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# **An Overview of Rural Extension in Brazil: The current situation**

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## Introduction

This document is the result of a series of interviews carried out in November 2012 with extensionists, university professors, researchers, technicians, and extension service coordinators from different states in Brazil. A total of 14 professionals from CATI<sup>1</sup>, ESALQ-USP<sup>2</sup>, EMPAER-MT<sup>3</sup>, EMBRAPA, and independent consultants were interviewed. The information shared by those professionals was combined to build a narrative, showing an overview of the current rural extension practices in Brazil. The name and organizations of interviewees were kept anonymous to maintain the informality of the consultation. The objective of the interviews was to understand the rural extension services currently provided in Brazil: who provides, to whom, providing what, and paid by whom.

Public rural extension in Brazil is characterized by a decentralized model, where state agencies receive federal and/or state funds to provide rural extension and technical assistance to farmers, free of charge. In parallel, private firms and farmer organizations (including cooperatives, foundations and no-till farmer associations) provide technical advice on specific topics.

This report discusses mainly agricultural technical advisory services. It should be noted, however, that many poor rural households receive other advisory services (e.g. health issues) from social services programs.

## The evolution of rural extension

To understand the current situation of Brazilian rural extension, we need to go back to the 1980s, when federal government funding for rural extension was drastically reduced<sup>4</sup>. The consequence was the closure of the Brazilian National Rural Extension and Technical Assistance Cooperation (EMBRATER) in 1990 by President Collor de Mello<sup>5</sup>. With the closure of EMBRATER, several state rural extension agencies, which were dependent on federal funds (mainly from EMBRATER), closed down as well. The state agencies which relied on state funds, but not federal resources, such as CATI and EMATER-RN<sup>6</sup>, survived and were able to employ some extensionists from other states.

During the same period, in the early 1990s, while the Brazilian government stimulated agribusiness which did not use public funded extension services, social movements<sup>7</sup> that

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<sup>1</sup> Coordenadoria de Assistência Técnica Integral (CATI)

<sup>2</sup> Escola Superior de Agricultura “Luiz de Queiroz”(ESALQ-USP)

<sup>3</sup> Empresa Matogrossense de Pesquisa e Assistência Técnica e Extensão Rural S.A.

<sup>4</sup> Dependency from federal funds varied from 40% to 80% in some states. Source:

<http://comunidades.mda.gov.br/portal/saf/arquivos/view/ater/Pnater.pdf>

<sup>5</sup> Peixoto, M. (2008). Extensão Rural no Brasil: Uma abordagem histórica da legislação, *Textos para Discussão* (Vol. 48). Brasília: Consultoria Legislativa do Senado Federal.

[http://www.senado.gov.br/senado/conleg/textos\\_discussao/TD48-MarcusPeixoto.pdf](http://www.senado.gov.br/senado/conleg/textos_discussao/TD48-MarcusPeixoto.pdf)

<sup>6</sup> Empresa de Assistência Técnica e Extensão Rural do Rio Grande do Norte – The Technical Assistance and Rural Extension Agency from Rio Grande do Norte State.

<sup>7</sup> One example of those social movements was the strengthening of national programs looking at sustainable production for small holder farms, such as the development and adoption of no till practices by Brazilian States, other than the originated States of Rio Grande do Sul and Parana, in

promoted sustainable agriculture and natural resources management emerged, stating that investment in family farming was crucial for the alleviation of rural poverty, food security and preservation of natural resources - a sector that still needed public funded extension services.

With that strong argument, and a proposal containing successful examples of rural extension models from other countries and within Brazil, extensionists from state agencies, led by the National Council for Sustainable Rural Development - Conselho Nacional de Desenvolvimento Rural Sustentável (CNDRS), were able to put forward a draft national policy. After being approved, public rural extension services in Brazil re-emerged in 2001.

The draft national policy was developed as a collective and participatory effort but was never fully implemented due to political reasons<sup>8</sup>. Only in 2004, alongside changes in the federal government, was the draft policy reformulated (without consultations) and the National Policy for Technical Assistance and Rural Extension - PNATER<sup>9</sup> was created.

Those who were interviewed, and had participated in the development of the draft policy, indicated that PNATER differs from the draft national policy on several aspects. One example given was that state agencies (e.g EMATERs) have the autonomy to choose to implement either rural extension or technical assistance programs, and not a combination of both, as initially proposed in the policy draft.

The ATER (Technical Assistance and Rural Extension National programme) defines *rural extension* as an educational process of communicating knowledge, either technical knowledge or any type of knowledge, in order to improve income and the quality of life of rural families. Rural extension also focuses on facilitating sustainable rural development through collective action and social inclusion. As part of the rural extension process, there is *technical assistance*, which looks at agricultural production and production systems, aiming at introducing new technologies that can lead to higher income generation.

There is great confusion among technicians as to what constitutes rural extension versus other services, such as agricultural technical assistance, technology transfer, advisory services, or even rural social assistance, which includes health, sanitation, education, and rural employment, to name a few.

As a consequence, this new rural extension model, created and supported by PNATER, was characterized by the expansion of publicly funded agencies providing more technical assistance than rural extension. Besides the state agencies (EMATERs), civil society organizations (CSOs), such as NGOs, farmers associations, and rural unions, were eligible to receive public funds and provide technical assistance or rural extension services free of

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partnership with EMBRAPA, agricultural universities, rural cooperatives, and private firms. The no-till program attracted great interest from neighboring countries and international agencies such as FAO and The World Bank.

<sup>8</sup> Interviewees did not provide details about the political situation at the time, but emphasized the political power struggles between national and state governments, and ideology differences among advisors to the government.

<sup>9</sup> <http://comunidades.mda.gov.br/porta/saf/arquivos/view/ater/Pnater.pdf>

charge for farmers of any category<sup>10</sup>, not just family farming or poor rural households, as indicated in the policy. Interviewees pointed out that many of these CSOs have been providing these services for several years, with their own resources or with money from private and foreign donors.

With the inclusion of these new actors, traditional rural extension agencies had to shift their modus operandi to strengthen the educational aspect of rural extension (previously characterized by strong technical assistance). Institutions had to adjust and new capabilities had to be acquired.

The old modus operandi was characterized by uncoordinated interventions by several organizations at different stages of the process. Different agencies acted at different moments to address particular problems within a community. Today, the rural extension model is, in theory, based on an interdisciplinary approach with different agencies and actors working simultaneously to improve the livelihood of rural communities. But, for those working as extensionists for decades, the model is challenged by the unpreparedness of professionals and institutions to work in collaboration with other institutions and professionals. These challenges were related to agreeing on the methodologies to be used, clarity on the roles of each institution (e.g. EMBRAPA, EMATERs, NGOs and universities), accountability, leadership, and the use and distribution of resources.

Developing new methodologies that are appropriate for the political and social conditions of Brazil is still a problem, as it is in most developing countries.

## **Who is delivering rural extension, and to whom?**

Traditionally, extension services in Brazil have been provided by public institutions directly, relying exclusively on government funds. However, over the years rural extension services were also offered by private firms, NGOs, and rural organizations (rural labour union or farmers organizations), at the federal, state and municipal levels.

The farming structure in Brazil is divided into rural settlements (as a result of land reform or inhabitants of riverbanks), which could be farmers or not; smallholder farms (usually family farming producing for subsistence or local market); middle size farms (usually producing for national market); and large size farms (usually producing for export markets).

The table below, extracted from the Brazilian census of 2006<sup>11</sup>, illustrates the area of rural establishments in Brazil, in hectares, and the percentage of producers per area.

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<sup>10</sup> For those organizations to be able to receive funds, they must be registered with the Ministry of Agrarian Development (MDA), and need to meet certain criteria related to their previous experiences, deliverables, methodologies used, etc. Universities are not eligible for ATER projects. Universities are eligible only for specific fund allocations.

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[www.ibge.gov.br/home/estatistica/economia/agropecuaria/censoagro/brasil\\_2006/defaulttab\\_brasil.shtm](http://www.ibge.gov.br/home/estatistica/economia/agropecuaria/censoagro/brasil_2006/defaulttab_brasil.shtm)

Size of Rural Establishments	Rural establishments area (ha)	% of Rural Establishments	Number of producers	% of producers per size area
Less than 10ha	7,798,607	2.36%	10,275,678	3.07%
from 10ha to less than 100ha	62,893,091	19.06%	64,864,668	19.37%
from 100ha to less than 1000ha	112,696,478	34.16%	113,121,384	33.78%
1000ha and more	146,553,218	44.42%	146,600,129	43.78%
<b>Total Rural Area</b>	<b>329,941,394</b>		<b>334,861,858</b>	

The majority of small rural establishments are concentrated in the northeast part of Brazil, which also concentrates the highest family agriculture practices. According to Ramos dos Santos (2010)<sup>12</sup>, the average size of rural establishments dedicated to family agriculture in the northeast is about 17ha, while the national average is 26ha. The author also indicates that these small rural establishments are largely responsible for the production of staple food consumed in Brazil, such as beans (70%), cassava (84%), pork meat (58%), milk (54%), maize (49%), and poultry and eggs (40%).

In terms of land use, the majority of Brazilian agricultural land is dedicated to pastures (49%), followed by bushes and forests (29%) and crop production (22%).

Today there are 27 state agencies, such as EMATER or CATI, which usually provide extension services to smallholder and middle size farms, which, depending on the state, could be from 10ha to 500ha.

Private firms and independent professionals provide services, typically technical assistance, which are paid by farmers or included in the purchase of agricultural inputs. Generally private companies provide services to middle to large size farms, over 500ha.

Normally NGOs provide extension services free of charge as they are financed by public resources through public contracts or by donors and international aid. NGOs tend to target rural settlements and smallholder farms.

Rural organizations or self-help groups provide extension services either by charging a membership fee, or free of charge using public resources raised from contracts with the government. In most cases, rural organizations provide services to rural settlements, smallholder farms and middle-size farms.

While the majority of agricultural universities have an extension department, they provide little rural extension per se. Universities provide technical and advisory services to middle to large size farms.

The national agricultural research institute, EMBRAPA, occasionally provides technical and specific advisory services, mainly to large size farms.

Interviewees indicated that extension services provided in Brazil can be demand driven or supply driven, depending on the state analyzed. According to Chipeta (2006)<sup>13</sup>, *demand is defined as what people ask for, need and value so much that they are willing to invest their own resources, such as time and money, in order to receive the services.*

<sup>12</sup> Ramos dos Santos, S. (2010) *Agricultural Familiar no Brasil*, Administração e Negócios.

<http://www.webartigos.com/artigos/agricultura-familiar-no-brasil/31006/>

<sup>13</sup> Chipeta, S. (2006) *Demand Driven Agricultural Advisory Services*, Neuchâtel Group. <http://www.g-fras.org/fileadmin/UserFiles/Documents/Frames-and-guidelines/New-paradigms/Demand-Driven-Agricultural-Advisory-Services.pdf>

São Paulo State is characterized by strong demand driven initiatives. Other states, such as Rio Grande do Sul, Pernambuco, Minas Gerais, and Amazonia, have more elements of supply driven initiatives such as agro-ecology and environmental education issues, working with rural women and youth, cooperativism, and rural sanitation. Most of these supply driven initiatives are motivated by grant calls from the federal government.

## Coordination of rural extension

The top public institutions responsible for allocating funds, and supervising public institutions in charge of rural extension and technical assistance, are the Ministry of Agrarian Development (MDA) (created in 2000) and the Ministry of Agriculture, Livestock and Supply (MAPA). In theory, rural extension and land reform are MDA's responsibility while MAPA is in charge of rural technical assistance. This division of responsibilities created great confusion because of the strong links between rural extension and technical assistance, which, although two different activities, are linked and should not be separated.

Adding to the confusion, the Government recently created a commission for dealing with technical assistance and rural extension (ATER), hosted by the Ministry of Agriculture (MAPA). Any agricultural producer can benefit from ATER programs without making distinctions of types and sizes of farms (small, middle or large size farms), production system (family agriculture or not), or production type (staple or export). This commission is composed of several ministries. The Ministry of Agrarian Development (MDA) also has a secretariat dealing with technical assistance and rural extension, but specifically for family agriculture, the Secretary of Family Agriculture (SAF), <http://portal.mda.gov.br/portal/saf/>. According to interviewees, there is significant overlapping and lack of coordination among the programs financed by the federal budget, and many are skeptical as to who benefits from such programs and who the programs should target.

Through a literature review, it was found that Brazil has dozens of institutions and organizations funded by public resources, which are, in theory, responsible for rural extension. In addition, it has national agencies responsible for coordinating the services provided along with national policies to guide the work being done by local agencies. Examples of organizations are listed below:

Public organizations:

- AGRAER (Agência de Desenvolvimento Agrário e Extensão Rural – Agency of Agrarian Development and Rural Extension) <http://www.agraer.ms.gov.br/>
- Agência Nacional de Extensão Rural (newly created National Agency for Rural Extension)
- EMATER (Empresa de Assistência Técnica e Extensão Rural – Technical Assistance and Rural Extension Cooperation). A total of 26 EMATERS, one per each State.
- CATI (Coordenadoria de Assistência Técnica Integral – Technical Assistance Coordination) in Sao Paulo State only <http://www.cati.sp.gov.br/new/index.php>
- ASBRAER (Associação Brasileira das Entidades Estaduais de Assistência Técnica e Extensão Rural – Brazilian Association of State Entities for Technical Assistance and Rural Extension) <http://www.asbraer.org.br/>
- EMBRAPA

- Public universities (e.g. ESALQ, Vicoso, Santa Maria, UNESP, Lavras)

Private or semi-private organizations:

- COATER (Cooperativa de Assessoria Técnica e Extensão Rural – Cooperative for Technical Assistance and Rural Extension) <http://www.coater.com.br/novo>
- Rural union (dozens in each state)
- Foundations (ABC foundation)
- Self-help groups, including no-till farmers' associations

The ASBRAER, the association representing all the state agencies (EMATERs and CATI), played a major role in keeping public rural extension alive during budget reductions. The ASBRAER depends on the support of a newly created political lobby group (Frente Parlamentar de Assistência Técnica e Extensão Rural – Parliamentary Front for Technical Assistance and Rural Extension), which assists ASBRAER in talking to members of Parliament on rural extension issues.

When asked about the alignment of regional and national policies, the State of Sao Paulo is characterized as being the most independent on its decision making, causing some conflict with national agencies. CATI, Sao Paulo State's extension agency, had a 5-year agreement with the Ministry of Agrarian Development (MDA) to work in collaboration. However, the current State Governor belongs to the opposition party and the agreement with MDA was not renewed. Consequently, extensionists from CATI do not officially participate in events organized by the Federal Government.

Other states characterized by strong family agriculture (e.g. Minas Gerais) have signed agreements with the Federal Government, independently of the political party, as a way of securing federal resources.

State extension agencies (EMATERs or CATI) are maintained (structure and salaries) by funds from the state budget, which represent a small percentage of the overall budget. For projects and activities, the financial resources come from the federal budget and other organizations (e.g. World Bank, Inter-American Development Bank).

In 2010, the government announced an increase in the budget for technical assistance and rural extension (ATER) from \$20 million to \$300 million. The funds were distributed among the institutions listed above. The government objective was to strengthen institutions and professionals in order to increase food production<sup>14</sup>.

Some interviewees showed high dissatisfaction on how funds are currently being distributed by state and federal resources, saying that the distribution is influenced by politics and not regional needs or performance. Extensionists' salaries are low and it is common for employees to have additional sources of income, which are sometimes acquired during official working hours.

There is poor coordination and opportunities for knowledge sharing at national and state levels; in some regions, however, extensionists collaborate and share experiences informally when needed. Most collaborations are at the individual level and not institutional. Occasionally EMBRAPA and universities promote events, which are an opportunity for

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<sup>14</sup> Official speech from the Ministry of Agrarian Development, Mr. Guiherme Cassel, on 11 January 2010. [http://www.mda.gov.br/portal/noticias/item?item\\_id=3595618](http://www.mda.gov.br/portal/noticias/item?item_id=3595618)

networking and sharing information, however such initiatives are not particularly intended to support extensionists but the agricultural sector as a whole.

## Future trends

From the interviews carried out with coordinators of rural extension and technical assistance services in Brazil, it was noted that very few initiatives took place, or are planned, to discuss future trends in agriculture, and how education and research should be formulated to address these trends. Some discussions with middle to large farmers take place occasionally, promoted mainly by state agencies, to talk about future markets and future needs. Issues such as land use or farming patterns of the future, however, are not systematically discussed.

Some state agencies (EMATERs) and NGOs are beginning to discuss future trends with farmers such as the use of land (the land size needed for food production over the next 20 years) and who will take over the farm (including land inheritance and technical capacity of youth).

## Government programs

As part of a government program, “Brazil without misery”, the Ministry of Agrarian Development (MDA) has recently allocated \$74 million for a two-year program to support technical assistance and rural extension for family farming. It is expected that 90 thousand poor families will benefit from this program.

Skeptics of the program see the initiative as a form of patronage that will not truly help farmers in the long term as farmers’ needs go beyond rural extension and access to information and include employment, better roads, schooling, access to health and sanitation, and access to markets.

Although current national policies nominally focus on family agriculture, interviewees perceive them as biased towards agribusiness and commercial farms.

According to the Brazilian census of 2006<sup>15</sup>, family agriculture corresponds to 84,4% of all agricultural establishments in Brazil, using only 24,3% of its agricultural area, and producing 30% of all agricultural products. This seems to be the reality in many countries, where a large number of smallholder farmers are responsible for a small share of production. Interviewees perceived that government programs and policies do not provide enough support to the most vulnerable groups of farmers, especially for those who are located in disadvantaged areas, are not land owners, or have less technical instruction.

In this context, there are international debates on the effectiveness of national programs in supporting smallholder farmers to continue or increase production since many smallholder farmers do not have scale of production to make higher profits, or their main activity may not be agriculture after all. In Brazil, 28,5% of farmers have economic activities outside the farm, and 50% of those activities are not in agricultural production.

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[http://www.ibge.gov.br/home/presidencia/noticias/noticia\\_visualiza.php?id\\_noticia=2242&id\\_pagina=1](http://www.ibge.gov.br/home/presidencia/noticias/noticia_visualiza.php?id_noticia=2242&id_pagina=1)

## Evaluation of rural extension programs

The information collected from the interviews indicated that a thorough evaluation of national policies and programs for extension has not been conducted in the past decade. None of the interviewees have knowledge of such an assessment. However, it was found that some state agencies (EMATER) have carried out participatory evaluations in recent years.

For example, the evaluation processes of state agencies (EMATERs) are carried out by EMATER itself and supported by local politicians, which, according to interviewees, may have a biased result. For accountability purposes, an independent process could provide a more impartial finding of what worked and what did not. For learning purposes, however, self-evaluations can be instrumental to improve practices. The interviewees agreed that the evaluation process helped improve dialogue among different agencies located in the same region and raise awareness on the importance of rural extension in Brazil among different actors involved in the process.

In April 2012, MDA organized the first conference to discuss the role of ATER to promote sustainable rural development (<http://www.mda.gov.br/portal/institucional/CNATER>). The conference was attended by representatives from state agencies, CSOs, rural unions, leaders of family agriculture movements, and government leaders. Proceedings of the conference are not publically available.

## Conclusion

This document presented an overview of the current rural extension situation in Brazil after discussing the issues with a small number of professionals. Several issues were raised including the lack of understanding of what constitutes rural extension, the lack of coordination and guidance on applying the national policy, the lack of capacity of professionals and institutions to work in multidisciplinary environments, and the lack of policies for evaluating the initiatives funded by federal resources.

For a more robust and in-depth analysis of the current situation of extension services in Brazil, along with future opportunities, it is necessary to analyze the policies, practices, incentives, and competencies of the sector at both the regional and national levels. A much larger group of professionals would need to be consulted, representing all sectors of the agricultural system that are engaged in rural extension, such as private firms, NGOs, self-help groups, the ministries, farmers and extension practitioners.