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# Tailoring rural advisory services for family farms





# Tailoring rural advisory services for family farms

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POLICY PAPER

*Published by*  
FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS  
*and*  
GLOBAL FORUM FOR RURAL ADVISORY SERVICES

Rome, 2016

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ISBN 978-92-5-109257-6

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## Abbreviations and acronyms

AIS	Agricultural Innovation System
AYF	African Youth Foundation
CAFF	Community Alliance with Family Farmers [California, USA]
CAP	Common Agricultural Policy [European Union]
CTA	The Technical Centre for Agricultural and Rural Cooperation
EADD	East Africa Dairy Development Project
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
GFRAS	Global Forum for Rural Advisory Services
ICT	Information Communication Technology
IFAD	International Fund for Agricultural Development
IYFF	International Year of Family Farming
KENAFF	The Kenya National Farmers Federation
LISF	Local Innovation Support Fund
MAFF	Management Advice for Family Farms
MDA	Ministry of Agrarian Development [Brazil]
MWCD	Mulukanoor Women's Mutually Aided Milk Producers Cooperative Union Ltd [India]
NGO	Non-Governmental Organization
PO	Producer Organization
PROLINNOVA	Promoting Local Innovation
RAS	Rural Advisory Service(s)
TECA	Technologies and practices for small agricultural producers
VERCON	Virtual Extension, Research and Communication Network
VFT	Volunteer Farmer Trainer



## Acknowledgements

This document benefited immensely from the comments and suggestions offered by many. We would like to acknowledge the review done by Kristin Davis (GFRAS) and Francesca Cofini (FAO). The authors would like also to thank Francesco Pierri (FAO) for his inputs and comments on an earlier version of this paper as well as Nimisha Mittal and Chandrakanth Madamanchi for their inputs and support (CRISP).

Final editing for language, conformation to FAO style and preparation for publishing was by Thorgeir Lawrence. Layout was done by Nadia Pellicciotta.



# 1. Context

Rural advisory services (RAS) are increasingly recognized as critical to agricultural and rural development. RAS work with farmers and other important stakeholders in rural economies. They provide rural communities with a wide range of skills and knowledge, and facilitate interactions among the different actors to help them access support and services required for improving their livelihoods.

Family farmers are one of the important clients of RAS as they are the most predominant type of farmers worldwide. Out of a total of 570 million farms estimated by the Food and Agriculture Organization of the United Nations (FAO) in the world, 500 million can be considered family farms (FAO, 2014b). The declaration of 2014 of the International Year of Family Farming (IYFF) by the United Nations General Assembly reflects a growing global consensus that family farming is critical to feeding a global population that is expected to reach more than nine billion people by 2050. Family farms occupy around 70 to 80 percent of farmland and produce about 80 percent of the world's food in value terms (FAO, 2014b). Similarly, family farming is the main source of employment worldwide. At the same time, the majority of family farmers still live in poverty and food insecurity (AFD, 2014). RAS can help such farmers in their efforts to enhance productivity and income from farming and other activities to support their livelihoods.

The UN General Assembly invited FAO to facilitate the implementation of the 2014 - IYFF, in collaboration with its partners. Among its other initiatives for IYFF, FAO worked with the Global Forum for Rural Advisory Services (GFRAS) in highlighting rural advisory services for family farms. This was done by jointly organizing two international events on the topic of "Rural Advisory Services for Family Farms"— one in Buenos Aires on 26 September 2014 during the 5th GFRAS Annual Meeting and one in Rome on 27 October 2014 during the Global Dialogue on Family Farming. To continue and expand the dialogue to a larger global audience, FAO hosted an e-conference on "Tailoring rural advisory services to family farms" from 1 to 18 December 2014, which allowed participants to share their knowledge, ideas and experiences on this topic. Results of the events and e-mail conference were used in the preparation of this present document to elaborate how RAS supports family farms and where its capacity to do so could be strengthened.



## 2. What is family farming?

Family farming includes all family-based agricultural activities, and it is linked to several areas of rural development. Family farming is a means of organizing agriculture, forestal, fisheries, pastoralism and aquaculture that is managed and operated by a family and is predominantly reliant on family labour, including both women's and men's<sup>1</sup>.

*“Family farming is more than just a business; it is a way of life and one that is deeply associated with values such as solidarity, continuity and commitment”*

(ENFRD, 2014: 8)

Though family farmers work on a significant portion of the world's farmland, the land ownership is highly skewed.

*“The vast majority of the world's farms are small or very small, and in many lower income countries farm sizes are becoming even smaller. Worldwide, farms of less than 1 hectare account for 72 percent of all farms but control only 8 percent of all agricultural land. Slightly larger farms between 1 and 2 hectares account for 12 percent of all farms and control 4 percent of the land, while farms in the range of 2 to 5 hectares account for 10 percent of all farms and control 7 percent of the land. In contrast, only 1 percent of all farms in the world are larger than 50 hectares, but these few farms control 65 percent of the world's agricultural land”*

(FAO, 2014b)

The majority of family farmers face constraints in accessing knowledge, support and services, and therefore remain more vulnerable to climatic and economic shocks. They need support for modernization and innovation of the farm, preparing for succession and encouraging future generations to participate.

*“The challenges facing family farming include: an aging population; lack of generational renewal; lack of training and financial assistance; difficult access to productive resources; exclusion from international policy- and decision-making; climate instability; and price instability”*

Evelyn Nguleka, World Farmers' Organization (FAO, 2015b)

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<sup>1</sup> <http://www.fao.org/family-farming-2014/home/what-is-family-farming/en/>



### **3. Special features of family farms**

#### **Family farmers and their farms are very diverse**

Family farmers are an extremely diverse group, ranging from small-scale to large-farm owners, indigenous peoples, fisher folk, forest farmers, pastoralists and many others. The farms vary in terms of cultivated area, equipment used and type of production. They exist in all ecosystems, from arid grazing lands and urban hinterlands to the large fertile agricultural plains. In East and South Asia and Sub-Saharan Africa, where land is scarce, small family farms dominate. Family farmers do not necessarily own the land that they cultivate. In some developing countries, family farms are often operated under share cropping arrangements, where they have to give a share of the farm output to the landowner.

In many developing countries smaller farms tend to be more productive per unit of land than larger farms, but less productive per unit of labour, hence affecting their overall productivity and the income per capita. This is explained by the constraints and imperfections of the labour market and the scarcity of off-farm opportunities (FAO, 2014b). At the same time, small family farms tend to be less specialized, thus ensuring greater biodiversity, but need a greater labour input, which contributes to rural employment and the social fabric of rural areas (EU, 2014).

Family farming structures, activities and functions are directly affected by: the diversity of national and regional contexts; agro-ecological conditions and territorial characteristics; available infrastructure; the policy environment; access to markets; access to land and natural resources; access to technology and extension services; access to finance; demographic, economic and, socio-cultural conditions; and availability of specialized education. Family farms are rather large in industrialized countries, especially where population density is low, as in the United States of America or Australia. Most farms in the United States of America are family operated (98 percent in 2007) and even the largest farms are predominantly family run (Hoppe and Bunker, 2010). In the more densely populated industrialized countries of Western Europe, where land is scarce, family farms engage in mixed farming or specialize in livestock production to earn a sufficient return to their family labour, or they switch to part-time farming (Birner, 2014). However, farm size is not the only factor determining viability. Other factors that include access to markets, value added to production and products, proximity to urban and urbanizing areas, and rural services, also determine the viability of family farms (Sourisseau et al., 2015).

#### **Family farms are the main producers of food consumed locally in both developed and developing countries**

Family farms are the main source of rice production in Asia where 80–90 percent of aquaculture farms are family based (FAO, 2014c). In the United States of America, family farmers grow 84 percent of all produce, working on 78 percent of all farmland. In terms of size, family-run farms cover around 69 percent of European Union (EU) agricultural land (ENFRD, 2014). In

Brazil, family farmers work on less than 25 percent of the land but provide 83 percent of cassava, 70 percent of beans and 46 percent of maize, and they account for 38 percent of the agribusiness value chain. In Fiji, 84 percent of yam, rice, manioc, maize and bean production comes from family farms working on only 47.4 percent of agricultural land (FAO, 2014e).

### **Family farms contribute to sustainable management of natural resources**

Family farmers are custodians of a finely adapted understanding of local ecologies and land capabilities. Through local knowledge, they sustain productivity, often on marginal lands, through complex and innovative land management techniques. As a result of the intimate knowledge they have of their land and their ability to sustainably manage diverse landscapes, family farmers are able to improve many ecosystem services<sup>2</sup>. Family farming preserves traditional food products while contributing to a balanced diet, safeguarding the world's agro-biodiversity, and sustainable use of natural resources (Ortiz, 2015).

### **Family farms are important for local economic development**

Family farming is very much part of the local economy and helps to maintain people in rural areas by way of employment. They nurture vibrant economic, social and cultural development in rural areas. Family farmers have strong economic links to the rural sector; they contribute strongly to employment, especially in developing countries, where agriculture still employs the majority of the labour force. In addition, the incremental income generated by family farming is spent on housing, education, clothing and so forth in the local non-farm economy (FAO, 2014b). Successful family farming leads to sustainable development of rural areas and retention of youth in the countryside.

### **Dependence on diverse income**

For most farming families, agriculture is only one of several sources of income. Engaging in a wide range of value-adding activities (e.g. processing and marketing) and off-farm activities represents both an attempt to make the best use of available household labour and a form of risk management. Because of the reliance on multiple sources of income, smaller farms are more seriously affected than larger ones by a lack of adequate alternative employment opportunities and poor remuneration for any work that is available. It is important to recognize that not all family farms have the capacity for innovation in farming and for commercial production. Some family farms may find it more effective to pursue higher incomes and improved livelihoods through non-farm activities. However, the two options are not mutually exclusive, as some members of farming families may move into non-farm activities. Innovation linked to increased commercialization, and diversification of farm household incomes, e.g. through value-adding activities, can take place in parallel (FAO, 2014b).

<sup>2</sup> As per the 2006 Millennium Ecosystem Assessment (MA), ecosystem services are the benefits people obtain from ecosystems, and these are grouped into four categories, namely, provisioning (such as the production of food and water); regulating ( such as the control of climate and disease); supporting (such as nutrient cycles and crop pollination); and cultural (such as spiritual and recreational benefits).

## **Women play an important role in family farms**

For small-scale family farms, women provide the bulk of agricultural labour force in production, processing and marketing, in addition to their reproductive roles. Often these important roles played by women are not recognized in terms of income earned, asset ownership and succession, and they often have restricted access to productive resources, services and knowledge compared with men. There are differences between men and women in the number of contacts with extension agents, the percentage of farmers visited by agents and access to community meetings or meetings held by extension agents (FAO & GFRAS, 2014; Meinzen-Dick et al., 2011).

## **Family farms face many challenges**

Though family farms vary widely in terms of their size, structure, production and marketing systems, most of them face a similar set of challenges. These include: loss of farm land due to urbanization; deterioration of productive land due to desertification, soil salinity, erosion, loss of agro-biodiversity and land grabbing; the need to adapt to climate change; increasing market volatility; and pressure to increase productivity and engage in value addition and collective marketing to deal with rising input prices, declining profitability, and increasing competition. Family farmers also find it increasingly difficult to access land, support and services, as they are often excluded from policy- and decision-making (FAO, 2015b; FAO & GFRAS, 2014).

Some family farmers also face specific challenges.

*“In most of the countries in Central and Eastern Europe, new family farmers emerged from the category of ex-large-state-farms employees, and consequently have no or very little experience of individual farming and farm management. At the farm level, the most restricting factors to the increased efficiency and adjustments of family farms to structural changes are related to human capital. Education and the age of the household members in many cases are not sufficient or appropriate for adopting new technologies and management concepts”*

(FAO, 2000)

Other challenges affect all farms regardless of size, including volatile output prices, availability of land and the taking over by a successor. A great deal of planning, preparation and communication is needed in order to accomplish the feat of moving the business from one generation to another. The aspirations of both generations need to be addressed along with the financial feasibility of the operation supporting all involved (Hilde and Wiborg, 2010; Bryan, Rodney and Duane, 2012; FAO and GFRAS, 2014). The appropriate development pathway and livelihood strategy for each small family farm should reflect its particular characteristics and the level of transformation within the country’s economy (Fan, Brzeska and Olofinbiyi, 2015).

To overcome all these challenges is beyond the scope and capacity of individual family farmers, but would require a supportive environment and investments as well as organizational, negotiation and decision-making capacities of the community of family farmers (farmer organizations, cooperatives, etc.).



## 4. Rural advisory services and family farms

Apart from the traditional functions that public extension services have often provided, namely delivering information about new varieties or agricultural production techniques, rural advisory services (RAS) provide a wide range of services, such as coaching farmers on how to improve market access, supporting them to deal with changing patterns of risk, or sharing knowledge on environmental protection (Box 1).

### **Box 1. Rural Advisory Services**

Rural advisory services (RAS) refer to all the different activities that provide the information and services needed and demanded by farmers and other actors in rural settings, to assist them in providing their livelihoods by developing their technical, organizational and management skills and practices (GFRAS, 2011; FAO, 2010). RAS designers and implementers must recognize the diversity of actors in extension and advisory provision (public, private, civil society); the need for broadened support to producer organizations (PO) and rural communities (beyond technology and information sharing) including advice related to farm, organizational and business management; and the role of facilitation and brokerage in rural development and value chains.

RAS are important for family farms to help them enhance their agricultural productivity, improve farm management skills, ensure widespread adoption of more sustainable agricultural practices, and also help them diversify to other crops and livelihoods. The roles that RAS could play in supporting family farming are listed in Box 2.

### **Box 2. Roles that RAS should play for effective functioning of family farming**

- Provide farm management and business development support appropriate to the scale, resources and capacities of each farm.
- Help farmers to better understand markets (prices, seasonality, standards, value addition etc.).
- Link farmers to other stakeholders involved in provision of varied support and services.
- Create platforms to facilitate interaction and sharing among the various stakeholders including POs to ensure coordinated support to family farmers.
- Exploit information communication technologies (ICTs) to provide farmers with a range of information related to weather, prices, extension programmes and generic information related to farming.
- Support or facilitate the formation of POs and also collaborate with POs to strengthen the demand and supply side of RAS.
- Promote institutional and policy change to enable and support family farms.

SOURCE: Synthesized from the FAO e-conference on 'Tailoring rural advisory services to family farms' (FAO, 2014d)

Over the last two decades, the public-sector-dominated system of RAS delivery has been gradually replaced with a pluralistic system of provision, comprising various actors in the public, private, civil society and non-governmental organization (NGO) sectors. Different kinds of extension and advisory services, delivered by various service providers, are more likely to address the diversity of services needed by family farms (FAO, 2014b). However, many concerns in the e-conference (FAO, 2014d) were raised about coordinating and ensuring that advice is consistent among the different providers, and that complementarities and synergies among different topics are accomplished.

*“Governments are reducing their support for public extension services and private service providers have no choice, but to focus on target groups who can pay for advisory services”*

Naser Zamain-Miandashti, Shiraz University, Iran, in (FAO, 2014d)

There has been a shift in recent years also towards demand-driven extension, which has contributed to enhancing the accountability of service providers towards their clients. However, in most cases, there has been no specific thrust by RAS to segregate demand for support by different categories of farmers. Extension services can help develop appropriate responses to demand by assessing micro-level situations with their clients before advising or making interventions.

### **Tailoring RAS to the diversity of family farms**

RAS should provide a wide range of support given this diversity (subsistence/small-scale/family farmers; medium/semi-commercial family farmers; fully commercial/large-scale farmers; organic farms; retirement farms; farms producing niche products; agritourism farms; etc.). For instance, family farms in mountain regions need different RAS, support that matches the seasonal changes in resource availability, compared with family farms on the plains or coastal areas (Wymann von Dach et al., 2013). In the case of aquaculture, large-, medium- and small-scale farmers need differentiated RAS support. The large farms are mostly self-reliant and need only regulatory support, while medium-sized farms need mobilization and facilitation support in addition to regulatory support. Small aquaculture farms need more education and input provision alongside facilitation (Kumaran, 2014).

Family farms need tailored professional farm management advice in order to optimize income sources while balancing out risks; to manage the farms in a sustainable manner by diversifying their specific cropping pattern to conserve soil and water resources; to adopt sustainable intensification practices; while remaining aware of other responses to the increasing climatic and market uncertainties of their specific environment. They require timely advice based on meteorological, marketing and management information for land-use decisions, and investments to improve resource use efficiency, which can go a long way in reducing both cost of cultivation and environmental pollution (Ayyappan, 2014). They need assistance in understanding the markets, including new standards and regulations and potential for value addition, so that they can move from subsistence to small-scale commercial farming.

## RAS support to enhancing policy influence of family farms

Without the capacity to organize themselves, family farmers have little influence over the social, economic and political processes affecting them. Considering their large number yet lack of influence as individual units, family farmers need to organize into groups, organizations and networks to deal with their specific challenges and make their voice heard. Such groupings can act as platforms to articulate concerns, exchange knowledge, influence policies and engage in collective action so that their agriculture remains sustainable and profitable. Effective and inclusive POs, such as cooperatives, can be instrumental by galvanizing collective action in order to ensure better access to markets and to support innovation by their members (Sundaram, 2014).

A supportive and well-coordinated agricultural innovation system (AIS) with a clearly defined institutional framework (research, advisory services, POs, education, etc.) comprising the public and the private sectors, should be in place. Such an AIS needs a favourable economic and legislative environment that supports innovations and investments in agriculture, including business development, financial services and rural infrastructure. On the one hand, the efficiency and effectiveness of RAS for family farms depends on such a well-functioning framework, and on the other hand, RAS has a central role in linking, networking and brokering the stakeholders of this institutional framework for enhancing the livelihoods of family farmers and the rural economy.





## 5. Gaps within RAS in supporting family farms

### 5.1 Lack of RAS capacities at different levels

The majority of RAS initiatives have focused on providing messages and technical knowledge on production and management of crops, through demonstration, training and use of media, in effect providing very little support beyond technology dissemination. However, family farmers also need information on and training in value addition, such as agro-processing and marketing. This aspect was highlighted by several participants in the e-conference (FAO, 2014d). However, very few of the traditional RAS providers have the capacity to link farmers to markets, or to support farmers to adapt better to climate change. Though recent years have witnessed increasing attention to organizing farmers into groups, and strengthening POs, many of these efforts remained ad hoc and very little attention is given to empowering these groups to emerge as sustainable independent organizations.

To support family farmers, RAS need different types of capacities at different levels (Box 3).

#### Box 3. Capacity Development Levels in RAS

To support family farming, RAS should collectively perform a wide range of roles. These include developing networks, organizing producers, facilitating access to credit, inputs and output services, convening and brokering within innovation platforms, promoting gender equality, facilitating knowledge management and exchange, supporting adaptation to climate change, and creating and providing new knowledge and skills through social innovation, training and demonstrations. To perform these roles, RAS need new capacities at the three levels articulated by FAO (2010), namely the individual, the organizational, and the enabling-environment levels.

- At the individual level, RAS need staff with strategic thinking, a good understanding of technical knowledge and practices, plus organizational and facilitation skills to manage social processes.
- At the organizational level, RAS should have capacities to put in place systems and procedures to manage human and financial resources, as well as institutions to facilitate partnerships and learning, and frameworks to deal with institutional, legal and regulatory issues.
- At the enabling-environment level, RAS capacities for influencing policies, including capacities to strengthen POs to gain a voice in policy-making, are important. RAS capacities are also required for creating favourable conditions within the extension and wider innovation systems, allowing them work as a system and for better performance of the service providers.

At all levels there should be mechanisms to look at gender representation and equal access to services by vulnerable groups; mechanisms to promote involvement of youth in agriculture; and opportunities to apply ICT to enhance RAS performance.

SOURCE: Davis and Sulaiman, 2014.

## **Limited technical and functional capacities at the individual level**

At the individual level, RAS need staff with good technical understanding plus skills to manage social processes (Table 1). Advisers often have limited up-to-date knowledge related to post-harvest handling, food storage structures, and value addition of food products, as well as on new topics such as climate change, about which the small-scale family farmers are keen to learn. Apart from technical knowledge related to agricultural production, RAS providers now need – much more so than in the past – a wide range of functional skills related to facilitation, organizational development, network building, and brokering and policy engagement, if they are to fully support family farmers. Quite often such functional skills are scarce among RAS providers. Furthermore, RAS personnel often do not have adequate skills, commitment and dedication to work with minority ethnic groups and very poor farmers, or to mediate in cases of conflicting interests within the farming community.

*“Extension workers are underfunded and often not trained to communicate with family farmers, making them ineffective. Most extension programmes lack qualified personnel, have limited capacity, or do not take women’s cultural and time constraints into account”*

(FAO, 2014c)

Poor quality and quantity of RAS providers to support family farmers was also highlighted as an important weakness in the FAO-GFRAS side event on “RAS for Family Farms” organized at Buenos Aires in 2014 (FAO and GFRAS, 2014). However, there is no standard fit; the performance of RAS vary widely across regions, countries and often across different regions within the same country.

## **Limited capacities at the institutional and organizational level**

Organizational-level capacity includes the level of the individual organizations, their systems, procedures and institutional frameworks, that allow RAS to operate and deliver demand-driven services to producers and other agencies that support producers.

### ***Capacity to assess demand and respond quickly***

RAS often have limited capacities to identify the demands of family farms; to facilitate POs to identify and articulate their needs for support; and to respond to these demands by developing programmes and interventions that meet these demands. Low numbers of RAS providers spread over a large number of family farms prevents them from fully identifying the demands of specific family farms. RAS need flexibility to respond quickly to the evolving and diverse needs and demands of women and men family farmers, and their organizations. RAS should have the capacity to deploy a wide range of interventions, including the use of ICTs. To provide effective and relevant support to family farms, RAS need to enhance their capacities to monitor performance and be evaluated by family farmers.

*“Most smallholder family farms use low external inputs and follow a mixed farming system (more by compulsion than choice) to avoid risks. But most of the research and extension programmes are commodity oriented and there is no intermediate step of testing appropriateness of technologies or recommendations.”*

Datta Rangnekar, Freelance consultant, Gujarat, India, in (FAO, 2014d)

**Table 1. Capacities required at the individual level in RAS**

<b>Technical</b>	<b>Functional</b>
<p>Good understanding about new technologies, practices, standards, regulations and policies in agriculture and natural resource management.</p> <p>Some of the new technical areas include:</p> <ul style="list-style-type: none"> <li>• Technical options to support climate change adaptation;</li> <li>• agribusiness, value addition and value chain development;</li> <li>• improving resource use efficiency;</li> <li>• application of biotechnology;</li> <li>• intellectual property and farmer rights; and</li> <li>• use of new Information &amp; Communication Technologies (ICTs).</li> </ul>	<p><i>Community mobilization</i> (organizing producers and rural women into different types of interest and activity groups)</p> <p><i>PO development</i> (assisting in organizing, sustaining and federating POs to take up new extension and advisory service tasks in agriculture, in jointly accessing markets and in linking them to new sources of knowledge and services)</p> <p><i>Facilitation</i> (facilitating discussions and joint action)</p> <p><i>Coaching</i> (building capacities of stakeholders and providing back-stopping support)</p> <p><i>Reflective learning</i> (organizing experience-sharing workshops and facilitating learning)</p> <p><i>Mediating in conflicts</i> (by improving dialogue and helping to reach agreement)</p> <p><i>Negotiating</i> (reaching a satisfactory compromise or agreement between individuals or groups)</p> <p><i>Brokering</i> (creating many-to-many relationships among the wide range of actors)</p> <p><i>Networking and partnership building</i></p> <p><i>Advocating</i> for changes in policies and institutions</p> <p><i>Leadership</i> capacity to inspire and motivate</p> <p><i>Managing resources</i> (human and financial)</p> <p><i>Critical thinking</i></p> <p><i>Problem solving</i></p> <p><i>Self-reflection and learning from mistakes</i></p> <p><i>Service-mindedness</i></p> <p><i>Accountability to RAS clients</i></p> <p><i>Responsible in accomplishing tasks</i> (Dedication and Commitment)</p> <p><i>Working in multi-organizational and multisectoral teams</i></p> <p><i>Working with rural women and using gender-sensitive approaches</i></p>

SOURCE: Davis and Sulaiman, 2014

### **Capacity to empower farmers in decision making**

RAS providers previously simply provided recommendations and generally did not have adequate capacities to assess the appropriateness of technologies and recommendations promoted by the researchers or offered on the market, and to refine these to suit the context of family farms. Even more, RAS often lack the ability to offer options to the farmers and to enable them to decide for themselves what innovations would be most appropriate for them, considering the farm endowment, family situation, future prospects, etc.

*“Research and extension services should consider and respond to agro-ecological and socio-economic conditions in providing support and avoid one-size-fits-all solutions”*

Dyborn Charlie Chibonga, World Farmers' Organization, in (FAO, 2015b)

### **Capacity in providing integrated advisory support**

Family farmers often need integrated support that enhances their technological, organizational, managerial, entrepreneurial and marketing capacities. They also need support in either moving up to more commercially-oriented and profitable farming systems, or moving out of agriculture to seek non-farm employment opportunities. While the public-sector extension providers are more focused on production aspects, private-sector providers quite often have specific advisory services related to their business, such as specific inputs. Overall, very few RAS providers offer such integrated support, so that it is necessary to collaborate in order to jointly provide more integrated services to respond to complex problems and opportunities.

*“Co-ordinating and achieving coherence among different extension providers is a key gap and so mapping demands and seeing how a coherent supply of services could be organized is of key importance”*

Laurens Klerkx, Wageningen University, the Netherlands, in (FAO, 2014d)

## **Constraints at the enabling environment level**

### **RAS environment and policy**

Performance of RAS depends crucially on the conditions that prevail in the environment in which they are embedded. Family farming needs to receive broad policy support from a range of other sectors that deal with rural infrastructural development, financing, and input and output market development. The performance of these other sectors has an influence on what impact RAS can have. Only very few countries have an explicit extension or RAS policy that clearly articulates the inclusion of family farmers in identifying demand for RAS, provides direction on objectives and achievements to be made, and priority programmes for addressing challenges and targeting disadvantaged groups, as well as guidance on how the expected outcomes are to be achieved (financial means, stakeholder collaboration, approaches, monitoring and evaluation). Absence of a clear policy direction has resulted in lack of a shared vision among policy-makers, research and extension personnel on how to support family farming.

## ***Weak farmer organization capacities to influence policies***

Policies provide guidance and frameworks against which investments can be directed and monitored. The capacities of family farms and their organizations to influence the policy process need considerable enhancement. This requires farmer organizations to be strengthened. In addition, RAS can facilitate dialogue within producer organizations to help identify and articulate demands, and among POs, policy-makers and other actors to influence the policy process in support of family farms. Very few RAS providers have these capacities to support family farmers and their organizations to engage with policy actors and shape the policy process to support their demands.



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## **5.2 Weak links among the various actors in the agricultural innovation system**

RAS as a group is only one of the actors in the AIS, although usually a major one, and therefore its comparative advantage lies in its capability as a “bridging” organization, linking the different elements of knowledge held by different actors, and facilitating application and use, thereby leading to innovation (Box 4).

### **Box 4. Agricultural Innovation Systems**

An Agricultural Innovation System (AIS) is defined as “a network of organizations, enterprises and individuals focused on bringing new products, new processes and new forms of organizations into social and economic use, together with the institutions and policies that affect their innovative behaviour and performance” (World Bank, 2006: 16).

Though research, education and advisory services are key components of AIS, these are not sufficient to bring knowledge, technologies and services to farmers and entrepreneurs (World Bank, 2012).

The idea of the AIS highlights the importance of a large number of other actors possessing different types of knowledge (e.g. farmer and industry associations, market intermediaries, consumer groups, policy-makers, certifying agencies, credit and input suppliers, etc.) and their effective interactions for innovation. Under the AIS framework, innovation is not merely concerned with technical innovation (e.g. adoption of a better variety), it also includes social and organizational innovation (e.g. organization of farmers as groups) and institutional innovation (e.g. addressing uncertainties in land leasing through policy changes).

SOURCES: World Bank, 2006

This essentially means that RAS has to interact and partner with a wide range of organizations dealing with research, markets, policy, financing, and so forth. However the capacity to play this bridging, facilitating and brokering role is poor among RAS, and requires considerable strengthening. Traditionally, the role of extension systems was to link research to farmers through technology transfer. However, farmers have not always received technology that suited their particular environments and needs. Though there has been an increasing focus on strengthening research-extension linkages since the 1980s, the progress on this has been very mixed. Lack of productive linkages between research and extension in particular has resulted in the development and promotion of several technologies inappropriate to the particular farmer’s situation. Improving the linkages and cooperation between the formal research system and farmers can help ensure that farmer priorities are addressed, enhance farmer access to and benefits from the work of researchers, and allow researchers to learn from and build on farmer knowledge and innovations (FAO, 2012). RAS could better contribute to the process of innovation, if the RAS providers would expand their conventional technology transfer role by including more functions, especially related to facilitation, brokering and enhancing the capacity of the actors in the AIS to create synergies and provide integrated support to farmers.

### **5.3 Limited role of producers and their organizations in planning and implementation of RAS**

Family farmers can overcome problems of lack of coordination, scale and comparative advantage by coming together in organizations or cooperatives. Joint action and collective arrangements offer advantages regarding input supply, availability of processing and other equipment, natural resource management and enhanced market access through aggregated storage and transport, while ensuring a stronger voice and negotiating positions within markets (Sourisseau et al., 2015). POs play an important role in demand articulation, service provision and financing of RAS (GFRAS, 2015). Some are also directly engaged in RAS provision (Box 5).

#### **Box 5. The Kenya National Farmers Federation (KENAFF)**

KENAFF is an umbrella organization representing about 2 million Kenyan family farms. To help members improve their livelihoods, the federation's activities focus on lobbying and advocacy, capacity development, providing advisory service, and promoting uptake of agricultural innovations. KENAFF promotes a business model in which farmers are organized along a specific value chain, making it easy to carry out targeted extension and advisory services with members.

Farmers are recruited in Common-Interest Groups (CIGs) along a specific value chain, and then organized into legally recognized producer business groups. The groups are then entitled to receive training according to their needs and demands, in order to improve the operational efficiency of the value chain in which they are engaged. For increased sustainability, the federation helps in establishing links among the members and other actors of the chain. Finally, KENAFF promotes the active engagement of farmers in order to take on board their insights and interests and feed into policy debates.

An inclusive culture is part of the federation's core values that fosters the participation of men, women, youth and special groups.

SOURCE: Nyando, V. The Kenya National Farmers Federation, in FAO, 2014d; <http://www.kenaff.org/>

Regional networks and federations of POs, such as the Confederation of Family Farmer Producer Organizations (COPROFAM), the Asian Farmers' Association for Sustainable Rural Development (AFA), the Networks of Peasant Farmers' and Agricultural Producers' Organization of West Africa (ROPPA) and the East African Farmers Federation (EAFF), are institutional arrangements that enable farmers to strengthen their capacities and their power in shaping national and regional policies. Collective action allows farmers to participate in policy-making processes and make their voices heard (FAO, 2014b).

However, many family farmers are not organized, and they need support to do so and to play the above roles. POs often lack capacities to systematically assess and articulate the needs of their

members. POs in the Near East and North Africa are weak and highly dependent on the authority of governments, which restricts their autonomy and ability to support family farmers (FAO, 2014c). RAS need to strengthen the capacities of POs in defining, articulating and negotiating the demands of their members. Both POs and RAS should then have the capacity to respond to these demands. In most cases, RAS lack policies and programmes to strengthen the capacities of POs and to engage them more closely in planning, implementing, monitoring and evaluating RAS interventions.

## **5.4 Limited access, outreach and impact**

With regard to the relevance, efficiency, quality, outreach and impact of RAS, there is little data and evidence (FAO and GFRAS, 2014). While limited data exists on public extension for some countries, achieving an overview of activities by the many non-public actors working in extension is very challenging (FAO, 2014b). Lack of monitoring – and hence data – also constrains improvement of RAS by its management, as well as rigorous impact evaluation affecting the reach and effectiveness of RAS for family farms.

When evidence is available, data from low- and middle-income countries suggest that far too many family farms, especially the smaller farms and women farmers, do not have regular access to extension services. In a sample of ten countries<sup>3</sup>, the share did not exceed 25 percent in any country, and was less than 10 percent in three countries. Furthermore, in another sample of household survey data from nine countries, the share of farms obtaining extension information generally increased with farm size, with the smallest farms the least likely to have access to such information (FAO, 2014b). In general, small family farms, as well as farms in remote and marginal areas, do not have sufficient access to RAS.

The real challenge is to cater to the needs of subsistence or near-subsistence small-scale family farmers who do not seek extension services on their own. Supporting these farms requires a certain level of dedication and commitment, which is lacking among many RAS providers. These family farmers need specific support to become integrated into the market, with social protection programmes, in order to enhance their livelihood.

Although women play a very important role in ensuring food security, and despite the fact that the majority of small-scale farmers are women, they are the most overlooked clientele of extension (FAO, 2011; Swanson and Rajalahti, 2010).

*“Women comprise, on an average, 43 percent of the agricultural labour force in developing countries, ranging from 20 percent in Latin America to 50 percent in Eastern Asia and sub-Saharan Africa”*

(FAO, 2011: 5)

RAS can effect improvements if extension approaches are designed based on a good understanding of farm work patterns. As a coping mechanism, especially among the small-scale family farms,

<sup>3</sup> The sample covered Bangladesh, Brazil, India, Lao People’s Democratic Republic, Malawi, Nepal, Nicaragua, Paraguay, Uganda, and United Republic of Tanzania.

the strategies adopted by rural families to increase and diversify incomes and livelihoods are gender specific: men either work with more lucrative crops, or migrate; while women stay back to cultivate the family plot for household consumption, care for small livestock, and process and/or sell part of their production in local markets (International Fund for Agricultural Development [IFAD], 2014).

Women lack access to extension services as extension programmes rarely identify women as a significant element of their target audience. It is estimated that, globally, only 15 percent of extension agents are women and male extension agents frequently target male-dominated farmers groups and focus information and inputs on their needs (World Bank, FAO and IFAD, 2009). In many cultures, it is unacceptable for male extension agents to address women in the village. In such cases, female RAS providers can play a major role in reaching out to women farmers. There is a need to assess labour saving technologies to reduce women's workload and to strengthen women's leadership roles in rural organizations. In addition to these, RAS should design demand-led programmes to support women engaged in farming. Finally, improving the articulation of women's demand for extension is one way of enabling development initiatives to be more focused towards local needs (Collet and Gale, 2009).

In many countries, RAS lack capacities to design and implement gender sensitiveness in their institutions and programmes. Limited funds and trained personnel, especially in the public sector, often hinder the establishment of the necessary arrangements to provide gender-differentiated services. With a changing scenario, RAS need also to adapt to women's increasing role in family farms and ensure that they have the same access as men to extension services, productive assets, technology, credit and markets.

Furthermore, many extension staff lacks the necessary experience, communication skills and knowledge to work with minority ethnic groups, leading to exclusion and limited impact on poverty reduction among these groups. (Hoang, Castella and Novosad, 2006). Low levels of funding for RAS is another major reason for not reaching family farms, especially in remote or sparsely populated regions. Modern Information and Communication Technology (ICT) has been used to provide technical and market information through computer, internet, mobile phones (voice and text), information kiosks, rural resource centres, call centres, etc. These devices are increasingly used to enhance the outreach of RAS. However, a majority of the small-scale family farmers do need personal contacts and handholding support to adopt new and improved practices. Participants in the e-discussion (FAO, 2014d) identified several challenges in the use of ICTs by RAS. These include: selection of appropriate messages to be conveyed that suit the peculiar situations of family farms and in the appropriate language or dialect that the farmers understand; financial sustainability of ICT-enabled village resource centres; availability of locally relevant and current content, etc. Despite much support for the diffusion of ICTs in rural areas, gender disparity in access to ICT services continues (World Bank, FAO and IFAD, 2009). Moreover, while most of the ICT initiatives disseminate new information and knowledge useful to rural women, many women are not able to make use of it, due to lack of access to complementary sources of support and services (Sulaiman et al., 2011).



## 6. Addressing gaps in RAS to support family farms

The context of family farms varies widely and family farmers need access to locally relevant, integrated support that includes knowledge provision, skill enhancement, organizational development support, financial services and links to markets and value addition opportunities. To provide such a broad range of integrated support to family farms, RAS should:

- [1] enhance its capacities at all levels to increase relevance, performance, outreach and impact;
- [2] facilitate needs identification, priority setting, formulation and negotiation of demand by different categories of family farmers and their organizations;
- [3] respond to demand by providing high quality advisory services as requested, and/or by linking family farmers with other stakeholders who can provide the required services;
- [4] facilitate the integration of farmers' indigenous knowledge and farmer's influencing policies relevant to strengthening the family farm sector;
- [5] enhance RAS capacities to strengthen its links with all other actors in the AIS;
- [6] provide support to organizing family farmers and to strengthening their organizations;
- [7] promote approaches through increased outreach;
- [8] innovate to provide gender-sensitive RAS;
- [9] use appropriate approaches and ICTs to reach a large number of family farms and their various members; and
- [10] monitor its services and involve the clients in assessing these services and their impact.

### 6.1 *Enhance capacities at different levels to respond to the diverse needs and demands of family farms*

#### **Undertake capacity need assessment within RAS**

Perhaps the first step in enhancing the capacities of RAS to support family farmers is to make an assessment of the capacity gaps within RAS that constrain it from providing the wide-ranging support needed by family farms. This assessment should look at the qualifications and specializations of field staff, middle- and senior-level management; quality and experience of trainers; and the availability and quality of infrastructure and mobility support that the services have to support family farms. This assessment should also diagnose the nature and quality of relationships, knowledge flows, and collaboration and partnerships the RAS has with other actors in the agricultural innovation system.

Milen (2001) offer some guiding principles for assessing capacity:

- *Be realistic when assessing capacity:* In most cases, existing capacity can provide a useful starting point to design future capacity. Experience suggests that it is better to build from existing strengths rather than inventing something from scratch.

- *Capacity assessment must follow policy – but policy must be in place:* Capacity assessment should follow policy or programme goals. Therefore, the nature of the assessment needs to vary according to the nature of these goals. Furthermore, effective policy reform is often an essential prerequisite.
- *Capacity is a continuing process:* Capacity is not static, it is continually developing and changing – it is a dynamic process. It is a lengthy process requiring continuous attention and investment, and the recognition that the capacity of an individual or organization is never complete or in a steady state.
- *Involve all levels:* Initial capacity assessment activities may focus on a particular area; but it is important to find ways to involve all levels (individual, institutional, organizational, and enabling environment) at some stage.
- *Perform in stages:* Capacity assessment needs to be accomplished in stages, because the nature and detail of the process depends on the state of the organization or system.
- *Find the appropriate entry point:* Finding the most appropriate entry point for assessing capacity is critical to a successful outcome. Logical assessment should start with the big picture at the level of the enabling environment and then proceed to the lower levels. The United Nations Development Programme (UNDP) suggests that the most common entry point is at the organization level.

In the case of support to family farms, capacity could be defined as the ability of RAS to deliver effective support and service for family farms. Components of the capacity would be physical resources, such as the existence of infrastructure for carrying out extension services in the field, sufficient extension personnel with the right set of skills and knowledge, and so on. Where the entity's mandate is clear, perhaps defined by law or in a mission statement, this can be the starting point for assessing current capacity and future needs. Where the mandate is not clear, it will be harder to assess the issues and it could, in fact, represent a capacity need in its own right.

*“Professionalizing capacity building of extension agents through regular skill development programmes, including improved university education and refresher courses, must be prioritized. The potential for introduction of a certification programme for trained extension workers (both public and private sector) for quality assurance can be explored”*

Katinka Weinberger, Centre for the Alleviation of Poverty through Sustainable Agriculture (CAPSA), in (FAO, 2014d)

### **Facilitate the formulation of demand from different types of family farms**

Family farmers organized as self-help groups, interest groups, user groups or as POs are better placed to articulate their demands for RAS support, while unorganized farmers, especially the small family farms, often do not have the capacities and confidence to articulate their demands, despite their often needing much wider support, and special efforts have to be made to assess their demands for support in a participatory way. Small family farms often produce a variety of produce and in most cases are not very specialized. RAS should have the capacity to support such small family farms with advice on enhancing productivity and income from cultivation of multiple crops while reinforcing resilience at the same time, and to support them in getting organized to better define and negotiate their interests to jointly market their products, etc.



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IFAD estimates that there are 350 million small-scale farms globally among Indigenous Peoples, and that these farmers are more likely to cultivate a variety of traditional or indigenous crops and livestock (Theiss, 2013). Many of them need support to secure their rights to Indigenous Lands and promote traditional indigenous farming methods. Similarly for small-scale farmers in mountain regions, accessibility to farm inputs and other services such as roads, transport and markets, is a key issue. Moreover, mountain farmers – like mountain people in general – are often a minority in their countries in terms of numbers. They live far away from the centres of economic and political power and decision-making, and are often marginalized in political, social and economic terms. This is particularly true for communities with livelihoods and farming practices that differ from global and national mainstreams, such as shifting cultivation or pastoralism, which are both prominent and important in mountain regions (Wymann von Dach et al., 2013). RAS must be in a position to reach many of these indigenous people, ethnic communities and minority groups who need different types of support to enhance their livelihoods.

The same is the case with youth. To sustain family farms and achieve inter-generational transfer of land and productive resources, agriculture has to be attractive to rural youth. This will only be the case, if young people have sufficient access to factors of production to be able to earn a living,

particularly access to land, to capital for investments and to labour (Bryan, Rodney and Duane, 2012; Matthews, 2013; FAO and GFRAS, 2014). Young farmers often have greater capacity than their older peers for innovation, imagination, initiative and entrepreneurship to transform the agricultural sector. However, their knowledge base and skills need improvement (Box 6).

## **Box 6. Enhancing the involvement of youth in family farming**

The Technical Centre for Agricultural and Rural Cooperation (CTA), in collaboration with the African Youth Foundation (AYF) organized an e-debate on Youth Sustaining Family Farms through ICTs in October 2014. The key recommendations on youth and family farming from this debate were:

### **1. Encouraging adequate processes for transition of family farm management from elders to youth**

It is important to develop an all-inclusive approaches, where elders are integrated into the transition of a family farm. As they prepare their young ones to appreciate agriculture and take over the management of the family farm, they should be valued and encouraged. For example, if a son or daughter is going to take on a managerial role for which the family head was responsible, ensure that the elder is compensated as required and that their role is recognized if they still want to be involved on the farm. Processes for smooth transition can be encouraged and facilitated by community leaders, public authorities or national and international institutions as required.

### **2. Promote role models and success stories of youth in family farming**

Family farming should no longer be seen as subsistence farming. If young people, who are successfully engaged in business-oriented family farms that generate sufficient revenues, are portrayed as role models, other youth will be encouraged to take over the family farms, instead of making their career in other sectors.

### **3. More agribusiness training and capacity building for rural young family farmers**

Youth in family farming, especially those living in rural areas, face specific challenges. For them to be better engaged in family farming sustainably, they should have more training opportunities on farm management, agribusiness and other training tailored for them.

### **4. Strengthen capacity and involvement of young women in family farming**

As the pillar of family labour, women have to be supported with information on production and markets for decision making, to consolidate their communal role in family farming. Therefore, the capacity of rural women should be strengthened, notably in ICTs. ICTs can be used to support vocational training for some of these young women as farmers in the family. The role of women in extension and advisory services could also be boosted so that they better encourage young girls to be involved in family farming.

### **5. Strengthen policies on family farming and youth**

In many countries, youth in agriculture programmes have been put in place, but the problem lies either in their implementation or in their limited focus on family farming. It is therefore recommended that policies on family farming are strengthened and on-going monitoring, evaluation and learning activities should be included as part of these programmes, so as to identify what is not working, with corrective actions taken when necessary.

SOURCE: AYF and CTA, (2014: 9-10)

## **Assess, refine and promote technical solutions**

In contrast to the previous standard recommendations technologies, it is important to tailor technical solutions to the family farm and its characteristics, by keeping in mind that technologies are neither wealth nor gender neutral. Men and women farmers need to be informed as to what technologies are available, and what are their particular advantages and disadvantages, so that they can make an informed decision on what technologies to choose. RAS can assist the farmers in assessing the different technologies and their suitability for the farm by providing possible assessment criteria and other parameters, and other elements essential for the evaluation process and decision-making.

One of the criteria is the need to enhance resilience of the natural resource base for maintaining long-term productivity. RAS interventions should not focus merely on promoting technologies to improve short-term social and economic benefits, but should also assist in assessing, refining and promoting solutions that could conserve and enrich ecosystems and natural resources for sustainable agriculture (Box 7). Applying participatory approaches in testing technologies will go

### **Box 7. Sustainable management of natural resources through family farms: A case from Rio de Janeiro**

In 2005, the 15 000 km<sup>2</sup> north/northwestern Atlantic Forest region of Rio de Janeiro State faced major threats of deforestation and soil erosion, caused by centuries of land conversion and poor agricultural practices. Between 1990 and 2000, Rio de Janeiro had the highest rate of deforestation of all Brazilian states. Pasture degradation, soil loss, and decreasing water availability were affecting the region's 30 000 family farms, as rural poverty and out-migration increased. The Rio de Janeiro Sustainable Integrated Ecosystem Management in Productive Landscapes of the North-North-western Fluminense, a Global Environment Facility (GEF) Project, helped promote an integrated ecosystem management approach for family farmers to adopt sustainable land management practices. Farmers living within selected micro-catchments were organized and participated in developing farm diagnostic plans. They received financial incentives, training, and technical assistance to adopt innovative technical practices designed to conserve their agro-ecological assets, reduce land degradation, and improve farm productivity.

Some of the outcomes were:

*Social Capital:* By the end of 2011, 2 254 family farmers organized in 48 participatory micro-catchment councils had invested in 2 728 sub-projects, representing the adoption of over 4 000 separate conservation practices on 31 360 ha of farmland. Of these farmers, 588 organized in 87 groups implemented small-scale agro-industrial ventures producing environmentally-friendly goods and services. Women took on leadership responsibility for 245 sub-projects.

*Economic returns:* Pasture rotation, poultry and honey production investments showed average rates of return of from 26 percent to 59 percent.

*Ecological returns:* Soil structural stability improved in 48 micro-catchments, from investments in pasture rotation, soil conservation equipment, agro-forestry systems and riparian forest restoration. Carbon storage exceeded 19 000 tons by end-2011 as a result of 224 pasture rotation investments.

SOURCE: World Bank, 2013



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a long way in enhancing the credibility of RAS, especially in situations where farmers are faced with contradictory messages from different sources.

RAS providers should have a good understanding of the trade-offs involved in using different technology and policy options, and how to identify those that are effective under existing institutional and social contexts, to promote sustainable agriculture (Box 8). This will allow them to guide family farmers better in their decision-making related to farm management, technology choices, investments, etc.

### **Build on the indigenous knowledge of family farmers**

Family farmers have good indigenous knowledge related to agriculture. Farmers are constantly experimenting, adapting and innovating both to improve their farming systems and to conserve their natural resource base at the same time. Innovative farmers build on existing knowledge and share it with other members of the community. Understanding and supporting the processes of agricultural innovation and experimentation are important for enhancing sustainable productivity, which is strongly locality-specific (Scoones and Thompson, 1994). Small-scale farmers and communities have shown great capacity for introducing productive innovations based on indigenous knowledge. These innovations have included developing varieties, designing soil and water conservation methods, and introducing post-harvest and value-adding techniques (FAO, 2014b).

### **Box 8. Management Advice for Family Farms (MAFF)**

Over the past two decades, several Francophone African countries experimented with a new advisory approach. This approach known as "Management Advice for Family Farms" primarily 'awakens' marginalized producers, struggling at the edge of subsistence, to the possibilities of improving their lives by improving farm management practices: for example, better management of their crops in order to improve food security, better calibration of input use to reduce production costs, planning spending to avoid debt, and re-organizing the workforce for more efficient use. MAFF allows participants to make more informed decisions by adopting a management approach based on the diagnosis, planning, action, and evaluation of their actions.

MAFF is based on participatory methods providing (i) self-analyses to modify farmers' and advisers' representations and perceptions of the problems addressed, and (ii) decision-support tools based on technical and economic records (book-keeping) to produce new knowledge and generate learning processes. In this regard, management is perceived as a cycle consisting of different phases: analysis, forecasting, action, monitoring, adjustment and evaluation. The adviser carries out a joint analysis of results obtained by each farmer. Exchanges between farmers about their results are always encouraged through regular meetings (training, field visits, on-farm experiments, etc.), as these exchanges stimulate strong dynamics. MAFF distinguishes itself from traditional extension services, which aim primarily at transferring knowledge and new practices to farmers, notably in the field of agricultural production. However, MAFF as with many other advisory services, faces difficulties of involving a larger number of farmers (scaling-out) and of addressing the institutional and financial sustainability of advisory mechanisms (scaling-up).

SOURCE: Faure, Toillier and Ismail, 2013

Indigenous people play a unique role in the conservation of biodiversity and in the mitigation of climate change, maintaining 80 percent of the world's biodiversity within their lands and territories (World Bank, 2008). Researchers and extension workers should seek and encourage the involvement of farmers and their organizations in developing and adapting technologies to local farming conditions. RAS should have the capacity to integrate indigenous knowledge from family farms while promoting new knowledge. In other words, promoting local innovations that seem promising for both scaling up and scaling out (Box 9).

### **Enhance capacities to provide integrated support to family farmers**

Family farms in general require integrated knowledge, support and services. RAS should thus have the capacity to provide technical, organizational, managerial, entrepreneurial and marketing support to family farms (Box 10). Effective dialogue and targeted investigation in a participatory process with on-the-ground actors would, for example, help to identify barriers to rural entrepreneurship, and how to overcome them effectively (ELO and EFB, 2013).

RAS should engage all possible competencies and expertise, including farmer expertise, in order to provide a wide range of technical and functional support for family farmers. The functions of technical backstopping and facilitating innovation are important for everyone providing services, be it by an adviser, a farmer conducting farmer field schools, or management of RAS providers. RAS would need to promote partnerships among RAS providers and with other

### **Box 9. Recognizing the dynamics of Indigenous knowledge**

The Local Innovation Support Fund (LISF) is an institutional arrangement promoted by PROLINNOVA (Promoting Local Innovation), an international network in 19 countries in Africa, Asia and Latin America, that provides small-scale farmers – men and women – with the means to design, implement and evaluate their own processes of exploration and development. It supports decentralized farmer-led experiments and sharing of findings, both farmer-to-farmer and through formal extension channels. It stimulates farmers to identify how other actors – especially agricultural advisers and scientists – can support farmers' efforts to improve their farming systems.

Grants can be used for various purposes and types of innovation, including technical (e.g. improved production or processing of farm produce), organizational (e.g. creating better access to inputs, services and produce markets), and institutional (e.g. adjusting local rules for natural resource management). Grants may be used for small-scale experimentation on one's own farm, joint experimentation by farmers and other actors (extension agents, researchers, etc.), sharing experiences and results, and other learning activities. Besides generating locally relevant innovations, the LISF process is meant to strengthen farmers' individual and collective capacity to innovate and to influence formal research and extension.

Over half of the grants made available to farmers through LISF have been used for farmer's own or farmer-led joint experimentation, covering the costs directly related to the experimentation, (e.g. notebooks, measuring equipment, protective clothing) and documentation equipment and materials. The other major activities funded have been learning events, such as training of farmer innovators, farmer-to-farmer or farmer-to-researchers visits to find out about local innovations and possibilities.

SOURCE: Waters-Bayer et al., 2011

### **Box 10. Community Alliance with Family Farmers (CAFF)**

CAFF is a 35-year-old non-profit organization that advocates for California's family farms and sustainable agriculture. Over 90 percent of California's farms and ranches are family-owned; however, many struggle to stay in business. To address this urgent issue, the Community Alliance with Family Farmers works directly with their regional members and family farmers to increase the use of fresh, healthy, local food, and to help growers prosper. They run extensive, on-the-ground programmes in several regions throughout California, enabling consumers (community members and businesses) to find and choose local food, and helping farmers increase their income and sustainability. They create links between farmers and businesses, between sellers and buyers, and they provide technical support to businesses and farmers through production planning, relationship brokering, local product line development, and food safety plans. Ultimately, their goal is to strengthen family farms, which are the cornerstone of healthy and economically viable communities. By working on the ground in six focal Northern California areas, they make it easy for community members and businesses to find and choose local food, and help farmers increase their income and sustainability. CAFF activities include:

**Farm-to-Market Tools and Services:** This programme facilitates sales connections, provides marketing services, and eliminates typical barriers standing in the way of farmers bringing their products to market.

**On-farm sustainability practices:** CAFF assists farmers to increase their on-farm biodiversity by consulting them about conservation planting and integrated pest management. For example, one of their farming programmes is helping growers to learn to farm with less water.

**Policy Programme:** CAFF has been advocating for family farmers in the California legislature for over 35 years. They continue that work today by focusing on the most pressing current food policy issues, including climate change, water usage, direct marketing regulations and food safety. They focus on state and federal policies, defending the rights of family farmers, as well as educating them about new policies that affect their farms.

SOURCE: [www.caff.org](http://www.caff.org)

service agencies to provide the wide range of services needed by family farms. The various services should also constitute inter-disciplinary and inter-organizational teams to provide this wide-ranging support.

Small family farms depend on a range of non-farm activities to support their livelihoods and the RAS should have the capacity to guide them to effectively choose appropriate options and ways of enhancing their incomes through pursuing farm and non-farm vocations. All these have huge implications for capacities within RAS and the way staffing of RAS is defined and organized, as well as the types of partnerships it should cultivate. RAS would definitely need a wider expertise and hence promote pluralism in extension to support the diverse needs and demands of family farms.

## ***6.2 Strengthen links with the different actors in the AIS***

RAS are integral to the AIS. The great value of the AIS framework for RAS is that it allows the role and organization of RAS to be understood as part of a wider grouping of actors, processes, institutions and policies that are critical for innovation. RAS need to evolve their roles as a facilitating organization that connects farmers with different sets of service providers. RAS could play these roles, but only if it strengthens its links with the other actors in the AIS to play a much broader role beyond its conventional technology transfer role (Sulaiman and Hall, 2002; Rivera and Sulaiman, 2009; Davis and Heemskerk, 2012). RAS needs to bring together the complementary knowledge and



expertise (technical, institutional, policy, etc.) of the various actors to provide integrated support to family farms. It also needs to build new constituencies, if it has to influence policies. Before designing a programme and operational strategy for investment within AIS and its sub-systems, it would be better to undertake an institutional diagnosis to understand the range of organizations within the AIS, their expertise and activities, and their patterns of interaction (Sulaiman, 2012).

### **Formulating and influencing policies relevant to rural advisory services for family farms**

To realize the full potential of family farmers in eradicating hunger and ensuring food security, an enabling policy environment is necessary. This includes greater recognition of their multiple contributions, as well as an acknowledgment and reflection of these in national dialogues and policies. Family farmers and their organizations need to participate in the processes of assessing existing policies and of developing future policies so that their needs and demands are considered. Rights to land, women's rights, infrastructure, access to markets and an enabling environment for producer organizations and cooperatives should become policy priorities (FAO, 2015b).

Considering the important contributions women make in family farming, public policies should facilitate women's access to land, resources, education and credit. RAS can play a role in supporting the participation of POs and itself providing contributions to the formulation of gender-sensitive agricultural policies.

Brazil provides a compelling example of the benefits that can flow from well-designed policies. Here, the government took the strategic decision to introduce measures that directly benefit family farms (Correa da Silva, 2014). The pluralistic approach, backed by significant finance, helped to increase agricultural productivity and farm incomes (Box 11).

#### **Box 11. Policy support for family farming in Brazil**

Brazil stands out among Latin American countries for supporting family farming. In Brazil, the concept of "family farming" refers to small- and medium-sized holdings based on family labour and administration, which produce for subsistence or for the market, or both. The Ministry of Agrarian Development (MDA) reports that family farming uses approximately 25 percent of farmland in Brazil. More than four million family farms, which account for some 85 percent of all farms, represent the vast majority of farmers. With the founding of the MDA in 2000, family farms had their interests represented at the top political level for the first time. MDA also has a secretariat dealing with technical assistance and rural extension, but specifically for family agriculture, namely the Secretary of Family Agriculture. A national Law of August of 2006 establishes the criteria that define 'family farming'. The small-scale farmers who comply with the criteria can be registered as 'family farmers', which entitles them to access to credit, crop insurance, price guarantees, and other public policies and social benefits. Between 2004 and 2009, the extension budget increased from less than 50 million reais (US\$100 million) to over 250 million reais (US\$250 million). Brazilian extension and public policies now include core values such as gender, racial equality and work with youth, which were formerly overlooked.

SOURCE: Sette and Ekboir, 2013; Corrêa da Silva, 2014.

A wide range of policy measures has been pursued to support family farming in Europe (Box 12). The measures adopted by Member States to influence structural change or to support family farming include land consolidation schemes to reduce farm fragmentation by land re-parcelling and amalgamation; land market regulations to regulate land sale and price; special agricultural taxation arrangements that favour family-owned businesses such as partial or total exemption from property, inheritance taxes or social security taxes; and measures to facilitate access to farm credit or insurance. In addition, policy instruments at European level under the EU Common Agricultural Policy (CAP) influence structural change and the viability of family farms (Matthews, 2013).

### **Box 12. The Common Agricultural Policy (CAP) and family farming in Europe**

Over 97 percent of Europe's farms are family farms, including large and small, full-time and part-time farms. Supporting the family farm has been at the centre of the CAP since its introduction in 1962. CAP has two pillars. Pillar 1 is about market support measures and direct subsidies (to EU producers); and Pillar 2 is about rural development programmes. In 2013, the budget for direct farm payments (subsidies) and rural development – the twin “pillars” of the CAP –was 57.5 billion euros, out of a total EU budget of 132.8 billion euros (i.e. 43 percent of the total). Most of the CAP budget is direct payments to farmers.

Under Pillar I schemes, price support and decoupled direct payments have transferred significant funds to family farms over the decades. These subsidies have significantly boosted farm incomes and have facilitated the survival of a large number of family farms that otherwise would have been economically non-viable.

Pillar II policies have successfully supported inter-generational transfer through retirement and succession schemes, and promoted farm modernization through investment schemes. The new Pillar II places considerable emphasis on knowledge transfer and innovation.

While the funding available for the innovation and farm advisory schemes is significant, their success will be highly dependent on the level of farmer participation, implying that significant efforts will be required to encourage participation.

SOURCE: EU, 2014

Similarly, policies related to agricultural marketing can enhance profitability of family farms, through emphasizing the establishment of farmer markets, and preferential allotment of stalls or retail outlet spaces for family farmers for direct sales to consumers. Similarly, family farmers can increase their income through contract farming with agribusiness enterprises, but such arrangements need a conducive policy framework and strong negotiating power. RAS should be able to enhance its capacities to influence policies like these, if they have to fully support family farming. RAS should also enhance capacities of farmers to influence policies by organizing training programmes on policy advocacy, negotiation skills, etc., or by facilitating collective action and PO networking.

RAS providers should collect and promote evidence to recognize the contributions of family farmers in agriculture, and the need for an enabling environment to support family farming. POs also play an important role in influencing policies, and RAS could partner with POs and

enhance their skills in policy advocacy. For instance, the Kenya National Farmers' Union lobbies to promote and protect farmer interests and represents farmers on various forums. Similarly, the services provided by Zambia National Farmers Union to its members include negotiations with government on issues related to farmer interests, taxes, legislation and property rights, as well lobbying activities (GFRAS, 2015). In Senegal, the national platform of farmer organizations participated in the formulation of a new RAS policy promoting a new, pluralistic and demand-led RAS system, and negotiated for investments with donors and government. It included support to family producer organizations at community level to define their demand and to contract a service provider of their choice (Chipeta & Blum, forthcoming).

The public sector can not provide all types of RAS support for all farmers. Governments should recognize the role of the various RAS providers in a pluralistic system, involving the private sector, NGOs and POs (FAO and GFRAS, 2014). The public sector has an important role to play in ensuring coordination among the wider range of RAS providers. Furthermore, given the pluralistic system of service provision, public investments are required in non-public extension services when these services are addressing non-profitable poverty and climate change objectives (Blum and Szonyi, 2014). Capacities to promote collaboration, coordination and collective action also have to be developed within the public-sector RAS.

### **6.3 Organize family farmers as producer organizations**

*"Producers' organizations and cooperatives are of particular importance. Strong, effective and inclusive organizations can facilitate the access of family farms to markets for inputs and outputs, to technologies, and to financial services such as credit. They can serve as a vehicle for closer cooperation with national research institutes; provide extension and advisory services to their members; act as intermediaries between individual family farms and different information providers; and help small-scale farmers gain a voice in policy-making to counter the often prevailing influence of larger, more powerful interests"*

(FAO, 2014b: xv)

POs are a vital node in AIS, whether they link their members with agribusiness, research organizations, NGOs, government or other RAS providers (Box 13). POs can provide RAS for their members in diverse ways that go beyond farming practices, and include: technical agricultural advisory services; commercial advice (market access, market efficiency, market information, market outlet and prices, business negotiation); access to various financial support (subsidies, credits, etc.) and inputs; training (farming skills, capacity development, planning and decision-making, women empowerment); and various other services (transport, legal assistance, etc.) (FAO and GFRAS, 2014).

POs also have a strong role in demand formulation, articulation and negotiation (GFRAS, 2015; Chipeta and Blum, forthcoming). Based on case studies, FAO concluded that services are more relevant to the needs of farmers when farmers themselves are more involved in both defining the services and providing the services to the member. Furthermore, demand only becomes fully effective when farmers and POs are enabled to purchase their advisory services. This in turn requires

### **Box 13. Mulukanoor Women's Cooperative Dairy Society, India**

The Mulukanoor Women's Mutually Aided Milk Producers Cooperative Union Ltd (MWCD) was formed as a unique initiative for rural women engaged in the dairy sector in and around Mulukanoor, Andhra Pradesh, India. Established in August 2002, the MWCD sets an example for collective action and rural women empowerment. This was the first time that women completely managed and governed a community-based enterprise, and where the women producers were present at all stages of the value chain. It was, and continues to be, a self-sufficient and self-managed women's cooperative dairy, with the primary mission of improving the economic status of both women and men dairy producers and consumers. The underlying vision of this cooperative was to contribute more value for dairy service producers and consumers in India by 2015.

MWCD markets all its products under the brand name Swakrushi. It has played a prominent role in empowering rural women in the economic and social management spheres. By emphasizing that all women members should express their opinions, suggestions and problems at the village-level meetings as well as in the society's general body meetings, the MWCD management makes it a more participative process for them. The cooperative dairy maintains transparency in every aspect related to the milk business: milk procurement, processing, supply and accounting. Through establishing audit of their monthly income and expenditure at both the village and cooperative levels, the MWCS has installed faith among the women members of the society.

Over the past 10 years of operation, the Mulukanoor Union has grown from strength to strength. The gross surplus income has increased from Rs. 2.34 million (US\$ 39 000) in 2002–03 to Rs. 41.35 million (US\$ 689 166) in 2011–2012. As of 2012, the number of milk producers in the network had increased to 21 118, and the number of societies had grown to 109."

SOURCE: SFAC, 2013: 33–34



empowerment, including financial support to POs (Chipeta and Blum, forthcoming). Organizing family farmers into viable, efficient and inclusive rural producer organizations of all kinds, and enhancing their capacities to collectively address the challenges faced by family farms, is perhaps one of the most important contributions a RAS could make to family farms. Membership and services provision are important elements for POs to be effective, sustainable and profitable in the long term (FAO and GFRAS, 2014). POs help in balancing the economic and political power of other actors, and consolidating the voice of family farmers in order to represent them in policy-making processes (FAO, 2014c). Irrespective of how POs are created (by farmers themselves, by government or by donors) they should have independence and autonomy (FAO and GFRAS, 2014).

RAS should consider POs as partners rather than as beneficiaries, and invest in exchange and partnership with them (GFRAS, 2015). It could organize education and training programmes for rural leaders, and support the exchange of experiences among POs.

## **6.4 Increase access, outreach and impact**

Given the lack of data with regard to RAS, deliberate efforts are needed to improve the collection and analysis of data, and to generate evidences on aspects such as relevance, efficiency, quality, outreach and impact of services, in order to better define policies and strategies. Some good practices for increasing access, outreach and impact might include promoting approaches and methodologies that multiply services, e.g. by use of groups or farmer leaders; inclusive and gender-sensitive RAS; as well as enhance access to and availability of ICTs, for both farmers and RAS advisers. These are described in the following sections.

### **Promoting RAS approaches with an increased outreach**

Great effort is required to multiply RAS services by using approaches and methodologies that use groups, including farmer-to-farmer approaches, advice to farmer groups or organizations, etc., and multipliers such as farmer leaders and para-professional farmer advisers. For example, local-or community-based extension approaches characterized by the use of para-professionals are found to be an effective way to provide flexible and cost-effective services to resource-poor farmers in marginalized rural areas (Warburton et al., 2011).

Family farmers in general are an integral part of the local community or farmer groups, or both, and they have much knowledge about the local context, including the challenges they face and opportunities that are available to them to improve their livelihoods. They generally tend to respect the opinions of other members of their community. RAS should make effective use of this situation through identification of lead men and women farmers in these communities, who could be trained to promote new knowledge and skills. Lead farmers could also be used to organize farmers into groups for knowledge exchange and for accessing inputs and services. Specific lead farmers could be identified to promote technologies, act as links to markets, or to access credit for the farmer group (Box 14). Men and women farmers could be trained as facilitators of farmer field schools on various topics according to local needs for advice (FAO, 2015c). In communities with low literacy

## **Box 14. Volunteer Farmer Trainers**

The East Africa Dairy Development Project (EADD) implemented by Heifer International and funded by the Bill & Melinda Gates Foundation adopted the Volunteer Farmer Trainer (VFT) approach. The VFT approach is a form of farmer-to-farmer extension where VFTs host demonstration plots and share information on improved agricultural practices within their community. VFTs are trained by extension staff, and they, in turn, train and share information with other farmers.

EADD reaches 315 000 dairy farmers in four countries in East Africa. Some 2 000 VFTs in Uganda and Kenya have been created as a part of the EADD. The proportion of women farmer trainers in the region went up as a direct result of EADD. A study conducted by the World Agroforestry Centre and the International Livestock Research Institute highlighted:

- VFTs can be effective agents of change;
- VFTs are highly effective; they can train on an average 20 farmers per month;
- VFTs have an in-depth knowledge of local conditions, culture and practices; they live in the community, speak the same language, and instil confidence in their fellow farmers, which in part explains this good performance; and
- Female trainers were found to be as knowledgeable and effective in reaching farmers as their male counterparts, and more effective in reaching female farmers.

However, VFTs require effective back-up from more fully trained extension agents or subject-matter specialists. In Rwanda, the Ministry of Agriculture has adopted the VFT approach and has taken over supervision of 64 of the EADD project's VFTs. In Kenya, EADD is helping dairy producer organizations to coordinate and provide back-up support for VFTs.

SOURCE: IFPRI, 2014

levels, young farmers who can read and record the discussion could be motivated to act as a link between farmers and RAS providers.

Another way of increasing outreach, in terms of both quantity and quality, is to promote a multitude of service providers, such as POs, input salesmen, buyers and private advisers, to provide advice in addition to their other mandates. Pluralistic advisory services systems are crucial to address the diverse needs of family farms, which vary widely according to the quality and location of the natural resources they control, their access to physical and economic resources (e.g. credit, inputs, transportation and markets) and their knowledge and skills (FAO, 2014b). Inclusive pluralism in service delivery also requires pluralism in financing mechanisms for services and financing mechanisms promoting multiple service providers. For example, pluralistic services can be encouraged through calls for proposals or outsourcing of advisory and innovation-related services in which the various service providers can participate. Demand-side financing mechanisms, such as vouchers or other subsidies paid to the farmers and/or their organizations, possibly combined with financial participation by the users, can increase the empowerment of farmers and the relevance and effectiveness of RAS (Chipeta and Blum, forthcoming).

### **Promote inclusive and gender sensitive RAS**

The nature of demand for RAS by women and men farmers varies considerably in different types of family farms. Keeping in mind the role played by women on family farms, their skills and knowledge should be enhanced and their access to productive resources, agricultural information

and advisory services should be improved. Governments also need to consider policies that ensure women's social (reproductive, marriage, and freedom from violence) and political rights, and remove existing discriminatory laws.

Households do not act as a single unit when making decisions. It is important to understand the different roles and responsibilities of all family members (women/men, girls/boys) in the production, transformation and marketing process (FAO, 2011; IFAD, 2014). The social and cultural contexts that affect differential rights and access to and control over productive resources require particular attention when providing RAS. Collecting sex-disaggregated data, undertaking targeted research and systematic gender analysis, monitoring progress, and documenting what works where and why – all these are essential for improving understanding of gender-related constraints and priorities, and supporting women and men appropriately (Box 15).

### **Box 15. Gender and agricultural extension: Stumbling blocks and lessons learned**

Promoting gender equality has been a fundamental principle of German development policy for many years. Some of the major lessons learned are listed below, drawn from this experience with implementing extension programmes for women.

1. Anchoring gender issues in policies and programmes of governments, agricultural ministries, agricultural extension services and NGOs is a necessary prerequisite to overcome gender inequality in agricultural production.
2. Strategic partnerships between women's organizations and government institutions help to improve women's land and resource access rights.
3. Working with entire rural communities (i.e. not only women) and raising men's awareness of the benefits of gender equality for agricultural production helps to overcome resistance to the social change that gender-equitable extension might entail.
4. Via provision of professional training on gender issues, advisers can become models for gender-sensitive and participatory communication within farming communities.
5. Female extension workers are often in a better position to help female small-scale farmers adapt and adopt innovations. Incentives can help motivate women to work as agricultural advisers. Current extension workers can be role models for career plans of young girls.
6. Supporting internships for female students from agricultural colleges in extension offices and agricultural departments have proven a successful way to increase the number of women advisers.
7. There is a need to implement extension approaches and tools that consider the specific interests and opportunities of female household heads and spouses.
8. There is also a need to enhance the access of women to information on land rights, agricultural inputs, and resources such as credits and financial services. Gender-equitable extension services provide the means to do so.
9. Care should be taken to not reinforce gender stereotypes and household roles. For instance, men are not necessarily the predominant gender involved in cash crops, as great variability in control and co-operation has been found. Any effort to make extension services more gender-equitable should therefore be tailored to its specific socio-cultural setting.

SOURCE: GIZ, 2013: 3

Based on this knowledge, strategies for reducing the gender gap in agriculture could include (Petrics et al., 2015):

- avoid gender-biased selection criteria for accessing or receiving RAS (e.g. land ownership, control over income produced, minimum income and productivity levels, and client literacy);
- tailor advice, message and presentation techniques in training interventions (such as using video, images and plays) and adapt them to local context in order to overcome education and illiteracy barriers;
- introduce proactive measures to boost women's effective participation in and leadership of POs;
- affirmative action in favour of women, such as land allocations, or gender quotas when funding or supporting activities;
- train RAS staff in gender-differentiated approaches and methodologies;
- ensure that demand-led processes consider gender;
- provide gender-sensitive arrangements for extension and training services (location, time, availability of on-site childcare services, etc.);
- promote technologically adequate responses and invest in technologies that reduce women's drudgery and time constraints; and
- create a gender-sensitive organizational culture, including increasing the number of female RAS advisors, and ensure equitable working conditions.



To be able to do these, creating awareness of the roles of both women and men on family farms, understanding is needed of their common priorities and understanding of the differential distribution of workloads and roles. RAS need a participatory process for designing gender-sensitive and demand-led programmes for rural women. A unique three-stage approach was pilot tested in India for designing programmes for women, based on an analysis of baseline information, feasibility studies and a series of consultations with a range of stakeholders to achieve convergence. In this process, household-level information on women's livelihoods and aspirations are matched with opportunities for sustainable improvements, and based on the natural resource situation and quality of support and service networks available. This ensures that service providers can respond in a locally-relevant and demand-driven manner (Jafry and Sulaiman, 2013).

### Careful selection and effective use of ICT tools

ICT is increasingly improving access to information, knowledge, skills and technology for farmers and their communities, and through this improving farm productivity and ability to participate in markets, and in contributing to increased sustainability and resilience of farming systems while transforming them to meet new challenges (Maru, Bourgeois and Mayer, 2014). Enhanced access to and availability of ICTs, for farmers as well as for RAS advisors, represents a strategy to increase outreach and impact of RAS. ICTs have five broad functions (Saravanan, 2010; Saravanan et al., 2015):

- offering localized and customized information, advisory, and other services;
- helping to create, document, store, retrieve, share, and manage information;
- enabling collaboration, sharing and partnerships for innovation among RAS actors;
- enabling farmers and others to 'gain a voice'; and
- facilitating capacity development of farmers, extension professionals, and other AIS actors.

In addition, ICTs are increasingly supporting RAS and rural producers to link with other actors in the AIS. RAS should ideally have the capacity to select the appropriate ICTs and design appropriate educational programmes to support family farmers, depending on the prevailing literacy levels, computer access and mobile penetration in different regions (Saravanan et al., 2015). This bottom-up approach involves extensive discussions, conversations, and decision-making with the communities involved.

The traditional ICTs, such as radio and television, and the new ICTs, such as computer, mobile phone, tablets and the Internet, offer several new opportunities to reach family farmers (Box 16). Radios in particular have the potential to provide a voice to farmers. Community radio, for example, reaches wide audiences in remote rural areas, including those who cannot read or write, by transmitting in local languages. ICTs can enhance empowerment by also connecting farmer groups and communities with each other, and by facilitating linkages between the family farms and innovation stakeholders (e.g. RAS, service providers, research entities, private sector actors) along the value chain (Box 17).

The potential of ICT has yet to be fully exploited, as it is mostly used as a mechanism for organizing and disseminating information related to new technologies, weather and prices in different markets.

## **Box 16. ICTs for family farmers**

ICTs – especially radio and mobile phones – help millions of small-scale family farmers in developing countries to gain better access to information on technologies, weather and market prices, which can transform their livelihoods. Though computers and internet cafes also provide access to information, small family farms in general cannot afford computers or the costs of internet cafes. Moreover, many ICTs, such as television, require mains electricity to operate. Radio is an important information tool in most rural communities (Rao, 2015). If radio stations are provided with material and human resources to produce and broadcast locally-relevant programmes, its potential could be enhanced. For instance, Farm Radio International, working with more than 500 radio partners in 38 African countries, provides training services for broadcasters, including direct in-station training, distance education and custom workshops to help them meet a higher standard of farm radio services. Over the years, radio has become more interactive (e.g. through call-in features) as a medium, without becoming more expensive. Community radio (e.g. Krishi Community Radio, Bangladesh; and Krishi Radio 105 MHz, Nepal) and community video (e.g. Digital Green, Access Agriculture) have huge potential for the family farming sector as the information is delivered according to the local need and context. Community radio can play a very important role in articulating the demands of family farms and also addressing community-specific needs for information and knowledge. Listeners are often invited to call or text the programme with specific questions; thus real issues raised by the farmers themselves are discussed. The FAO 'Dimitra listeners club' uses club-owned solar-powered radio to discuss and share concrete solutions to development issues in the community. The project contributed to improving the visibility of rural populations, women in particular, by making their voices heard (FAO, 2015d).

Mobile telephony is currently emerging as an important ICT tool for family farmers as it is the easiest to use by farmers, members of the community and extension workers to connect and communicate. Where information can be shared with farmers — such as market information services, weather reporting and follow up contacts — mobile devices work well (Vignare, 2013). Mobile telephones also allow farmers to contact information sources on agriculture, such as Farmer Call Centres.

SOURCES: FAO, 2015d; Rao, 2015; Vignare, 2013.

ICT could potentially be used for training, knowledge exchange, policy advocacy and distance learning, but the evidence in these areas is very limited (Sulaiman et al., 2011). The biggest factor influencing success in working with different communication technologies seems to be a well-functioning human network. The use of ICTs can help to support this process by enabling the exchange of information and knowledge and by establishing contacts, but only human action will really change behaviour. Technology is not an end in itself, but a tool, a potentially powerful means to support the objectives, and meet the needs, of family farmers. However, equitable and affordable access to ICTs remains a challenge in many communities, as well as information and training in the most effective use of the ICT technologies (FAO, 2014a; 2015a).

RAS could effectively use ICTs to help satisfy the demand for advisory services and other services currently carried out. The information thus generated, such as the different types of queries per region, could be organized and analysed so that the services could be categorized or sectored. This would also help the RAS providers to anticipate demand and effectively organize advisory support. A central repository of advice provided would help in ensuring ease of reporting,

### **Box 17. Technologies and practices for small agricultural producers (TECA) and Virtual Extension, Research and Communication Network (VERCON)**

In 2002, FAO launched the TECA<sup>4</sup> interactive platform – Technologies and practices for small agricultural producers – that provides information on good agricultural practices, in simple and easy-to-understand language for small-scale producers. TECA is not only a database of applied and validated technologies and practices on various rural activities, but it also provides room for exchange and sharing among practitioners, from farmer associations, advisory services, NGOs, universities and the private sector, to improve their support to small-scale producers.

Similarly, another example from FAO shows the role of ICTs in enhancing the potential of family farming: VERCON<sup>5</sup> – the Virtual Extension, Research and Communication Network. VERCON is an on-line tool that establishes and strengthens linkages among agricultural research, extension, farmers and other stakeholders in agriculture and rural development. The network allows members to communicate and develop, share, store and retrieve information in order to address problems, discuss solutions and coordinate local, regional and national agricultural activities.. VERCON can be available also off-line through a combination of CD-ROM and the Internet, depending on specific situations (e.g. the reliability of the Internet connection).

SOURCES: <http://teca.fao.org/>  
<http://km.fao.org/vercon/vercon-home/en/>

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<sup>4</sup> <http://teca.fao.org/>

<sup>5</sup> <http://km.fao.org/vercon/vercon-home/en/>

monitoring of problems occurring, and of solutions which were recommended to men and women farmers or other actors.

RAS should also have the capacity to generate and promote locally-relevant content (appropriate technology, prevailing market prices, weather information, services provided by different agencies, indigenous knowledge, etc.) for its use through relevant ICTs to reach family farmers. It should also have the capability to support farmers in using ICTs, through demonstrations, training and incentivizing their use.

ICTs can improve the ability of RAS advisors to respond to farmers' needs and demands. RAS advisors should have adequate skills and expertise in using ICTs, not only for providing advisory support, but also for enhancing staff personal knowledge and expertise. This can be done through e-learning opportunities, such as open distance learning and sharing of good practices.

Finally ICTs can be used for monitoring and tracking RAS activities. Mobile devices might be used for information collection and dissemination for monitoring purposes, while telephone calls and on-line surveys might be used to receive client feedback (Siraj, 2010). Involving the clients in assessing rural advisory services and their impact is crucial in order to improve relevance of services, their effectiveness and to re-orient the advisory system based on lessons learned.



## 7. Conclusions and key messages

Family farms are likely to contribute significantly to global food production for the foreseeable future. A sustainable and secure food future relies on enhancing the capacity of family farms to do better. They also contribute to sustainable management of natural resources and are important for local economic development. However they face significant challenges in managing natural resources, enhancing productivity, adapting to climate change, linking their produce to markets, managing succession and influencing policies to protect and further their interests. As pointed out in the State of Food and Agriculture,

*“all family farmers need an enabling environment for innovation, including good governance, appropriate macro-economic conditions, transparent regulations, risk management tools and market infrastructure”*

(FAO, 2014b)

Family farms need support from all the diverse actors in the AIS dealing with generation, promotion and application of new knowledge, both for those facilitating access to inputs and outputs markets, and for those dealing with policy issues. RAS is one of the major constituencies of AIS and it could play a major role in supporting family farms to address many of these challenges, through direct provision of services, facilitating them to access different sources of support and services, organizing them as POs and enhancing their capacities to provide different types of support to family farms. However, RAS in most cases currently lack capacities to play many of these roles, and therefore their capacities to support family farms need to be enhanced.

As pointed out in the introduction, this present document draws on several sources, including the side event in Buenos Aires during the 5th GFRAS Annual Meeting, the side event in Rome during the Global Dialogue on Family Farming, and the FAO e-conference on “Tailoring rural advisory services to family farms”. The following key messages and policy recommendations are drawn from across all sources in order to support RAS in having a significant impact on family farms and rural development.

### Key messages

Family farms are the predominant type of farm worldwide, and remain responsible for the world's food security and environmental sustainability. Family farms are a very diverse group and in order for RAS to provide relevant and effective services, advice needs to be tailored to the needs and demands of these men and women farmers.

Demand-driven services require that farmers are able, or are enabled, to define and formulate their demands, and that RAS providers become accountable to their clients. Accountability can only be ensured if a pluralistic system of provision, including POs, the private sector, etc., is in place for enhanced coverage and effectiveness of the advisory services, where farmers can negotiate and pay for the services they want. Demand-driven and pluralistic RAS are critical for supporting family

farms to enhance their contributions to food production, sustainable natural resource management and local economic development.

RAS need new capacities at the individual, organizational and enabling-environment levels to fully support family farms. RAS needs to have capacities to assess demand from different types of family farms; to build on farmers' indigenous knowledge; to assess, refine and promote technological solutions; and to provide integrated support. Making an assessment of the capability gaps within RAS to support family farms could be the first step in strengthening the capacity of RAS to support family farms. GFRAS, FAO and other organizations engaged in research, education, training and policy advocacy for RAS have a major role to play in developing these new capacities.

Family farmers and their organizations also need capacities at all these three levels in order to influence policies and their enabling environment, and to strengthen their own organizational efficiency, as well as their individual capacities, such as accessing new knowledge by making better use of ICTs. Bearing in mind the role played by women in family farming, women's skills and knowledge should be enhanced and their access to productive resources and services improved. Women and other vulnerable groups must have equal access to land and inputs, and RAS must facilitate their participation in all the interventions. RAS need a consultative process for designing gender-sensitive, pro-poor and needs-led programmes. An increase in the number of women RAS advisers, together with equitable working conditions, are strategies to be taken into account when recruiting new staff.

Professionalization of family farms through RAS is essential to allow farmers to compete in markets with good quality products, to efficiently use their resources and to protect their interests, thus enhancing rural incomes and livelihoods. This includes the running of family farms as business enterprises. Market-oriented and business services require RAS to play a strong brokering and facilitation role along the value chains in order to enhance market access and farmers' positioning and to take advantage of the opportunities offered by markets. In addition, RAS providers would need to have farm management and business competencies, and promote a value chain approach to reinforce farm activities from a business point of view. In order to improve infrastructure, transportation and market access, strong support from governments is needed. To sustain family farms and achieve inter-generational transfer of land and productive resources, agriculture has to be attractive to rural youth. RAS should organize more youth-oriented training on farm management and agribusiness, and also promote successful young agri-entrepreneurs as role models.

Professionalizing family farms also includes supporting the creation of effective and inclusive POs, so that family farmers can be recognized as stakeholders in their own right and their voices heard and considered in policy-making. Supporting and facilitating the formation of viable and efficient rural POs and enhancing their capacities to collectively address the challenges faced by family farms is perhaps the most important contribution the RAS could make to the family farm sector. RAS also need capacities to organize and network POs so that the POs, in collaboration with RAS, can facilitate provision of a broad spectrum of integrated support for family farms, including influencing policies that are relevant for strengthening family farming.

RAS need to be better linked to all the actors in the AIS if it has to support family farms in addressing the wide range of challenges they are facing. RAS has to expand its mandate from "technology transfer" to "enabler of innovation processes". As policies play a major role in

ensuring sustainability and success of family farms, RAS should be in a position to influence the policy process to protect the interest of family farms and reinforce the position of farmers and their organizations in the AIS. Governments could play a major role in strengthening the capacity of RAS to play a brokering role among the wide range of actors in the AIS, and also in ensuring coordination of RAS interventions by the different actors. A supportive and well-coordinated AIS with a clearly defined institutional framework should be in place that includes both the public and the private sectors. Such an AIS needs a favourable economic environment that support innovations and investments.

Special efforts are needed to enhance the outreach and impact of RAS. RAS should promote approaches and methodologies that multiply services such as groups and farmer-to-farmer approaches and involve a multitude of public and private service providers – elements crucial to addressing the diverse needs of family farms.

Inclusive pluralism in services requires also pluralism in financing mechanisms so that multiple service providers can emerge. Financial support is not only needed for the supply side, i.e. for RAS providers, but also for the demand side, hence for POs in which family farms are organized. Demand-side financing mechanisms which support the process of defining their demand, of negotiating the services they want and of enabling them to pay for these services, can increase the relevance and the effectiveness of the services as well as enhance farmer empowerment.

ICT offers new opportunities for RAS to enhance its linkages with the various actors in the AIS, and also to reach a much greater number of family farms. In addition, ICT can provide direct access for farmers to knowledge, and opportunities for sharing experiences and learning from each other. This potential of ICT needs to be fully exploited by promoting equitable and affordable access to ICT, as well as information and training on the effective use of these ICTs.

This involves understanding the cultural, economic and social landscapes in which ICTs are operating, and applying them directly in developing and using communication systems. Every development programme should place priority on participatory approaches, which serve to ensure the ownership and commitment of the different stakeholders. In particular consider the active involvement of family farmers and their organizations in accessing ICTs, providing and exchanging their knowledge, and in using the knowledge made available.

Finally, much more effort is needed to generate data and evidence on the coverage and impact of RAS, which also affects the quality of the monitoring and evaluation processes needed. Reliable baseline data on extension and investment are, in fact, often not available, or are incomplete. Monitoring and evaluation should be used by policy-makers and all RAS providers as a management tool in order to inform in general and to support more evidence-based decision-making on RAS. Given the pluralistic nature of the service, all RAS providers should contribute to overcoming this information shortfall. This requires a joint effort and a long-term commitment that will also include financial commitment by governments, development agencies and donors, in line with the overall RAS policy of the country.



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Most farms worldwide are family farms and they produce about 80 percent of the world's food in value terms. The majority of family farms are smallholdings that face many challenges, but their contribution to sustainable intensification of agriculture and to poverty eradication is crucial for achieving the Sustainable Development Goals.

This document has been developed based on many consultations (workshops, e-discussions, interviews, expert contributions) and literature reviews by FAO and GFRAS. It describes briefly the diversity of family farms, as well as the roles played by rural advisory services (RAS) in enhancing these farms. Constraints on RAS' ability to respond to the diverse needs and demands of family farms and to provide relevant good quality advice in an efficient, effective and sustainable way are outlined. Experiences and solutions are then presented for addressing these limitations. Finally, conclusions and key messages are formulated for policy and action for tailoring RAS to family farms.

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO)**  
[www.fao.org/research-and-extension/en/](http://www.fao.org/research-and-extension/en/)

ISBN 978-92-5-109257-6

A standard linear barcode representing the ISBN number 9789251092576.

9 789251 092576

I5704E/1/06.16