

Building Knowledge Systems in Agriculture

Five Key Areas for Mobilising the Potential
of Extension and Advisory Services



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There are three dimensions to sustainable development: social, economic, and environmental. Knowledge sharing is critical to supporting these dimensions, and extension and advisory services are a vital knowledge-sharing institution. Extension is key for linking scientific research, field-level innovations and innovators, markets, education, and other service providers.

Introduction

Extension and rural advisory services (RAS) are crucial to putting farmers' needs at the centre of rural development, ensuring sustainable food security and poverty reduction, and dealing with risks and uncertainty. Knowledge-sharing mechanisms must focus on critical areas including protecting natural resources, productive farming processes, product development, marketing skills, nutritional needs, and household health.

There is renewed attention on the importance of advisory services and extension in rural development processes. This paper, based on the publication 'Mobilizing the potential of rural and agricultural extension',¹ focuses on five opportunities to mobilise the potential of extension and advisory services.

The five areas are: (1) focusing on best-fit approaches; (2) embracing pluralism; (3) using participatory approaches; (4) developing capacity; and (5) ensuring long-term institutional support.

Improving institutional capacity in extension for better knowledge sharing will help us to achieve the Millennium Development Goals (MDGs) and any future Sustainable Development Goals. As stated in MDG1, cutting hunger is the top social priority. By ensuring that farmers have information, skills, markets, technologies, and other services, extension and advisory services can improve the quality, diversity, volume, and accessibility of food to tackle hunger and malnutrition. Extension outreach to families in the form of educating for nutrition, developing skills for preparing food, and promoting health will also help mitigate the impact of hunger and malnutrition in communities.

MDG1 also aims to reduce poverty. As one half the world's poor are smallholder farmers, extension services that provide information, training, linkages for marketing, price discovery, and economic skills provide a mechanism to break the poverty cycle. There is a further role for extension outreach to individuals and families by providing information and training on family financial planning, and identifying and developing local handicrafts and products to market and sell, that will also help to alleviate poverty. Extension also plays a key role in sharing information to further environmental sustainability – including limiting deforestation, fostering biodiversity, and protecting water.

Knowledge sharing is critical for sustainable development. **More and better agricultural extension and advisory services are a legacy outcome that allows knowledge-based infrastructure to adapt to changes in agriculture.** Whether it is better meeting of nutritional needs, promoting health and financial security, improving the efficiency of water use, reducing land use, or any of the other competing demands on farming services, they are best met through improved practices based on knowledge.

¹ Christoplos, I. 2010. *Mobilizing the potential of rural and agricultural extension*. Food and Agriculture Organization (FAO) of the United Nations Office of Knowledge Exchange, Research and Extension, and Global Forum for Rural Advisory Services (GFRAS). Rome: FAO.



Eric McGaw/FARA

Extension's role in agricultural innovation systems

Rural advisory services, also called extension services, are the different activities that provide the information and services needed by farmers, their families, and other stakeholders in rural settings. They help them develop their own technical, organisational, and management skills and practices to improve their livelihoods and well-being.

Extension plays a critical connecting role in food and agricultural innovation systems. RAS help local communities to meet their needs and link them to scientific research and input and output markets. For example, extension helps them to respond to expected climatic changes, environmental degradation, and market volatility. The role of extension goes far beyond technical and production functions, and includes the whole social and cultural milieu. Extension is, simply put, action with others.²

Extension/advisory services connect science to users in a healthy relationship that not only provides reliable, honest, and timely information to farmers, processors, marketers, and community members, but also gives solid feedback to scientists and researchers about users' own innovations, insights, problems encountered, and opportunities uncovered.

2 Procisur. 2012. Rol de la asistencia técnica y la extensión rural en la gestión de innovaciones. Montevideo: Procisur.

1 Best-fit approaches to extension and advisory services

Extension and advisory services are increasingly recognised as essential to ensuring that applied research is demand-driven, to help farmers deal with risk and uncertainty, to develop individual and organisational capacity, and to broker links to a range of services and markets.

While policy makers and planners are increasingly looking for 'quick-fix' approaches that can be easily implemented and scaled up, a 'one-size-fits-all' approach to sustainable RAS programmes will not work. Extension investments must take into account the diversity found in rural areas, where governance, levels of capacity, farming systems, environmental changes, market opportunities, and many other factors differ. These variables must be considered when designing policies, approaches, programmes, and institutions. Most importantly, there is a need to apply the lessons learned from past failures where attempts to introduce rigid models failed to recognise these contextual factors. Rapid and unpredictable changes in markets and climate, and the diverse ways that these changes impact different target groups, mean that effective and sustainable RAS cannot be based on fixed advisory packages using a single method.

Some RAS stakeholders have promoted the concept of 'best-fit' approaches as a way to transcend the problems of the past. Best-fit embraces pluralism of approaches and service providers. Best-fit solutions to RAS design are based on local conditions, including governance structures, capacity, organisation and management, and methods. They value local and traditional knowledge, as well as research and good practices. Such approaches should also fit the overall agricultural innovation system.

The focus on best-fit approaches is an opportunity to shape services that are relevant and demand-driven, and to make RAS flexible enough to deal with current and future rural development issues and emerging crises. This implies that policy makers and programme planners must be willing to invest the time and effort into moulding approaches to fit unique situations.



Pluralism in advisory service provision

A recent assessment of global extension systems has shown that many different types of advisory service providers and approaches exist.³ Such pluralism is appropriate, given the diversity of rural life and needs. Various service providers are more or less effective at reaching different types of clientele. Two basic categories of providers are the public/government and non-state actors, the latter including farmer organisations, non-governmental organisations (NGOs), and private companies and individuals. While public RAS provision has played a major role in development, private companies, NGOs, and farmer organisations are becoming more important today, often through synergies with other types of service providers involved with other sectors.

Public rural advisory services need to play a coordinating, technical backstopping, and quality assurance role within pluralistic systems. In many countries they ensure that national development objectives, such as poverty reduction, are reflected in the provision of 'public goods' services. They offer more impartial advice than private actors and often deal with issues related to sustainable natural resource management, family financial management, nutrition and health promotion, and family well-being. Public providers are critical to reaching disadvantaged groups, dealing with national food security, providing objective information, and enabling farmers to deal better with risk.

Farmer organisations have a key role to play. For instance, farmer organisations focused on commodities provide advisory services related to the commodity along the entire value chain. Farmer organisations are often the most sustainable type of service provider since they are owned by the main users of RAS.

Non-governmental organisations tend to use flexible and cost-effective techniques, are often focused on the grassroots level, and are usually driven by values related to social welfare, gender equity, and environmental sustainability. NGOs often pride themselves on methods that are participatory, demand-driven, and client-centred.

Private companies, cooperatives, and individuals providing advisory services usually help clientele working with high-value

³ Joint study by IFPRI, FAO, IICA, GFRAS. See www.worldwide-extension.org



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products and relatively well-off producers. Input suppliers are increasingly providing information about new varieties and planting methods to all kinds of producers. While private providers are not likely to reach millions of poor farmers, and may be prone to gender and product biases, they are important in providing inputs and linking producers to markets, thus increasing incomes.

Institutional pluralism through different service providers must be matched by pluralism in financial flows if RAS are to be broadly accessible. Private investment will not address the needs of all rural producers. Public agencies must have clear and steadfast commitments from ministries, and in some cases local government, to shoulder their mandated tasks effectively. Hence, targeted public investments in RAS will remain crucial, even when services are carried out by non-state providers, some of which may be better at reaching poor farmers than the public sector if appropriate incentives, such as subsidies, are in place.

Pluralism in advisory services provides the opportunity to capitalise on the comparative advantages of different types of providers. However, coordination of such providers is challenging, particularly in ensuring that vulnerable sectors of the farming population have access to services, and avoiding duplication of efforts. Public financial support, appropriate policies, technical backstopping, and coordination are needed. Governments must ensure that the needs of disadvantaged groups are met. They may be central in quality assurance and coordination of advisory services.



Participation and ensuring accountability to local clients

There are increasing calls for 'demand-driven' and 'farmer-led' rural advisory services using participatory approaches. These approaches can promote downward accountability if they are anchored in bottom-up planning, monitoring, and evaluation. A challenge here is the limited capacity of many service providers, especially farmer organisations and their higher-level federations, to plan and monitor RAS.

When promoting participation and accountability, it is important to think critically about who participates and who is accountable to whom. Gender, age, and ethnic differences can result in inequitable services even when ostensibly participatory approaches are used. Policy makers, planners and field-level programme staff must ask hard questions about whose demands are being served. Women are central to agri-food systems. Different ethnic groups have unique links and obstacles to reaching different markets. Agriculture is seen as unrewarding by many young people. Climate change is already having severe impacts on people living in 'hot spots' where extreme climate events are becoming more common. All stakeholder groups need a voice in national fora where rural and agricultural issues are discussed.

Farmer organisations are obviously one of the most effective ways to make RAS more accountable. Decentralisation, if well planned, can also increase accountability to rural people through subsidiarity – placing responsibility for activities at the frontline where extension agents and farmers meet. The ways RAS are financed can be a means of holding providers accountable for the quality of their services. When the client pays (perhaps with public financial support), service providers are incentivised to attend more to clients to ensure their own economic survival.

Accountability to rural people also means knowing whether a programme or organisational innovation actually worked or not, and taking action to respond to challenges. Much is still unknown about the effectiveness of RAS approaches. Better ways must be found to measure and document the effectiveness of extension.⁴ We need more and better evaluations, providing a deeper understanding of the complex relations and multiple accountabilities that exist between advisory services, their clients and other stakeholder institutions, such as local government, private investors, researchers, and farmer organisations. Better evaluation, embedded within extension outreach programming, will enable extension to become even more relevant and effective for rural people in meeting their goals.



⁴ Christoplos, I., Sandison, P. and Chipeta, S. 2012. *Guide to evaluating rural extension*. Lindau, Switzerland: GFRAS.

4 Capacity development

Human resources are a fundamental bottleneck to effective RAS given the new challenges facing rural development. Lack of interest in agriculture, stagnation in funding and a brain drain have brought agricultural education to a point of near collapse in several regions. New challenges are emerging: the capacity to undertake participatory approaches, understand markets, and address new forms of climatic, social, and economic vulnerability. However, in many parts of the world the skills of extension agents and the capacities of their organisations are declining.

Capacity can be defined as a human system's ability to produce results, sustain itself, and self-renew.⁵ Human resource development does not include just basic education but also continuing education and on-the-job training. Capacity is needed not only at the individual level but also at organisational and system level among public, private, and civil society stakeholders.

Individual. Effective advice is no longer a matter of simply providing messages about set technological packages. Skill sets need to shift from technical approaches to include capacities to manage organisational and social processes. Advisors thus need skills in building social capital, facilitating discussions, and coaching stakeholders in broad areas of food and agricultural extension. These include renewable natural resource management, nutritional sciences, food safety, health promotion, consumer sciences, physical and social sciences, as well as collaborating in market supply chains. They need the ability to shift from lecturing to empowering clientele to deal with uncertainties and variability such as climate change and market trends. These tasks require professional skills in critical thinking, problem solving, and organisational development and negotiation. In many cases, they can also be furthered by focusing on farmer-to-farmer training, and particularly woman-to-woman training.

There is a long list of capacities needed that cannot be found in one person; thus many advisors should be well-qualified generalists with a diverse combination of soft skills and a multi-disciplinary agricultural background so that they can broker access to other forms of technical support as needed. There is a need to identify the key skills and most appropriate methods for developing the 'new extension advisor' who can operate capably in a complex system. These new competencies should be integrated into extension training curricula.

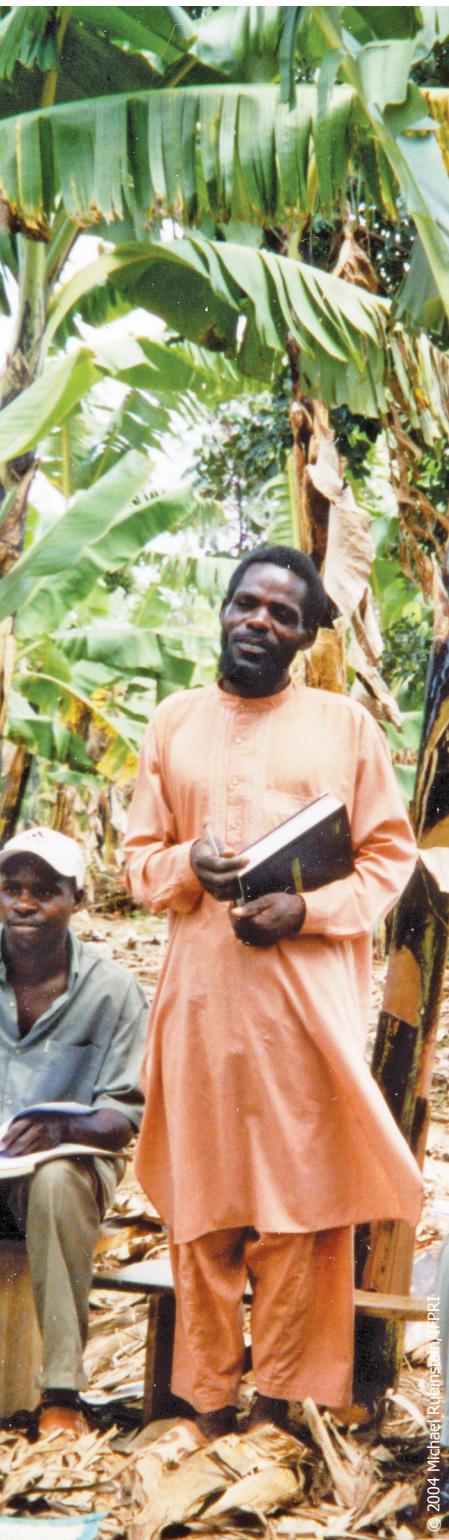
The methods used to impart capacities are important. Certain skills require practical exposure and experiential learning, and innovation management must be 'learned by doing'. Extension should therefore engage in partnerships with health and education to develop appropriate methods and curricula, and to identify the respective roles of each institution.

In addition to skills needed by extension advisors, other actors within the agricultural system need advisory skills for greater impact, including the media, researchers, planners, extension managers, and policy makers. And of course farmers need capacity to work through their organisations to demand, plan, monitor, and evaluate extension and advisory services and research. Farmers and other rural actors need technical and management skills, plus the ability to operate in groups, use ICTs effectively, and analyse market opportunities.

Organisational. Extension organisations need to be capable of managing innovation, coordination, alliance building, mediation, management, and facilitation. Organisations must be able to develop performance

⁵ Ubel, J., Acquaye-Baddoo, N-A. and Fowler, A. (Eds). 2010. *Capacity Development in Practice*. London: Earthscan.





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management systems with clear goals and accountability to clientele. Extension organisations need systems through which they can mobilise an array of specialists to backstop generalists in the field. Given decentralisation, local governments also need better capacities to manage their growing relationship with RAS.

The traditional roles of universities and academic researchers who are working in agricultural innovation need to change to reflect their new relations with extension outreach efforts. Some efforts are being made to invest in agricultural education, particularly in curriculum adjustments at the tertiary level. This should also lead to more effective human resource development throughout the agricultural innovation system.

System. The overall agricultural knowledge and information system needs to change if extension is to operate effectively. The main gaps at the system level include institutional procedures, processes, and governance to make systems work. Many different actors provide advisory services, not just the 'typical' extension agency, but this is not yet reflected in the prevailing institutional landscape in many countries.

Capacities are needed within the system to create feedback loops and get information and innovations to farmers, and also from farmers to research and extension. Systems need to encourage a readiness to communicate scientific findings and learn from local knowledge. Researchers and university staff play an important role here. This requires the ability to form new kinds of partnerships. Links to policy and decision makers to ensure long-term institutional support are also critical, which in turn requires that policy makers understand extension's role in an agricultural innovation systems.

Capacities to manage change. Resilience and risk management are critical competencies that must be developed at all levels. Smallholders, in particular, have few resources to risk changing practices and need specific help to use new techniques on their farms. To help farmers, extension programs should consider insurance and related risk management programs. The facilitation and brokerage skills of extension can be applied to bring together local actors to negotiate, cooperate, and build trust for sustainable use of both household and common natural resources (e.g., water, grazing, and non-timber forest products). Extension can contribute to community and household food security and reduce climate risk through the maintenance of biodiversity. Extension can also help manage the conflicts that are likely to intensify in the wake of global demographic and environmental change.

For capacity development, public financial support is needed. Plans for RAS must reflect the current human resource crisis and include concerted and sustainable investment strategies to address it. Such fiscal priorities are required to equip advisors, other rural development actors, their organisations, and systems with the appropriate capacities to deal with the ever-changing and complex arena in which they operate.

Ensuring long-term institutional support: Beyond projects to institutions

Sustainable rural advisory services need government commitment and effective forms of financing. RAS projects have shown that the injection of project resources can mobilise service provision for a short period of time, but that the sustainability of these projects has generally been poor. Additional temporary resources may be needed for particular campaigns or for dealing with temporary problems (such as responding to a drought). All too often, however, these high-profile 'quick impact' investments have distracted attention from the need to strengthen the institutions that will carry out future programmes. Pressure to address the food security crisis and respond to climate change have meant that RAS are still often supported as a temporary component of broader projects addressing various themes. If this is to be avoided, project support must be balanced with systematic, foundational funding and institutional approaches to reforming and strengthening pluralistic RAS systems.

Political will is key to long-term institutional support. Extension has both waxed and waned on the political agenda. A decade ago, public extension was proclaimed dead in Latin America; today there are vibrant programmes and important policies promoting and implementing extension (e.g. Brazil, Argentina, Bolivia, and Mexico). India and Ethiopia are putting huge resources into human and physical capital in their public extension systems. Kenya, Malawi, Nigeria, South Africa, and Caribbean and Pacific nations have enacted policies on extension.

The changing technological landscape, including the spread of the Internet and mobile phones, has shown the potential for enhancing access to information about markets, weather, and technological options, and improving communication among stakeholders. This has often been heralded as yet another 'silver bullet' for sustainability. These technologies are expected to provide a way of avoiding the problems of bloated bureaucracies and high recurrent costs. To some extent this may prove true, but even these new ways of accessing information need to be anchored in an understanding of the need for a stable, institutionalised extension infrastructure for farmers and their families that will continue to remain in existence for their information, training, and support. A weather forecast is important, but may only be useful if the farmer can discuss the implications of that forecast for what to plant, how to plant it, what the market is for the new variety, and how to reach those new markets.

The opportunity is to ensure that the new concepts, approaches, and methods discussed here are integrated within the work of existing institutions and organisations. As mentioned above, project support must be balanced with foundational funding and with systematic, institutional approaches to reform and strengthen pluralistic systems, built on the three dimensions of sustainability.





Conclusion

While we have learned valuable lessons from past efforts, there is still much to be done in improving extension to ensure sustainable reduction of hunger and poverty. Though more knowledge is needed on the relative effectiveness of various approaches in addressing different needs, demands, and capacity constraints, it is clear that RAS forms an essential knowledge-sharing institution within rural development. We can mobilise the potential of RAS by focusing on these five areas: best-fit approaches, pluralism, participatory approaches, capacity development, and long-term institutional support. These will enable RAS to contribute effectively to sustainable rural development and the alleviation of hunger and poverty.

For further reading

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- Technical Centre for Agricultural and Rural Cooperation ACP-EU (CTA). In press. *Innovations in extension and advisory services: capacity building.* Proceedings of the international conference on innovations in extension and advisory services, 15–18 November 2011, Nairobi.



Zoohar/christiw

GFRAS is the Global Forum for Rural Advisory Services. GFRAS is made up of various stakeholders worldwide who have an interest and role in rural advisory services (RAS). The mission of this forum is to provide advocacy and leadership by RAS stakeholders on pluralistic, demand-driven advisory services. The vision is to promote sustainable growth and reduce poverty. GFRAS and its partners have developed this position paper to focus attention on the need to revitalise knowledge systems in agriculture, with a particular emphasis on extension and advisory services.

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