

CAPACITY DEVELOPMENT IN RURAL EXTENSION: GOOD PRACTICES FROM LATIN AMERICA

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ABSTRACT

Capacity-development is an essential tool for fostering rural extension. The challenge is to identify a framework that includes the problems of rural areas and the capacities required by the variety of actors operating at the different levels. A definition that recognises this reality is: 'capacity is the ability of a human system to produce results, maintain itself and self renew'. If it is accepted that extension is one element of a complex innovation system, it is necessary to consider the specific capacities required by the different components of the system: individuals (farmers, rural entrepreneurs), private organisations (enterprises, co-operatives, farmer organisations, civil society organisations), intermediate organisations (local government,

non-governmental organisations), higher-level organisations (research, education) and networks. The objective of this document is to contribute specific experiences that offer good practices in capacity-development in extension, conceived as a system that produces results, stands on its own and is renewed. The paper reviews 15 experiences in Latin America that provide a background to the capacities that have been developed for innovation in small-scale farming and food security, demand driven services and institutionalism. The results demonstrate the capacities needed and the gaps to be filled for each component of the system. The paper elaborates good practices that provide lessons for dealing with the challenges and a strategy that permits a positive outcome for the whole system.

KEY WORDS: *GAPS, TOOL SYSTEM, ACTORS, INNOVATION*

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INTRODUCTION AND OBJECTIVES

Extension has not been a sufficiently valued service in Latin America, where most of the public services were dismantled in the 1980s and 1990s. Reasons for this undervaluation include the limited impact for users, the absence or low level of demand for these services, and their poor quality. Although we cannot generalise – because the institutional, economic and political contexts of the different countries are very diverse – there are institutional and capacity weaknesses across the region in the provision of quality rural extension services. There is also confusion about what extension means and the role it should play in rural development.

The linear model of agricultural technology generation and transfer was seen as virtually the only source of innovation for agriculture. Although this model had significant achievements, it is no longer sufficient for addressing the problems and opportunities of rural life. This model was modified by involving the users in participatory research, which resulted in increased focus on production demands. It maintained the idea that innovation was found only in agricultural research, which prioritised the problems of primary production in the field.

To meet the new demands and to involve users as leading actors, modern agricultural or rural extension must look at the specific agro-ecological and socio-economic conditions, and at the different agricultural activities. This requires the development and application of ‘hard’ and ‘soft’ technologies for

human and social capital development. Several groups linked to agriculture and rural development (e.g., GFRAS, FAO and Wageningen University) stated that rather than adopting new technologies, the challenge is to achieve an ‘agriculture with knowledge’ (Klerkx *et al.*, 2009), sustained by appropriate research, development and innovation processes, covering technical, social, institutional and political aspects. This ‘knowledge’ is both agricultural and non-agricultural and must generate greater well-being, higher incomes for rural farmers and benefits for the consumers.

The Neuchâtel Initiative and the Global Forum for Rural Advisory Services (GFRAS) have made important contributions to the definition of ‘extension’ for the rural context.

‘Extension is defined here as systems that should facilitate the access of farmers, their organizations and other market actors to knowledge, information and technologies; facilitate their interaction with partners in research, education, agri-business, and other relevant institutions; and assist them to develop their own technical, organizational and management skills and practices’ (Christoplos, 2010).

To make this effective, new and better capabilities are required. Jan Ubels defines this as: ‘capacity is the ability of a human system to perform, sustain itself and self-renew’ (Ubels *et al.*, 2010, p. 4).

The Food and Agriculture Organization of the United Nations (FAO) distinguishes four important

functional capacities for rural situations: (a) *Policy and Normative*: capacities to formulate and implement policies and lead policy reform; (b) *Knowledge*: capacities to access, generate, manage and exchange information and knowledge; (c) *Partnering*: capacities to engage in networks, alliances and partnerships; (d) *Implementation*: management capacities to implement and deliver programmes and projects, from planning to monitoring and evaluation’ (FAO, 2010).

One mechanism for building extension capacity is to capture good practices from within the region, many of which can be replicated. FAO defines a good practice as ‘a number of mechanisms, methodologies, processes or strategies that enable the extension to function in a more effective, efficient and quick way’ (FAO, 2011).

These good practices will be linked with the perception that extension is part of an innovation system. The Organisation for Economic Co-operation and Development (OECD) countries describe it as part of an agricultural knowledge system (AKS). Others describe the ‘agricultural knowledge triangle’, and suggest that the three pillars – education, research and extension – include complementary instruments, which must be planned as a system rather than as separate entities (Eicher, 2001, cited in Rivera *et al.*, 2001).

Finally, to understand the required capabilities for this new role of extension inside an innovation



system, it is worth noting the World Bank definition of a national system of innovation:

‘a network of organizations, enterprises and individuals focused on bringing new products, new processes and new forms of organizations into economic use, together with the institutions and policies that affect the way the different agents interact, access, share, exchange and use the knowledge’ (cited in Klerkx *et al.*, 2009).

The study reported here analysed good practices of 15 rural development experiences in Latin America, all of which are ongoing projects that involve rural extension and capacity-development. These experiences are from Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico, Paraguay and Peru.

Each project had a specific focus, by which they were grouped into four ‘subjects’: institutional and public–private relationships; demand-driven market approach; family farming and food security; and extension and innovation. The purpose was to identify good practices, put them in the context of each country’s reality and assess their potential replication. This analysis took into account the contribution of good practices to strengthening the innovation system.

MATERIALS, METHODS AND DATA SOURCES

For each of the four subjects, projects that recognised their good practices and that constituted successful initiatives were selected.

To be included in the study, each project must have systematised its process and identified the factors that contributed to the desired changes, as well as the factors that limited these changes. The main material used for this work was the systematisation documents produced by each project team.

First, a specialist was selected to compile the material, analyse the cases in depth and raise common questions. These questions were discussed in a second stage with the representatives of the projects via an electronic dialogue, which enabled fine-tuning of the information. The third stage consisted of presentation and dialogue, in which a proposal document was developed and presented at the Second Latin American Meeting for Rural Extension Services. The fourth and final stage was the preparation of a final document with analysis and proposals for each subject.

The sources of information for this paper are the documents that contain the conceptual frameworks for each subject, the documents of each experience, the interviews of those responsible for them and, in some cases, the evaluations made by others.

RESULTS AND DISCUSSION

This section presents the main results obtained from the analysis and discussion of the experiences.

Institutionality and public–private relationships

Figure 1 shows how extension services were conceived in the 1980s and how they are conceived today. The challenge is how to reorganise public institutions to face the current problems and to identify which abilities are required to do the task efficiently. For the construction of a new institutional scenario, the important questions are:

- How is management developed with the participation of the public and private sectors? What are the capacities needed in the public institutions?
- What extension-agent profile is required at this time and what changes must occur in the formal and non-formal agricultural education sectors to train extension agents to face the new challenges?
- What strategies and institutional reorganisation must happen for an extension service able to face the new challenges and strongly complementary to and interconnected with other services?
- How is institutional plurality organised and managed, especially so that it can serve the disadvantaged rural population?

Answering these questions requires the conception of a new institutional that contains challenges to:

- facilitate innovation processes;
- promote networking processes for the organisation and management of value chains,



- agro-ecosystems and territories;
- integrate actors and capabilities of non-public organisations and civil society;
- favour co-operative strategies and strengthen interchange spaces and decision-making that include actors committed to the problems of the rural area (councils, committees);
- establish national and international platforms to facilitate the interchange of information and

knowledge generated from the collective processes of public-policy design, among others.

Micro- and meso-institutional innovations

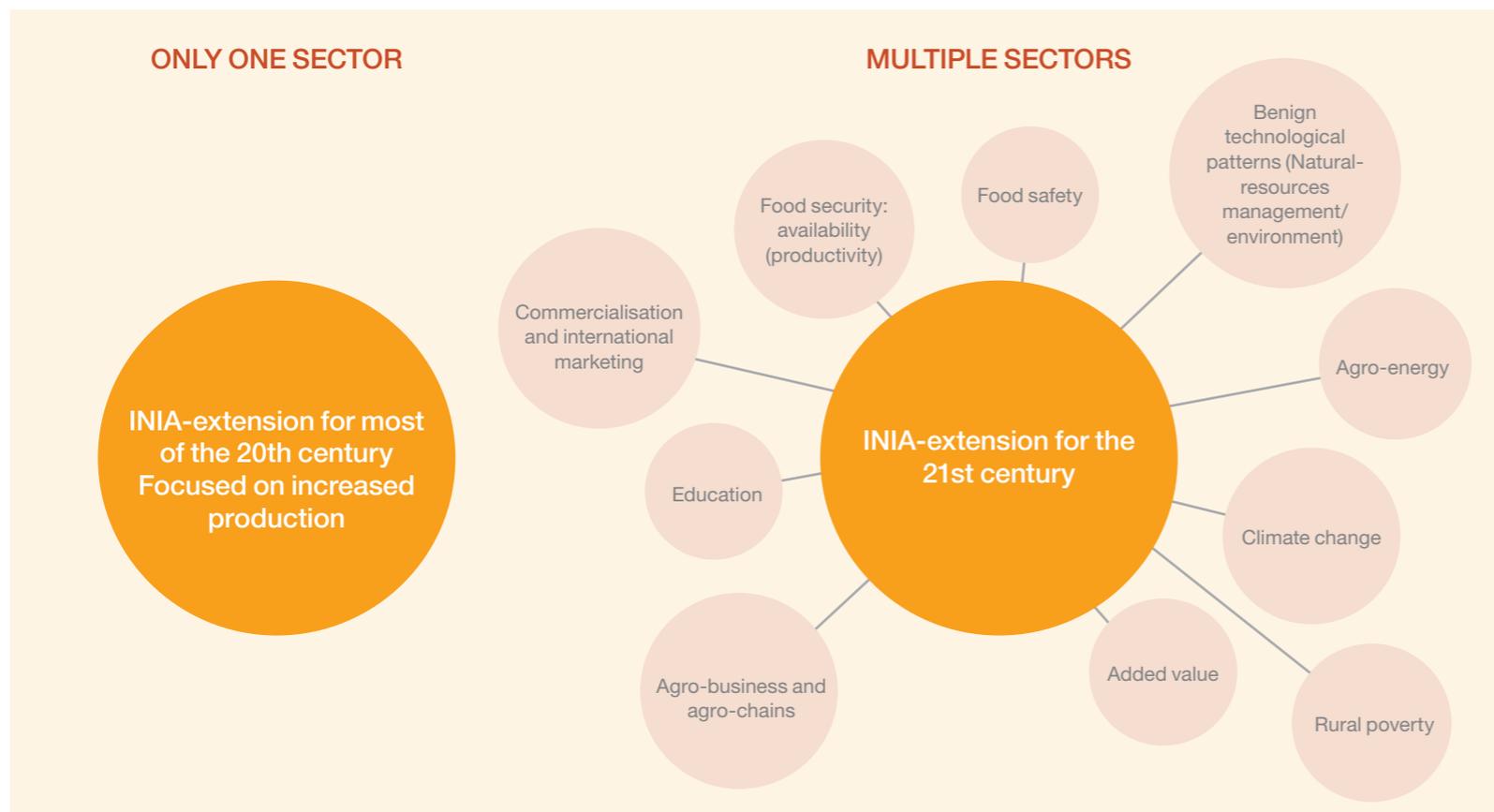
Micro-type innovations are related to inside the institution, such as the organisation and reform of a national agricultural research institute (NARI) (e.g., *Instituto Nacional de Tecnología Agropecuaria* [INTA] Argentina), the reorganisation of an extension

service or institute to provide the service, or the changes inside a producers' organisation to enable them to participate and get benefits from the technological services. Meso-type innovations are related to the interface between institutional actors or organisations (e.g., *Innovación y Competitividad para el Agro* [INCAGRO] in Peru), at local, national or international level and the institutional arrangements to promote their interaction. An example of meso-level innovation is innovation fields – the concerted action of several actors, public-private partnerships and knowledge networks.

Public and private extension

With the surrounding changes (mainly in markets, environment and technologies), and the pursuit of competitiveness in agriculture, there is a growing recognition that the type and quality of the relationships between the market and farmers are dominant and motivating forces (i.e., not technology). This has led to the emergence of semi-public extension. Public-sector support is required, such as the public research agenda, incentives, subsidies to technical assistance, lines of soft loans, and marketing facilities.

In Latin America and the Caribbean (LAC), there are diverse experiences of public-private connections and even the privatisation of extension and technical assistance services in countries such as Argentina, Brazil, Chile, Colombia, Ecuador, Mexico, Peru and Uruguay.



Source: Alarcón (2011).

FIGURE 1: CHALLENGES OF THE NEW AGRICULTURAL CONTEXT TO RESEARCH AND EXTENSION



Location of extension and institutional strategies

One of the challenges that decision-makers face with agriculture and technological change, is how to locate – either under the same roof, or separated but articulated and integrated – the processes of research and rural extension, especially the public and national ones. There is an urgent and growing need for the governments of LAC countries to achieve food security. Governments, especially those of countries that have no extension service, need to learn how to establish public or mixed (public–private) extension services.

In LAC, only a few NARIs incorporate agricultural or rural extension in their functions – *Centro Nacional de Tecnología Agropecuaria y Forestal* (CENTA) in El Salvador, *Instituto Nicaraguense de Tecnología Agropecuaria* (INTA) in Nicaragua and INTA Argentina. In Chile, most of the State extension for rural small-scale and family farming has been done through Instituto de Desarrollo Agropecuario (INDAP), which has different modalities, such as outsourcing, to transfer technology and technical assistance to farmers. In other countries, such as Costa Rica, Dominican Republic, Panama and Paraguay, the extension services are located in the ministries of agriculture in specific departments. In Brazil, extension for family farming is located in the secretariat of family farming within the agricultural development ministry.

Family farming and food security

A large part of the effort to rethink rural extension is dedicated to family farming, which does not receive the quality and quantity of services desired, especially given current challenges. Any kind of institutional arrangement must start by recognising some realities in this sector.

- Poor people's capabilities are unique and essential. People who are in poverty have demonstrated that they can reach their goals, if conditions allow. There is a wide range of poor people's groups in rural areas, whose characteristics depend on their development context and their own survival strategies.
- The market is essential, but it does not work efficiently, especially for poor people, who must be able to participate fairly. Some may use the tools and mechanisms that the market offers, but most of them do not, so it is important that the State assumes the responsibility, provides enabling conditions, supplies technological knowledge, and facilitates the information, business skills, strong organisations, credit and infrastructure needed.
- Achievement of sustainable livelihoods goes beyond technical knowledge, economic development, incomes and assets, to include human vulnerability and dignity, citizenship and participation, having a voice and an active role in society.

The main messages are:

- *A public policy of rural extension* focused on

family farming is part of a global strategy of poverty reduction and social inclusion.

- *Diversity and differences.* These families have different requirements and therefore require different answers. Rural extension with a family-farming approach helps to recognise that poverty is multidimensional and heterogeneous, providing answers via different approaches.
- *The importance of the State's role.* National, regional and local governments have the responsibility to create the conditions for poor people to participate equitably in the development processes.

Rural extension for small-scale farming must go beyond technology, by recognising and responding to risks (environmental, economic and social) and vulnerabilities that resource poor rural families face: improving their food security, recognising and analysing the uncertainties facing markets, changes in farmers' productive systems and in the prices of the products and inputs, identifying the opportunities in markets, restrictions in the financial system, and lack of representativeness in political arenas.

Other additional, but no less important, messages are:

- It is essential to have committed actors in rural extension who use pro-small-scale farming approaches, take these actions into account and work with them. The promotion of networking,



developing linkages or searching for synergies is essential to expand the possibilities for action in the field.

- It is important to maintain and share the lessons learned from experiences in this new approach to the poorest.
- Extension agents have the responsibility to facilitate change and to do so, they must prepare themselves, and adjust their visions, methodologies and strategies of work, within inclusive development. They must overcome the traditional paradigm of the agent–farmer relationship and establish a more horizontal relationship, where the technician is the facilitator in the change processes.
- It is possible to improve women’s and youths’ access to rural extension through the implementation of this approach, which considers the importance of incorporating gender dimensions and including the younger generations.
- The various forms of collective action are an effective means of building the social capital of rural resource poor people. Through rural organisations, it is possible to reduce the risks they face, to develop their capabilities, to promote learning processes, to create networks of trust, to reduce the transaction costs and to enhance their opportunities to get inserted into markets.

Demand driven-market approach

The following were emphasised in both the discussions and group work.

- User participation in the definition of their needs and in the prioritisation of their problems is key to identify gaps and needs. Users must be able to express their demands.
- Orienting production towards the market requires technical knowledge and skills, facilitation, mediation and use of modern communication techniques.
- The cases in Chile, Colombia and Ecuador showed the importance of working with young people to encourage productive innovation processes. There have been useful knowledge tours and internships for young farmers.
- With family farming, associative work (e.g., within co-operatives, producers’ organisations) is required to raise demand and to access dynamic markets. The governance of the system is particularly important and distinctive – those organisations that have hired good technical teams, but also controlled management through the boards, have shown best results.
- One aspect that can become critical is what is called ‘informed demand’, in which the rural extension service provides producers and their organisations with information and capacity to generate demand for their products. The information is specific to the agro-ecological and

socio-economic conditions of the territories where the production process occurs.

- Special effort is needed to help small-scale farmers who face more restrictions in reaching levels of commercial production. Different solutions are required that must be established during the agreement on demanded needs.
- New information and communications technologies (ICTs) are increasingly popular tools, resulting in recognised efficiencies.

Extension and innovation

There are several definitions of innovation and its conditions. The aim here is to use the studied cases to determine the conditions that promote extension as part of a successful innovation process.

Notable aspects are:

- There are difficulties in establishing what is really innovative. The case-studies provide new products, new forms of marketing and new processes as well as new experiences in rural contexts.
- Understanding that, most of the time, innovation involves a learning process in areas such as how to produce and commercialise a new product, or a new way of producing an existing product, it seems that innovation is a fundamental ‘gear’ between new and existing knowledge. It is essential that professionals involved in innovation, and its extension, apply basic principles of adult



education to the assessment of existing knowledge and the contribution it can make to the generation of innovation.

- Co-design – the participatory creation of the innovation by the actors ‘affected’ by the problem it seeks to address, who can contribute to the solution – was a well-identified methodology in the case-studies. Two of the groups of farmers identified and prioritised the problems or tasks to address, identified agents that could collaborate in this matter and worked together to achieve innovation.

The vertical model:

Generate innovation + adapt to the reality of farmers = innovation adapted

is not a good way to produce permanent changes and shows an unwillingness to create spaces for real discussion and participation, which would ensure the appropriation of innovation.

The co-design in the case-studies involved the formation of public–private partnerships and partnerships between different actors of the innovation process, such as farmers’ organisations (two of them indigenous) with research centres, private providers of services (testing laboratory, input suppliers), and public and private institutional providers of funding for the innovation and its dissemination.

The creation of value, goods, services, processes, organisational models and marketing is a basic requirement to determine if innovation is

occurring. An innovation that is not demanded is not innovation, so it is important to be able to predict potential consumer demand for the products of innovation and that the innovative product has attributes that are valued by the consumers.

Thus, attributes such as safety, environmental sustainability and cultural identity (found in the products of the case-studies) are valued and usually demanded by the increasingly aware and informed consumers.

It is essential to understand that innovation is a product of more systemic social organisation and is the result not only of technological changes, but also of social, cultural and political changes. This implies that the emphasis must be not only on appropriation of new technologies, but also on cultural and social changes, so that the work not only addresses the needs of individual farmers or rural inhabitants, but also those of the organisations they belong to or interact with (Gargicevich and Bedascarrasbure, 2011).

CONCLUSIONS, RECOMMENDATIONS AND IMPLICATIONS

It is possible to obtain the following conclusions and recommendations when analysing the current situation in Latin America on extension services and having studied cases of good practice.

Extension requires major readjustment to respond to demand that is specific and complex. This involves institutional changes and

organisational capabilities that currently do not exist. Regional diversity in terms of the political, economic and social situation means that it is not appropriate to develop extension models. Consequently, at least in Latin America, the essential first requirement is that those who design the policies have the necessary capabilities to do so *in context*.

Innovation policy, of which extension is an important part, must demonstrate that it adds value, sustains itself and continually renews itself. Extension is part of the innovation system. In this context it must be able to demonstrate that its contribution adds value. For this, organisations and institutions need knowledge, better implementation capacities and specific skills to influence public policies.

The analysed experiences illustrate the importance of the public–private relationship, independent of the specific arrangements in each country. It is no longer conceivable that any successful experience will involve a public service that provides extension services, without association with productive organisations or delegating the execution to the private sector. The most successful processes to raise demand occur in the producer organisations. Investment in organisation, management and governance capabilities appears to be effective in the development of good extension systems. Better quality services also positively affect the users’



willingness to pay. However, the experiences also show the value of this relationship in bringing the demand close to the offer: the producers benefit from a better relationship with the market (productive partnerships in Chile; public–private partnerships in Colombia, Mexico and Peru).

In Latin America, achieving a balanced relationship between research and extension is an enormous challenge. The culture of these organisations has developed in parallel over many years, with no communication between them. Except in isolated instances, such as INTA Argentina, the research institutes do not motivate the development of capabilities to engage with small and medium-scale farmers, neither is there enough assessment of farmers' knowledge. The experiences, especially in innovation, demonstrate that many of the good results have come from an inverse process, i.e., the companies have sought the support of research institutes to promote processes of innovation.

Rural extension in Latin America strongly emphasises family farming, because of the number of families that engage in farming, the concentration of poverty and food insecurity. There are calls to develop appropriate policies that cover the diversity of the sector and to prepare a new generation of extension agents.

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