Food and Agriculture Organization
of the United Nations

A SHIFT IN GLOBAL PERSPECTIVE
INSTITUTIONALIZING FARMER FIELD SCHOOL

OCCASIONAL PAPERS ON **INNOVATION IN FAMILY FARMING**

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A SHIFT IN GLOBAL PERSPECTIVE
INSTITUTIONALIZING FARMER FIELD SCHOOL

Prepared by
Delgermaa Chuluunbaatar and Jennifer Yoo

Research and Extension Unit

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CONTENTS

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ABBREVIATIONS USED IN THE TEXT

ASEAN	Association of South East Asian Nations
CGIAR	Consultative Group on International Agricultural Research
CIP	International Potato Center
CSO	Civil Society Organization
DDNR	Research and Extension Unit of FAO
ECA	Escuelas de Campo de Agricultores
FAO	Food and Agricultural Agriculture Organization of the United Nations
FFS	Farmer Field School(s)
FIELD	Farmer Initiatives for Ecological Livelihoods and Democracy
FO	Farmer Organization
GFRAS	Global Forum for Rural Advisory Services
ICM	Integrated Crop Management
IGAD	Inter-Governmental Authority on Development
IPM	Integrated Pest Management
JFFLS	Junior Farmer Field and Life School
KTDA	Kenya Tea Development Agency
MOA	Ministry of Agriculture
MT	Master trainer
NCARE	National Center for Agricultural Research and Extension
NGO	Non-governmental Organization
PPD	Plant Protection Department
SAARC	South Asian Association for Regional Cooperation
SAFE	Sasakawa Africa Fund for Extension Education
SOFT	Society of Facilitators and Trainers
SRI	System of Rice Intensification
TOT	Training of Trainers

CHAPTER 1
INTRODUCTION

The increasing world population poses a need for production of more food. According to estimations of the Food and Agriculture Organization of the United Nations (FAO), food crop production must grow by 60 percent by 2050 (FAO, 2012a). At the same time, possibilities for expanding crop land by reclamation are becoming more and more limited, which means that agriculture must further intensify. The population that is most hard-pressed to meet this challenge is that of small-scale farmers, as they struggle to feed their families and make agricultural production a more profitable enterprise. Efforts to achieve this are hampered by lack of effectively functioning agricultural extension services. In a survey by the Inter-Academy Council (2005), 24 African countries listed strengthening extension as one of the top priorities for a poverty reduction strategy. However, contradictions within agricultural extension systems complicate these efforts. Broadly speaking, there are two conflicting approaches:

- designing standardized technology packages which maximize yields, to be delivered to farmers in a top-down fashion; or
- entering into partnerships with farmers to foster innovation, creativity and flexibility in dealing with agricultural systems.

The Farmer Field School (FFS) strategy is aimed at empowerment of farmers through field-based experiential learning processes. It was first conceived and implemented 25 years ago in the rice paddies of Southeast Asia as a way of training farmers to apply the principles of Integrated Pest Management (IPM) in dealing with outbreaks of the brown planthopper in rice. This approach turned out to be very successful (Kenmore, 1991) and the following years witnessed a strong expansion of FFS activities: in crops other than rice, aspects of crop management other than IPM and, beyond the field, into aspects of processing and marketing.

Notwithstanding this success, the adoption of FFS in national extension often remains problematic (Global FFS Review e-Forum, 2012). Tension between traditional top-down approaches and the new focus on farmer empowerment often weakens institutional support for FFS implementation. Moreover, changes in advisory services are often impeded by a lack of partnership between different actors, limited expertise at the national level, and an absence of political will to promote new approaches (Sulaiman and Hall, 2002, cited in Faure, Desjeux

and Gasselin, 2012). Altogether, the potential for success of the FFS approach appears strongly influenced by a sense of ownership by the parties involved. As farmers take ownership of their innovations and decisions on the farm, local and national governments take ownership of their extension systems on the policy level by creating an environment in which FFS programmes and networks can succeed.

The potential long-term success and sustainability of the FFS programme outcomes appears strongly influenced by a sense of ownership by the parties involved at the different levels. The essence of FFS – empowerment of farmers to learn, understand, and make informed decisions – challenges conventional agricultural extension approaches, yet the creation of an enabling environment for institutional support – one that is conducive to transformative and people-centered approaches – is essential for expanding the effort, improving quality and strengthening impact and continuity.

'Institutionalization' is used here in the sense of a process through which new ideas and practices are introduced, accepted and used by individuals and organizations and become part of 'the norm' (Jonfa and Waters-Bayer, 2005). This definition entails that institutionalization of a new approach involves change and development within the targeted organizations. For a further discussion of the concept of 'institutionalization' with reference to FFS and FAO's development policies, see Box 1.

Box 1
THE NOTION OF INSTITUTIONALIZATION IN RELATION TO FFS

Differences in meaning of institutionalization are reflected in two common definitions:

"…to incorporate into a structured and often highly formalized system " (Merriam-Webster)

"…to establish (something, typically a practice or activity) as convention or norm in an organization or culture" (Oxford).

The first definition entails a new practice or activity – say, FFS – to be incorporated in an established system – say, Agricultural Extension; the latter implies more. Here, the practice or activity is not only taken in, but also effectuates fundamental changes in the receiving entity. Thus, there are significant drawbacks inherent to the Merriam-Webster definition.

In this paper the term 'FFS-institutionalization' will be used in a broad sense, including also establishment of collaborative arrangements and linkages, as with NGOs and agricultural universities, or in public-private partnerships. These issues are considered against the backdrop of essential elements of institutionalization, as mentioned in FAO's capacity development policy: "clarity in assignment of roles and responsibilities to stakeholders; accurate reflection of roles in proper job descriptions; career incentives and mechanisms to hold players accountable for their performance".

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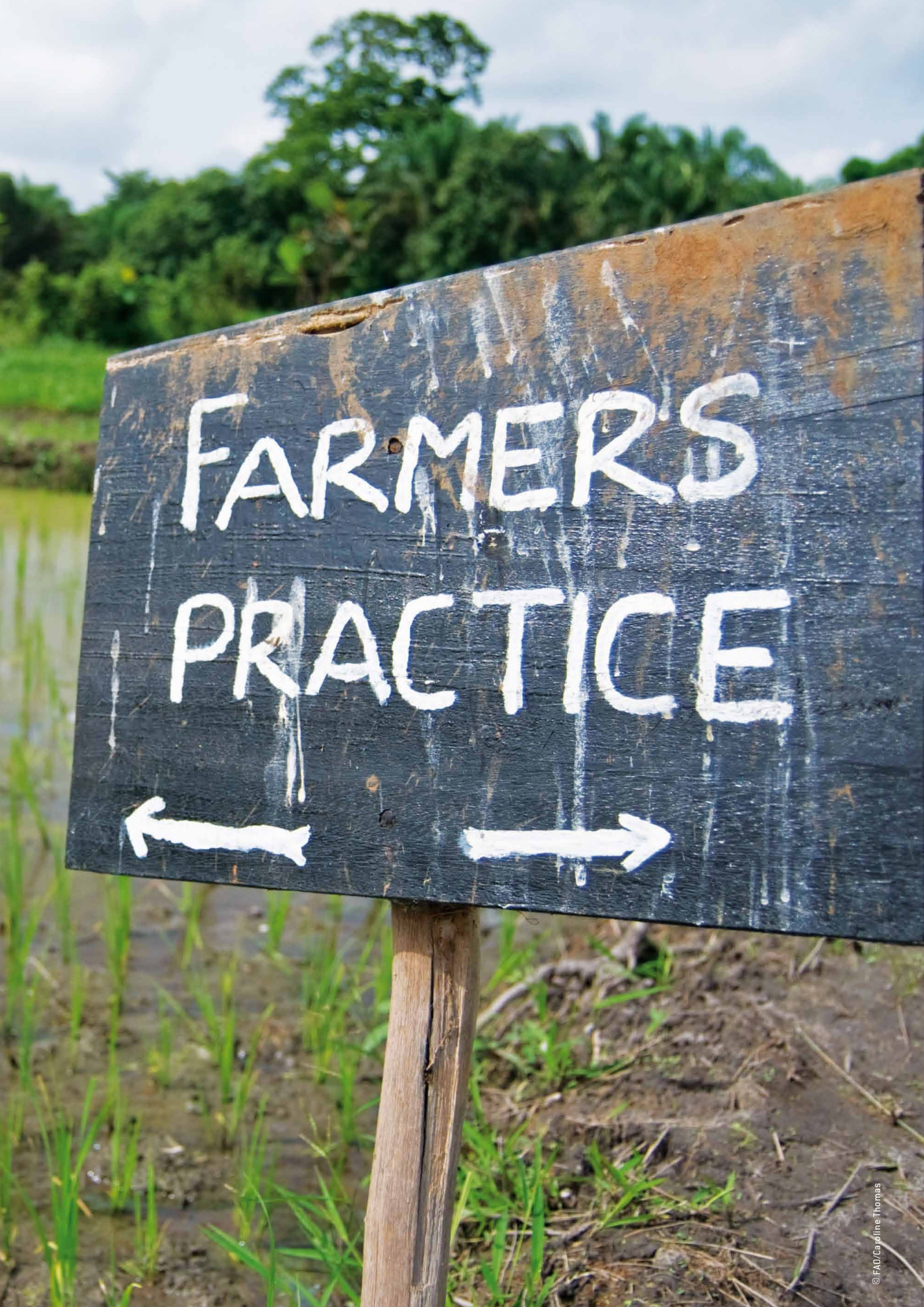
This process of institutionalization can takes place on different levels, including local or community level, national level, as well as regional and international levels, as described below:

- *Appropriation* at the local and community levels by farmers taking ownership of their innovations and decisions on the farming activities and becoming engaged in a wider range of activities and environment as a group.
- *Institutionalization* at the local and national levels by other actors in the agricultural sector, including public institutions, private businesses, Civil Society Organizations (CSOs) and Farmer Organizations (FOs), creating common understanding of FFS and its values, and integrating it into agriculture policy and rural development programmes, and creating an enabling environment in which FFS programmes and networks can succeed.
- *Harmonization* at regional and global level by regional and international organizations (such as Association of South East Asian Nations (ASEAN), South Asian Association for Regional Cooperation (SAARC), Inter-Governmental Authority on Development (IGAD), Consultative Group on International Agricultural Research (CGIAR), Global Forum for Rural Advisory Services (GFRAS), and development organizations), promoting synergy and shared learning and exchange on FFS-related activities, and mainstreaming common features and principles of FFS to maintain quality and standard in FFS programmes across countries and regions.

This paper aims to analyse opportunities, challenges and implications of institutionalizing FFS, with more focus at the national level.



CHAPTER 2
BACKGROUND: A PARADIGM SHIFT

In the late 1960s the 'Green Revolution' in agriculture started by the introduction of new, research-based technologies in major staple crops (maize, wheat and rice). Agricultural extension strategies were developed that emphasized transfer of these new technologies to farmers in a top-down fashion (Conway, 1997). The focus was on high-resource farmers, while the poorer ones were left behind (Swanson, 2008). Another drawback of this approach was a lack of explanation of underlying processes and concepts of new technologies, which left farmers ill-equipped to adapt to changing socio-economic, technical and biophysical challenges (Onduru *et al.*, 2002; FAO, 2000). Although the technology transfer method did increase food production during the latter half of the twentieth century, such success came at the cost of ecologically negative externalities, which threaten agriculture's natural resource base (FAO, 2011a). Moreover, the concept of *technology transfer* or *diffusion of innovations* has been increasingly challenged and discredited by a number of authors (Lipton and Longhurst, 1989; Röling, 1994; Foster and Rosenzweig, 1995; Biggs, 1998), following the growing recognition of the need for farmer innovation. This involved local-context solutions and increased focus on local and household food security in marginal areas. Goals of agricultural extension need to include improvement of natural resource management in the face of population growth; climate change; advancement of rural livelihoods; increase of farm household income; and building social capital among farmers so as to strengthen their voices in the global food economy (Swanson and Rajalahti, 2010). The concept of extension as mainly an act of transferring technologies to farmers is now more and more abandoned and substituted with increased focus on participation of farmers in the innovation process and facilitation of experimentation among communities.

Various methods have been developed to include farmers as stakeholders, including:

- '*animation rural*', an approach meant to raise group consciousness in order to communicate village needs to government agencies;
- *participatory rural appraisal*, an analysis of data on local needs and problems as identified by all stakeholders; and
- *integrated rural development*, which emphasizes location-specific synergies to create enabling environments for innovation at all levels.

In this changing spectrum of extension methods, participatory research methods, emphasizing locally defined priorities and perspectives, have become widespread in agricultural extension, and direct involvement of farmers in management and implementation has led to better results (Neuchâtel Group, 2006). Agricultural extension has recently been described as a multi-institutional network, supporting knowledge creation and cooperation, in which external and local knowledge are integrated (Faure, Desjeux and Gasselin, 2012).

Against this background of increased emphasis on farmers' needs and interests, the FFS approach has been developed to bring about farmer empowerment within agricultural extension systems, and to strengthen resilience to volatile agricultural challenges through solidifying farmer organizations and social capacity. The next chapter gives an overview of FFS features and strengths, as well as challenges met in implementation of FFS.

CHAPTER 3

KEY CHARACTERISTICS OF THE FFS APPROACH

MAIN CHARACTERISTICS

FFS focuses on community-based, practice-oriented field observation and experimentation. Participants are groups of men and women farmers with a common interest, who meet regularly over a longer period of time and are guided by a "facilitator", who is not lecturing, but promotes learning by discovery through hands-on exercises (Gallagher, 2003). FFS curricula encourage the creation of holistic perspectives, covering not only crop and pest management, but also a multitude of other topics, such as climate change, sustainable land management, nutrition, health care, business skills and farm enterprise development, as well as a range of special subjects such as HIV/AIDS prevention and mitigation.

The field itself acts as a unique classroom wherein experiential learning techniques are applied and farmers and facilitators seek collaborative answers to local problems . Facilitators are often extension agents or lead farmers who are generally familiar with: training managerial and organizational skills; principles of adult education, such as discovery-based learning and group discussion; and technical aspects of the subject matter that the FFS seeks to address. The timeline for an FFS curriculum is attuned to its subject. For example, in an IPM programme, curricula run in phase with the crop cycle to ensure relevance of observations and experiments to actual problems.

Throughout the learning cycle, farmers engage in group dynamics exercises, critical thinking, problem-solving and presentation exercises, strengthening their cohesion as a group and building confidence in speaking in public. FFS programmes aim to empower farmers to make decisions with a more scientific and critical understanding of local problems so that they can respond dynamically and confidently in the face of unpredictable environmental, technological and economic conditions (Braun and Duveskog, 2008; Onduru *et al.*, 2002).

COMMON STRENGTHS

Most impact studies on FFS have concentrated on achievements in pesticide use and yield. In crops like cotton and rice, substantial increases in yield have been found in conjunction with reduced pesticide applications (Fakih, Rahardjo and Pimbert, 2003; van den Berg and Jiggins, 2007; Ali and Sharif, 2012). FFS programmes have also contributed to improved natural resource management by creating opportunities for farmers to observe the impact of their farming practice on the surrounding ecosystem, and then to make decisions with due regard to their new insights. A study on cotton farming in India revealed that IPM practices taught through FFS greatly reduced negative impacts on the environment (Braun *et al.*, 2006). Developments in productivity and sustainable practices that produce quantifiable results are very important in demonstrating the effectiveness of FFS, and in providing evidence for policy-makers who seek to increase food security and improve nutrition.

FFSs have also been instrumental in empowering* farmers, strengthening social capital and building rural communities. There is increased sense of ownership of the process by all involved: farmers, extensionists, researchers and policy-makers. Effects of FFS have been shown to extend beyond the technical aspects into the sphere of human development (Braun *et al.*, 2005; Davis, 2006). Few studies have focused specifically on empowerment and FFS, but wider developmental benefits are reported in terms of poverty reduction and human and collective action (Mancini, van Bruggen and Jiggins, 2007; van den Berg and Jiggins, 2007; Züger, 2004). On the individual level, participation in FFS leads to improved social skills, such as creativity, punctuality, strengthened work ethic, confidence in public speaking and willingness to communicate and collaborate with others (David, 2007; Duveskog, Friis-Hansen and Taylor, 2010). Farmers also appreciate the benefit of working in groups rather than individually in looking for solutions to problems and challenges. FFS graduates have gained the confidence to hold extension agencies accountable for technologies introduced, and are more willing to question authority if information is contrary to their own knowledge or experiences (David, 2007; Fakih, Rahardjo and Pimbert, 2003; Duveskog, Friis-Hansen and Taylor, 2010). They also tend to more assertive in withstanding pressures of salesmen and will go for inputs which they require rather than what the supplier tries to impose on them. On the collective level, FFS activities can strengthen capabilities of farmers'organizations to articulate demand in local policy and market settings (Friis-Hansen & Duveskog, 2011; Züger, 2004; Pontius, Dilts and Bartlett, 2002). For a discussion on FFS as a means to bring about all these so-called 'transformative' learning processes, see Box 2.

* Friis-Hansen and Duveskog (2011) define empowerment as 'a process that increases the capabilities of smallholder farmers and farmer groups to make choices and to influence collective decisions towards desired actions and outcomes on the basis of those choices'.

Box 2
FFS PROGRAMMES AND TRANSFORMATIVE LEARNING

FFS training has a profound impact on individuals' learning processes. Duveskog, Friis-Hansen and Taylor (2010) produced an analysis of FFS methods, describing the nature of the learning experience of FFS participants in western Kenya as *transformative*, or, an experience that:

- directs attention to the context-dependent nature of significant personal change;
- strengthens the local culture of the FFS farmers by increasing awareness of traditional value systems and their relationship to transformative learning; and
- results in a profound change in perspective for FFS farmers, reflected by a significant shift in their understandings of farming practices and of their own lives in general

According to this analysis, FFS methods have the potential to change the way people see the world. While the report focuses on farmer transformation in western Kenya, participants in the 2012 Global FFS Review E-forum expressed similar transformative learning experiences. Participants from various backgrounds wrote about changes in their perspectives on farmers and extension systems, while other participants shared deeply personal growth experiences. One participant wrote,

"How has FFS changed me? It moved me from pests to people ... The nearly 20 years [of] FFS experience convinced me more and more that it is not the crop or the 'topic' but the people who are at the centre of the FFS ... The strength of the FFS is the approach part of it: giving people tools of how to be (or become) in control of their own life, be aware of their own shortcomings, limitations and opportunities, and make well-considered decisions for a better future."

Using FFS methods can lead to critical transformative learning experiences for all stakeholders: farmers, extension staff, researchers, educators and students alike. Encouraging transformative learning experiences on the individual level will be essential in order to continue bridging gaps between stakeholders in agricultural extension and development.

Prepared by Jennifer Yoo, Research and Extension Branch, FAO

The FFS approach helps in the integration of vulnerable groups, particularly youth and women. Based on the FFS model, Junior Farmer Field and Life Schools (JFFLS) have been implemented in seventeen countries, with the goal of empowering youth by educating them in farming and in life skills, such as knowledge of HIV/AIDS, coping mechanisms and social skills (FAO, 2008). Using the participatory principles of farmer field schools, JFFLS aim to build youth involvement within the community. Additionally, special attention is drawn to womens' participation in FFSs and how this affects family life. Recent literature indicates that participation in FFSs can improve gender equity, empowerment of women and the overall well-being of relationships within a household (Friis-Hansen, Duveskog and Taylor, 2012). Within the FFS setting, gender roles are significantly downplayed, providing opportunities for women to gain confidence and men to give respect to women's contributions. It has been estimated that more than 100 million people could be lifted out of poverty if women had the same access to productive resources as men (FAO, 2011b).

One of the key recommendations of the *State of Food and Agriculture 2011* report for closing the gender gap in agriculture is the scaling up of the FFS: '*FFS have proven to be a participatory and effective way of empowering and transferring knowledge to women farmers*'. See Box 3.

COMMON CHALLENGES

FFS has become a buzz word on the present-day agricultural development scene and worldwide initiatives are taken for expanding and scaling up FFS activities. However, recognition of the FFSs as 'cutting-edge agricultural development' is not without drawbacks. Some institutions and organizations are abusing the FFS banner to get ahead in competition for funds, and this has resulted in activities that are not representative of FFS principles. A common problem is that the parties involved (country, agency, project staff, etc.) often do not fully appreciate the in-depth commitments needed for a fully realized FFS programme. Under such conditions, participatory research methods devolve into glorified technology transfer as attention to farmers' demand is neglected (Ashby, 2007). This, incidentally, is a recurring deficiency not only in FFS, but also in the various other participatory extension activities.

By too-rapid scaling up of FFS, expectations of farmers may not be met, which discourages them from participating. Also, FFS programmes with over-reliance on donor input and insufficient post-donor support systems are prone to post-project quality deterioration and loss of credibility (Global FFS Review e-Forum, 2012; Sherwood, Schut and Leeuwis, in press) and from the World Bank, the fiscal sustainability of FFS is being questioned (Feder, Murgai and Quizon, 2004).

Major criticisms of and challenges to FFS programmes include (Braun ***et al.***, 2006; Braun and Duveskog, 2008; Anandajayasekeram, Davis and Workneh, 2007):

- insufficient and inconsistent training of FFS facilitators and extension staff;
- unsustainable funding for FFS programmes;
- lack of institutional support;
- problems in integrating modern, scientific knowledge with traditional practices;
- limited targeting and scaling up; and
- difficulties of monitoring and evaluation (M&E).

These specific challenges of the FFS approach also reflect larger questions about agricultural extension: what is it, who benefits from it, and why do we need it? Efforts to institutionalize FFS bring these issues to the forefront because they enforce a redefinition of agricultural extension as a farmer-driven participatory system.

Box 3

WOMEN AND MEN CHANGING JOINTLY: GENDER DIMENSIONS IN FFS

Background

Over the past two decades much attention has been given to the need for overcoming gender bias in extension and service delivery. Gender bias is closely connected to peoples' livelihoods, cultures and social relations, and remedial action takes time and is not merely a matter of simple message delivery. FFS has shown to serve as an ideal platform for farmers to safely experiment and try out not only agricultural practices but also new ways of interacting with each other. In eastern Africa, FFS has been implemented and scaled up in a number of countries and contexts since the mid-1990s. In total, over 5000 FFS have been carried out with an estimated average of 55 percent women and 45 percent male participation. Although gender outcomes have been specifically targeted in only a few cases, most of the FFS programmes appeared to have a clear impact on gender dynamics in the group and at community level following FFS participation (Friis-Hansen, Duveskog and Taylor, 2012). This shows that FFS has inherent gender-equalizing mechanisms, which should be better utilized and recognized.

Key factors for success

Addressing gender inequity through FFS is most effective when a broader and holistic entry point is taken for their learning agenda. This is done regularly under most JFFSL programmes, but not always in FFS, which more narrowly address crop or livestock production issues.

A multi-stakeholder and multi-sectoral approach is needed to address complex underlying barriers and threats to gender equality. This requires the involvement at programme and field level of a combination of social and technical government ministries and actors.

A holistic learning agenda including life skills, for which adapted FFS training material is now available, requires a network of external resource since the regular facilitators (who often are male technicians) often are not comfortable covering topics outside of their area of expertise.

Social and group dynamic elements of the FFS approach, such as theatre, dance, and other expressive ways of transmitting messages are highly effective in addressing sensitive issues, such as gender-based violence, reproductive health, HIV, etc.

Gender equality should be measured in terms of quality of participation, confidence to speak, leadership roles taken by women and men, etc., rather than merely in quantitative terms of numbers and attendance rates.

Gender disaggregated data as well as use of qualitative assessment tools are indispensable for monitoring and evaluating changing gender dynamics.

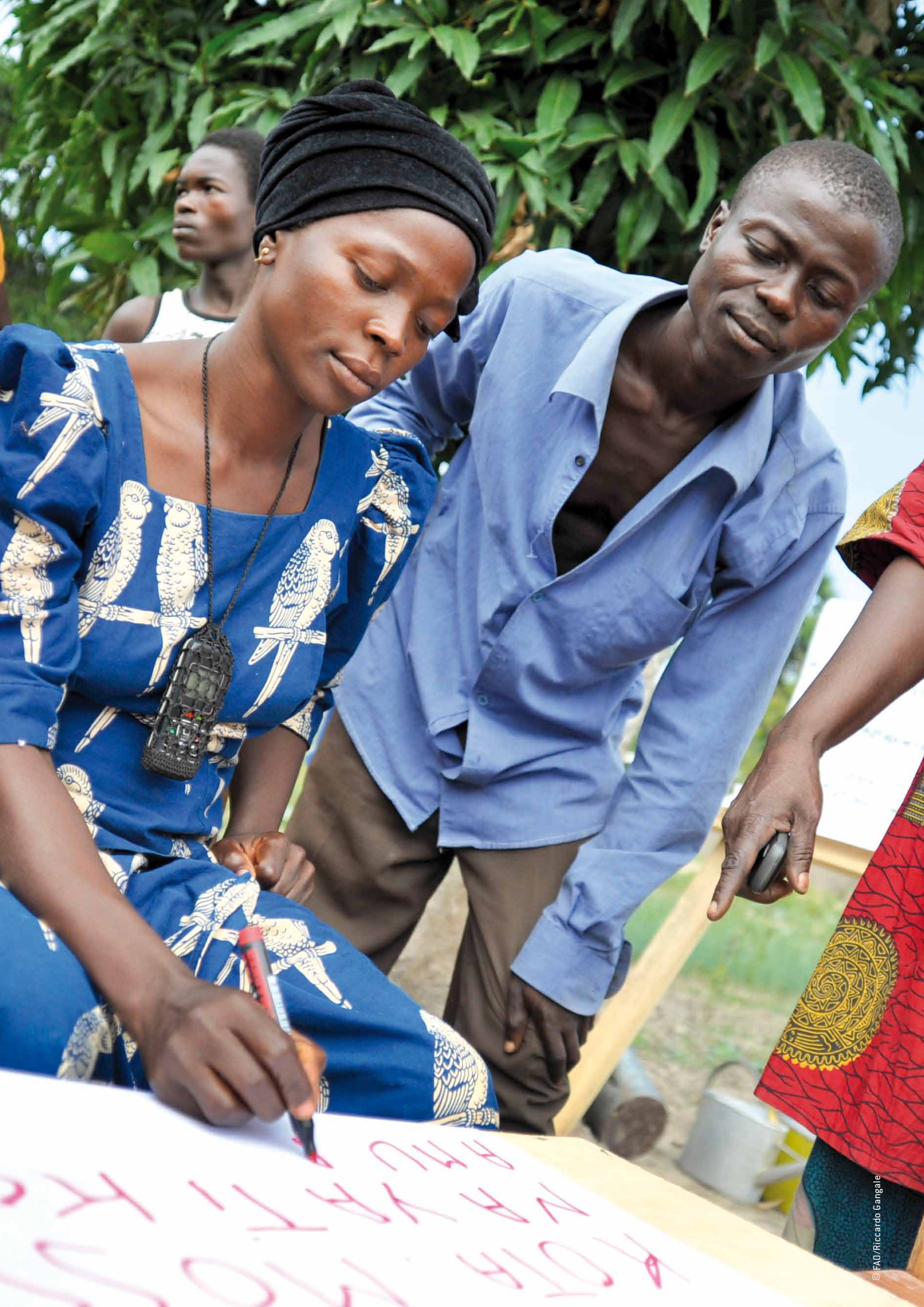
Lessons learned

In FFS there is a synergy of economic factors (improved farming and income generation) and psychological effects (confidence, changed relationships). Both these aspects need to be considered in programme planning, training of facilitators and when preparing learning curricula.

Since farming practices and rural life in general are surrounded by beliefs, taboos and cultural restrictions that to a large extent are gender based, FFS provides a valuable 'safe space' where men and women can engage in new interrelationships outside the confines of the traditional community.

Mixed FFS groups should be encouraged, where possible. Experience has shown that real change in gender dynamics can only come about when both men and women change together.

Source: Deborah Duveskog, Community Development Officer, FAO sub-regional office in Nairobi



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CHAPTER 4

OPPORTUNITIES FOR STRENGTHENING FFS ACTIVITIES THROUGH INSTITUTIONALIZATION

Davis (2006) stresses that FFS is not a "one-size fits all approach," and should be used only if it suits local conditions and is appropriate to specific communities. Engagement of national institutions in the development and implementation of FFS training will help to address some of the challenges faced, but should not limit the flexibility of individual FFS to address specific farmer needs. Rather, institutionalization should maintain the quality and relevance of FFS programmes by creating a supportive enabling environment. Another aspect to be mentioned here is that FFS, like any school, is not an aim in itself, but a stepping stone for further development into self-sustained groups working on development of their community (Gallagher *et al.*, in press). So institutionalization should be taken here broadly, relating not only to FFS proper, but also to follow-up activities, whatever form these take.

In this section, opportunities for strengthening FFS activities through institutionalization are discussed in the five categories of: training; funding; support systems; targeting and impact; and M&E.

TRAINING

Improving skills and quality of trainers

Poor training of facilitators and extension staff leads to poor-quality FFS programmes. The training suffers when curriculum objectives are unclear or poorly planned, and when the participatory learning process is not given enough attention because of inadequate or inappropriate facilitation in the field (Braun *et al.*, 2006). There is a need for certification systems for facilitators and introduction of professional standards in associations of service providers. In facilitator training programmes, non-formal education methods should be intertwined with technical training on relevant subject matter in such a way that a balance is struck between social and scientific learning (Global FFS Review e-Forum, 2012). Also, follow-up training and

refresher courses for facilitators can be improved by establishing levels of accountability for experienced FFS facilitators and fostering informational flows as new technologies develop. All these aspects are of global concern and one could consider an important role for FAO in terms of M&E of facilitator training and assistance to countries in setting national standards for facilitator certification and performance criteria. Also, FAO could provide an international platform for FFS practitioners and facilitators to interact, exchange and learn from each other.

Incorporation of participatory approaches and FFS-related activities into formal education

In Peru, the FFS methodology is included in the curriculum of agronomy faculties at three universities (see country status report on Peru in Annex 1).

In Africa, the Sasakawa Africa Fund for Extension Education (SAFE) was established in 1991 to link tertiary education institutions to agriculture and rural development efforts by encouraging lifelong learning, demand-driven curricula, student-centred experiential learning, and rural leadership development (Mutimba, Knipscheer and Naibakelao, 2010). With help from SAFE, mid-career-level extension agents of the Ghanaian Ministry of Agriculture have been encouraged to participate in a study programme at the University of Cape Coast, leading to a BSc degree in Agricultural Extension. Exposure to the traditional education system increased extension agents' knowledge base, job performance, work attitude and confidence, allowing them to respond more dynamically to farmers (Owens ***et al.***, 2001; Duo and Bruening, 2007). Integrating FFS training into agricultural college curricula is considered necessary for sustaining the quality of FFS programmes at the national level. With the opportunity of educational enrichment, facilitators become subjects of the development process themselves. The university setting can inspire advocacy of FFS principles, such as adult education, experiential learning, development and innovation.

FUNDING

Shift from dependence on *ad hoc* funding by donors, to more sustained financing from public- and private-sector sources

A precondition for obtaining national sources of funding is recognition, by national authorities, that: (1) mobilizing and empowering small-scale farmers is essential for attaining agricultural

development goals; and (2) FFS is an effective way to bring about farmers' empowerment. FFS programmes must be acknowledged and defined as activities addressing public interest, and therefore in need of public funding. At the same time, the reality of shrinking government budgets implies a need for innovative public-private partnerships for joint financing (Neuchâtel Group, 2002). Participation in international projects with donor funding should be seen as stepping stones for national governments and institutions towards understanding benefits and opportunities of the FFS strategy and its adoption in country policies. Subsequent scaling up and consolidation are to be carried out in national plans of work with national budget allocations. An example of effective embedding of FFS activities in public funding is reported in the country status report on Peru (see Annex 1).

Promotion of competitive grant schemes and (semi-)self-financing mechanisms

Participation of producers in financing extension activities (including FFS), even to a modest extent, is essential if they are to be heard when they ask for good quality services responsive to their needs, and funding mechanisms, such as demand-side financing and competitive grant schemes, can promote empowerment (Neuchâtel Group, 2002; Bartlett, 2007).

In eastern Africa, FFS groups were organized according to a "foci model," in which FFS groups were clustered in efforts to increase inter-group exchange and decrease implementation costs. Different FFS groups were able to purchase inputs in bulk, and share costs on joint special topics presented by guest speakers (Okoth, Khisa and Julianus, 2003). FFS clusters developed into FFS networks, and as relationships between groups grew stronger, clusters began semi-self-financing for FFS activities. Through this project, farmers took ownership of their projects, writing simple grant proposals to the FAO Global IPM Facility in partnership with the Ministry of Agriculture, monitoring expenditures and assessing the quality of facilitators within the FFS network. Furthermore, these networks created entry points for micro-finance institutions to introduce group loan options. Institutionalization can foster FFS group interaction by creating more avenues for communication, exchange and sustainable funding.

In addition to eastern Africa, self-financed FFSs also have been carried out in the Democratic Republic of the Congo. FFS self-financing networks promote interaction between farmer groups and governing organizations. 'Hybridization' of self-financing and government backstopping is essential to scale up FFS programmes and increasing farmer access to active markets and advisory services, according to their own needs.

SUPPORT SYSTEM

Strengthening institutional support and stakeholder interactions

Coherence between different stakeholders, investments and support systems is essential for the establishment of networks that support agricultural innovation (Braun ***et al.,*** 2006; Hall, Dijkman and Sulaiman, 2010). The true value of the FFS approach lies in its ability to build community connections and linkages among different actors within agricultural systems.

As farmers learn to articulate their needs through FFS training and get somebody to listen, extension providers and other stakeholders must be prepared to communicate effectively to foster exchange of information and innovation. In this way, agricultural extension systems can serve as entry points for farmer empowerment. Lack of collaborative relationships between stakeholders is often mentioned as a major reason why FFS activities do not survive the pilot stage (Global FFS Review e-Forum, 2012). Institutionalized FFS programmes may remedy such shortcomings and bring the various stakeholders together*.

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* In the rice FFS in Southeast Asia, visiting government officials and other dignitaries were invited to take off their shoes and socks to step into the paddy mud and mingle with farmers in inspecting rice plants, bugs and natural enemies. This proved to be a very effective way to secure interaction between stakeholders of all levels!

Establishing participatory research and development methods for collaborative learning

Participatory research is instrumental in promoting a sense of mutual learning among stakeholders and raising key questions about creating support systems for FFS programmes. A study in Peru (Ortiz ***et al.,*** 2008) documented the evolutionary aspect of interactions between CIP (International Potato Centre, a research group) and CARE (an international development NGO). It showed that participatory research methods fostered an environment for collaborative learning and exchange among research and extension agencies. All stakeholders (extension service providers, governments, and members of the private sector) must be willing to engage in an interactive, mutual learning process when working with farmers in the FFS setting, and importantly, when reflecting on organizational lessons learned. Sustained interests in FFS among stakeholders in Peru have facilitated organizational learning and system-level innovations for scaling up as well as for funding (Orrego, 2009). Increased organizational interaction reduces redundancies in FFS curriculum, perpetuates good practices among extension providers, increases access to markets, and facilitates M&E on all levels. Moreover, it favours development of sustainable support systems, rather than reliance on external funding in donor-driven projects.

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TARGETING AND IMPACT

More effective targeting of FFS participants

Feder, Murgai and Quizon (2004) criticized FFS programmes because of limited impact. They did not find significant diffusion of knowledge from FFS trained farmers to their colleagues living in the same village. At the pilot stage, FFS implementation targets specific farmers who share interests and are willing and able to take risks, but without proper follow-up arrangements, there may be no move beyond the pilot stage and the most vulnerable groups will not be reached. Such pilot activities rely on external support for a limited duration, and present a challenge for scaling up and expanding coverage. Institutionalization can help address this challenge by developing the necessary relationships within the community and defining long-term objectives to include those who are most in need of FFS training.

Spin-off beyond FFS – impact on the community level

The impact of an FFS activity is not simply determined by the number of FFS graduates. Individual and social changes brought about by participation in the training may bring about community-wide changes. For example, in a study reported by Pontius (2003), FFS graduates in three West Javanese villages were given disposable cameras to capture their experiences about the impact of IPM-FFS programmes. Several photos feature repairs to irrigation ditches, which were direct results of FFS alumni advocacy to local governments and public works departments. Other photos depict non-alumni interacting with FFS alumni, showing that non-participating neighbours were eager to learn from methods taught in FFSs. In this example, FFS programmes produced community-wide effects, not only changing the behaviour and practices of participants, but also influencing decisions of non-participants.

A study in India demonstrated that FFS participants and the farmers in the same villages appreciated a range of positive environmental, human, and social impacts (Mancini, van Bruggen and Jiggins, 2007; van den Berg and Jiggins, 2007). Women valued in particular their improved self-confidence and opportunity to play a developmental role in the community, while the men stressed the importance of developing contacts with a wider range of development and agricultural services and networks. Altogether, this example shows the potential of FFS to strengthen the collective social capital within a community, expand impact and target a wide range of beneficiaries. The challenge is to move beyond the pilot phase of incidental studies such as these and devise strategies for institutionalization that enables scaling up without loss of quality.

MONITORING AND EVALUATION

Standardization of procedures for monitoring and evaluation

In the area of FFS impact assessment, conceptual and methodological disagreements abound. Studies by the World Bank question fiscal sustainability because production costs do not match production output (Feder, Murgai and Quizon, 2004), while in other cases notable increases in yield, decreases in pesticide use and advances in continued learning were reported (Bartlett, 2005; Braun ***et al.***, 2006; van den Berg and Jiggins, 2007). Alston and Pardey (2001) write that such conflicting results are typical of agricultural research and development in general. FFS programme impact is particularly difficult to monitor and evaluate because of the diversity of measurement parameters. Researchers choose the scope and parameters depending on whether they want the M&E to be *rigorous*, with use of specific statistical figures, or *comprehensive*, with inclusion of a broad range of technical, educational, social and political impacts (van den Berg, 2004). M&E processes should depend and focus on goals that each FFS sets out to achieve, measuring changes as brought about by training. It is important for the institutionalizing process to establish a participatory M&E system that will be flexible enough for FFS mutability. The information flow can be enhanced by availability of well-defined options for M&E. Basic parameters may include measurements of implementation and participation, changes in production resulting from FFS training, and impacts in the social and cultural spheres.

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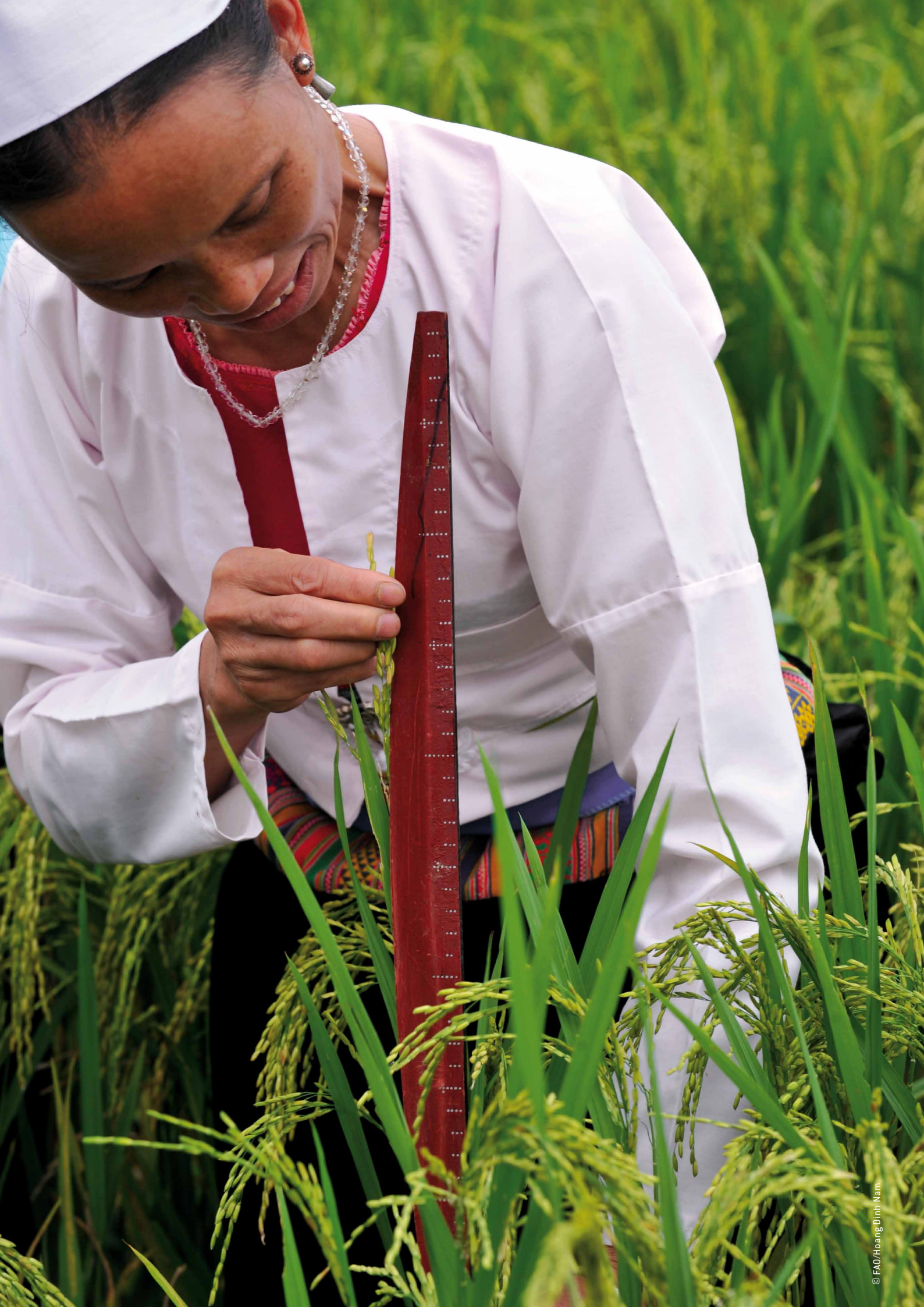

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CHAPTER 5

CHALLENGES AND RISKS OF INSTITUTIONALIZATION

Institutionalization of FFS programmes entails a variety of challenges and risks, as exemplified in Box 4 with developments in Indonesia. In this chapter, challenges and risks are categorized and briefly discussed.

Box 4

THE EVOLUTION OF AN INSTITUTION: IPM-FFS PROGRAMMES IN INDONESIA

Background and history

First steps towards an institutionalized FFS programme were taken in Indonesia. This happened in the context of efforts to respond to a severe crisis in rice growing due to rampant outbreaks of an insect pest, the brown planthopper. After it had been demonstrated that these outbreaks were caused by excessive use of pesticides, the President of Indonesia issued a decree in 1986 which entailed a ban on 57 insecticides and development of human resources to promote application by the farmers of Integrated Pest Management (IPM) as an alternative to over-reliance on chemical pest control. Through this presidential decree, Indonesia's higher bureaucracy was committed to the adoption of IPM as a national crop protection strategy, and an early move in the implementation of this policy was the phased elimination of the 85 percent insecticide subsidy which was then still in place. The effect of this turnabout in national policy was immediate – in the first five years after its start, insecticide use as well as brown planthopper infestations decreased strongly and rice production increased by 12 percent (Kenmore, 1991). The FFS approach in farmers' training appeared the most suitable to make farmers understand the principles of IPM and apply them in their own fields and so far approximately one million Indonesian farmers have graduated from FFS programmes since the beginning of the National IPM Programme. Funding was mostly from external sources, either bilateral donors through the FAO Intercountry IPM programme or World Bank.

Lessons learned

The FFS spirit needs to be revitalized in Indonesia. Although the policy-level support initially paved the way for institutionalization of FFS at the national level, the momentum was lost and vested interests in keeping rice growing 'hooked' on chemical pest control prevailed over farmers' needs. This shows that, even in the case of highly successful projects and programmes, transition from external funding to national budget allocation puts a heavy strain on continuation. Furthermore strong policy support is indispensable

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for embedding FFS activities in national institutions, such that:

- national agricultural goals are reconciled with farmer needs and demands, and
- there is flexibility in the thematic focus of FFS programmes (the sometimes problematic permanent link between national policy and IPM-FFS led to a tarnished reputation of FFS programmes in general).

Current environment

As explained by participants in the FAO E-forum Review of FFS (Global FFS Review e-Forum, 2012), the current circumstances in Indonesia exemplify risks when FFS implementation passes from donor-funded programmes and projects to national institutions with national budget allocation:

- Conducting IPM-FFS has become a "routine" programme within the Ministry of Agriculture in the past decade, with a declining number of IPM-FFS units proposed annually in the national budget.
- Policies restraining abuse of insecticides, in the line of the aforementioned presidential decree of 1986, have been abandoned.
- Enthusiasm for the FFS approach has diminished, good practices have been ignored and a return of heavy outbreaks of the rice brown planthopper in recent years has disheartened farmers, extension workers and researchers alike.

From 2007, the Ministry of Agriculture launched another FFS programme called Integrated Crop Management (ICM). Farmers complain that the original source of recent pest outbreaks were rice fields planted with hybrid varieties promoted by ICM-FFS programmes.

On the national level, the influence of agrochemical companies has supplanted the IPM-FFS programmes, utilizing the pest outbreak as an opportunity to gain profits by convincing governments to buy and distribute inappropriate technological package products to the farmers as subsidies.

On the local level, agrochemical companies have contributed to damaging the credibility of extension workers and FFS programmes, as farmers perceive extension workers as "busy promoting pesticides or other agricultural products" as part of their secondary-income generation.

Prepared by Jennifer Yoo, Research and Extension Branch, FAO, based on: Gallagher, Braun and Duveskog, in press; Bartlett, 2005; Braun and Duveskog, 2008; Fakih, Rahardjo and Pimbert, 2003; Winarto in Global FFS Review e-Forum, 2012

QUALITY VS. QUANTITY

A major risk of scaling up and formally institutionalizing FFS programmes is that rigidity enters and essentials such as flexibility and local focus are lost. FFS training should be adaptable and responsive to particular farmer concerns and needs. Strict adherence to imposed standards may be incompatible with such characteristics and thwart farmers' creativity and innovation. Also, enforced time constraints are detrimental. FFS programmes typically require season-long training of facilitators, to build capacity in participatory research methods and knowledge of FFS subject matter. Likewise for farmers it is all about learning processes for which they need time to build relationships, confidence and skills in the field.

INCONSISTENCY IN LEADERSHIP

Success or failure in FFS is largely determined by quality and attitude of individuals in charge (Bartlett, 2007). Coordination teams, facilitators and staff need to be willing to take risks to preserve the unique learning environment of FFS (Global FFS Review e-Forum, 2012). However, institutional arrangements are not always conducive to keep the best on board. 'Champions' of FFS programmes are often rewarded with career advancement. When such persons are removed from the field setting, shifts in management may produce watered-down versions of FFS training. Also, institutionalization may affect individuals engaged in FFS implementation. Sherwood, Schut and Leeuwis (in press) present three stories of individual FFS leaders in Ecuador with different responses to institutionalization. While one facilitator was willing to stand up to his supervisors to provide farmers with the lifelong education that FFS offers, another one lacked motivation and interest to do so. The third facilitator was forced to let demands of institutions prevail over those of farmers, Clearly, stakeholders with the strongest influence could subvert FFS programmes to pursue their own objectives.

INSTITUTIONAL LIMITATIONS

With the introduction of institutions in any context, there is a risk of increasing bureaucratic layers that can create more problems than they solve. Farmer needs must remain at the centre of FFS activities, but in actual practice interests of funding agencies may prevail . A revealing example from Ecuador is described by Schut and Sherwood (2007). Field days were held before farmers had achieved sufficient self-confidence to express themselves before the group, because scheduling was dictated by donor cycles rather than farmers' interests. This forced the facilitators to lead the sessions in an inflexible fashion, to the detriment of the essence of FFS.

Government capacity for institutionalization is sometimes overestimated. When FFS pilot activities produce results that cannot be matched on a scaled-up level, institutionalization attempts end up destroying the credibility of FFS. As one FFS E-Forum participant wrote,

> *"It is easy to organize 10–20 farmer field schools, but when organizing 1000 farmer field schools one faces different organizational challenges. Subsidies and generous allowances in the pilot phase may not be affordable in a scaled-up programme." (Global FFS Review e-Forum, 2012)*

The challenge of institutionalization is for policy-makers to commit themselves firmly to FFS programmes in a realistic and feasible way. Furthermore, institutional rigidity may imply M&E

techniques that leave little room for farmer participation in the process. Instead, progress is measured relative to goals imposed by institutions (Bartlett, 2008). Facilitating communication between stakeholders to support farmer demand is crucial in institutionalizing FFS programmes, even as bureaucratic layers are established.

ADVERSE EFFECTS OF COMPETITION FOR FUNDING

Expanding the institutional scope of FFS programmes entails risks of competition for funding on the global stage. CARE International has highlighted the donor tendencies to spend on emergency aid rather than supporting institutional development (Meikle and Rubin, 2008). Recently FFS were used as vehicles for emergency aid to Sudan and South-Sudan. In general, however, institutionalized FFS programmes are defined as long-term investments, perpetuating an atmosphere of competition that is counterproductive to the environment of collaboration that is essential for success. It is a common dilemma – no competition for FFS because of funding by external donors, or FFS have to stand on their own merit alongside other agriculture, rural development or even other government priorities.

CONFLICTS BETWEEN COMMERCIAL INTERESTS AND FARMERS' NEEDS

Institutionalization of FFS-type training through public-private partnerships offers interesting possibilities of synergies and innovation, but is not without risks. The ultimate purpose of private companies is marketing their products to make a profit and this objective may be at odds with farmer needs. An example is the implementation of the Monsanto Smallholder Programme in India in 1995 (Glover, 2007) The programme created technology packages which provided extension services for small-scale farmers, including training sessions, micro-loans, and encouragement of farmer-to-farmer dissemination of the Monsanto products. The idea was to hybridize profit-making with implementation of social policies for small-scale farmers through partnerships with local organizations and initiatives. This included a well-known government programme, the Development of Women and Children in Rural Areas programme. However, in spite of Monsanto's effort in offering on-site project coordinators for farmer consultations, there was no meaningful opportunity for farmer expression. By overly pushing the sales aspect, a critical opportunity was lost to take farmer empowerment seriously. Although this attempt to create public-private partnerships was not FFS related, it illustrates risks of engaging with

private sector actors in agricultural extension activity. Creativity in mobilizing the private sector towards farmer empowerment is essential for keeping the perspective focused on farmer demands rather than company interests.

NGOS

As discussed elsewhere in this paper, NGOs are important players through their engagement at grassroots levels and expertise in community relationships. Yet their involvement is sometimes not without risks. The interests of NGOs themselves may supplant farmer demand. A study conducted by Labarta and Swinton (2006) in Nicaragua compared the impact of FFS-IPM programmes as carried out by seven different NGOs. Extension workers from all the NGOs received the same two-month intensive training programme. Researchers hypothesized that differences between FFS programmes would occur solely based on differences in farmer demand. However, the study concluded that each NGO presented a different emphasis on FFS subject matter, based on their institutional background. Farmer demands were not prioritized. Rather, the expertise of these individual NGOs determined the curriculum of FFS programmes in the area. While NGO-led extension programmes may have a greater impact due to their relationships with communities, this study showed that the impact of NGOs can vary considerably depending on their institutional backgrounds. Enabling farmers to articulate and address their needs is the essence of the FFS strategy, regardless of whether it is used by NGOs or governments.

In summary, there are considerable risks and challenges in institutionalizing FFS. Ignoring this aspect would be harmful to all stakeholders in agricultural development, wasting resources and destroying the reputation of FFSs.

CHAPTER 6
IMPLICATIONS OF INSTITUTIONALIZATION

Critical issues of agricultural development, advantages and challenges of the FFS approach, as well as incentives for and risks in its application, determine the possibilities for institutionalization. Bartlett (2008) writes, "It is possible – and often desirable – to deliver information to farmers ***and*** facilitate experiential learning, to conduct skills training ***and*** facilitate communicative action". Institutionalization of FFS programmes exemplifies this integrative approach, as it is a step towards greater farmer empowerment ***and*** towards adopting better practices in adjustment to current global economic and ecological conditions. Important in this context are governments, educational systems, public-private partnerships and NGOs. These are briefly discussed in the following paragraphs.

GOVERNMENTS

Institutionalizing FFS through government recognition can increase its quality and effectiveness and establish FFS as a mainstream methodology for addressing current agricultural challenges. Links should be established with international and intergovernmental organizations to get inspiration and ideas from new concepts of agricultural innovation and extension systems. Affirmations from international organizations can help define quality standards and motivate political will for institutionalizing FFS programmes. National policy frameworks to institutionalize FFS programmes can support local movements toward farmer organization by improving partnerships between stakeholders and creating legal and budgetary supportive frameworks. Important progress in this area has been achieved by countries participating in the long-standing Asian IPM-FFS programme, as illustrated by the country status reports from China and Viet Nam (see Annex 1). In the Philippines, national policy supported IPM by mandating reduced use of agrochemicals and expanding the role of FFS programmes. Working groups at the national, provincial and local levels collaborated to ensure quality standards for FFS training and activities. Furthermore, a country report from the Philippines submitted in FAO's Global Review of FFS (2012) stressed the importance of building political will, local ownership and institutional capabilities as foundations for sustainable FFS programmes. In Pakistan, formal government recognition and policy support led to a more cohesive network of FFS activities. In 2000, the government issued a policy statement in which the FFS approach

was emphasized as a key element of sustainable agricultural development. This came in response to increasing misuse and overuse of pesticides (Braun and Duveskog, 2008). Since then, farmer organizations have developed alongside the national policy campaign, indicating farmers' interest in maintaining the relevance of FFS networks. The Pakistan National IPM Programme assisted in holding three farmers' congresses in 2004 to improve the exchange of ideas and experiences among different farmer groups. In addition, a 'Society of Facilitators and Trainers' (SOFT) was established for networking in support of improved productivity, environmental protection and development of rural communities. It has now grown from an informal group to an officially registered association.

These examples and others (see for instance the country status reports for Peru and Jordan in Annex 1) demonstrate how national policy support for FFS programmes can lead to cohesive efforts to address small-scale farmer demand.

TERTIARY EDUCATION

As discussed earlier in this paper (see Section 4 on *Opportunities for strengthening of FFS training through institutionalization*), collaborative arrangements between agricultural universities and FFS programmes have been established in several countries with obvious benefits for both parties. However, there is still much scope for expanding and deepening such symbiotic working relations. By incorporating FFS methods into curricula, universities invest in the education of agricultural professionals, strengthen ties with communities and remain relevant to solution of actual problems in the field. The higher education setting can thus act as a conduit for mainstreaming best practices on FFS strategies by involving all stakeholders in participatory curriculum development to ensure that relevant support can be given to farmers in the face of constantly changing situations (Worth, 2007).

PUBLIC-PRIVATE PARTNERSHIPS

Private-public partnerships can enhance collaboration among stakeholders in agricultural development. Through contracts, planning and inter-partner relationships, they have the potential to overcome both the public sector's usually limited ability to take research outputs to the market, and the private sector's limited scope for operation where there is no commercially viable market (Ferroni and Castle, 2011). As the private sector attains more prominence in agricultural extension, the role of public extension services may shift towards contracting

private extension service providers. Adebayo (2004) suggests that government agencies should embrace a new role, identifying gaps in provision of extension services and contracting extension service providers to better address farmer needs. Some argue that increasing the role of the private sector will increase the quality of FFS through enforcing a competitive, demand-driven economy, in which farmers can choose extension services based on their quality (Swanson and Rajalahti, 2010).

Much of recent scholarly literature on agricultural extension focuses on the need for a pluralist extension system, including extension service providers from the public and private sectors (Zhou, 2008). In such a set-up, the importance of stakeholder interaction cannot be overemphasized. Involving the private sector within a pluralistic extension system can be advantageous in creating enabling environments for farmer empowerment, making FFS more relevant to actual needs, improving production and granting farmers better access to competitive markets. A recent study documented how the Kenya Tea Development Agency (KTDA) and Unilever/Lipton worked in partnership to introduce FFS methods to their tea farmers, with the goal of increasing the quality of tea production and increasing farmers' agricultural income (Waarts ***et al.,*** 2012). In an evaluation of the impact, farmers said that training improved their relations with each other and with the Unilever/Lipton factory. Additionally, they articulated demands for more FFS attention to credit facilities and development of commercial activities. The full consequences of this partnership still remain to be analysed, but some positive outcomes are evident in terms of empowering farmers, who have been given a forum to express their needs and wishes.

It has also been pointed out that privatization can lead to increased accountability among extension providers (Glover, 2007). However, the profit motive of private parties may create conflicts of interest, as exemplied by the Monsanto Smallholder Programme in India (see above, Section 5 on ***Challenges and risks of institutionalization***).

NGOS

NGOs can effectively contribute to the FFS institutionalization process through long-term community relationships and the ability to escape negative connotations that often accompany government-driven institutionalization. In Peru, an NGO called Practical Action, trains farmers, called *Kamayoq*, in participatory methods of innovation for local veterinary and agricultural problems (Hellin and Dixon, 2008). While the *Kamayoq* model is not directly equivalent to FFS, the relationship between Practical Action and the farming community demonstrates how NGOs can influence institutionalization of extension approaches. Following completion of an intense training course, including meetings and seminars with technical experts, large-scale farmers, and extensionists, *Kamayoq* emerge with expertise in local agricultural issues, as well as with skills to facilitate interactions with stakeholders. *Kamayoq* advisory services are high in demand among Peruvian farmers, who have adopted localized, experimental techniques as a result of *Kamayoq* influence. The success of the *Kamayoq* has been partially attributed to Practical Action's long-term interaction with farmers and their respect for the culture and history of these people. The NGO has been active in the community since the 1990s and has a positive reputation in Peruvian communities, as evident from the farmers' willingness to pay for services provided by the *Kamayoq* (Hellin ***et al.,*** 2006). The *Kamayoq* model suggests that farmer empowerment is best carried out by NGOs whose longer-term interactions with farmers create a sense of permanence and trust, while maximizing impact.

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Another country where NGOs play a positive role is Indonesia. As discussed in Box 4, after a strong start in the 1990s the FFS movement in that country suffered due to waning government support and the prevailing of other interests over those of the farmers. An NGO called 'FIELD' (Farmers Initiatives for Ecological Livelihoods and Democracy) was established to build farmer capacity through FFS-based education and action-research and strengthen network ties between farmer organizations. FIELD is also supported by the Southeast Asian coalition of NGOs, the Field Alliance, which emphasizes that the role of governments, corporations and international organizations is to support the efforts of individuals and local communities, rather than promoting external interests. At the regional level, the Field Alliance supports training services, technical backstopping, information-sharing and resource mobilization in countries where national partnerships do not exist. It also manages funds for larger projects involving activities in more than one country.

In these and other cases, the strength of NGO-led FFS programme institutionalization lies in its ability to cater to specific, local settings and create accessible networks of extension providers, without imposing the constraints of more formal institutionalization. Yet, institutionalization through NGOs is not without risks. Sometimes NGOs stick to their own agenda to the detriment of farmers' interests; see the Nicaraguan story in Section 5 on ***Challenges and risks***.

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CHAPTER 7
CONCLUSIONS

'Institutionalization' is a process through which new ideas and practices are introduced, accepted and used by individuals and organizations, and become part of 'the norm'.

(Jonfa and Waters-Bayer, 2005).

The essence of FFS – empowerment of farmers to learn, understand and make their own decisions – is at cross-purpose with conventional agricultural extension systems, which are based on top-down delivery of technology packages. As a result, FFS projects and programmes have often been implemented in the margin of government institutions with strong reliance on donor funding. It is increasingly felt that embedding FFS in institutional frameworks is essential for expanding and deepening the effort, improvement of quality and strengthening impact and continuity. Paradoxically, the FFS approach challenges the top-down extension model, yet their sustainability relies on the creation of an enabling environment of institutional support. This will be conducive to general acceptance of the powerful, transformative and people-centered nature of the FFS strategy.

'Institutionalization' is used in the broad sense, including also collaborative arrangements in public-private partnerships, with tertiary education and NGOs. Cooperation in the public-private sphere is increasingly important in view of worldwide declines in government budget allocation to agricultural extension and potential for addressing problems along the entire value chain, including financing and marketing. As to tertiary education, the experience with several collaborative efforts between FFS programmes and agricultural universities has demonstrated that both parties benefit – universities because of strengthened staff engagement in relevant issues of agricultural development and attuning research agendas to real needs; FFS programmes because of facilitators' upgrading in technical and methodological curriculum development. Worldwide, there is still a lot of scope to foster this form of institutionalization. NGOs can substantially contribute to success of the FFS effort because of their strengths in grassroots level operation and community development.

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Potential benefits of institutionalization are balanced by risks and challenges that can jeopardize deeper values and benefits of the FFS approach, including flexibility, focus on experiential learning in the field and farmer empowerment. In government extension services, vested interests may lead to maintenance of the status quo of top-down delivery of technology packages. In public-private partnerships there may be conflicts between profit drives of companies (sale of proprietary products) and farmers' empowerment. Similarly, NGOs have sometimes been known to put their organizations' interests above those of farmers. At all levels, quality control, of methodology as well as content of FFS training, is essential.

It is widely acknowledged that FAO has played a pivotal role in the gestation and introduction of the FFS concept and its subsequent implementation in a wide range of countries, agro-ecosystems and socio-economic settings. FAO's continued commitment to FFS as a participatory extension approach in farmer education and empowerment is reflected in FAO's ongoing programmes and projects. Possible shifts in emphasis could be in addition to field-level activities, namely aspects of institutionalization, quality maintenance and monitoring, promotion of functional networks, and sustainable funding arrangements.

CHAPTER 8

RECOMMENDATIONS REGARDING ROLE OF PROJECTS AND PROGRAMMES TO FACILITATE INSTITUTIONALIZATION

Institutionalization of FFS is essential for expanding effort, improving quality, and strengthening impact and continuity. Since at present, FFS has seen as very much donor driven and implemented by international organizations, projects and programmes with FFS activities have a vital role to play in order to ensure long-term impact and sustainability of FFS and remove its dependency on the project-based approach. They can play a role at all levels: community, national, regional and global. Generally speaking, projects do not include activities towards institutionalization in their work plan and budget from the beginning, but the institutionalization rather comes as afterthought late in the project. By that time, it is often too late for any meaningful contribution towards institutionalization, especially at the national level. However, when institutionalization and sustainability concerns are present from the beginning of the intervention, there are a number of possibilities and entry points that can be exploited by the projects and programmes in order to facilitate the institutionalization of FFS. Below are some suggestions and recommendations for projects at different levels of institutionalization, as discussed at the end of the introduction section.

APPROPRIATION

A "natural" process? As groups grow and strengthen throughout the FFS basic and subsequent learning cycles, groups build a sense of belonging and ownership of their groups and move on together, through:

- facilitation of engagement with other stakeholders and markets;
- encouragement of networking among FFS;
- development of new skills (with a focus on functional skills, such as communication, partnering, negotiating and marketing);
- brokering of information and other resources (capital, market, inputs, etc.); and
- assurance of quality, and trust and relationship building.

INSTITUTIONALIZATION

It is not a linear process. For the FFS approach to be a "norm" and accepted and used in the extension service system as a participatory extension approach entails change and development in the mind-set of stakeholders in advisory service systems, as well as adjustment of policies and strategies in agricultural sector development. In the light of moves towards an innovation system approach and a pluralistic extension system, demand-driven and farmer participatory approaches such as FFS have been embraced by advisory services more and more.

Institutionalization of the FFS concept requires time and resources and might not be possible to effect in the duration of short-term projects and programmes. However, projects could start getting engaged in discussions and activities to support the process.

- Raising awareness at the institutional (policy) and local levels by advocating FFS principles within national extension policies, strategies and funding mechanisms.
- Developing capacity of local partners and institutions to support FFS and provide quality assurance (e.g. registration or certification of facilitators and Master Trainers). This can be done through formal training as well as through partnering, collaborating, and coaching. Partnership with non-public organizations is increasingly important in view of a clear trend of a declining role of public funding for agricultural extension.
- Supporting mainstreaming of participatory and experiential learning processes and knowledge on the FFS approach in education systems (including primary, secondary, vocational training institutes, and tertiary education systems in agricultural extension).
- Engaging in establishing linkages and building synergies among key actors (especially involved in the FFS related activities) in the agricultural sector (e.g. input suppliers, research institutions, and development organizations), markets, and financial sources. In view of shrinking budgets for governmental extension services and expanding private sector involvement in advisory services, possibilities for FFS implementation in public-private partnerships and (semi-)self-financing arrangements should be further explored.
- Facilitating development of networks such as community of practices and innovation platform on FFS related activities. Innovation platforms might be useful to provide a stage to discuss and promote demand-led and participatory research and extension services and funding mechanisms. Such platforms can also play a role in quality assurance of the FFS as well as lobbying at various levels.
- Creating incentive mechanisms through certification and grants for participatory research and extension that is done in close collaboration with farmers.

HARMONIZATION

Harmonization at the regional and global levels is crucial to promote standardization, avoid misconception and misuse of FFS, create synergies, and encourage learning and exchange on FFS-related activities among countries, regions and worldwide. In order to facilitate and promote this process, projects and programmes can be involved in the following proposed activities.

- Facilitate a process of standardization of training programmes and certification of master trainers. Institutionalization at the regional and global level favours expansion and scaling up and harmonizing FFS activities in order to ensure quality standards in methodology of teaching, field orientation and curricular contents. This needs to be addressed for certification systems for facilitators and the introduction of professional standards in associations of service providers.
- Advocating of key principles and non-negotiable characteristics of FFS in regional and international events and forums.
- Help national stakeholders link with regional and global organizations and networks. For FFS managers and practitioners to have professional interaction with their counterparts in other countries and regions is essential to keep abreast of new developments, in the educational as well as technical sphere, through participation in workshops, exchange field visits, e-forums, etc.

Potential benefits of institutionalization have to be balanced against risks and challenges that can jeopardize deeper values and benefits of the FFS approaches, including flexibility, focus on experiential learning, and empowerment. Potential risks and challenges of institutionalization include: quality versus quantity; inconsistency; and institutional limitation and lack of capacity at the national level.

Formal Institutionalization is not a MUST! if not appropriate.

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Note: *There are various references cited in the text that are from the online discussions of the 2012 Global FFS Review E-forum. No official report is available of the deliberations, but information can be found at http://dgroups.org/fao/ffs-eforum2/library.*

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ANNEX 1

COUNTRY REPORTS ON INSTITUTIONALIZATION OF FFS

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PERU

John Preissing, FAO Representative in Perú, and Julian Buitron, FAO Consultant in Perú

BACKGROUND AND HISTORY

Peru has considerable experience in FFS (known locally as Escuelas de Campo de Agricultores – ECA), at the national, regional and local institutional levels. The International Potato Center (CIP) first started to use ECAs in 1997 in Peru, and FAO has also included them in its field programme. During the last 10 years, >1000 ECAs were implemented in projects focused on promoting productive enterprises and in strengthening development of technical and local capacities. A main challenge with ECAs has been in institutionalization – especially with regard to maintaining their local and national positions within agricultural sector policy.

MAIN INSTITUTIONAL ACHIEVEMENTS

- Incorporating ECA methodology into programmes led by the Ministry of Agriculture, such as the Operational/Institutional Plans of Agro Rural, the country's Agrarian Productive Development Programme, and SENASA, the National Animal Health Service.
- Institutionalizing the use of ECAs through regional ordinances for technical assistance in agrarian extension, such as the Regional Ordinance of the Huancavelica Government.
- Training of more than thirty technicians from NGOs and civil society organizations, such as Action against Hunger and Caritas.
- Incorporating the ECA methodology in the syllabus of the Agronomy Faculty of the National Agrarian University of La Molina (Lima), the Jose María Arguedas University of Apurimac, and the Peruvian Amazon National University of Loreto.
- Legally creating four Regional Networks of ECA Methodology Facilitators.

KEY SUCCESS FACTORS

The motivation of local governments is a key factor in achieving positive results and the adaptation of this participative method in extension work. The high level of motivation on the government level led to a strengthened administration, well-trained technical facilitators, and a legitimized reputation as rural development promoters in their areas. These results led to improved institutional relationships within communities.

Strengthening the capacities of institutions that provide agrarian extension services stimulated the inclusion of the methodology as a part of their activities (Agro Rural, local government agrarian agencies, NGOs).

LESSONS LEARNED

ECA implementation requires strong support from local government leaders who are committed to fulfilling a participatory rural development agenda. Furthermore, a commitment to participatory and articulated technology transfer actions is needed.

The participation of the community in participative budgets of the local governments should be promoted, in order to implement productive projects using the ECA methodology, providing sustainability to the productive enterprises.

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CHINA

Hu Xinmei, National Programme Officer, FAO/China Pesticide Risk Reduction Programme

BACKGROUND AND HISTORY

The FFS approach was introduced by FAO/China Rice IPM Programme in 1988. Since then, China has been involved in the FAO Inter-Country IPM Programme for Rice (1994–2004), the EU/FAO Regional Cotton IPM Programme (2000–2005), the FAO Inter-Country IPM Programme for Vegetables (2003–2008), and the Pesticide Risk Reduction Programme (2007–2013). Over the past 20 years, more than 40 Training-of-Trainers sessions (TOTs) have been conducted, training about 1 400 facilitators, and more than 31 000 FFSs have been implemented, training about 160 000 farmers. The IPM-FFS themes have been extended to a wide variety of crop commodities, including rice, cotton, fruit trees, tea and vegetables.

CURRENT ENVIRONMENT

The FFS facilitators and programme managers from IPM Programme have played an important role in government-led FFS Programmes. In 2005, Beijing municipal government started to develop local FFS programmes, with initial facilitators trained from the Vegetable IPM Programme. Beijing has been gradually developing FFS programmes as an approach to develop peri-urban modern agriculture. So far, 800 × 3-year-cycle FFS programmes have been implemented in Beijing. The FFS approach was adopted by the Kunming government in

Yunnan Province in 2007. The local government funds TOTs and FFS programmes so that FFS can be widely used for agricultural extension, contributing to improving productivity, securing food safety and controlling non-point pollution of Dianchi Lake. Since 2009, the Agricultural Science and Education Department of the Ministry of Agriculture has been conducting a national programme called the Grassroots Agricultural Technology (GAT) Extension System Reform and Building, with 800 demonstration counties selected for the programme, in which FFS is an important component.

KEY FACTORS FOR SUCCESSFUL INSTITUTIONALIZATION OF FFS PROGRAMMES IN CHINA

Quality of FFS programmes: It is important that pilot FFS programmes lay a solid foundation for FFS adoption and institutionalization. In China's IPM-FFS programme, participatory M&E systems were developed and adopted by government-run FFS. The Ministry of Agriculture also developed demonstration FFS for quality assurance.

- **Linking FFS programmes with the needs of government**. It is important to lobby for FFS programmes, demonstrating to the government how the FFS approach can bring innovation to government objectives. The 2012 National No.1 Official Document regarding Quickening Agricultural Science and Technology Innovation and Enhancing Agri-produce Supply is one example of a national policy effort linking FFS programmes with government objectives. The GAT Extension System Reform Programme will be extended nationwide, indicating that FFS programmes will be introduced into all Chinese counties.
- **Adding national scope to localized FFS programmes**. FFS needs to be developed to match local situations, while maintaining relevance to agricultural development themes. If FFS programmes can be linked with agricultural development themes, there is a greater possibility of adaptation and institutionalization.

LESSONS LEARNED IN CHINA

Quality assurance in fast expanding FFS programmes is vital. The fast growing demand for FFS programmes may cause "fast-food TOTs". As a result, the quality of FFSs suffer, which might eventually destroy the reputation and the sustainability of FFS programmes.

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JORDAN

Ashraf Saber Alhawamdeh, Director of Participatory Extension Unit, National IPM/FFS Project Coordinator GTFS/REM/070/ITA/FAO, National Center for Agricultural Research and Extension (NCARE)

BACKGROUND AND HISTORY

The Ministry of Agriculture (MOA) of Jordan and The National Center for Agricultural Research and Extension (NCARE), with the support of FAO's Regional IPM Programme for the Near East – GTFS/REM/070/ITA – focuses on educating farming communities to better understand and manage their agro-ecosystems by promoting agricultural good practices.

Facilitators were selected from the Government Extension Services, NGOs, the Farmer's Union, local communities and the private sector. While building the capacity of FFS facilitators, the Programme also made efforts to increase public awareness of FFS and good practices, using local newspapers, radio and TV broadcasts. The awareness campaign involved students and teachers from schools and universities, committed volunteers, and NGOs such as The Jordan Environment Society and Friends of the Environment Society. Meanwhile, through FFS training, the Programme encouraged farmers to produce clean products, self-finance FFS activities and organize themselves in farmer associations. In Jordan, mass media and FFS programmes were used jointly as tools of agricultural extension. While mass media increased public awareness of good agricultural practices, FFS programmes applied concepts at the field level, demonstrating practical results from implementing these practices.

CURRENT ENVIRONMENT

The IPM-FFS method was institutionalized as an integral part of the National System of the Extension Services at NCARE. IPM and FFS programme were included in the national MOA strategy as the preferred approach for the sustainable crop and pest management system. In 2010, NCARE created a Participatory Extension Unit (PEU) to promote and expand the IPM/FFS approaches to new areas and target crops, and to enhance acceptance of the IPM methodology over all Jordan. At the same time, FFS was extended to other agriculture components in addition to IPM, such as water management, soil management, participatory plant breeding, and weed management.

LESSONS LEARNED

Farmers have used new skills in public discourse to influence MOA and NCARE decisions, lobbying on behalf of FFS programmes. This approach has improved the link between farmers, extension agents and researchers, and increased the level of trust among them, which was weak before.

- The selection of crop, farmers, facilitators and sites plays an important role. Inappropriate baseline selections led to inflexibility and reduced impact.
- FFS programmes are a process, not a goal; this should be clearly understood by organizations and main players. Jordan still faces this misconception problem within its system.
- Farmer field schools are an additional extension technique, not a replacement for other methods. FFS works very well under certain circumstances, but does not work well under other circumstances.
- The FFS approach can be implemented for any field, not only IPM, but it needs to be carefully planned.

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VIET NAM

Le Nguyet Minh, Associate Country Director, Oxfam in Viet Nam

BACKGROUND AND HISTORY

Oxfam has been supporting a programme to promote the community-based adoption of the System of Rice Intensification (SRI) since 2006, through partnership and collaboration with the Plant Protection Department of Viet Nam (PPD). SRI methods help vulnerable farmers grow more rice using less seed, less water, less fertilizer and less pesticide.

CURRENT ENVIRONMENT

This 12-year partnership aspires not only to advance SRI to a national scale, but also to build the adaptive capacity of farming communities and extension services. The programme design includes three inter-linked phases:

- local testing and confirmation of the potential of SRI methods taught through FFS programmes, forming an evidence base and local experience with alternative extension approaches;
- building a critical mass of farmer-level support via a tiered model of FFS and farmer-to-farmer extension to expand SRI practices at both farmer and technician levels; and
- influencing policy mandates and leveraging resources to maintain SRI adoption and foster dialogue between farmers and policy-makers.

The field-level implementation is primarily led by PPD staff, using the well-established network of national IPM and field trainers. The programme started with 3 450 farmers in 2006, and by 2011, the PPD reported over 1 million SRI participants across 22 provinces, accounting for 6 percent of nationwide paddy areas and 11 percent of the rice farming population. Learning about SRI has given women, who make up 70 percent of FFS participants, greater confidence both at home and in public. Furthermore, a woman, on average, helps five to eight other farmers adopt SRI, while her male counterpart helps only one to three others.

KEY SUCCESS FACTORS

- IPM network and available participatory expertise are well capitalized to gain local confidence;
- the rate of SRI expansion is strongly shaped by national policy and builds on the IPM/FFS foundation;
- regular exchange with the wider global community of SRI supporters induces more learning and eventual support from national technicians and policy-makers; and
- proactive advocacy for policy change led to endorsement by the Minister of Agriculture in October 2007, which enabled access to state financial support and wider expansion of SRI adoption.

LESSONS LEARNED

The quality of the programme is critically dependent on the consistency of training and robustness of leadership. That said, attempts to ensure quality through standardization can inadvertently lapse into prescriptive approaches and overlook the innovation inherent in SRI, thus affecting farmer's own learning and the programme's long-term goals. To manage this risk, the programme has emphasized farmer experimentation, documentation of lessons and communicating them widely. In parallel, the programme invests in building the capacity of farmers, coupled with the ability of extension workers to keep pace with the plans of individual farmers.

To address the challenges of integrating empowerment processes aimed at broader social change, multi-stakeholder partnerships have been established with cooperatives, farmer unions and extension centres at the district and commune levels. Over time, these local actors should increasingly drive the processes, especially where the emphasis is kept on strengthening the innovative capacity and voice of farmers.

OCCASIONAL PAPERS ON **INNOVATION IN FAMILY FARMING**

The Farmer Field School (FFS) strategy is aimed at empowerment of farmers through field-based experiential learning processes. It was first conceived and implemented 25 years ago in the rice paddies of Southeast Asia. This approach turned out to be very successful and the following years witnessed a strong expansion of FFS activities in many areas such as animal production, agro-processing and marketing, forestry, and nutrition.

Notwithstanding this success, the adoption of FFS in national extension often remains problematic. The essence of FFS – empowerment of farmers to learn, understand and make informed decisions – is at cross-purpose with conventional agricultural extension systems, which are based on top-down delivery of technology packages. As a result, FFS projects and programmes have often been implemented in the margin of national institutions with strong reliance on donor funding.

The potential long-term success and sustainability of the FFS programme outcomes appears strongly influenced by a sense of ownership by the parties involved at the different levels. The creation of an enabling environment for institutional support – one that is conducive to transformative and people-centered approaches – is essential for expanding the effort, improving quality and strengthening impact and continuity.

This paper aims to analyse opportunities, challenges and implications of institutionalizing FFS at the national level.

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO)

www.fao.org/nr/research-extension-systems/res-home/en