



Brazil's Lessons in Rural Development

Family Agriculture, Access to Water, and Civic Engagement

By Joseph Bateman and Viviane Brochardt,
with contributions from Silvio Porto

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FREQUENTLY USED ACRONYMS

ABC: Brazilian Cooperation Agency (*Agência Brasileira de Cooperação*)

ASA: Brazilian Semiarid Association (*Articulação no Semiárido Brasileiro*)

Conab: National Food Supply Company (*Companhia Nacional de Abastecimento*), a public company within the Ministry of Agriculture, Livestock, and Supply that manages much of the Food Acquisition Program (PAA)

Consea: National Council of Food and Nutritional Security (*Conselho Nacional de Segurança Alimentar e Nutricional*)

Embrapa: Brazilian Agricultural Research Corporation (*Empresa Brasileira de Pesquisa Agropecuária*)

FAO: Food and Agriculture Organization of the United Nations

MAPA: Ministry of Agriculture, Livestock, and Supply (*Ministério da Agricultura, Pecuária e Abastecimento*)

MDA: Ministry of Agrarian Development (*Ministério do Desenvolvimento Agrário*)

MDS: Ministry of Social Development and the Fight against Hunger (*Ministério do Desenvolvimento Social e Combate à Fome*)

P1+2: One Land, Two Waters Program (*Programa Uma Terra e Duas Águas*)

P1MC: One Million Cisterns Program (*Programa Um Milhão de Cisternas*)

PAA: Food Acquisition Program (*Programa de Aquisição de Alimentos*)

PNAE: National School Meals Program (*Programa Nacional de Alimentação Escolar*)

UNICEF: United Nations Children's Fund

1. Introduction

Across Latin America, rural poverty rates remain stubbornly high. While many countries in the region have experienced notable national-level economic growth rates over the past decade, income and opportunities have not grown at the same rate in rural areas. In Mexico and Central America, as small farmers, rural laborers, and especially young people consider their future, the lack of opportunity in rural areas is one of several issues that factor into decisions about whether to stay in the community or leave for urban centers or opportunities abroad.

The decision to leave is not an easy one, as migrants face many challenges. Mexicans and Central Americans travel north toward the United States in hopes of a better future as agricultural laborers or urban workers, but they can place their lives at great risk as they pass through Mexico.¹ Significant numbers of migrants also travel within Latin America to work as agricultural laborers, whether remaining in their own countries—for example, Mexicans who travel from Oaxaca to Guerrero—or traveling across

international borders—for example, Nicaraguans who travel to Costa Rica. Whether in the San Joaquin Valley in California or the fields of eastern El Salvador, migrant workers, both documented and undocumented, often face discrimination, labor abuses, and the threat of deportation.

In some countries that have experienced relatively high growth rates and reductions in national levels of poverty, such as Mexico, rural poverty has increased or remained at high levels, and inequality between the urban areas and rural farmlands has intensified.² In recent years, long-standing issues of lack of opportunity and development in rural areas have been compounded by a growing problem of food insecurity for rural communities. This has been caused in part by drastic international price fluctuations and the increasing tendency to produce cash crops, such as palm oil, instead of food for local markets.

To address high levels of poverty and food insecurity, increased social spending across Latin America has focused on alleviating rural poverty and decreasing hunger. Many countries have implemented

poverty reduction strategies, such as conditional cash transfers, that have reduced poverty rates and that may increase the employability and “human capital” of the next generation. However, like remittances, these types of measures do not by themselves promote long-term solutions that help increase the output and the incomes of small farmers or generate investments that create other rural employment opportunities.³

Governments, policy makers, and rural populations continue to be concerned about rural poverty and food insecurity. Additionally, many governments and international donors have become increasingly concerned about rural development and food security after seeing the negative effects on the rural sector caused by the increase in natural disasters and drought associated with climate change. But the growing concern about rural poverty has not yet translated into sustained action.

Nevertheless, there are examples in Latin America of sustained investment in rural family agriculture and local economic development which may be of interest to development practitioners, *campesino* organizations, governments, and donors across Latin America.

Brazil's approach to rural development and food security is one worth examining. Most studies focusing on Brazil's development strategy have given attention to former President Luiz Inácio “Lula” da Silva's signature Zero Hunger (*Fome Zero*) strategy to reduce hunger through a comprehensive government approach. In particular, the Brazilian government's conditional cash transfer program, *Bolsa Família*, has received widespread attention and praise. On the other side, critics of Brazil's rural development strategy have focused on the argument that the Brazilian government and legislature have promoted export-oriented agribusinesses, with dramatic increases in land devoted to soy and other export commodities and with negative effects on land concentration and on the environment.⁴

But the focus on these issues has meant that less attention has been given to Brazil's effort to promote family agriculture, including the ways in which the Ministry of Agrarian Development (*Ministério do Desenvolvimento Agrário*, MDA) and the Ministry of Social Development (*Ministério do Desenvolvimento Social*, MDS) have incorporated support for small producers as an element of the implementation of the Zero Hunger strategy.

This study attempts to draw attention to Brazil's efforts to promote family agriculture. In particular, this study highlights two specific programs in Brazil—the Food Acquisition Program (*Programa de Aquisição de Alimentos*, PAA) and the Cistern Programs (P1MC and P1+2)—looking at how they have achieved success in promoting rural development by focusing on support for family agriculture.

The PAA, an element of the Zero Hunger program, is funded through the Ministry of Social Development and the Ministry of Agrarian Development and is managed by a consortium of Brazilian government agencies. It uses federal funds to make direct purchases of agricultural products in local markets, thus generating income for small farmers. The purchased agricultural goods are then donated to food assistance programs, used to create food reserves, or used in schools or other public institutions. The program complements its purchasing program with a capacity-building component that includes training programs for participating small farmers and cooperatives; the trainings address issues of organizational management and financial planning. The program also supports network building between small producers to share best practices. The PAA has multiplier effects beyond the benefits it brings to the participants: other community members indirectly benefit from the more predictable demand and more stable prices that result from government purchasing contracts, as well as from increased skills and knowledge within their communities.

The Cistern Program is a project funded by the Ministry of Social Development and implemented by NGOs that addresses lack of access to water in the Brazilian Semiárido region (*o Semiárido*), through partnerships between a network of NGOs and federal and local governments. The program trains local community members in the skills needed to build different kinds of cisterns to collect rainwater and then provides funding to employ them to build cisterns for personal and agricultural use. In doing so, it supports small farmers, strengthens local economies, and promotes rural development.

Both of these programs were developed in partnership with communities to address locally identified problems. They are case studies in government-NGO partnership, NGO advocacy, and government willingness to adapt policies to local

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needs and respond to civil society feedback. They are also examples of how some aspects of Brazilian development policies have addressed food security issues by investing in family agriculture. This study hopes to contribute to regional discussions on family farming and food security by exploring two interesting and innovative programs that promote family farming.⁵ If governments in Central America are able to successfully implement programs that similarly focus on small farmers and rural development, it could be a way to address long-standing issues associated with out-migration from these countries.

2. The Food Acquisition Program in Brazil

By Joseph Bateman, with contributions from Silvio Porto

HISTORICAL CONTEXT OF RURAL DEVELOPMENT AND FAMILY AGRICULTURE IN BRAZIL

Until the 1990s, successive Brazilian governments pursued economic development of the rural sector mostly by promoting monocultures and agroindustry, from focusing on the exploitation of Brazilwood at the beginning of Portuguese colonization to focusing on sugar cane, gold, and coffee. More recently with the advent of the so-called “green revolution,” Brazilian governments supported establishing major agricultural commodities, including soy, corn, chicken, and other meats. In recent years, though, while Brazil has by no means abandoned its focus on large scale commodity producers, there has been an increasing additional focus on supporting small producers as a method of rural development, to preserve the country’s fragile biodiversity, and to address the longstanding issues of hunger and food insecurity.

This change came about because of a concerted effort by various social movements who worked with the Workers’ Party to place these issues on the

national agenda. After Lula was elected president in 2003, family farming became a major priority for the federal government and became a significant part of Lula’s trademark Zero Hunger strategy. The allocated budget of the Ministry of Agriculture (*Ministério da Agricultura, Pecuária e Abastecimento*, MAPA), whose main focus is on large, export-oriented farms, is around US\$4.42 billion for 2013, with only about \$100 million going for family agriculture. But the MAPA is not the only Ministry that focuses on the rural sector. The Ministry of Agrarian Development (MDA), which was created in 2000 to focus on supporting family farming, received about \$2.28 billion for 2013.⁶ Although the budget for the MDA is only about half that of the MAPA, it nonetheless represents a relatively new and substantial commitment to the family farm sector. It is also worth noting that the MDA’s budget increased more than 300 percent from 2004 to 2013, while the MAPA’s budget increased only 25 percent.

Despite a major historic and current focus on cash crops and commodities, both from the government and the private sector, Brazil still has a large number of small, local producers throughout the country who help the country maintain an extremely diverse food supply. According to the latest agrarian and livestock census performed in 2006, there are around 5.3 million rural farms in Brazil. Approximately 4.5 million of these farms (approximately 85 percent) are family-based economies. Despite their numbers, the small farm sector controls less than 25 percent of the land used for farming nationally. Of these 4.5 million family farms, about half (2.77 million) farm on less than 10 hectares, occupying less than 3 percent of the total land area for family farming.⁷ Despite accounting for such a small percentage of land use for farming, family and other small-scale agriculture have been contributing significantly to food supplies in Brazil, as well as maintaining the country’s fragile biodiversity.⁸

GREATER FOCUS ON RURAL DEVELOPMENT AND FOOD INSECURITY IN BRAZILIAN PUBLIC POLICY

Although there are efforts by the Brazilian government to eradicate extreme poverty through robust social programs, poverty and the related problem of hunger remain issues; official data⁹ indicate that there are 16 million people in Brazil (out of about 200 million people) who live on an income of less than \$35 per month, making them much more vulnerable to hunger and nutritional insecurity.

The issue of hunger and secure access to food in Brazil began to receive more attention in the 1990s, due to the work of civil society actors who created the movement Citizen Action against Hunger, Poverty, and for Life (*Ação da Cidadania contra a Fome, a Miséria e pela Vida*) to mobilize Brazilian society to fight hunger and malnutrition. Numerous local and state committees were created to collect food, clothing, and building materials, which were then donated to civil society organizations that served low-income populations, in particular families and people facing food insecurity and malnutrition. This movement for essentially charitable purposes helped to build organizations that were capable of pressuring the government to take the issue of food security more seriously.

In 2001, while working at the Citizenship Institute (*Instituto Cidadania*), a civil society organization, Lula launched his campaign for the Zero Hunger Program in order to bring the issues of food security and hunger to public policy debates. The program, a collection of social policies aimed at reducing poverty and hunger in Brazil, became one of the central features of the Workers' Party's presidential campaign, receiving support from a wide variety of social movements interested in supporting small farmers, biodiversity, and reducing poverty.¹⁰

After becoming president in 2003, Lula created what would become the Ministry of Social Development¹¹ to implement the Zero Hunger Program. To do so, Lula reactivated¹² a key planning body, the National Council of Food and Nutritional Security (*Conselho Nacional de Segurança Alimentar e Nutricional*, Consea), which had become inactive during Fernando Cardoso's presidency. The Consea¹³ is a group made up of civil society members and government officials tasked with monitoring and making recommendations on food and agriculture policies, such as the *Bolsa Família* program, the School Meals program (*Programa Nacional de*

Alimentação Escolar, PNAE), the PAA, and other federal social programs. Soon after the Consea became active in 2003, the group began making new proposals that became incorporated into the government's strategy. Among these initial proposals were:

- ▶ launching the Safra Plan of Family Agriculture (*Plano Safra da Agricultura Familiar*), which was intended to evaluate and strengthen access to credit, financing, and investment;
- ▶ reinstating farm insurance for climate problems, such as drought, excessive rainfall, hail, and frost;
- ▶ reinstating the National Program of Technical Assistance and Rural Extension (*Programa Nacional de Assistência Técnica e Extensão Rural*); and
- ▶ increasing income for small-scale farmers by stimulating demand for the production of family and small-scale agriculture.

These programs, and other existing programs, were incorporated into a Secretariat of Family Agriculture within the Ministry of Agrarian Development, which was a major step toward institutionalizing President Lula's commitment to family farmers.

Also, after Lula was elected, the political climate became increasingly favorable for including the small farmers themselves in the policy-making process, as the Workers' Party's policies and their social base included an emphasis on small producers in the rural sector. The political opening and the inclusion of these groups in the policymaking process led not only to a greater emphasis on supporting family farms, but also to the development of policies and programs tailored to address the specific needs of specific sectors living in rural Brazil—small-scale farmers, activists and farmers in the landless movement, indigenous groups, *quilombolas*, and other groups.

THE FOOD ACQUISITION PROGRAM

In this context, the Food Acquisition Program (*Programa de Aquisição de Alimentos*, PAA) was created in 2003 in order to address issues of rural poverty, hunger, and food insecurity by guaranteeing demand in local markets for small producers through local government purchases of agricultural products. The program provides funding to cooperatives and associations to build food reserves, where foodstuffs

can be stored for post-harvest periods when supply is lower and the market price is more favorable, and to buy food for use in government institutions and programs, like the School Meals Program (see box). The local, regional, and federal governments were already purchasing food items for most of these programs, but with the PAA, there was a concerted effort to use the governments' purchasing power to support small farmers. In addition to direct federal government purchases, the PAA urges local and regional governments to favor small producers in purchasing by providing funding to purchase from small, local producers. The purchases are seen as a strategic way to spur rural development, even as they address problems of hunger and nutritional deficiencies using the food purchased in government assistance programs.

The program has several key components:

- i) It identifies and defines whose products can be bought through the program (small-scale farmers, settlements of landless farmers, indigenous groups, *quilombola* settlements, and other groups).
- ii) It allows government purchasers to buy at established fixed, fair prices based on market averages, from the target populations, without requiring a bidding process that might drive prices down and disadvantage the smaller producers or the target populations.
- iii) It institutes a system of direct food purchases from family farmers by the government.

PHOTO CREDIT: MANUEL URBANO, SECRETARIA DE EXTENSÃO AGROFLORESTAL E PRODUÇÃO FAMILIAR



Farmers in Acre, Brazil sell their produce through the PAA

- iv) It shares management between six different government ministries, which together make up the Managing Group (*Grupo Gestor*).¹⁴

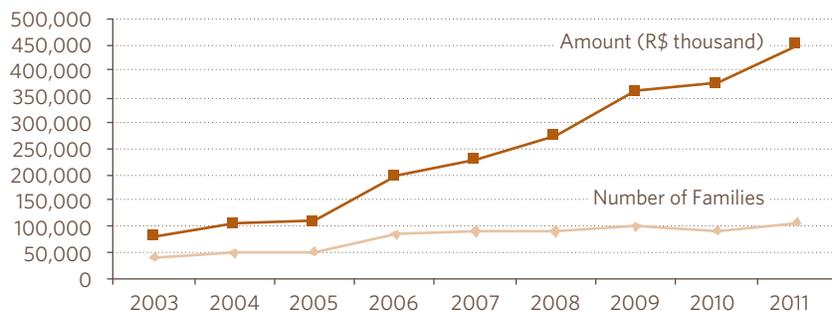
The PAA uses two different mechanisms to make food purchases; in the first, the MDA and the MDS provide resources to the National Food Supply Company (*Companhia Nacional de Abastecimento*, Conab) to spend at the local level, and in the second, MDA and MDS provide resources directly to states and municipalities to purchase food for schools, hospitals, et cetera. In this study we will focus most of our analysis and recommendations on the part of the PAA managed by Conab, since most of the resources and management of the program go through this

OBJECTIVES OF THE FOOD ACQUISITION PROGRAM

- I - Encourage family agriculture, promoting social and economic inclusion, with incentives for sustainable production, processing, food industrialization, and income generation;
- II - Promote the consumption of food produced through family agriculture;
- III - Promote access to food in necessary quantity, quality, and regularity for people facing food and nutritional insecurity, recognizing access to adequate and healthy food as a human right;
- IV - Support food supplies through government food purchases at the city, state, and national levels, including providing food in schools and in the areas served by public entities.
- V - Build public food reserves produced by family farmers;
- VI - Support agriculture storage reserves formed by cooperatives and other formal family agriculture organizations;
- VII - Strengthen local and regional commercial networks;
- VIII - Promote biodiversity and organic and agro-ecological food production, as well as incentivize healthy food habits at the local and regional levels; and
- IX - Support agricultural cooperatives and associations

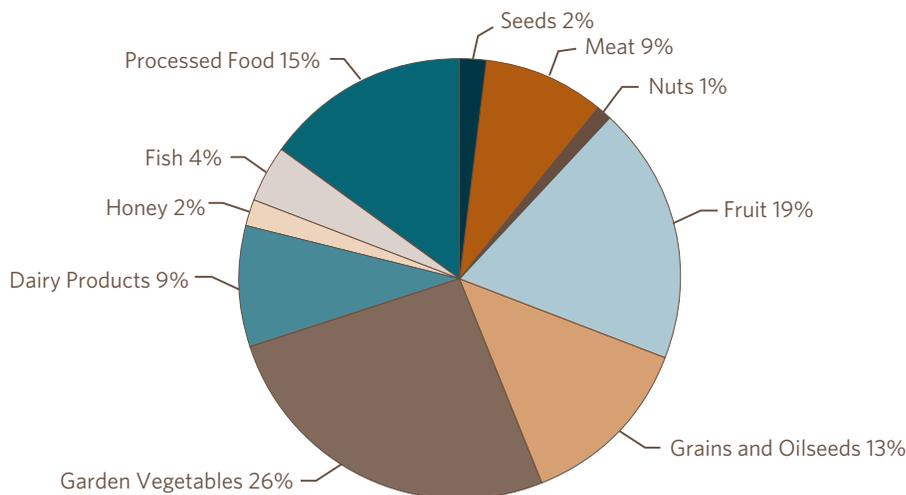
Source: Chapter 1, Article 2 of the Decree N 7.775 on July 4, 2012

Figure 1: Number of families participating in the PAA and the amount in thousands of R\$ executed by Conab



Source: CONAB

Figure 2: Different foods purchased during 2011



Source: CONAB

agency in partnership with local cooperatives and associations. We will also mention some of the more interesting and innovative ways that local governments are able (or required) to use funds from the program to support small farmers and rural agricultural development.

In the part of the program that it manages, Conab signs contracts with local cooperatives, farmers' associations, and in some cases independent family farmers to purchase set quantities of products at fixed

prices that remain the same for 12 months. This initiative provides an effective way to increase income for small farmers—both for poorer farmers who may only have access to markets via the PAA and for more successful farmers who may already have access to markets—because it is a guaranteed market with a price that is known ahead of time. Conab also provides funding from the MDA to associations and cooperatives to buy food from individual family farms to build food reserves. The food can be stored for up to 12 months to sell when the market price is higher. In addition to purchasing from the farmers, the PAA also has a capacity-building component that focuses on organizational management and financial planning, as well as collaboration between associations and cooperatives to gain market access.

Since 2003, the limit on the amount that each farmer can sell through the program has increased significantly. For Conab purchases that are donated to food assistance programs and government institutions, the limit has

risen from \$1,250 in 2003 to \$2,400 in 2011. For Conab purchases going to build local food reserves, the limit has risen to \$4,000 per year for each individual farming entity; the total value of what each cooperative or association can sell is the individual sum of its set of members. The limit for purchases by local governments for food to be used in schools using federal PAA funds is \$4,500 per farm.

The number of families selling food through the PAA has more than doubled since 2003. When the

Throughout the nine years of implementation of these PAA programs, there have been various adjustments so that the programs better address local realities on the ground.

program began, the PAA included 48,000 families, and by 2011, Conab purchased food from over 106,000 families. The budget of the program grew more than 400 percent, rising from approximately \$41.5 million executed by Conab in 2003 to about \$227 million in 2011. (The total PAA budget, including funds executed by Conab and local governments, grew from \$72.5 million to \$397 million).

Also, in 2003, the first year that the program was implemented, Conab only purchased 56 different products, whereas in 2011 it purchased 374 different food items through the PAA.

The map below shows where the PAA has been implemented over the past eight years. In the blue municipalities, at least one cooperative or association project has taken part in a PAA project. According to the MDA, “Food purchased by the PAA goes to an average of 25,000 entities annually, which [in turn] supplies over 15 million people.”¹⁵ This total includes several tens of thousands of food assistance organizations that serve over three million people per year, which is over double the number of people served by food assistance organizations using PAA funds when the program began in 2003.

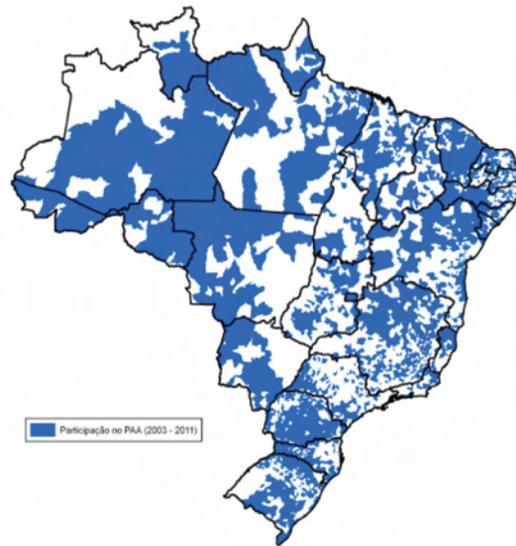
The Conab has executed PAA projects in 2,499 of the 5,564 municipalities in Brazil, or 45 percent of the country.

IMPACT OF THE PROGRAM AND PROCESSES OF EVALUATION AND ADJUSTMENT

The MDS has funded several academic-led studies to evaluate the impact and effectiveness of the program. The results of a 2007 study that gathered empirical data and interviewed participants and non-participants of the program help show the program’s effectiveness in promoting family agriculture and rural development.¹⁶

All family farmers in the Brazilian Northeast experienced increases in income during the period of the PAA—both those that participated in the program and those that did not—because nearly 70 percent of all family farmers in this region benefitted from other government social programs, such as *Bolsa*

Figure 3: The PAA in Brazil from 2003 to 2011



Familia and the gas vouchers program. In comparison, only 37 percent of participants in the South received government benefits outside of the PAA, reflecting better socioeconomic conditions as well as higher levels of social organization among producers in this region.¹⁷

The average increase in monthly income for PAA participants in the Northeast was \$163.64, and in the South the average increase for PAA participants was \$48.26. These amounts represent a significant increase in income from agriculture for both regions. In the Northeast, 29.7 percent of participants did not receive any income from their land before the program, and 27 percent received less than \$175 per month. In the South, while only 3.7 percent previously received no income, more than 50 percent received less than \$175 per month.¹⁸ It is also worth noting that the income from agriculture of family farmers in the Northeast who participate in the PAA is nearly three times that of non-participants in the same region. Many non-participants have to seek their income from non-agricultural activities, whereas participation



PHOTO CREDIT: BRUNO SPADA, BRAZILIAN MINISTRY OF SOCIAL DEVELOPMENT

in the PAA program often makes relying only on agricultural income a viable option.¹⁹

The PAA is monitored by the Consea, as well as state-level Conseas and civil society organizations working on issues of rural development and food security. Over 2,300 cooperatives and associations directly participate in its implementation at the local level. The Consea monitors the volume and delivery of financial resources of the PAA, as well as whether the resources are meeting the demand of the projects. It also coordinates with social organizations, the regional Conseas, and the federal government. The state-level Conseas, which are one third government and two thirds civil society, have also formed a bridge between the federal and regional governments and family agriculture organizations, agrarian reform settlements, indigenous groups, and *campesinos*. (However, many local producers are unaware of the role of the local Conseas, and in some cases they are unaware of their existence.)²⁰

Throughout the nine years of implementation of these PAA programs, there have been various adjustments so that the programs better address local realities on the ground. One important change has had to do with the purchasing rules for the School Meals Program. Recognizing that purchasing from small, local producers for existing government programs was a way to increase biodiversity, nutrition, and

rural development, the Brazilian Congress updated the law governing the School Meals Program in 2009 to mandate that local governments buy 30 percent of the food to be used in schools from small, local producers.²¹ While most of the funding for the School Meals Program is separate from the PAA, funds from the PAA for local governments also go to purchase school meals, and this recent change to the law governing the School Meals Program shows that there is a commitment to use government food-purchasing programs as a means to support small farmers.

Before the law, about one third of cities purchased a portion of food for school meals from local producers, but now all of them are obligated to buy a significant portion of schools' food from small, local farmers, which represents a dramatic opening of a reliable market for these producers, who frequently cited bureaucratic obstacles in the bidding process of contracts with the School Meals Program. Through the PAA, many local producer organizations have been able to form close relationships with local governments. In several municipalities cited in the 2007 MDS study, institutions that received food produced by the PAA participants expressed a desire to continue purchasing from these suppliers even if the program ended, showing that at least the direct purchasing aspects of the program could be sustained beyond the life of the PAA if there is a concerted effort to build these kinds of relationships throughout the country.²²

Another significant change has to do with support for organic agriculture. In 2010 the Managing Group of the PAA passed a resolution to increase the value of agro-ecological and organically produced goods by offering to pay up to 30 percent more for these types of products than the price of equivalent goods produced using conventional methods, with the end goal of promoting better and healthier food.²³ A third change is aimed at increasing women's participation in the program. After studies demonstrated that women and women's groups represented only 23 percent of the PAA participants and after receiving criticism that women were being excluded from the program, a minimum quota of female participation in each PAA program was incorporated and will be mandatory starting in 2013.²⁴

One of the recognized limitations of the program is that it only includes family farmers, cooperatives, and associations that are registered as such with the government. There is a strong argument for the

requirement that small producers work through cooperatives or associations; it increases efficiency and reduces costs, makes both marketing and technical assistance easier, et cetera. But, in limiting participation to formally organized entities, it excludes the smallest, most marginalized farmers that experience the most extreme forms of poverty.

In studies on the program's implementation in the Brazilian Northeast, researchers noted that the part of the PAA that allows advance purchase contracts was, in some cases, causing further indebtedness of already marginalized farmers, rather than stimulating greater production and increased market access to farmers who would otherwise not be able to produce.²⁵ In many cases, farmers would enter into contracts to provide a certain amount of a good, and then would be unable to deliver the product, either due to a lack of technical skills to grow that crop or due to climate problems. While the government farm insurance program, Proagro, should have covered these losses, many farmers were unaware of the insurance program, or when they were aware, they found the bureaucratic obstacles too great to overcome. When farmers were able to file a claim, the amount received was often less than what they owed, because the Proagro reference price was less than the PAA reference price for the same product. There was a lack of necessary technical assistance for the PAA participants in many cases and a lack of farmers' understanding of the program in others. Because of the problems associated with this part of the PAA, and because the other forms of direct purchases were seen to be much more successful in increasing farmer incomes, the advanced purchasing component of the PAA has been almost completely discontinued.



PHOTO CREDIT: ANA NASCIMENTO, BRAZILIAN MINISTRY OF SOCIAL DEVELOPMENT ARCHIVE

While there are some efforts to identify potential beneficiaries that are currently left out of the program, there still needs to be a greater push to find ways not only to help those that are close to the poverty line to rise above it, but also to identify those experiencing extreme poverty in rural areas and find ways to incorporate them into the program as well. This can be done by increasing awareness of the program, making sure payments are allocated in a timely fashion, giving more technical assistance to farmers that need it, and addressing inadequacies and obstacles in transportation.

PAA IMPLEMENTATION AT THE LOCAL LEVEL

In order to get a better understanding of how the PAA works at the local level, below are some specific cases that highlight its scope and its capacity to strengthen

BOX 1: PROMOTION OF AGROEXTRACTIVISM

In northern Mato Grosso and southern Rondonia (in Western Brazil), Conab has funded projects that help farmers move into the processing of their products, thus capturing more profit by moving up the value chain, particularly with the Brazil nut, the Copaiba tree, and latex. Using funds from the PAA (for acquisition and working capital), the cooperative is able to transfer funds to its members as a form of partial advance payment for production of the Brazil nut, and the rest of the payment is made after production. At harvest, some of the nuts are sold raw and others are processed. Oil is extracted from the nuts

to sell in the private market, and the part that is left over after the nuts are crushed is converted into flour. Afterwards, the flour can either be distributed directly to the market or made into a cracker, which could be sold to Conab through the PAA and allocated to public schools, daycares, Associations of Parents and Friends of Special Children (*Associação de Pais e Amigos dos Excepcionais*, APAES), and several other organizations that serve vulnerable populations in Brazil. By processing the Brazil nut, family farmers add value to their products and are able to increase their incomes.

family farms. The program has a strong capacity-building component, serving as a teaching tool for how local markets operate while simultaneously allowing family-based economic organizations to gain experience in technical, administrative, and financial management.

SOME LESSONS FROM THE PAA

The PAA has promoted rural development in Brazil by stimulating local markets in various ways. The direct purchase of products for use by government institutions or for donations to food banks has helped secure reliable markets for small producers. The

BOX 2: PROMOTING BIODIVERSITY AND FOOD SECURITY BY USING NATIVE SEEDS

One of the strengths of the PAA has been its ability to adapt to the needs of diverse local communities. A key example of this is the PAA's support for seed banks in the Brazilian Semiarid region,²⁶ where the PAA purchased native or traditional seeds that have been developed by family farms and producer organizations.

The Brazilian Semiarid experiences high temperatures and extreme irregularities in rainfall. As a result, local farmers living in this region developed certain cultivation practices, such as selecting and adapting several seed species and varieties that are able to grow in this environment. A study developed by the Brazilian Agricultural Research Corporation (*Empresa Brasileira de Pesquisa Agropecuária*, Embrapa) in partnership with the Semiarid Association of Paraíba (*Articulação do Semiárido Paraibano*) and the Federal University of Paraíba compared the native seeds to commercial seeds to analyze their yields, and it analyzed the local capacity to stockpile seeds developed at the local level. The research conducted from September 2009 to September 2011 confirmed what the farmers already experienced in practice: the native seeds, compared to the commercial seeds, perform better under the climate conditions from this region. In the Semiarid, local seeds are more effective at enhancing productivity, and therefore ensuring food security.

Beginning in 2003, some of these farmers asked Conab to help create an institutional framework for the purchasing and distribution of the native seeds, with the objective of

recovering and strengthening the local Community Seed Banks. The organizations affiliated with the Poló Union of Borborema (*Poló Sindical of Borborema*) have since been able to use the PAA to expand economic opportunities linked to seed production. Conab agreed to purchase the seeds from the association members to resupply family and community seed banks in the region. The communities only use these reserves when droughts and other climate disasters make their use necessary, as was the case in 2012 when the region experienced the worst drought in thirty years. These seed banks have increased community autonomy and prevented the loss of their heritage of traditional seeds.

In 2006, the purchases made through the PAA contributed to a state network of 228 seed banks with native seeds that encompassed about 7,000 family farms. Different varieties of corn and beans were distributed through this system, in addition to fava bean, sesame, sorghum, and sunflower seeds. As these purchases and acquisitions continued for several consecutive years, the seed banks strengthened their capacity to self-supply.

Over the last nine years, Conab, through the PAA program, has been able to work with local organizations with experience using native and local seeds. Largely inspired by this experience, the Brazilian Congress recently passed a law²⁷ that expanded purchases of local native seeds produced by small family farmers as a way to promote traditional family farming and biodiversity.

BOX 3: THE STIMULATION OF LOCAL MARKETS AND FOOD SECURITY WITH PROMOTION OF LOCAL FOOD

The PAA has found widespread acceptance among producer organizations, who say that the program helps raise food prices, stimulates demand for local products, and supports producer organizations. For example, in Uruará, Pará state in the Transamazon region, Conab has supported the Don Oscar Romero Women's Association (*Associação de Mulheres Dom Oscar Romero*), composed of 23 women. The Association had once had as many as 70 members, but according to the president of the group, participation had diminished significantly by the time the group joined the PAA; women had begun to leave because they were not making any money and their husbands did not support their participation.

In 2010, the group started a project in which they signed a contract with Conab to produce fruit pulp (20 tons of cocoa and six tons of *cupuaçu* fruit) over the course of one year to sell to Conab through the PAA program. The project was successful, and in 2011 and 2012, they scaled up to 41.5 tons (16 tons of *cupuaçu*, 7.5 of cocoa, and 16 of acai berry). (They added acai after having to drastically reduce the amount of cocoa when a severe drought hit the region.) According to the group's members, before the PAA the level of production was small, individualized, and suffered from irregular market access, and was therefore not a viable choice as a source of income for them. Today, after two years of participation in the PAA, these women have seen significant increases in their salaries.

In addition to helping the women who are part of this program, it also indirectly supports a broader set of small farmers in the region by stabilizing the price of these products. With the PAA in the municipality as an alternative purchaser, the market price has stabilized closer to the PAA reference price. In the case of acai, the market price before the PAA for 15 kilograms was \$5, and now it is \$6.50. The processed acai (pulp) previously cost \$2.50 per kilo, and Conab pays \$3 through the PAA. The *cupuaçu* was previously \$2, but in the PAA it is sold for \$2.90; cocoa was \$1.25 and is now \$2 per kilogram in the PAA. Conab does regional price research for different products and tries to offer a price slightly higher than the local market as a way to provide production incentives and secure greater income for the families that are producing and participating in the PAA.

The president of the association pointed out that the school children who receive their products through the PAA started to value and demand the PAA-supplied juice over the industrially-produced juice that was served previously. In an interview with the group conducted by Conab, the increase in the women's self-esteem became evident. According to its president, the group "...is now seen through different eyes, before it was said that we weren't going to get anywhere."²⁸ Today the local market respects the organization for the economic impact it has begun to have on the area and for the outside resources that it brings to the community through the PAA, which are themselves channeled into the local market.

program provides a reliable source of income for a group particularly vulnerable to hunger because of poverty, and in doing so it also has reduced levels of food insecurity by expanding reliable access to food at the local level. It has also reduced price variability by buying products at consistent prices and by expanding food and seed reserves for use during drought or other times of food shortage. The PAA has strengthened the capacities of local civil society organizations through partnerships with local and federal governments, and it has transformed the public policymaking process with respect to rural communities by involving them in the process of putting together and reviewing the programs at the local level, recognizing that the communities understand local realities and have innovative ideas.

The PAA, because of its success in Brazil, has contributed to regional thinking about government purchases of local production in other countries. Several similar programs exist throughout Central America and in Mexico, including El Salvador's *Vaso de Leche* program, Mexico's Liconsa, and the World Food Program's Purchasing for Progress. Yet the scale and profile of the PAA in Brazil is greater than any of the food purchasing programs in Mexico and Central America, and the PAA has proven exceptionally open to civil society participation. As other countries implement government food procurement programs, it will be important for them to place particular emphasis on the knowledge and practices of rural farmers, indigenous groups, and other local populations in these countries so that they can promote local economic growth and social inclusion.

As other countries implement government food procurement programs, it will be important for them to place particular emphasis on the knowledge and practices of rural farmers, indigenous groups, and other local populations in these countries so that they can promote local economic growth and social inclusion.

The Brazilian government, via the Brazilian Agency of Cooperation (*Agência Brasileira de Cooperação*, ABC), has already played an active role in the development of similar programs in both Latin America and Africa. Also, international cooperation agencies like the UN's Food and Agriculture Organization (FAO) have looked to the PAA as an important reference for promoting family agriculture and reducing food insecurity for vulnerable populations.²⁹ The PAA is not a magic bullet; in Brazil it forms part of a comprehensive strategy to address food security and eliminate hunger, which includes conditional cash transfers and support for a wide range of rural development and agricultural projects. But its success and widespread recognition make it an important case study for governments that want to design programs to support family agriculture.

3. Increasing Water Access through Brazil's Rainwater Captation Programs

By Viviane Brochardt

INTRODUCTION

If one problem that family farmers face in Brazil is low prices and limited access to markets, another significant problem is lack of access to water for irrigation. This is particularly true in the Semiarid, which extends throughout almost the entire Brazilian Northeast and through the northern portion of the Southeastern region. The Brazilian Semiarid includes more than 22 million people from nine states and accounts for 11 percent of Brazil's population, but 66.5 percent of Brazil's rural poor. The worst human development indices in Brazil are found in municipalities of this region.³⁰ According to UNICEF, more than 70 percent of the 13 million children that live in the Semiarid are classified as poor.³¹

Brazil's Semiarid is also home to about 5 million

farmers.³² Like the PAA, the Cistern Programs in Brazil were launched in response to mobilization by civil society and rural social organizations to increase access to water for small family farms, and the programs largely reflect their priorities. In addition to the PAA, Brazil's Cistern Programs are among the more interesting examples of its approach to food security and rural development.

Water shortages are one of the region's many problems associated with—and contributing to—poverty. Like semiarid regions throughout the world, the Brazilian Semiarid has highly irregular rainfalls and long periods of drought. Though it receives more rain than many other semiarid regions, its evaporation rate is high, leaving the region with a net water deficit. The length of the rainy season varies, but it generally accounts for four or five months per year, leaving seven to eight months of drought. During this period, known as the *seca*, there is a lack of water for domestic consumption, forcing long hikes—often of several kilometers—to the reservoirs, particularly by women and children.

According to Brazilian Agricultural Research Corporation (*Empresa Brasileira de Pesquisa Agropecuária*, Embrapa), during the drought period, a family with five children spends a monthly average of three days per person obtaining water. Water in the region is often unfit for human consumption, either from salinization from minerals in the rocks and soil or from pollution from pesticides, fertilizers, and bacteria.³³ It has also been documented that five weeks per person per year are lost due to diarrhea contracted following the consumption of contaminated water. Based on data from the Brazilian Ministry of Health, UNICEF reports that one out of every four children who die in the Semiarid will lose his or her life as a result of diarrhea after ingesting water unfit for human consumption.³⁴

ANALYZING POLICIES TO ADDRESS THE BRAZILIAN SEMIARID

Brazil has struggled for many years to find workable approaches to the problems of the Semi-arid. Although there have been some changes over time in the policies implemented in this region, in many cases the same—often unsuccessful—practices are simply continued under different names. Currently, the government describes its approach to the region as one of seeking “coexistence” with the realities of the region’s climate, in contrast to previous governments’ strategies of combating drought. However, the policies have remained essentially the same as under previous governments. One such example is the project to divert the São Francisco River.³⁵

Known as the national integration river because it connects northern and southern Brazil, the São Francisco starts in São Roque de Minas, Minas Gerais state. It meets the Atlantic Ocean after traveling 2,700 kilometers and passing through 503 municipalities in five states: Minas Gerais, Bahia, Pernambuco, Alagoas e Sergipe. Its mouth is located on the border between these last two states. Approximately 16 million people in these five states depend on the São Francisco for water.

With the goal of addressing the lack of access to drinking water among the poor living in the Brazilian Semi-arid, in 2007 the Lula government resurrected an idea dating back to the 1800s: to divert the river via open canals to other rivers in the region. The proposal included transporting water to 390 municipalities in four Northeastern states—Pernambuco, Paraíba, Ceará, and Rio Grande do Norte—via 600 kilometers of canals going through nine water-pumping stations and 30 levees. According to government estimates, the project will benefit 12 million people.

The project, which started during the Lula government and has been continued by current President Dilma Rouseff, has doubled in cost in the last four years. In 2007, its budget was around \$2 billion; the prediction is that the expenditures will rise to \$4 billion this year, and the construction is not even halfway finished.

There have been many criticisms of the river diversion project, in addition to its growing cost. Critics have charged that, despite appearances, the



area the water is being taken from actually has a greater water demand than the area receiving the water.³⁷ The program has been criticized as well for benefitting agroindustry and large shrimp farming over small producers, as the canals will go through large farm areas, benefitting large land owners under the premise of bringing water to inland communities.³⁸ The water’s intended use is clear when looking at proposed distribution patterns: 70 percent for irrigation for primarily large farms, 26 percent for industry, and only 4 percent for the general population without other sources of water. There is also a lack of impact studies for the river basins giving and receiving the water.³⁹

BOX 4: TYPES OF CISTERNS



CREDIT: JOSÉ REIS, ASA COMMUNICATIONS ARCHIVE

The Cement Cistern is a round, partially buried reservoir tank made from pre-cast cement blocks and built beside houses. It stores rain water that falls on the roof of the house and is then directed toward the cistern via gutters and pipes. It can hold 16,000 liters of water to be used for human consumption, enough to supply a family of five to six people for eight months, if used correctly, for drinking and cooking.



PHOTO CREDIT: REGIONAL CENTER OF TRAINING AND ASSESSMENT (CERAC)

The Stone Tank, or *caldeirão*, stores rainwater on *lajedos* (rock formations that are common in the region) by constructing stone walls that prevent water runoff. Water naturally accumulates in holes in these rocks, but in small quantities. To increase the capacity of these reservoirs, walls are built which keep water from running off the rocks.



PHOTO CREDIT: JOSÉ CARLOS NERI

Water Pumps remove ground water through previously inactive wells. A water pump is operated by turning a large iron wheel, called a *volante* or *volanta*. It is referred to as the *popular water pump* and can draw up to 1,000 liters of water in one hour in wells that are 50 meters deep, but it can be installed in wells that are up to 80 meters deep. Each water pump can supply water to 10 families in a community and can last up to 50 years. The water is used for domestic chores, agriculture, and animals.



CREDIT: JOSÉ REIS, ASA COMMUNICATIONS ARCHIVE

Subterranean Levees act as artificial aquifers and are constructed in valleys that are flooded with water during rainy seasons, sometimes forming small temporary streams. At the point where the valley narrows, ditches are dug in the soil until a rock called *crystalino* is found. These ditches, which will subsequently be lined with plastic canvas, form a barrier or subterranean levee that traps water underground between the levee and the rock. They are normally four meters deep, 80 centimeters to one meter wide, and can be up to 100 meters long. This underground wall holds water that runs off from the higher areas of the valley well into the dry season so that this area of land can be used for agricultural production.



PHOTO CREDIT: RAFAELLA SABINO, ASA COMMUNICATIONS ARCHIVE

The Sidewalk Cistern, or *calçada*, has the capacity to store 52 million liters of water. The Sidewalk Cistern is so named because the area that catches the water is a paved surface of 200 square meters built on the ground next to the reservoirs. This cistern is rounded and almost completely buried, with only its cover remaining visible. The water stored in this cistern can be used as drinking water for small animals (such as chickens) and for watering small farms or gardens. Its use is encouraged to maximize small-scale farming near houses. The ASA believes that, because women traditionally work in these areas, the *calçada* could help women farmers' work become more valued and appreciated.

Both cistern programs were started by civil society organizations and adopted by the federal government and scaled up massively through federal funding. They are based on innovative water storage technologies, adapted for the local environment and for small scale use.

The river diversion project clearly illustrates some of the conflicting priorities within the government regarding the development of the Semiarid. Billions of dollars are spent on this project; meanwhile, several hundreds of millions of dollars are being spent on activities that aim to decentralize the water supply by means of social technologies, such as cement cisterns.

LIVING WITH THE SEMIARID

In 1999, various civil society groups organized to create the Brazilian Semiarid Association (*Articulação no Semiárido Brasileiro, ASA*), a network of over one thousand organizations.⁴⁰ They developed the Program of Social Development and Mobilization for Living with the Semiarid (*Programa de Formação e Mobilização Social para Convivência com o Semiárido*). Within that overall program, they created the One Million Cisterns Program (*Programa Um Milhão de Cisternas, P1MC*) and the One Land, Two Waters Program (*Programa Uma Terra e Duas Águas, P1+2*), which rely on the capture and storage of rain water for human consumption and food production. Both cistern programs were started by civil society organizations and adopted by the federal government and scaled up massively through federal funding. They are based on innovative water storage technologies, adapted for the local environment and for small scale use.

The P1MC has the goal of expanding access to drinking water for 5 million people via the construction of 1 million cement cisterns. Once families are guaranteed access to drinking water, the One Land, Two Waters Program (P1+2) seeks to ensure water for farming, respecting the regional food culture and the knowledge of local farmers.

The P1+2 program is intended for families that already have access to water for human consumption, meaning families that are already benefitting from a cistern. It expands small scale water collection technologies and teaches water conservation and water use, so that cistern-stored water is available for

both consumption and farming. Participating families take part in a set of social programs, including training through farmer-to-farmer exchanges, collecting experiences and sharing best practices, and construction.

With funding from the federal government that has grown significantly over time, the community organizations that make up the ASA select families to receive cisterns. These families subsequently participate in training programs based on established criteria having to do with poverty and social need. More than 400,000 families have received cisterns since the program started in 2003.

Along with increasing family farmers' access to water for consumption and irrigation, the cistern program is designed to provide rural jobs. In addition, local procurement requirements for materials help strengthen the local economy. All of the cisterns and collection systems developed by the ASA are built in the communities themselves by farmers trained as construction workers, which consequently generates jobs and increases the income of local families. To date, there have been 14,190 individuals trained as construction workers through this program.

The payment a construction worker receives for the construction varies by technology and by the time required for construction. To build a cement cistern, a construction worker needs five days. The water pump can be installed in 10 days. The sidewalk-cistern, the subterranean levees, and the stone tank are built in 20 days each. (See Box 4 for descriptions of the different types of cisterns).

The purchase of construction material also takes place within the municipalities themselves, following a bidding process. The only requirement for local suppliers to participate in the bidding process is that they must be registered as a formal business with the state and have their tax payments up to date. This allows more businesses to qualify to participate in the bidding and increases the taxes collected by the municipalities and the state; this, in turn, creates

While it would be inappropriate for other governments in Latin America to implement exact replicas of Brazil's programs to address local issues of poverty and lack of rural development, the fact that these programs address problems identified by rural communities is worth emulating.

resources that can be spent locally, creating gains for the local economy.

Although the cisterns are the most evident product of these programs, the development of local economies, the process of social mobilization, and the exchange of best practices and knowledge among farmers are equally important because they result in the creation and strengthening of local networks of production and innovation, as well as the creation of solidarity in rural communities.

The costs and number of people benefiting from each type of cistern can be found in the box below.

The programs P1MC and P1+2 have already been implemented in over 10,000 communities in nine states. About 400,000 cisterns have already been built, as well as another 12,000 other systems for water storage. Due to the volume of resources necessary for these programs, the partnership with the federal government has been essential. The results from the first years of the P1MC program allowed the ASA to sign a Term of Partnership with the MESA (which later became the MDS) in 2003. After that initial agreement, the partnership with the federal government continued through both of Lula's terms and involved the expenditure of about \$350 million. Following Dilma's election, the negotiations between the ASA and the government continued, and projects are currently underway to construct entire reservoirs that can store water that is safe for human consumption and agricultural use.

The programs P1MC and P1+2 have been successful in reducing the problems associated with the lack of water in the Brazilian Semiarid because, like the Food Acquisition Program (PAA) described in the first part of this study, these are programs that invest in local communities so that they can solve the problems that they identify as the most pressing. These programs don't just provide access to water; they also provide training and employment in a sector that suffers acutely from poverty. Furthermore, one important result of these programs is their contribution to food sovereignty and security for producers and communities.

BOX 5: COST OF CISTERNS PER NUMBER OF BENEFICIARIES

Cement cisterns - \$1,012.58
One family of five to six people

Sidewalk cisterns- \$7,201.00
One family of five to six people

Subterranean levee - \$7,668.50
One family of five to six people

Stone Tank -\$8,258.50
10 families of five to six people each, totaling 50 to 60 people benefitted by the technology

Water pump - R\$8,978.50
10 families of five to six people each, totaling 50 to 60 people benefitted by the technology

**The costs presented are per 10 units. They vary with the quantity of tanks to be built by project. The larger the number of cisterns, the smaller the cost per unit.*

BOX 6: COMPONENTS OF THE CISTERN PROGRAMS

1. SOCIAL MOBILIZATION, SELECTION, AND

REGISTRATION – This phase involves the selection and registration of families who will receive the cisterns. Priority is given to families led by women, families with children in school, the elderly, and individuals with special needs.

2. TRAINING:

a) Training of Construction Workers – Training courses take place within the communities and include any interested individuals who have been actively participating in the construction process as assistants. In each course, the techniques for storage and management of rainwater through cisterns are addressed, along with construction techniques.

b) Training Families in Water Management for Drinking Water and Food Production – This training is managed by the local NGO partners and emphasizes the following themes:

Water resource management: The focus is on the cistern's importance in the process of rain water collection and in supplying water to families for drinking, cooking, domestic use, and food production (both planting and raising animals);

Citizenship: In the style of Paulo Freire, the training program focuses not only on the technical issues, but on urging critical reflection on the social and political relations between the community and the models of development adopted by the state; promotion of the idea that water is a basic right; and discussions regarding the involvement of families in the management of P1MC at all levels;

Living with the Semi-arid: Trainings focus on reflecting on the natural characteristics of the region and the resulting consequences for human and animal life, as well as the storage and utilization of rain water, the use of native creole seeds, and hay for animals, all as ways to live in this region sustainably.

3. CONSTRUCTION – This component is also called “implementation” by the ASA. The construction phase can include building either the P1MC and P1+2 cisterns.

To launch the construction process, the community organization holds a series of meetings in the community to present the criteria for and the results of the selection of families; explain the program for cistern construction, including construction worker training; introduce the need for training in water management; establish a timeline for completing all the trainings; and present the construction proposal. At this time, all of the construction materials

will be financed, including the production of manual hand pumps, identification plates, gutters, lids, locks, and compensation for the construction workforce.

4. INSTITUTIONAL STRENGTHENING – The cistern programs aim not only to provide potable water, but also to promote the strengthening of the civil society organizations that participate in the programs by broadening their reach and operational capacity. As the program advances in the community, the local organization's development should become progressively more visible, thus opening up opportunities for new partnerships. As the program moves ahead, community members, financial agents, and other potential partners in the local and national government will become more engaged.

5. COMMUNICATION – The communication component enables information exchange to help shape the programs and involve community leaders and social movements. Its goal is to use communications education as a way to build organizational capacity. For the ASA, the goal of “coexistence” with the Semi-arid should involve active local citizen participation in coming up with ways to communicate their experiences.

6. MONITORING – The monitoring process enables daily recording of financial and project data by the main implementer of each project using the Information, Management, and Auditing System. Daily reports are generated on the total number of families involved at all levels, families trained, construction workers trained, completed cisterns, and cisterns under construction.

In the case of P1+2, in addition to the components above, there is also:

7. DOCUMENTATION OF LOCAL KNOWLEDGE – This process documents the knowledge and practice of local family farmers. This process recovers, recognizes, and values the knowledge that local people, who are understood to be not simply program recipients but social agents, currently have or have built in the past. These records result in printed bulletins and banners that are used during farmer exchanges.

8. EXCHANGES – The program organizes exchanges between different groups of farmers to visit other areas of the Semi-arid to discuss strategies for farming in this region. The exchanges take place within groups of the same municipality, of different municipalities, and between states, enabling horizontal knowledge exchange and the creation of a network of experimental farmers.

4. Final Conclusions and Recommendations

Both of these policies, the Food Acquisition Program (PAA) and the Cistern Programs, have achieved positive results in promoting rural development in Brazil. One of the strengths of the PAA is that it directs government resources, many of which would already be spent on similar items, to strengthen the small farm sector. Through direct purchases on year-long contracts from small producers and cooperatives, the PAA has created reliable markets for local producers and secured quality sources of food for local communities suffering from food insecurity, with relatively modest costs. The two Cistern Programs have helped address long-standing issues associated with the lack of reliable access to water for personal and agricultural use in rural communities in Brazil, and they have been successful in developing the local economies of these areas by training and employing community members who build the cisterns, as well as in providing a necessary input for small-scale agriculture.

These policies have been successful largely because they have received financial support from the federal government, and because the programs have invested those resources in local communities so that they can respond to problems that the communities themselves have identified as the most pressing. Both the PAA and the cistern programs have relied on community input and involvement throughout the process to improve and adapt the policies. They have become more successful due to a willingness to correct recognized failures and to capitalize on success. The law governing the PAA, for example, was recently revised for the fourth time since the original law was passed in 2003. Each revision has come in response to feedback from local cooperatives and associations and the national Managing Group. Also, as the example of the PAA's support of local seed production illustrates, investing in the local capacities of small producers has been much more effective and a better use of government resources than using the previous top-down approach, which assumed (incorrectly, as experience demonstrated) that the seeds from large producers were better than native seeds selected by local farmers. These policies are not just representative of effective ways to address problems associated with the lack of development

in rural areas; they also show that increasing the level of participatory democracy is an effective way for governments to address urgent needs of their constituencies.

Across Latin America, people living in the rural sector face a lack of economic opportunities, which can contribute to increased poverty levels and outmigration. While it would be inappropriate for other governments in Latin America to implement exact replicas of Brazil's programs to address local issues of poverty and lack of rural development, the fact that these programs address problems identified by rural communities is worth emulating. These programs are worth examining as examples of rural development policies that respond to the desires of various groups in the rural sector. The PAA and the Cistern Programs were not developed behind closed doors; instead, they came about as a result of civil society advocacy and government willingness to listen to their proposals.

Recommendations

Governments in Latin America looking to lower rural poverty rates should examine strategies to ensure local demand for goods produced by small farmers. Evidence suggests that relatively low cost programs that create local market demand for small producers provide a level of price stability and security that makes small farmers more productive, improves farm income, and increases local food security.

Government agencies that make food purchases for state and local institutions (such as schools, hospitals, police, and military barracks) and for food assistance programs should have coordinated programs to buy in local markets, in cooperation with local producer associations and local development plans. Most governments already have programs in place that purchase food for use in public institutions and for donation to food banks, and these programs could be used as a tool for rural development if they favored purchasing from small-scale producers. While there might be initial concerns about capacity for local supply to meet demands, investing in small farmers would help bridge this gap and increase local food security.

Countries in Latin America experiencing problems with access to water should examine Brazil's Cistern Programs as one possible way to address long-standing problems associated with the lack of access to water and rural development. Investing in access to water would provide local economic opportunities by providing jobs and training to build cisterns or other technologies, as well as help support small-scale producers by providing them with a necessary resource for agriculture.

When developing policies aimed at addressing the rural sector, governments should include small producers and community members in the process in order to achieve long-term results.

Development policies aimed at the rural sector, while coordinated at the national level, should be designed and implemented at the local level in consultation with small producers, cooperatives, and producer organizations to ensure effectiveness and long term impact.

Endnotes

- 1 Meyer, Maureen. *A Dangerous Journey through Mexico: Human Rights Violations against Migrants in Transit* WOLA: December, 2010.
- 2 According to data from the Food and Agriculture Organization of the United Nations (FAO) <http://www.fao.org/economic/ess/ess-fs/fs-data/ess-fadata/en/> and the International Fund for Agricultural Development (IFAD) <http://www.ruralpovertyportal.org/web/rural-poverty-portal/region/home/tags/americas#mexicoca>
- 3 While studies have shown that remittances can increase the long-term investment capacities of upper-income recipients, lower income recipients (including many in the rural sector) are more likely to use remittances for immediate needs, like food and nondurable goods. See: Pablo Acosta, Pablo Fajnzylber, and J. Humberto López. "Remittances and Household Behavior: Evidence for Latin America." *Remittances and Development: Lessons from Latin America* Eds. Pablo Fajnzylber and J. Humberto López. World Bank: Washington, DC, 2008.
- 4 Azevedo-Ramos, C. "Sustainable development and challenging deforestation in the Brazilian Amazon: the good, the bad and the ugly." *Unasylva* Vol. 59, 2008/1. Food and Agriculture Organization of the United Nations: Rome, 2008.
- 5 While there has been some cooperation between Brazil and Central American governments to promote family agriculture in Central America, none of the countries in the region has implemented programs at the same scale or with as much coordination between local groups and national governments as Brazil has achieved with the PAA program.
- 6 Orçamentos da União: Projeto de Lei Orçamentária, Exercício Financeiro 2013. http://www.planejamento.gov.br/secretarias/upload/Arquivos/sof/ploa2013/Volume_1.pdf
- 7 The land distribution characteristics of family farms and small-holder agriculture vis-à-vis large, industrial farms in Brazil are similar to other countries in Latin America. See, for example: Berdegú, Julio A. and Ricardo Fuentealba. "Latin America: The State of Smallholders in Agriculture." Conference on New Directions for Smallholder Agriculture. January 24-25, 2011. IFAD: Rome.
- 8 With the exception of the Brazilian Amazon, the level of biodiversity in Brazil is largely ignored, both nationally and internationally, even though the rest of the country also has high levels of biodiversity. The advances that occurred in recognizing the need to protect and maintain this valuable resource over the last decade have taken place primarily because the Brazilian government has recognized indigenous populations and traditional communities, such as artisanal fishermen, extractivists, the Babaçu breakers, river communities, and *quilombolas*, among others, through various laws. In all, there are sixteen groups that have been legally recognized by the government, along with family farmers, for their contributions to rural development and for promoting biodiversity and ecological preservation in these areas.
- 9 Instituto Brasileiro de Geografia e Estatística (IBGE). http://www.ibge.gov.br/home/mapa_site/mapa_site.php#economia.
- 10 For a short overview of the policies included in the Zero Hunger Program, see Oxfam's 2010 case study "Fighting Hunger in Brazil". <http://www.oxfam.org/sites/www.oxfam.org/files/cs-fighting-hunger-brazil-090611-en.pdf>
- 11 In 2003, Lula created the Ministry of Food Security and the Fight against Hunger (*Ministério Extraordinário da Segurança Alimentar e Combate a Fome*, MESA), which became the Ministry of Social Development in 2004. The MESA was headed by the agronomist José Graziano da Silva, who is now the Director General of the Food and Agriculture Organization of the United Nations (FAO). Under Graziano da Silva's leadership, the FAO has promoted government programs similar to Brazilian programs across Latin America and the Caribbean.
- 12 In 1992, Luiz Inácio "Lula" da Silva, then head of the Workers' Party, presented a proposal to then-President Itamar Franco calling for a National Plan of Food and Nutritional Security, suggesting the creation of the Consea, and the proposal was accepted. Consea was active until 1994, when President Fernando Henrique Cardoso replaced the Council with another body, the Solidarity Community Program (*Programa Comunidade Solidário*), which was headed by first lady Ruth Cardoso and oversaw a wide variety of social programs.
- 13 The Consea is currently made up of 57 advisors, with 38 civil society representatives and 19 government officials, as well as 28 invited observers. They make recommendations for the implementation of the *Bolsa Família* program, School Meals program, the PAA, and other federal social programs.
- 14 Ministry of Social Development and Fight against Hunger (*Ministério do Desenvolvimento Social e Combate à Fome*, MDS), Ministry of Agrarian Development (*Ministério do Desenvolvimento Agrário*, MDA), Ministry of the Agriculture, Livestock and Supply (*Ministério da Agricultura, Pecuária e Abastecimento*, MAPA)—represented by Conab—the Ministry of Planning, Budget and Management (*Ministério do Planejamento, Orçamento e Gestão*; MPOG), Treasury Ministry (*Ministério da Fazenda*, MF) and more recently, the Ministry of Education (*Ministério da Educação*).
- 15 "Programa de Aquisição de Alimentos vai beneficiar 270 mil agricultores familiares em 2012." Ministério do Desenvolvimento Agrário. January 3, 2012. <http://www2.planalto.gov.br/imprensa/noticias-de-governo/programa-de-aquisicao-de-alimentos-vai-beneficiar-270-mil-agricultores-familiares-em-2012>
- 16 For several studies on the impact of the PAA, as well as several other federal programs aimed at promoting family agriculture, see the section of the MDS website devoted to their studies on food security (*segurança alimentar*), <http://www.mds.gov.br/gestaodainformacao/disseminacao/seguranca-alimentar-e-nutricional>. The study, *Evaluation of MDS Policies and Programs - Results*, was published in English in 2007 and gives a fairly comprehensive review of the implementation of the PAA and its results up until 2007 in the Brazilian Northeast and Southeast. <http://www.mds.gov.br/gestaodainformacao/disseminacao/seguranca-alimentar-e-nutricional/2007/evaluation-of-mds-policies-and-programs-results-food-and-nutritional-security-v-1/evaluation-of-mds-policies-and-programs-results-food-and-nutritional-security-v-1>.

- 17 Curralero, Cláudia Baddini and Jomar Álace Santana. "The Food Acquisition Program in the South and Northeast Regions." Chapter 2 in *Evaluation of MDS Policies and Programs - Results. Volume 1: Food and Nutritional Security. Organized by Jeni Vaitsman and Rômulo Paes-Sousa, Secretariat for Evaluation and Information Management, Ministry of Social Development and the Fight Against Hunger, 2007: 49-95.*
- 18 Ibid.
- 19 Sparovek, Gerd. "Comparative Study on the Effectiveness of the Different Modes of the Food Acquisition Program (PAA) in the Northeast." Chapter 1 in *Evaluation of MDS Policies and Programs - Results. Volume 1: Food and Nutritional Security. Organized by Jeni Vaitsman and Rômulo Paes-Sousa, Secretariat for Evaluation and Information Management, Ministry of Social Development and the Fight Against Hunger, 2007: 32-33.*
- 20 Curralero, Cláudia Baddini and Jomar Álace Santana: 67.
- 21 Law 11.947/2009
- 22 Curralero, Cláudia Baddini and Jomar Álace Santana: 65-92.
- 23 Resolução do grupo Gestor nº 39. January 16, 2010
- 24 Resolução do Grupo Gestor nº 44. August 16, 2011.
- 25 Sparovek, Gerd: 31.
- 26 The Brazilian Semiarid Region contains 1,133 municipalities and extends throughout almost the entire Brazilian Northeast and through the northern portion of the Southeastern region. Twenty-two million people from nine different states live in this area, accounting for around 11 percent of the Brazilian population, which makes it the most populous semiarid region in the world. Over half (58 percent) of Brazil's poor population is concentrated in the Semiarid region, according to the Ministry of National Integration.
- 27 Law 7.794, August 20, 2012.
- 28 Interview with Conab.
- 29 See <http://www.rlc.fao.org/es/programabrasilfao/acerca-de/>
- 30 UNDP data: http://www.pnud.org.br/atlas/ranking/IDH_Municipios_Brasil_2000.aspx?indiceAccordion=1&li=li_Ranking2003 UNDP Brazil is producing a new Atlas of Human Development in Brazil. With the data from the 2010 census, the new Atlas will be published in early 2013 and will have the Human Development Index for all municipalities in Brazil, as well as supporting indicators for the analysis of the HDI data. Until the 2013 Atlas is published, the municipal-level HDI data available for reference and use are from the 2003 Human Development Atlas, which used information from the 2000 census. Information about the HDI in Brazil is available at http://www.pnud.org.br/IDH/IDH.aspx?indiceAccordion=0&li=li_IDH.
- 31 UNICEF, Infância e adolescência no Brasil. <http://www.unicef.org/brazil/pt/activities.html>
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Acknowledgements

WOLA Executive Director Joy Olson, Program Director Geoff Thale, and Program Officer Clay Boggs provided valuable comments and suggestions throughout the production of this report. WOLA Program Assistant Ana Goerdts assisted in the editing of the report.

This report was made possible by the generous support of the CAMMINA consortium, as part of their broader support for an examination of advocacy opportunities to improve the livelihoods of small farmers in Mexico and Central America, whose uncertain economic prospects increase the pressures for emigration.

ISBN: 978-0-9859307-0-7