

Building an effective RAS/EAS model for smallholders: Emerging issues and the four cornerstones of sustainability

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Abstract

Rural advisory services/extension and advisory services (RAS/EAS) models are influenced by a number of factors and emerging issues that can determine best practices in the development of extension policy. These emerging issues are extremely valuable in creating RAS/EAS policy and must be considered in the development of innovative extension models. They include: participatory, farmer-led decision-making; privately-led extension and public-private partnerships; gender equality; ICT and mass extension; value chain marketing; and building partnerships.

Four policy cornerstones should also be addressed in efforts to build an effective RAS/EAS model for sustainable development. These cornerstones include capacity building and technical assistance to support the following extension policy areas: land tenure and information reform; access to credit for smallholders; innovative technical subject matter training, demonstration plots and farmer to farmer Extension; and, development of social capital to encourage the growth of farmer organisations.

Introduction

Success in building effective rural advisory services (RAS)/extension and advisory services (EAS) models that sustain smallholders in developing countries depends on each government's ability and willingness to define the appropriate RAS model in a participatory partnership with farmers and their organisations and the other private and public institutions and organisations that help farmers and their families achieve growth and development (Swanson and Samy, 2002). The circumstances and level of development of farming will determine which areas of emphasis a RAS model should include in order to serve the smallholders in a particular country. There are a number of emerging issues that must be analysed, with broad-based feedback loops that reach beyond ministers and prominent stakeholders to include the voices of extension staff in the field and,

most importantly, smallholder producers, to guide the establishment of a sustainable RAS/EAS model (Birkhauser et al., 1991). In addition, there are four basic cornerstones that are vital to the development of a comprehensive and sustainable RAS/EAS model.

The following issues are essential in assessing any RAS/EAS model that serves smallholders: participatory decision-making that is farmer-led, administratively flat and field staff-oriented; gender equality and nutrition awareness for the food insecure, primarily women smallholders; ICT innovation platforms and multi-media driven mass extension; value chain markets; public-private partnerships and pluralistic extension; and partnerships and cooperation among donors and recipients of aid with stronger linkages between innovators and researchers affiliated with international and national universities and agricultural ministry research experts, and

extension field-based professionals and lead farmers. These issues are not new to RAS/EAS staff and smallholders, but they have recently begun to receive greater emphasis and international interest. Each deserves a stand-alone policy critique and, collectively, their importance to developing effective RAS/EAS policies cannot be overstated. They provide a context and set of directions that extension models must follow to support the critical challenges facing smallholders.

There are also other important issues, such as climate change and the conservation of natural resources, that should not be ignored, but the capacity of extension services to address them successfully requires the effective involvement of the scientific community. Youth development, post-conflict recovery and the needs of landless farmers are also critical social issues that, while not addressed in this paper, may also be important to consider in specific circumstances when developing a RAS/EAS model.

Four areas of action serve as the cornerstones for any sustainable RAS/EAS model capable of lifting farmers out of poverty. Extension policy-makers may shy away from these elements, considering them to be too difficult to tackle, the responsibility of other public or private sector actors and/or beyond the expertise and programming scope of EAS. Nevertheless, the best practices of RAS/EAS providers most often include capacity-building and technical assistance for smallholders in these four areas: land tenure and information reform policy; access to credit for agriculture and livestock production; field-based training for evidence-based, best agricultural practices that are appropriate to the smallholders' environment; the development of social capital and the capacity to build strong farmer organisations that unite the efforts of smallholders to produce and market value-added agricultural commodities.

Traditionally, RAS/EAS models in developing countries, especially in countries that have received donor assistance, have not usually tackled these fundamental cornerstones for development in a comprehensive way. Likewise, donors and their implementers have rarely assessed the effectiveness of RAS/EAS models in addressing the issues listed above in a participatory manner with smallholders and their advocate organisations. To do so

would require networks of partnerships with the often competitive donor organisations that support RAS/EAS development, as well as the establishment of shared and common interests among donors working together and with their grantee organisations.

The structure of these donor assistance arrangements might be better served by more flexible cooperative agreements that encourage the sharing of information and resources, rather than contractually-driven donor projects, which tend to be silos of development with little cooperation between donors and nonresponsive to the leadership of their host countries. As has been suggested by international best practices EAS/RAS models, sustainable development should be supported by international nongovernmental organisations (INGOs) that promote an entrepreneurial and innovative spirit that is flexible, less structured, and better able to respond to challenges and constraints of smallholders in a participatory process.

Recent history of donor support for RAS/EAS models

A growing number of international donor organisations, national governments, private sector partners, international NGOs, and regional funding coalitions are supporting the development of RAS/EAS models and programmes, with a significant concentration in some of the poorest and least-developed countries in the world (Cristoplos, 2010). Programmes of assistance for smallholders are conducted by public and private sector RAS/EAS organisations, often heavily subsidised by significant donor resources, which are distributed to government ministries, research centers and universities. Often, geopolitically-strategic countries are targeted for donor assistance to bring stability to rural areas after conflict, a natural disaster, or a public health epidemic.

The United Nations and the European Union have increasingly made resources available to smallholders, as have the United States, European countries, China, Brazil, and Israel. U.S. assistance in this area has focused on 'Feed the Future', a programme targeting smallholders in countries with large rural populations living in poverty, malnutrition, and food insecurity. Many of these assistance programmes are managed by in-country missions as well as the country offices of implementing organisations such as the Food

and Agriculture Organization of the United Nations (FAO), the European Neighborhood for Agriculture and Rural Development (ENPARD), and the United Nations Development Programme (UNDP).

While assistance from international donors is almost always welcomed by the recipient countries, the issue of how to coordinate donor resources and the roles of the governments and organisations in these recipient countries in leading their own development has become recognised as vital for the success of a coordinated approach where host country leadership drives development programmes (Paris Declaration on Aid Effectiveness, 2005). Competition among donors is valuable if it can increase the impact of international development aid. However, a development climate in which donors and programme implementers coordinate their actions and build partnerships with local, regional, and national stakeholders is even more important (The Busan Partnership, 2011). The key takeaway from international summits that took place in Paris, Busan and Accra reinforce the point that the most important elements for success are international donor partnerships driven by the leadership of the recipient countries. These partnerships should be better able to demonstrate measurable impacts of INGO projects on development, especially among smallholders in at-risk and food-insecure countries (Accra Agenda for Action, 2008).

Evaluations by FAO of the E.U.'s ENPARD project focused on smallholders in the independent province of Ajara concluded that there has been significant progress in the development of the Georgia Ministry of Agriculture (GE MOA's) extension and advisory services, especially for smallholders. The University of Illinois-led, USAID-supported project, 'Modernizing Extension and Advisory Services (MEAS)' has documented the improved quality of RAS/EAS organisations in many of the countries where MEAS has been implemented. The global impact of the USAID programme, Feed the Future, demonstrates that smallholder farmers in the poorest countries can make progress with the proper support. At the same time, a significant number of international aid investments do not lead to sustainable development (The Economist, June 11, 2016). Once international funding ends, countries often find it difficult to support ongoing programmes of EAS/RAS organisations.

Despite the checkered track record of global donor assistance programmes, there are indications that governments and donor organisations have prioritised support for the efforts of RAS/EAS organisations to strengthen smallholder production. The Global Food Security (GFS) Act of 2016, which President Obama signed in July, 2016 before attending the GFS Summit, asserted that it is in the long-term national security interest of the United States to accelerate growth that reduces poverty, hunger, and malnutrition (Global Food Security Act, U.S. Congress, 2015-2016). Similarly, the United Nations General Assembly recently approved the Sustainable Development Goals, which include "zero hunger" (Goal 2) and "sustainable production and consumption systems" (Goal 12). These goals explicitly call for strengthening extension and advisory services as an instrument for development (United Nations, 2015).

Emerging issues for RAS/EAS models

During this decade, international assistance institutions, donor countries, and private foundations have increased their support for issues that are most relevant for poor smallholders. Some of these issues are highlighted below, in no particular order. Other issues that are not highlighted in this paper, such as climate change and the management of natural resources; development programmes for youth and rural entrepreneurs; and, social programmes for post-conflict populations and landless farmers, could also be important, depending upon the unique circumstances of each community and region. However, the following issues have implications for nearly all RAS/EAS models.

Participatory, farmer-led decision-making

When best practices are made available to countries or regions that are struggling to address poverty and food security through extension services, decisions on how to implement such services should be participatory, involving field-based extension staff, leaders of rural communities, and local farmer organisations. In Georgia, a University of Illinois-led activity supported by USAID, 'Strengthening Extension and Advisory Services in Georgia (SEAS)' held a national extension forum, which brought together a large audience of farmers, extension professionals, and other stakeholders to discuss the results of a SEAS action research

project conducted in partnership with the GE MOA to ask farmers and stakeholders how to improve the policy and programmes of the extension and advisory services of the GE MOA (Mueller and Baramidze, 2016). Donors and implementers of the UNDP and ENPARD projects, in partnership with the GE MOA and SEAS, organised national meetings with farmers and other stakeholders to discuss the best practices of European RAS/EAS models and to consider with farmers how to improve their model of extension and advisory services.

MEAS conducted a similar extension action research project to receive feedback from farmers on how to improve extension policy in Liberia (Sigman and Gbokie, 2013). The Global Forum for Rural Advisory Services (GFRAS) and its associated regional organisations have long carried out similar EAS/RAS policy development activities around the globe using the GFRAS model of country fora (www.g-fras.org).

Privately-led extension and public-private partnerships

Once the RAS/EAS model has sufficiently developed to enable smallholders and their organisations to expand and improve their production and postharvest capabilities, the inclusion of private sector partners often leads to the development of value chain markets. Public-private partnerships (PPPs) may enhance the participation of smallholders in value chain markets by promoting a better understanding of how global changes in food value chains affect farmers in developing countries, particularly given the decline in public support for small farms (Gómez et al., 2011). A case study of apple growers in Italy demonstrates how public-private involvement with producers in creating RAS/EAS models can lead to innovative results (de Meyer, 2014). There are notable examples of private sector corporations and social entrepreneurship companies that are in the forefront of developing RAS/EAS models that not only lead to improved markets and farming incomes, but also lift farmers out of subsistence farming to become consumers of the products of these companies and active participants in local economies (Gómez et al., 2016).

Gender equality and nutrition awareness

The increasing influence of women as leaders at all levels of international development, as well as in RAS/EAS organisations and smallholder groups and cooperatives, demonstrates a

climate for growth in gender/social equality, which has significant potential for effective EAS model-building (Manfre et al., 2013). A good example is 'Integrating Gender and Nutrition within the Agricultural Extension Services (INGENAES)', a USAID-supported project led by the University of Illinois, which was designed to assist partners in Feed the Future countries build more robust, gender-responsive, and nutrition-sensitive institutions, projects, and programmes to assess and respond to the needs of both men and women farmers through RAS/EAS (<https://agrilinks.org/ingenaes>). Promoting agricultural innovations – especially among women farmers – and increasing their awareness of nutrition implications for their children and families may also lead to increased food security and support the development of gender equality as an extension policy.

ICT and mass extension

Information technology, information and computer technology, and mass extension hold out exciting possibilities for innovating the transfer of best practices and capacity development to smallholders and extensionists. The potential to teach and learn, record experiences, and develop e-learning tools is growing exponentially as new technologies emerge and countries invest in their IT infrastructures.

Countries, regions, and local populations may differ in their media of choice. An example of the scale of ICT and media usage in Colombia can be seen in the Extension Service of the National Federation of Coffee Producers. Colombia's ICT and mass extension efforts reach isolated, indigenous farming tribes without electricity, who use a single battery-operated radio to receive extension meeting notices and radio programmes, as well as extension professionals and coffee farmers armed with laptops, tablets, and smart phones (Gómez et al., 2013).

Value chain marketing

A key element of the emerging issues and opportunities for smallholders is their access and capacity to participate in the growing number of value chain markets that focus on smallholders and small and medium enterprises (SMEs).

"The Fourth Industrial Revolution is an unprecedented moment of opportunity for a world facing unprecedented challenges. One of the greatest challenges is to feed an expected

population of 9 billion by 2050 in a radically sustainable and impactful way. That is, not merely 'sustainable' as we casually use the word now, but in a way that improves the lives of everyone participating in the food chain along with the ecological health of our planet. The single best way for us to do this is to focus our investment and innovation – both in terms of technology and business models – on small-scale farmers in the developing world, using the already huge and constantly growing demand for sustainable food in the global market to power development programs that help these farmers and their communities escape poverty," said Patrick Struebi, founder and CEO of FAIRTRASA (Huffington Post, January 21, 2016).

"What we need to do is create real business opportunities that can take a rural family from having virtually no resources to investing in their future," said Willy Foote, founder and CEO of Root Capital (USA Today, July 21, 2016).

Building partnerships

One of the keys to the success of the next stage of international development is a greater emphasis on partnerships and coordination among donors and recipients and among donor organisations working in the same country. A Busan Partnership report (2011) highlights a set of common principles for development actors, which are key to making development cooperation effective:

- Ownership of development priorities by developing countries: countries should define the development model that they want to implement.
- A focus on results: having a sustainable impact should be the driving force behind investments and efforts in development policy-making.
- Partnerships for development: effective development depends on the participation of all actors and recognises the diversity and complementarity of their functions.
- Transparency and shared responsibility: development cooperation must be transparent and accountable to all citizens (<http://www.oecd.org/dac/effectiveness/busanpartnership.htm>, 2011).

Based on the SEAS experience in Georgia, which assisted the Ministry of Agriculture (MOA) to build a new extension model, the MOA has established a Donor Coordination Committee to share the results of donor-supported activities,

tools, and reports. These documents are translated into Georgian for ease of use by EAS field staff and researchers, farmers, and agricultural universities. For example, a GFRAS Technical Note, *The New Extensionist*, was translated into Georgian and shared with the Georgia MOA's extension field staff (Mueller and Smith, 2016).

The four cornerstones for effective RAS/EAS model building

The issues described above are critical elements that countries should take into account when building a sustainable RAS/EAS model. But there must also be a focus, and tailored resources available to address the fundamental cornerstones that allow smallholders to move from subsistence farming to sustained growth.

Land tenure and information reform

The documentation of land ownership is often a complicated and disputed process that requires fees for land surveys, legal fees for titles, and the consideration of gender equality issues for women who farm the land 'owned' by their husbands (Inter-American Development Bank, 2014). Given the interest of governments in developing extension policies that promote rural development, RAS/EAS policy-makers might wish to advocate for multi-ministry efforts to support land tenure reform for smallholders. International nongovernmental organisations and governmental ministries may need to orchestrate an effort to address land tenure issues that have remained entangled since the emergence of smallholder farming on land where there is little or no precedent for documenting ownership.

Extension agents in some cases have actively assisted smallholders to document and register their ownership of property. The National Federation of Coffee Growers (FNC) in Colombia, a public-private partnership extension model, has assisted nearly 500,000 smallholder coffee growers to search for solutions on how to document and register their small plots of land, which were passed to them through informal and undocumented arrangements (Mueller et al., 2013). With the guidance of FNC extension workers and support from the Colombian Ministry of Justice, the FNC was able to leverage land reform initiatives that allowed a significant number of coffee growers to secure the credentials and title documentation necessary to secure their farms and become eligible for

financial assistance to support their agricultural production.

Access to credit

In countries where the smallholders have the opportunity to apply for small farm production loans, access to credit has become an important stepping stone to lifting farming families out of poverty. An assessment by microfinance specialists, partnering with in-country financial institutions, is necessary to determine the type of loan or small grant programme that would be most effective to meet smallholders' agricultural production, post-harvest, marketing, and infrastructure needs (World Bank, 2005).

RAS/EAS models should support policies that provide access to credit for smallholders. Without documented ownership of property, credit eligibility is unlikely. RAS/EAS policy-makers may wish to recommend a role for extension field staff in assisting smallholder farmers to apply for loans, particularly for their agricultural production needs. National agrarian banks in developing countries often lack adequate staff to process potentially tens of thousands of loans for smallholder farmers.

Access to credit should be coupled with basic farm management and loan management training as a requirement for smallholders to receive a loan or manage a small grant. In Colombia, FNC field staff assist coffee farmers with the application process for small loans, as well as loan management and basic farm management capacity-building. This training often involves the younger generation of farming families and may utilise ICT applications.

Root Capital is a pioneering finance INGO for high-impact agricultural businesses in Africa, Southeast Asia, and Latin America that lends capital, delivers financial training, and strengthens market connections so that businesses serving hundreds, and often thousands, of smallholder farmers can improve rural prosperity. Since its founding in 1999, Root Capital has disbursed more than US\$1 billion through over 2,000 loans to nearly 600 businesses, and has improved incomes for more than 1.2 million producers cultivating approximately 1.7 million hectares of land (Teague, 2016).

The One Acre Fund is a privately-led agriculture development organisation that provides

extension services to more than 130,000 small-scale farmers in Kenya, Rwanda, and Burundi (McNamara, 2014). Revolving loan funds, village savings programmes, and community organisation mini-grants are examples of One Acre Fund's successful approaches to providing agricultural financing for the rural poor.

Innovative technical subject matter training, demonstration plots, and farmer to farmer extension

There are many excellent EAS manuals, farming fact sheets, brochures, and instructional guides for farming practices. More recently, videos, web-based curricula, SMS text-messaging programmes, and even social media platforms, such as Facebook, have been developed with international donor support (MEAS, 2016). When research-based innovation tools are combined with field-based technical assistance, the outcomes may well improve dramatically (Alex, 2004; Evenson, 2001).

In most countries around the world, farmers from large-scale operations as well as smallholder farmers are more easily convinced to try new varieties of seeds and agricultural production techniques when they can see the results in a demonstration plot on a neighboring farm or a research station (Schultz, T., 1964). Agricultural specialists, experienced extension field agents, and lead farmers have demonstrated successful results when smallholders are exposed to the Farmer to Farmer Extension (F2FE) model (Franzel et al., 2015). Lead farmers are the early adopters of the innovation model that leads to improved production and higher-quality yields and post-harvest practices. F2FE can help build effective, farmer-centered extension systems and empower farmers as change agents in their communities. Field-based technical assistance and training workshops are a crucial element of an effective and holistic approach to RAS/EAS model policy-making (Cochrane, 1979).

Social and human capital development leading to organisational capacity building

While technical assistance for improved agricultural practices and innovative post-harvest and marketing practices have been available for more than a decade and continue to advance, the extent to which smallholders can take advantage of these practices varies greatly. There needs to be a parallel development of farmer organisations and strong networks of cooperation in order

for many smallholders to unify their efforts. Social capital is the fourth cornerstone, which, in effect, holds everything in place and provides the environment for stability and growth. Social and human capital are key to organisational development in an effective RAS/EAS model.

Research theorists have identified the critical factors for increasing social capital among community members. Trust, cooperation, and strong communication channels among individuals and their organisations underpin the development of social capital (Putnam et al., 1993; Coleman, 1988). Social capital accrued through a participatory process, whether with cooperatives, village-based extension approaches, or the organisational growth of farmer associations, continues to be identified as a critical factor for successful public and privately-led RAS/EAS approaches. However, evidence of the impacts of social capital networks remains difficult to measure (Gómez et al., 2013).

There are mixed results as to the efficacy of smallholder cooperatives, arising from a wide range of studies of the impacts of agricultural cooperatives, especially for the poor (Lele, 1981). Agricultural cooperatives may help to increase access to production inputs and markets (Ortmann and King, 2007). Linking farmer organisations to value-added markets, in some cases, encourages the development of organisational leadership and social capital development (Bingen et al., 2003). The management skills of the leaders of producer organisations must be developed alongside the technical and marketing expertise of smallholders and their organisations in order to achieve progress and improve the economic circumstances of all.

Extension professionals in a 21st century RAS/EAS model must be able to cultivate social capital among often desperate, isolated, and resource-constrained farming families. Extensionists are often the only actors in underserved, rural communities that have strong relationships with producers. In some cases, these producers may have endured in a post-conflict environment, but have not been able to join forces, lacking the glue of social capital development needed to engender trust and cooperation. A RAS/EAS model that does not

make use of social capital development cannot mobilise individuals to unite with a purpose and the will to work together.

Conclusion

Without RAS/EAS providers, the work of developing the fundamental foundations for the sustainable development of smallholders is unlikely to occur. Some form of a pluralistic extension model, which is designed and planned by farmers and extensionists, and supported by private sector partners, university researchers, INGOs, and in-country NGOs, is critical to the growth of organisations that support the poorest producers and their leaders.

Likewise, the four cornerstones of development, nurtured by human and social capital, are necessary to enable smallholders to move from poverty and food insecurity to sustained growth and participation in global value chains. When there is a strong social capital network among smallholders, these farmers benefit from improved access to agricultural best practices, innovative farming technologies, and improved value chain markets. Access to credit and land tenure information, coupled with increased capacity-building of technical subject matter and the growth of social and human capital are the four cornerstones of a sustainable and holistic RAS/EAS model that leads to improved quality of life for smallholders and their families.

RAS/EAS model-building policies will continue to develop across the globe, not only because of the efforts of donors to alleviate the crippling effects of hunger and malnutrition. Growing evidence of the alleviation of poverty in rural areas supports the relevance of an emerging business and global security case for developing RAS/EAS models to lift rural populations out of poverty.

"Development isn't charity. It's one of the smartest investments we can make in our shared future, in our security, in our prosperity" (President Obama, USA Today, July 21, 2016).

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