The project will monitor the performance of the service providers and will only disburse funds based on satisfactory performance; a grievance mechanism should be incorporated.

The project's role is to monitor the PESPs' implementation of activities according to the partnership agreement and ensure timely delivery of agreed tasks. The following activities are important for contract management and should be integrated into planning/start-up preparations.

- **Results-based contract and disbursement:** The disbursement of funds to PESPs should be based on the annual workplan and budget and progress in implementation of activities against agreed targets. Milestones should be set in each contract to trigger continued support.
- **Monitoring implementation and addressing issues**: The role of the government is to closely monitor the performance of the service providers, and monitoring modalities and grievance systems should be clearly spelled out.

The project should develop reporting templates for each PESP contracted by the project, to ensure harmonization of reporting.

### Preparation for exit and sustainability from the start

Post-project sustainability is a significant challenge for most development interventions, including the continuation of key extension and service provision. Therefore, an exit strategy should be developed from the design stage, including during PESP selection and recruitment, clarifying which services may need continued investment (i.e. supporting the creation of farmer organizations and groups is often resource-intensive and can be considered a project investment, whereas less support may be needed for semi-mature groups). The mid-term evaluation and completion phase provide specific milestones to review the exit strategy, identify and address such sustainability challenges and monitor them regularly.

The project team and service providers need to have a **shared understanding of the key benefits and services that should be sustained**, such as farmers' capacities to implement agricultural innovations or address emerging challenges (pest and disease occurrence, climate hazards), or improving access to inputs, seeds, supply services, market and finance. Then, a matrix needs to be developed to identify more concretely how such services are currently implemented, what their costs are, who will implement post project, which sustainability challenges they may face and what is needed to address them.

### Monitoring and enhancing the economic viability and business models of PESPs

Most PESPs struggle with cost recovery post project, notably last-mile service providers and new institutions such as service centres and producer organizations (lessons 7, 8 and 9). Therefore, it is important **to monitor the business model and viability of PESPs** that need and seek to sustain services beyond the project duration.

- **The business model canvas** provides a useful framework for summarizing and discussing key drivers of sustainable business models with the project, partners and PESPs. It was piloted to help the PACE project in Bangladesh strengthen the sustainability of its business model delivery, helping to identify the need to strengthen collaborations with public actors and long-term support to emerging agroentrepreneurs. The IFAD (2016b) toolkit provides dedicated guidance to help producer organizations develop business models and business plans.
- Both tools can be captured in **dedicated scorecards** to track improvements in the sustainability of producer organizations and service providers and address gaps on time. Such scorecards may review governance, financial and administrative management, planning, delivery of key services, sales numbers, outreach to members, linkages, etc. Such assessment should also assess financial viability in terms of cost recovery and sustainability, and facilitate participatory discussions with groups.

Building on overall project costs, annual workplans, budgets and dedicated surveys, the project may **prototype business models of different PESPs** (community workers, local service providers, groups, etc.) and run forecasts to identify the cost-benefit structure and how it may fare beyond project support.

- Establish a mechanism to **track all the costs** involved in promoting and strengthening PESPs from the beginning of the intervention, differentiating between investment and operating costs. Then find ways to **reduce the overhead costs** by sharing the costs among multiple service providers. The third step is to **enhance outreach** or service delivery to more clients, thereby reducing the unit costs. The more cost-effective the service delivery, the more likely the interventions are to sustain post-project support.
- **Track the revenue mechanisms** of the major PESPs involved, and identify ways to enhance them by expanding outreach or diversifying services or revenue streams. Surveys can also be administered with last-mile workers to identify their own aspirations and ideas to sustain their services and potential training required.
- **Track the value created by PESPs** along the value chain to **leverage additional cofinance** by public and private partners, as the value chains may be motivated to cofinance specific services, either in cash or in kind.

**It is crucial to identify realistic phases to reach sustainability**, acknowledging that the investment phase may focus on initial investments required in infrastructure, and institutional and technical capacities to deliver extension through updated curricula, strengthened farmer groups and last-mile extension workers. Financial viability may focus on recovering operating costs once such more expensive investments have been carried out and partners have seen the added value of services.

### Leveraging public-private partnerships to enhance sustainability

Sustainability requires both economic viability and technical capacities of the PESPs. This takes time and benefits from partnerships with local service providers, producer organizations, networks, and private and public organizations (lesson 9).

- Last-mile extension workers and organizations can be linked to **federations of producer organizations, country extension forums and regional networks** to promote networking and the sharing of good practices, as another way to ensure that the capacities created by the projects are used in different contexts. Such networks may also require dedicated support and investment.
- Strengthen **partnership mechanisms with financial institutions and value chain actors** that might be interested in cofinancing some of the initiatives or provide in-kind technical support for mutual benefits (as they benefit from working with aggregated farmers). Partnerships between financial institutions and PESPs can provide a win-win formula that can help farmers and value chain actors to cofinance sustainable, inclusive PESPs. Similarly, part of the extension costs can be borne by value chain partners.

Finally, in addition to the crucial importance of public investments in pluralistic extension, governments still have a key role to play in fostering such partnerships and providing a positive enabling environment for pluralistic extension systems within their regular extension activities (lesson 10):

- An **initial and continuous role in establishing, coordinating and monitoring pluralistic extension systems** that can help match the demand for and offer of services
- A role in **integrating local PESPs within wider public and private extension systems** (i.e. Cambodian extension workers being remunerated by local districts and private organizations; CHARMP2 community institutions in the Philippines signing sustainability partnerships with various local public institutions; lead farmers in Malawi being integrated into public extension services; Indian extension policy fostering structural partnerships with producer organizations, etc.)
- **Leading or cofinancing specific training**, notably for the poorest farmers and less commercial activities. Governments must be willing to invest in a minimum level of supervision and follow-up of producer organizations and last-mile extension workers.

# REFERENCES


Blum, M.L., Cofini, F. and Sulaiman, R.V. 2020. *Agricultural extension in transition worldwide: Policies and strategies for reform*. Rome: Food and Agriculture Organization of the United Nations. https://doi.org/10.4060/ca8199en

FAO. 2021. *Coordinating pluralism in extension advisory services*. Rome: Food and Agriculture Organization of the United Nations.

Grow Asia. 2020a. *Driving AgriTech Adoption: Insights from Southeast Asia's Farmers*. Singapore: Grow Asia. http://exchange.growasia.org/driving-agritech-adoption-insights-southeast-asias-farmers

Grow Asia. 2020b. *Smallholder AgriTech Business Models: High-potential models emerging in Southeast Asia*. Singapore: Grow Asia. http://exchange.growasia.org/smallholder-agritech-business-models-high-potential-models-emerging-southeast-asia

IDH. 2020. *Service Provision as a Viable Business: Lessons from analyzing 50+ smallholder business models that create value for smallholders and companies alike*. Utrecht: IDH. https://www.idhsustainabletrade.com/uploaded/2020/02/Insights-Service-Provision-2020-mobile-version.pdf

IDH. 2021. *Farmer segmentation: Improve the cost-efficiency and effectiveness of the services you offer to smallholder farmers*. Utrecht: IDH. https://www.idhsustainabletrade.com/uploaded/2018/11/2020_12_04-IDH_farmers-segmentation_doc_final.pdf

IFAD. 2014. *How to analyse and develop the social capital of smallholder organizations*. Rome: IFAD.

IFAD. 2014b. *Scaling up note. Smallholder institutions and organizations*. Rome: IFAD.

IFAD. 2016a. *How To Do Note on 4P*. Rome: IFAD. https://www.ifad.org/documents/38714170/40314128/Public-Private-Producer+Partnerships+(4Ps)+in+Agricultural+Value+Chains/853d82f8-45c9-4493-b2da-b509112cc0b3

IFAD. 2016b. *Toolkit on farmer organizations*. Rome: IFAD. https://www.ifad.org/en/web/knowledge/-/publication/engaging-with-farmers-organizations-for-more-effective-smallholder-development

IFAD. 2018. *Completion report NaDeP, Sri Lanka*. Rome: IFAD.

IFAD. 2021. *Digital Agriculture in Asia and the Pacific region: A synthesis of ongoing work*. Rome: IFAD. https://www.ifad.org/en/web/knowledge/-/digital-agriculture-in-asia-and-the-pacific-region-a-synthesis-of-ongoing-work

OECD and FAO. 2016. Agriculture in Sub-Saharan Africa: Prospects and challenges for the next decade. In *OECD-FAO Agricultural Outlook 2016-2025*. Paris: OECD Publishing and Rome: Food and Agriculture Organization of the United Nations. http://www.fao.org/3/a-BO092E.pdf

Osterwalder, A., Pigneur, Y. and Clark, T. 2010. Business Model Generation: A Handbook For Visionaries, Game Changers, and Challengers. Strategyzer series. Hoboken, NJ: John Wiley & Sons. ISBN 9780470876411. http://www.businessmodelgeneration.com/

USAID. 2019. *Feed the Future's 'Strengthening Private Sector Extension and Advisory Services' Portfolio Review of Projects of August 2019*. Developing Local Extension Capacity (DLEC) Project. Washington, DC: United States Agency for International Development.

### Useful websites

Agricultural Extension in South Asia (AESA): https://www.aesanetwork.org/

Agrilinks: https://www.agrilinks.org/

Farmfit Intelligence: https://www.farmfitintelligence.org/

Global Forum for Rural Advisory Services (GFRAS): http://www.g-fras.org

### Online references for the business model canvas

Grow Asia. Framework for Smallholder Agritech. https://www.growasia.org/business-model-guides

Innovision Consulting. 2020. Market Systems Solutions to Tackle COVID 19 Impact: Using Business Model Canvas as a Tool to Pivot. http://innovision-bd.com/business-model-canvas-for-covid-19/

Joyce, A. and Paquin, R.L. 2016. The triple layered business model canvas: A tool to design more sustainable business models. *Journal of Cleaner Production* 135. https://www.researchgate.net/publication/304026101_The_triple_layered_business_model_canvas_A_tool_to_design_more_sustainable_business_models

Social Enterprise Institute. Social Business Model Canvas. https://socialenterpriseinstitute.co/wp-content/uploads/2018/12/Social-Business-Model-Canvas.pdf

Strategyzer. 2022. Strategyzer Virtual Masterclass: Testing Business Ideas. https://www.strategyzer.com/training/virtual-masterclass-testing-business-ideas

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
www.ruralpovertyportal.org
ifad-un.blogspot.com
www.facebook.com/ifad
instagram.com/ifadnews
www.twitter.com/ifadnews
www.youtube.com/user/ifadTV

ISBN 978-92-9266-275-2