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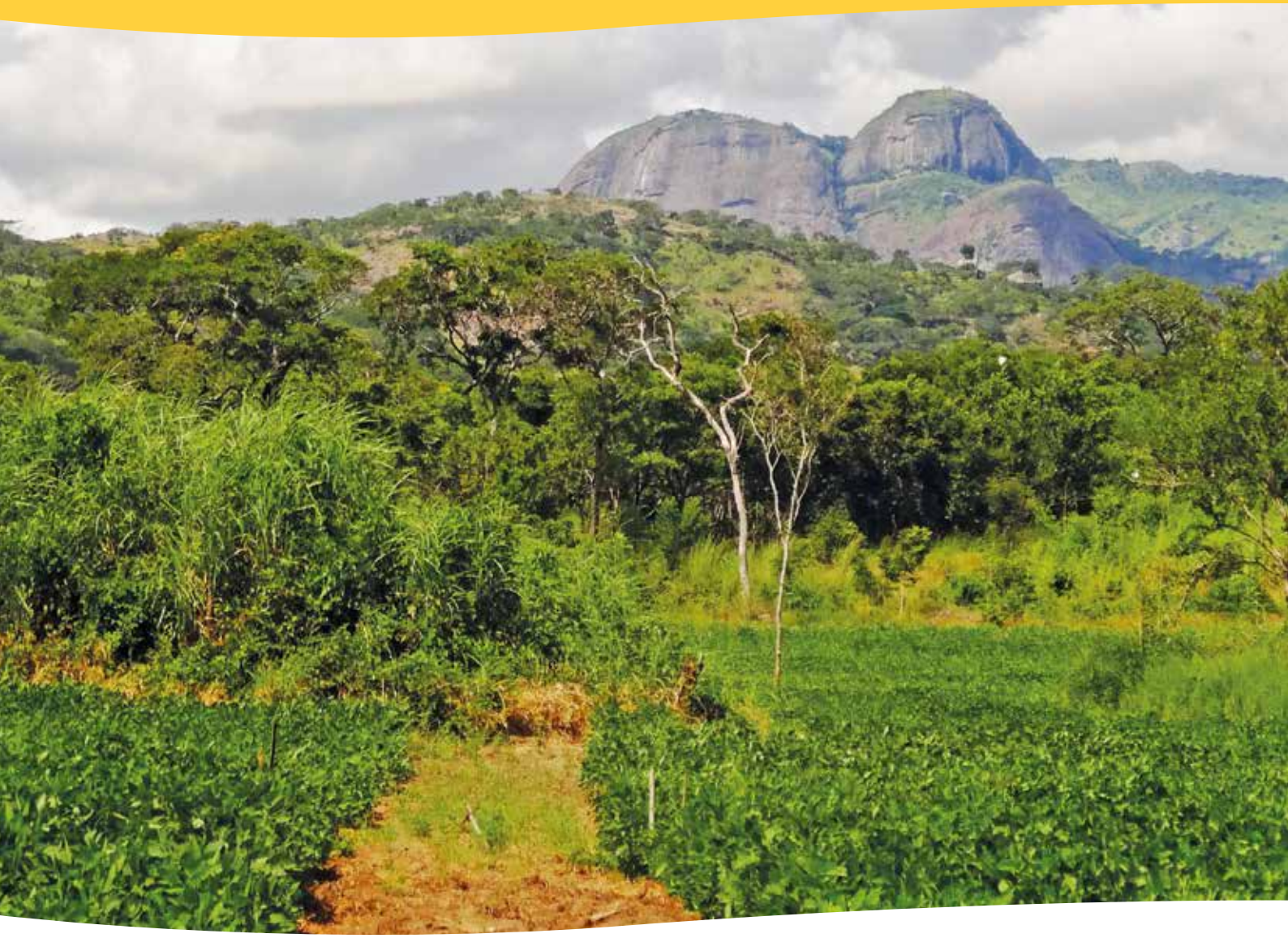

# Brazilian Development Cooperation in Agriculture

## A Scoping Study on ProSavana in Mozambique, with Implications for Forests

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Working Paper 138

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Soya field in Ribaue district

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# Executive summary

This study forms part of a greater project, New South–South Development Trends and African Forest, carried out in Gabon, Mozambique and Cameroon. In Mozambique, the project focused on the Brazilian–Japanese–Mozambican trilateral program ProSavana. At the time the study began, there was little information or previous work on the topic. This paper should therefore be treated as a scoping study. During the course of this scoping study, only a few papers based on field research were published, and the initial findings of this study are largely in line with this research. This paper supplements the existing literature by adding depth from field interviews in Nampula and Zambezia as well as an examination of the draft ProSavana reports, which became available in May 2013.

ProSavana is mostly an agricultural aid program, with limited investments planned in forestry. Its aim is to transform the agricultural sector in northern Mozambique along the Nacala Corridor into a competitive and sustainable industry, by promoting private investments in cooperation with the public sector. That transformation has potential impacts on the Mozambican forest ecosystem dominated by leguminous *miombo* tree species and the economic interests of people who derive benefits from those forests.

ProSavana has its origins in Japan's agricultural development program PROCEDER, which was implemented in Brazil's Cerrado region in the 1970s and 1980s. Through the development and application of agrarian research technologies, the Cerrado savanna with its unfertile soils was transformed into a global agricultural hub. The project was hailed as a success in terms of agricultural production.

Yet the Cerrado transformation was not without criticism. Although the area is sparsely populated, native communities are reported to have been marginalized. Another critique of the agrarian development is that it threatens the indigenous savanna and its biodiversity. Such criticisms raise the questions of whether it is desirable to replicate the Cerrado model in northern Mozambique, and, indeed, if it is replicable at all, given the socioeconomic and environmental differences between the two regions.

This paper finds large misconceptions about what the ProSavana program is and what agrarian models will be implemented under the program. The ProSavana program team's inadequacy in effectively communicating the program's mission, methods and content has led civil society to look to PROCEDER for clues as to how ProSavana will play out in Mozambique. However, the findings from field visits, interviews with a range of stakeholders and a review of ProSavana project documents reported in this paper are that ProSavana will not be a replica of PROCEDER and the strategies proposed do align well with Mozambique's agrarian strategy, known as PEDSA, and by extension the Comprehensive African Agriculture Development Programme (CAADP). ProSavana must therefore be evaluated on its own merit.

All widespread transformations carry the risk of having adverse impacts on certain groups or localities. Although the program mainly focuses on small- to medium-scale farmers and the promotion of contract farming and outgrower schemes where larger scales are found to be advisable, threats emerge of resettlement and forest clearance. The strategies drawn up as part of the ProSavana program were developed from field research into the agrarian, socioeconomic and environmental conditions in the program area conducted by the ProSavana program teams, and the project plans include activities aimed at mitigating any adverse impacts. Nevertheless, given the weak institutional systems in Mozambique, experience indicates that plans and regulations, however perfect on paper, often take on a different shape when put into practice, with the most vulnerable groups often are at risk of losing out in encounters with investors. Civil society therefore has a large role to play to ensure that activities under ProSavana meet its environmental and social goals. The program team could benefit from innovative thinking to ensure that the written plans unfold in practice as hoped.

# Acknowledgments

The research presented in this article was conducted as part of the project "Emerging economy multinationals: New south-south development trends and African forests," funded by GIZ (Contract No. 81141285) The research team expresses their gratitude to all those who supported the project and made the research possible. We would like to thank all the key informants for giving up some of their time to share their invaluable knowledge and contacts with us. Particular thanks go to IIAM, both in Maputo and in Nampula, for receiving us and providing insightful information; the Provincial Department of Agriculture in Nampula for their extensive assistance; ProSavana personnel for going beyond all our expectations to accommodate our research; Dr. Mario Falcao at Universidade do Eduardo Mondlane in Maputo for assisting with the implementation of the research project; ORAM, UGCN and the Nampula Civil Society Platform for inviting us and including us in their discussions; and the farmers who received us and shared their perspectives with us. We also extend our thanks to Louis Putzel and George Schoeneveld for their input and comments on the final report.

# Abbreviations

| | |
|---|---|
| ABC | Agência Brasileira de Cooperação (Brazilian Cooperation Agency) |
| CAADP | Comprehensive African Agriculture Development Programme |
| CLUSA | Cooperative League of the United States of America |
| CPI | Center for Investment Promotion |
| DNTF | National Directorate of Land and Forests |
| DPA | Provincial Department for Agriculture |
| DUAT | Direito de Use e Aproveitamento da Terra |
| EIA | Environmental Impact Assessment |
| Embrapa | Empresa Brasilieira de Pequisa Agropecuaria |
| EU | European Union |
| FAO | Food and Agriculture Organization of the United Nations |
| FGV | Getuilio Vargas Foundation |
| GAPI | Gabinete de Consultoria e Apoi a Pequena Industria |
| IBASE | Brazilian Institute for Social and Economic Analysis |
| IFAD | International Fund for Agricultural Development |
| IFPRI | International Food Policy Research Institute |
| IIAM | Institute of Agricultural Research of Mozambique |
| INE | National Institute for Statistics |
| JICA | Japan International Cooperation Agency |
| MCA | Millennium Challenge Account |
| MICOA | Ministry for Coordination of Environmental Affairs |
| MINAG | Ministry of Agriculture |
| MoU | Memorandum of Understanding |
| NGO | Nongovernmental organization |
| ORAM | Associacão rural de adjuda Mutua |
| PDIF | ProSavana Development Initiative Fund |
| PEDSA | Strategic Plan for Agricultural Development |
| PRAI | Principles of Responsible Agricultural Investments |
| QIP | Quick Impact Projects |
| UCA | Union of Cooperatives and Associations of Lichinga |
| UEM | Universidade Eduardo Mondlane |
| UNAC | União Nacional de Camponeses |
| UNCTAD | United Nations Conference on Trade and Development |
| USAID | United States Agency for International Development |
| WFO | World Farmers' Organisation |

# 1. Introduction

## 1.1 Background literature on ProSavana

The existing literature on the ProSavana program is limited, although media and research interest in ProSavana are growing. Many assessments of ProSavana have been based on extrapolation from the Brazilian experience with PROCEDER in an attempt to understand how PROCEDER would play out in the context of Mozambique, rather than on factual information on the ProSavana program itself.

At the time of writing, available information on ProSavana included one public project document, various short information brochures, draft project documents that had been leaked to the public and meeting minutes signed by the three countries. In addition, the ProSavana team has held several information seminars for civil society and stakeholders, and the JICA International Research Institute released a series of papers on Japan's Triangular Cooperation and ProSavana (Hosono 2012; Sakaguchi 2012; Makino 2013).

Furthermore, a few papers based on field research were published during the course of the scoping study, mainly by The Future Agricultures Consortium (Cabral and Shankland 2013; Chichava et al. 2013), Instituto de Estudos Sociais e Economicos (Fingerman 2013) and Observatorio do Meio Rural (Jaiantilal 2013). The initial findings of this study are largely in line with the results from these research papers. In addition, Tokyo University published a critical discourse analysis on the early public Japanese sources on ProSavana (Funada Classen 2013).

The following sections describe the context of agriculture in Mozambique in which ProSavana will be implemented and the emergence of Brazil as a donor. This is followed by a discussion of what ProSavana entails and a deeper look at some of the socio-environmental aspects of the program.

## 1.2 Brazil as an emerging donor

Brazil has emerged as the third largest developing country creditor providing loans to low-income countries, after India and China (Cabral and Weinstock 2010), although it still operates on a much smaller scale than traditional Development Assistance Committee donors (OCD 2012). In 2009, Brazil dispersed US$362 million as aid, with the vast majority destined for multilateral institutions (Cabral and Shankland 2013). As technical cooperation is the main component of non-multilateral aid, a range of ministries and institutions tend to be involved in projects, with the overall mandate lying with the Ministry of Foreign Affairs and coordinated by the Agência Brasileira de Cooperação (ABC) (John de Sousa 2010; Cabral and Shankland 2013).

The Brazilian aid model is demand-driven and based on principles of noninterference. Cabral and Shankland (2012) describe the model as simply a set of general guiding principles and an absence of an explicit policy for Brazilian agricultural cooperation. They argued that this "policy of non-policy" made it difficult to assess Brazil's aid effectiveness and causes the Brazilian approach to development cooperation to be highly fragmented (Cabral and Shankland 2013). To date, with the exception of an agricultural cooperation post in Mozambique, the ABC has no formal representation abroad, and its power to direct and monitor the progress of Brazilian aid is limited (Cabral and Shankland 2013).

More than half of Brazil's aid is channeled to Africa, with a clear emphasis on the Lusophone countries (Cabral and Shankland 2013). Four of the top five African recipients of Brazilian aid are Portuguese-speaking nations, with Mozambique being the largest beneficiary (Chichava et al. 2013). Brazil has 38 agricultural partner countries in Africa, again with Mozambique being the biggest recipient of Brazilian aid (Cabral and Shankland 2013). The rise of Brazil as a donor beyond the Americas can be traced to former Brazilian president Lula Silva's focus on diplomacy in Africa through South–South

cooperation; the incumbent president Dilma Rousseff has continued this approach (Cabral and Shankland 2013). However, Cabral and Shankland (2013, 8) also noted a subtle shift in Brazil's role as a donor toward a more pragmatic approach seeking to combine altruism with business, stating that "there is an explicit emphasis on commercial and investment opportunities for Brazilian enterprises".

Approximately 20% of Brazil's technical cooperation budget goes toward agricultural projects (Bloomberg 2012), with the focus on agriculture attributable in part to Brazil's own success in transitioning from a food net importer to a food exporter (Cabral and Shankland 2012).

## 1.3 Brazil and Japan in Mozambique's agricultural sector

Although Brazil's presence in Mozambique as a donor is relatively recent, it does have several agricultural programs underway there. In 2011, Brazil was engaged in 21 technical cooperation projects in Mozambique, with seven agricultural development projects underway in 2013 (Table 1) (Chichava et al. 2013).

Most of Brazil's agricultural aid programs have been carried out in cooperation with Mozambique's Ministry of Agriculture (MINAG) and the Mozambican agrarian research institute IIAM.

One emerging feature of Brazilian aid is the use of triangular cooperation to carry out projects and programs. In addition to the ProSavana program, involving Japan, the ABC has a triangular technical cooperation program with USAID on health (HIV) and food security. Brazil is approaching development cooperation through trilateral agreements in other countries also, with similar partnerships in place in Angola, Cape Verde, Botswana, Madagascar, Tanzania, São Tomé e Príncipe, Benin, Republic of Congo, Ghana and Gabon (ABC website: http://www.abc.gov.br). As of September 2011, Brazil and Japan had engaged in 13 joint development programs (Hosono 2012). Therefore, the trilateral cooperation underpinning ProSavana does not represent anything new or unique, although it is the biggest and most ambitious project of its kind to date.

The rationale for trilateral development programs in sectors such as agriculture and health lies in building on knowledge that other developing countries have gathered in meeting the challenges common in tropical areas. As most developed nations lie outside the tropics, they have little expertise on problems specific to many developing countries; the argument, then, is that trilateral partnerships will ensure that valuable experiences are harnessed (Hosono 2012).

From Japan's perspective, triangular cooperation with Brazil puts Brazil in a position to act as a

**Table 1. Overview of Brazilian agricultural aid programs in Mozambique.**

| Project name | Leading Mozambican institution | Leading Brazilian technical institution | Bilateral / Trilateral |
|---|---|---|---|
| Technical capacity building on conservation agriculture | IIAM/MINAG | Embrapa Cerrados (Empresa Brasilieira de Pequisa Agropecuaria) | Trilateral (with CIRAD) |
| Plataforma (strengthening livestock research) | IIAM/MINAG | Embrapa | Trilateral (USAID) |
| ProSavana | IIAM/MINAG | Embrapa | Trilateral (JICA) |
| ProAlimentos (addressing food security objectives in the Maputo greenbelt) | IIAM/MINAG | Embrapa | Trilateral (USAID) |
| Community native seed banks | MINAG, UNAC, Ministry of Planning and Development (MPD | IBASE (Brazilian Institute for Social and Economic Analysis) | Bilateral |
| More Food Africa | MINAG | Ministry for Agrarian Development | Bilateral |
| Food Acquisition Programme | Ministry of Education and Culture (MEC) | Ministry for Social Development | Trilateral (FAO and WFO) |

Source: Cabral et al. (2013)

cultural bridge between Japan and Mozambique. Given the Japanese diaspora in Brazil, Brazil possesses considerable expertise for dealing with the cultural differences between Mozambique and Japan. Japan's active involvement in the Brazilian agricultural revolution offers a further reason for the three countries to work together on agriculture.

## 1.4 Agriculture in Mozambique

The agricultural sector is important to the Mozambican economy, accounting for roughly 25% of Mozambique's GDP and employing more than 80% of the adult population (Pauw et al. 2012). The agricultural sector is particularly important for women, with 90% of the female labor force depending on agricultural activities for their livelihoods. Rural poverty is directly linked to the constraints on agricultural development as the vast majority of rural families depend on farming for food and income. The Mozambican government has noted that development of the agricultural sector is fundamental for improving food security and reducing poverty (MINAG. 2010).

Yet although agriculture is the backbone of Mozambican society and important for the economy, the sector is falling short of its full potential. Farmers continue to use traditional means for production, which, coupled with growing population pressures and low use of inputs, has marginal returns.

### 1.4.1 Farming scale and farm size

Smallholders dominate Mozambique's agricultural sector: 99.6% of Mozambican farms cover an area of less than 10 ha, with 72% smaller than 2 ha (Hanlon and Smart 2012). Furthermore, 95% of total agricultural production stems from rural households (small and medium-sized farms); the other 5% comes from about 400 large commercial farms, which produce cash crops such as sugar, tobacco and tea (MINAG 2010). Official definitions of small, medium and large farms, as given by the National Institute for Statistics (INE) in its agricultural census, are set out in Table 2.

It is important to note that the notion of large farms in Mozambique (average 85 ha) is quite different from that in Brazil, where large farms in the Cerrado average 13,000 ha per mill, the median farm size is 1000 ha and more than 1000 farms operate on over 100 000 ha (Deininger and Byerlee 2011). The average farm sizes in Nampula and Zambezia are well below the national average, at 1.25 ha and 1.29 ha, respectively; in contrast, the average farm size in Niassa (1.89 ha) is above the national average. Population density is a significant factor in average farming size, with Nampula having a density of 54.1 inhabitants per square km, Zambezia 40.1 inhabitants, and Niassa only 10.5 inhabitants (ProSavana-PD interim report, section 4.1). Population density varies greatly between the districts along the Nacala Corridor where the ProSavana program is to be implemented, ranging from only 2.6 inhabitants/km$^2$ for Majune to 97.2 inhabitants/km$^2$ for Monapo (Ministry of State Administration, ProSavana-PD interim report, section 4).

### 1.4.2 Declining yields

Although Mozambique is one of the fastest growing economies in the world, the agricultural sector has been lagging behind. Yields of staple foods have stagnated on the national level, and, in northern Mozambique, including along the Nacala Corridor, average yields of important crops such as cassava, maize, sorghum, wheat and rice have all fallen (Pauw et al. 2012), even though the region possesses fertile soils and high potential for agricultural

**Table 2. Definition of farming size.**

| Scale | Non-irrigated land | Irrigated land | Livestock | Average size |
|---|---|---|---|---|
| **Small farms** | <10 ha | <5 ha | <10 cattle,<br><50 sheep/goats/pigs <2000 poultry | 1.4 ha |
| **Medium farms** | 10–50 ha | 5–10 ha | 10–100 cattle<br>50–100 sheep/goats/pigs/<br>2000–10,000 poultry | 5 ha |
| **Large farms** | >50 ha | >10 ha | >100 cattle<br>>100 sheep/goats/pigs<br>>10,000 poultry | 85 ha |

development. Currently, Mozambique's agricultural productivity is among the lowest in the world, and ranks lower than regional averages. Some estimates put current output at only a quarter of the potential yields (Aabø and Kring 2012). Estimates of actual (for the northern region) and potential yields for some major crops produced in Mozambique are given in Table 3. Mozambique remains a net food importer and has a high degree of food insecurity.

**Table 3. Average current and potential yields in northern Mozambique (tons/hectare).**

| Crop | Average yield (t/ha) | Potential yield (t/ha) |
|---|---|---|
| **Maize** | 0.73 | >4.5 |
| **Rice** | 0.92 | >4.5 |
| **Beans** | 0.63 | >1 |
| **Sorghum** | 0.41 | >1.5 |
| **Cotton** | 0.4 | >1.5 |
| **Soybeans** | 1.5 | >2.5 |

Source: MINAG (2010), Pauw et al. (2012)

Pauw et al. (2012) attributed the strong growth in the agricultural sector during the 1990s to the expansion of farming practices as people returned to rural areas at the end of the civil war. These gains are reaching a plateau as it is increasingly difficult to improve total yields through expansion, particularly in areas with high population density and rising pressure on land due to population growth.

According to the 2007 population census, the population growth in Niassa and Nampula Provinces is much faster than the national average which lies around at 2.6% (Pauw et al. 2012) During the period 1997–2007, the population grew by 3.4% and 5.7% annually in Nampula and Niassa, respectively (ibid). The combination of rapid population growth and limited available land is forcing farmers to expand their cultivation to marginal land. As a result, crop yields cannot keep up with population growth, particularly in the population-dense provinces of Nampula and northern Zambezia (ibid).

Furthermore, farming in Mozambique is characterized by low use of inputs, as seen in Table 4 (Aabø and Kring 2012). The lack of inputs means that land must lie fallow for extended periods to recover its fertility.

**Table 4. Farmers' access to agricultural inputs in Mozambique.**

| Input | Farmers with access (%) |
|---|---|
| Fertilizers | 4% |
| Pesticides | 7% |
| Improved seeds | 3–10% |
| Ploughs | 1.8% |
| Access to tractors | 1.6% |
| Animal traction | 12% |
| Access to irrigation | 13% |

Source: MINAG (2010); Aabø and Kring (2012); Pauw et al. (2012)

Mozambique has huge potential for irrigated farming, with 3.3 million ha of arable land viable for irrigation. However, only 3.6%, or 120,000 ha, of this is under irrigation, and less than half of this area is functional because most of the infrastructure was destroyed or has deteriorated as a result of the civil war (MINAG 2010). Only 13% of farmers have access to some form of irrigation, with the main benefactors being sugarcane plantations. The vast majority of smallholders and family farmers do not have access to irrigation, instead relying mainly on rain-fed agriculture, which leaves them subject to weather patterns (MINAG 2010).

The shortage of agricultural extension services further contributes to the stagnation in developing the agricultural sector in northern Mozambique. Access to extension services, already limited, has declined over the past decade: whereas 13% of farmers had access to extension services in 2003, only 8.3% had access in 2008 (MINAG 2010); the strategy quoted a World Bank study that estimated that access to extension services could increase family farming productivity by more than 8%.

### 1.4.3 Government strategies and PEDSA 2010–2019

Although the government aims at allocating 10% of the national budget to agriculture actual expenditure has been much lower at 6% (Hanlon 2011b). In response to the poor performance of the sector, the government has drafted several strategy documents designed to increase productivity in the sector. In particular, the government released PEDSA, or Strategic Plan for Agricultural Development (2010–2019), the stated aim of which is to "contribute towards the food security and income of agricultural producers in a competitive and sustainable way, guaranteeing social and gender equity".

The strategy document takes a medium-/long-term view and incorporates the priorities set out in the CAADP. Under the approach set out in PEDSA (2010), the focus will be on the generation of value chains and use of agricultural clusters to foster development; the development and transfer of technologies; agricultural production; processing and marketing activities; and sustainable natural resource management. PEDSA paves the way for greater state intervention in the agricultural sector (Hanlon 2011b); for example, the state will resume its role as a buyer of last resort to encourage farmers to invest in production for the market. The document also stresses the need to attract financial resources in the form of investments with a focus on small- and medium-scale farmers (MINAG 2010). Furthermore, the strategy gives explicit priority to the more fertile regions, which is roughly aligned with the area in northern Mozambique covered by ProSavana.

The official attitude to large-scale land investments appears to vary, reflecting a lack of consensus in the government on the importance of attracting large-scale investments in land. Between 2009 and 2011, the government stopped issuing large land concessions (over 1000 ha) following a rise in conflicts and the failure of existing investments to produce expected benefits (Hanlon 2011a). However, there exists:

> broad consensus that Mozambique has enough available good land and water and, even with climate change, adequate rainfall to feed itself and be a significant agricultural exporter. There is also broad consensus that agro-processing should be a basis for industrialization and that foreign capital and technology is needed to raise agricultural production and productivity. But the balance between small and large-scale, between foreign and domestic investment, and between food and other crops, is subject to intense debate (Hanlon 2011a, 2).

That is, the question is *how* to invest, rather than *whether* investments in the agricultural sector are desirable.

### 1.4.4 Regulations on land and agriculture

Under Mozambique's Land Law of 1997, all land in the country is owned by the state and cannot be sold or rented. However, it is possible to hold use rights to the land, known as DUATs (Direito de Uso e Aproveitamento da Terra), which may be transferred or inherited. DUATs can be acquired through application to the state for land, but people also hold use rights to land through community occupation governed by customary law, as well as good faith occupation of at least 10 years (Kaarhus and Martins 2012). Furthermore, farmers and communities have a legitimate claim to use rights over land lying idle, either as fallow or set aside for future use (Kaarhus and Martins 2012). It is therefore possible for farmers who do not possess a formal DUAT to have legal entitlements to the land they occupy; in fact, it is estimated that approximately 97% of farmers do not possess formal land rights (ProSavana-PD report 2, section 3).

The provincial departments for agriculture suffer from severe resource constraints, and the capacity to implement the Land Law appropriately remains limited. As most farmers occupying land do not possess formal land rights, it is difficult for the government to make exact estimates of where land is occupied and the land use registry has proved inadequate for this task. This often causes difficulties when local authorities are requested to identify land for investors seeking DUATs. Although small farmers have a legal right to the land, in the absence of formalization and awareness of their right, they may be vulnerable in any confrontation with new investors or farmers seeking to expand their areas.

Farmers have limited knowledge of their land rights, and consultations between investors and communities are sometimes a mere formality rather than an actual dialogue aimed at reaching an outcome agreeable to all stakeholders. In field research, the organization Spire (Theting and Brekke 2010) interviewed several communities subject to land investments and found that none had received the promised compensation, nor did any hold a copy of a contract recording the size of the land given away or the promised compensation. The report nonetheless found that people generally welcome investments as they offer an opportunity for wage labor. Although there are cases of investments that benefited communities (Norfolk and Tanner 2007; Kaarhus and Martins 2012), it appears that the success of such mutually beneficial agreements depended on the attitude of investors and the support given to communities, rather than on legal requirements in the regulations.

# 2. Methodology

Little official information on ProSavana was available at the time this research began. As the ProSavana program is still in its early stages, this working paper should be treated as a scoping study. Initially, this aim of this report was to look at the remodeling of Mozambique's agricultural production through implementation of Brazil's Cerrado model in a South–South partnership involving Brazilian multinational companies; however, as more information on ProSavana was gathered and better understanding of the program was gained, the research objective evolved. The present aims are to identify the nature and extent of the ProSavana program and to understand the potential effects on the local biota and on local people involved in subsistence agriculture.

The study was conducted in partnership with Universidade do Eduardo Mondlane (UEM) to facilitate the field research and to make use of the university's network of specialists. Key informant interviews with various actors were conducted in Maputo and in Nampula, over four weeks prior to and during the field research.

As projects under ProSavana are yet to be implemented, it was not possible to assess the socio-environmental impact. However, five pilot projects are underway, two of which were visited. Stakeholders who were interviewed included the following: national and provincial Mozambican government agencies; Mozambican, Japanese and Brazilian representatives of ProSavana; Mozambican forestry and land experts; researchers on ProSavana; NGOs; farmers involved in the ProSavana program through the pilot projects; farmers associations; and other local and national civil society actors (see Table 5). To date, no Brazilian or Japanese companies have invested in Mozambique under the ProSavana program. According to CPI (the Center for Investment Promotion) only one request for agricultural investments has been made by a Brazilian company in Mozambique. The investment request was however rejected by the authorities due to lack of information on the activities to be carried out. There is currently no "rush for farmland" by Brazilian farmers in Mozambique.

In general, interviewees from all sectors (private, public, civil society) were very forthcoming and willing to participate. The ProSavana office and the DPA (the Provincial Department for Agriculture) in Nampula in particular were extremely helpful in facilitating field visits and responding to our requests.

Access to readily available information, such as selected graphs and data, was granted, although such information was limited. Major in-depth reports were not made available on the grounds that they had not been completed; however, the research team was allowed to view one of the draft reports during an interview.

**Table 5. Key informant interviews carried out for the scoping study.**

| Key informant | Number of interviews |
|---|---|
| Government agencies | 3 |
| NGOs and associations | 5 |
| Forestry and land consultants/experts | 3 |
| ProSavana researchers/academics | 2 |
| Pilot project farmers | 4 |
| ProSavana representatives | 6 |
| Communities | 1 |
| Official ProSavana information meetings | 3 |

Data for this research paper were collected through the following methods:

- review of existing literature
- review of the regulatory framework and laws pertaining to land and investment in Mozambique
- review of primary documents collected in Mozambique and data collected from government institutions and ProSavana agencies
- key informant interviews in Maputo and Nampula
- information gathered during public meetings on ProSavana
- field interviews with farmers involved in ProSavana pilot projects.

Five districts covered by the ProSavana program in Nampula and Zambezia Provinces were visited: Nampula, Ribaue, Alto Molocue, Muecate and Gurue. Due to time constraints and poor infrastructure, projects in Niassa Province were not visited. Sites were selected based on the intention to visit pilot projects and attend community meetings on ProSavana and recommendations from local farmers associations.

# 3. The ProSavana Program

## 3.1 Overview

The Triangular Cooperation Program for Agricultural Development of the African Tropical Savannah in Mozambique, generally referred to as ProSavana JMB, is an agricultural and rural development program in the Nacala Corridor region of Mozambique. As the name suggests, the program is run under a cooperation agreement between the Japan International Cooperation Agency (JICA), Brazilian Cooperation Agency (ABC) and the Mozambican Ministry of Agriculture (MINAG). The program is based on a Memorandum of Understanding (MoU) signed by the three countries in 2009.

According to the MoU, ProSavana aims "to improve the competitiveness of the sector, in terms of food security, increase of the productivity of small producers, and the generation of exportable surpluses from agriculture-oriented agribusiness".

It is hoped that by using the technical and strategic expertise that enabled the agricultural revolution in Brazil, Mozambique will be able to achieve food security and transform its agricultural sector.

The program is being implemented in 19 districts along the Nacala Corridor in the provinces of Nampula, Niassa and Zambezia (Table 6 and Figure 1).

**Table 6. Districts of Mozambique covered by ProSavana.**

| Province | Districts | | |
|---|---|---|---|
| Nampula | Lalaua | Mogovolas | Murrupula |
| | Malema | Monapo | Nampula |
| | Meconta | Muecate | Ribaue |
| | Mecuburi | | |
| Zambezia | Alto Molocue | Gurue | |
| Niassa | Cuamba | Mandimba | Ngauma |
| | Lichinga | Mecanhelas | Sanga |
| | Majune | | |

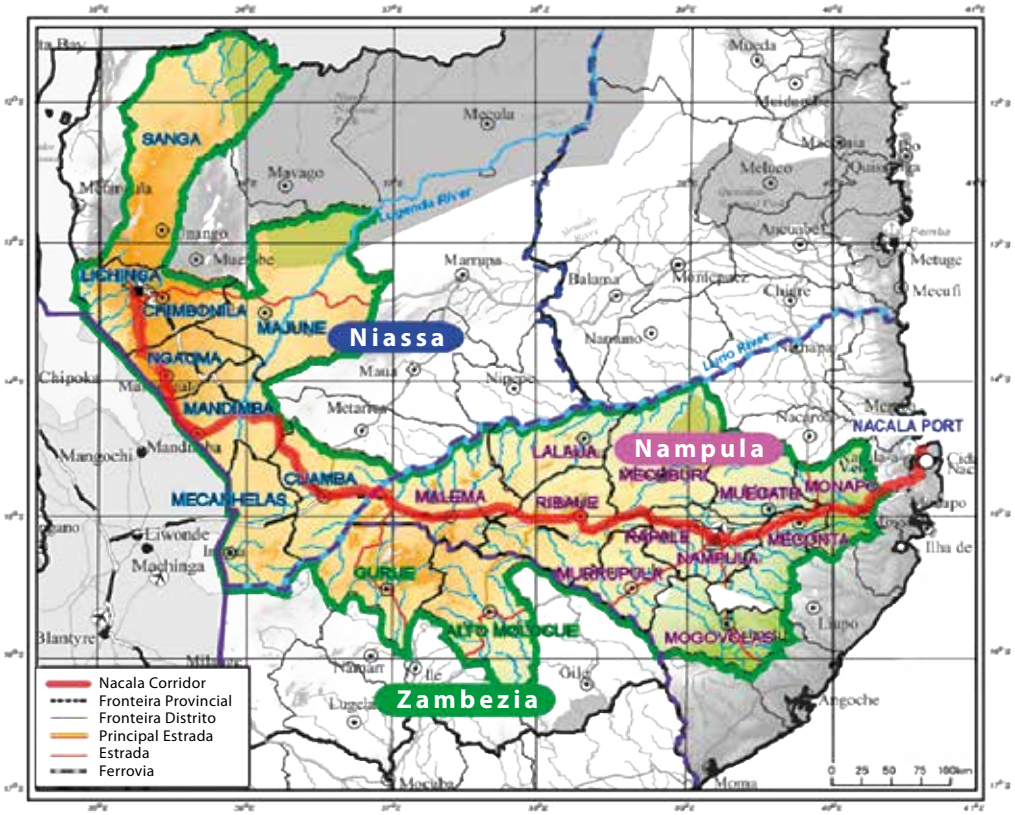


**Figure 1. Map of ProSavana implementation area.**

Source: Oriental Consultants [Presentation], Nampula, 22 March 2013

## 3.2 Main components of the ProSavana program

ProSavana consists of two main phases. First, during the research and planning stage, strategies and projects will be identified; the second stage will implement the strategies and key projects identified by mobilizing public and private capital to finance the activities. The first phase got under way in 2011, with elements of phase two activated incrementally as investments are made and investments projects are carried out along the evolving strategies (Sakaguchi 2012).

Phase one has three main components, as follows (Table 7): strengthening of domestic technical research (PI); development of an overall strategy for the corridor (PD); and an increase in agricultural extension services (PE).

### 3.2.1 ProSavana-PI: Improvement of agricultural research capacities and technology transfers

The aim of ProSavana-PI is to improve research and technology transfer capacities for the Nacala Corridor Agriculture Development in Mozambique. The project was originally named ProSavana-TEC.

The total budget for ProSavana-PI is set at US$14.68 million, of which 42.1% is financed by ABC, 43.8% of the funding or (technical equivalent) is given by Embrapa, and the remaining 14.1% is covered by the Mozambican government (ProSavana-TEC project document).

The project duration is 60 months, beginning May 2011, with extensions if necessary. As the number of districts has been expanded to 19, ProSavana-PI will be extended accordingly to allow the research team to cover the additional districts.

Work conducted under the project will seek to identify suitable agricultural technologies for sustainably developing agricultural production in the region, with the objective of strengthening local research capacities and disseminating technologies to producers.

In the short term, the project is expected to strengthen domestic agricultural research capacities. The longer term target for the project is an increase in regional agricultural production of 12% on average from 2015.

The project has five main components: (i) to create a database on the natural resource and socioeconomic characteristics of the region; (ii) to build and improve the physical infrastructure and institutional capacities of IIAM; (iii) to establish a system for participatory planning in the agricultural sector; (iv) to develop a system of human resource management to expand IIAM's technical staff (including training

**Table 7. Overview of the components of ProSavana.**

| Project | Aim | Components | | Partners |
|---|---|---|---|---|
| **PI**<br>2011–2015 (with possible extension) | To strengthen Mozambique's domestic agricultural research capacity | • Construct two research laboratories<br>• Establish a database of agricultural information<br>• Establish mechanisms for dissemination of techniques and technologies to farmers | | IIAM, Embrapa |
| **PD**<br>2012–2030 | To develop an overall agricultural strategy for the Nacala Corridor and identify supporting projects | **Phase I**<br>2012–2013<br>• Research and develop strategy and identify related projects (Master Plan)<br>• Undertake 5 pilot projects | **Phase II**<br>2013–2030<br>Mobilize public and private capital to finance the implementation of the strategy and associated projects | Getuilio Vargas Foundation (FGV), Oriental Consultants, DPA, Gabinete de Consultoria e Apoi a Pequena Industria (GAPI) |
| **PE**<br>(delayed) | To train and restore agricultural extension services to farmers along the Nacala Corridor | *Details still to be determined at the time of this study* | | IIAM |

of personnel); and (v) to promote the effective dissemination of technology among farmers. The first three components are aimed at strengthening local research capacity, and the last two components are aimed at passing technology on to farmers.

The first component aims at gathering information on the socioeconomic and environmental conditions of the region, and how projects and interventions may affect these aspects. Surveys will be carried out to establish a database on the flora and fauna, soil and water analysis, topographical information, and agricultural production. Following this analysis, the project should be able to propose new technology and production systems, identify the potential environmental vulnerability linked to these systems and suggest measures to mitigate the potential adverse effects of any proposed activities.

The second component, improving the physical infrastructure for agrarian research, includes the construction of two modern research laboratories in Lichinga and Nampula.

The dissemination of technologies and techniques will be based on Embrapa's successful experience in developing its research capacities in Brazil. For the fourth output, the project aims to train a team of 150 Mozambican technicians to become trainers of extension service providers, thereby more easily increasing the number of extension service providers in the region. The project plan emphasizes the need to include trainees from various ethnic and language groups to ensure that the new techniques can be effectively disseminated throughout the region.

The target group are Mozambican agrarian researchers (employed by IIAM), extension service providers and an estimated 40,000 small- and medium-sized farming households along the Nacala Corridor. Based on these numbers, the extension services will indirectly benefit approximately 20% of all farmers in the study region.

The project had originally intended to collaborate with the farmers organization UNAC in Niassa and the IKURU farming cooperative in Nampula to reach the 40,000 farmers who would participate and benefit as extension service recipients. However, it is unclear whether UNAC will be involved, as the organization released an official condemnation of ProSavana in October 2012. UNAC's rejection of ProSavana can be attributed to rumors that ProSavana will promoting large-scale land grabbing (14 million ha, the entire area of Niassa, Nampula and Zambezia Provinces put together) along with the fact that little information about ProSavana had been released.

### 3.2.2 ProSavana-PD: Agricultural Development Master Plan for the Nacala Corridor

ProSavana-PD involves the formulation of an overall strategy for the development of the local agricultural sector (Plano Director). This strategy is based on research and analysis of the region's characteristics, such as soil and weather conditions and socioeconomic factors. The aim of the strategy is to identify existing constraints in the Nacala Corridor and any projects that could be used to address these and thus transform the region's agricultural sector. The trilateral agreement stipulates that ProSavana shall contribute to poverty reduction and the development of the local economy and society, and that the Master Plan must be consistent with the existing agricultural and rural development plans in the region.

The bulk of the funding for ProSavana-PD comes from Japan (US$6,254,000), followed by Brazil (US$800,000) and Mozambique (US$300,000).

ProSavana-PD has four expected outputs:
1. comprehensive data collection and analysis of the agricultural sector in the Nacala Corridor
2. overall strategy for the development plans
3. identification of a set of Quick Impact Projects (QIPs) in selected areas
4. publication of a guidebook for potential investors to encourage responsible investment. This investment book was planned to contain all necessary information on relevant laws and regulations, the region's potential, and socioeconomic and environmental conditions. Guidelines for government officials on best practice for processing investment requests responsibly will also be published.

### 3.2.3 ProSavana-PE: Improvement of agricultural extension services

The aim of ProSavana-PE is to improve access to agricultural extension services for farmers by boosting the number of providers of extension services. At this stage, little information is available on ProSavana-PE because, according to IIAM, its formulation is to be based on outputs from ProSavana-PI and -PD.

In a consultative information meeting for ProSavana representatives and local communities in Muecate, a request was made for some extension service providers to be female to ensure that women are not overlooked as beneficiaries.

## 3.3 From PROCEDER to ProSavana

Grassroots NGOs have examined PROCEDER to infer the potential impacts of ProSavana on local communities along the Nacala Corridor. The use of large-scale farming in the Cerrado raised major concerns about potential land grabs and the displacement of local farmers who depend on their land for their livelihoods. Some civil society groups and international organizations have voiced staunch objections to the implementation of ProSavana in Mozambique (GRAIN 2012). In the absence of any detailed information on ProSavana, UNAC released a statement in October 2012 denouncing the program. To date, the debate has centered on the applicability of the program and whether the Cerrado model/PROCEDER is appropriate for the Mozambican context.

A report by the World Bank, Awakening Africa's Sleeping Giant (2009), also questioned the suitability of the Cerrado model for an African context. The report examined the Brazilian experience and noted that, despite its overall positive impact, the Cerrado model of transformation might not be ideal for African tropical savanna countries. The report made two arguments on this point. First, PROCEDER involved the expansion of large commercial farms, whereas it is generally accepted that supporting smallholder farmers has a greater impact on poverty reduction in Africa, as the focus on large farms meant that the commercial benefits have disproportionately accrued to an elite group of farmers. Second, the report found that in Mozambique and other African countries studied, smallholders have greater potential to create competitive agricultural enterprises because there are few obvious economies of scale for many of the crops grown in southern Africa, the exception being highly perishable crops that require coordinated and rapid processing, such as horticulture.

By contrast, another study (Sender et al. 2006) based on the largest Mozambican survey on rural labor markets, covering Manica, Nampula and Zambezia Provinces, found that larger (often foreign) farms provide better working conditions and higher wages than small and medium-sized farms. The authors argued that discussions on agriculture and poverty reduction tend to overlook this positive impact of larger farms on rural labor markets, stating that "…the widespread belief that concentrating resources on small farm agriculture and food production will reduce African poverty ignores the fact that many of the poorest rural people depend on earnings from agricultural waged labour" (Sender et al. 2006, 17).

Large-scale farming may therefore have a positive role in labor markets and in the production of highly perishable crops with marked economies of scale. Nonetheless, given the high population density and scarcity of land throughout much of the Nacala Corridor, there is little room for new large-scale land investments in the region.

Minutes signed in 2009 between Mozambique, Japan and Brazil acknowledge that, despite similarities between the Cerrado and the Mozambican tropical savanna, major socioeconomic and geographic differences need to be taken into account, stating that: "Considering that the socioeconomic situation of the Brazilian Cerrado region differs greatly from that of the African tropical savannah, new models of sustainable agricultural development specific to each region in Africa will be necessary."

IIAM holds that ProSavana and PROCEDER are distinct programs because of the fundamental differences between Mozambique and Brazil. As a representative of IIAM said in an interview: "We hope to use their [Brazil and Japan] expertise, but PROCEDER will not be implemented here. People here have no other option than being farmers; therefore we must invest in basic agriculture to develop the economy."

ProSavana does not replicate the model of agriculture used in the Cerrado. Rather, it seeks to take advantage of the expertise and knowledge that Brazil and Japan possess to successfully link public and private investments in agriculture with farmers, and coordinate supporting infrastructure.

The proposed strategy set out in the leaked ProSavana draft project documents provides further evidence that the Cerrado Model will not be applied under ProSavana. In particular, the project documents advise against the use of large-scale farms characteristic of the Cerrado because of the high population density (ProSavana-PD interim report).

A ProSavana consultant interviewed pointed out that, in recent decades, the emphasis and priorities of Japan's development program have changed, reflecting the general shift in the donor community toward sustainability and greater environmental protection, especially since the Earth Summit in Rio in 1992. Since the 1990s, JICA has provided assistance for several conservation projects in the Cerrado. The interviewee added that the original slogan for ProSavana — exporting the Cerrado experience to Mozambique — was not very specific. Rather, the consultant noted that research into the conditions in the Nacala Corridor clearly found that the local context demands a different model from that applied in the Cerrado, and that this need is reflected in the ProSavana program plans.

Criticism of ProSavana on the grounds that it is a duplicate of PROCEDER is therefore unsubstantiated. Rather, ProSavana should be assessed on its own merits, and any criticisms should be better targeted to address concrete issues and gaps in the program strategy rather than drawing upon general inferences from the Cerrado transformation nearly half a century ago.

Overall, the misperception of ProSavana is attributable to poor communication about the program, lack of transparency and lack of access to information.

## 3.4 Zonal strategies and farming models

Because ProSavana will be applied across a highly diverse region, no single model is suitable for all areas. Therefore, for the purposes of the program, the region has been divided into zones based on agro-climatic and socioeconomic conditions, with a tailored strategy for each, according to a ProSavana consultant in Nampula.

The zonal strategies were developed by analyzing the following three factors: (i) agricultural management, (ii) human resource potential and (iii) farmland access. Data on each these factors were collected and the composition of each factor analyzed (Table 8).

Environmental vulnerability was classified using the WISDOM (Woodfuel Integrated Supply/Demand Overview Mapping) methodology. Socioeconomic vulnerability was ranked by analyzing indicators of rural population density, road density, railway density, the total cultivated area (%) and the adult literacy rate (ProSavana-PD report 2). Production scales were classified according to crop suitability by measuring 22 crops (banana, cashew, cassava, castor oil, coffee, cotton, beans, elephant grass, eucalyptus, groundnut, maize, off-season maize, potato, paddy and upland rice, sesame, soybean, sugarcane, sunflower, sweet potato, tobacco, wheat).

**Table 8. Factors for zonal strategies.**

| Data | Factors for zonal strategies |
|---|---|
| Socio-environmental vulnerability classification | Agricultural Management Zones |
| Land use and cover | |
| Production scales | |
| % of students aged <14 years | Human Resource Potential |
| % of population over 65 years | |
| % population at working age | |
| population density | Farmland Access |
| % of land covered by productive forests | |
| % of forest coverage on DUAT registered land | |

The 19 districts under ProSavana were then classified into four socio-environmental vulnerability categories (Figure 2).

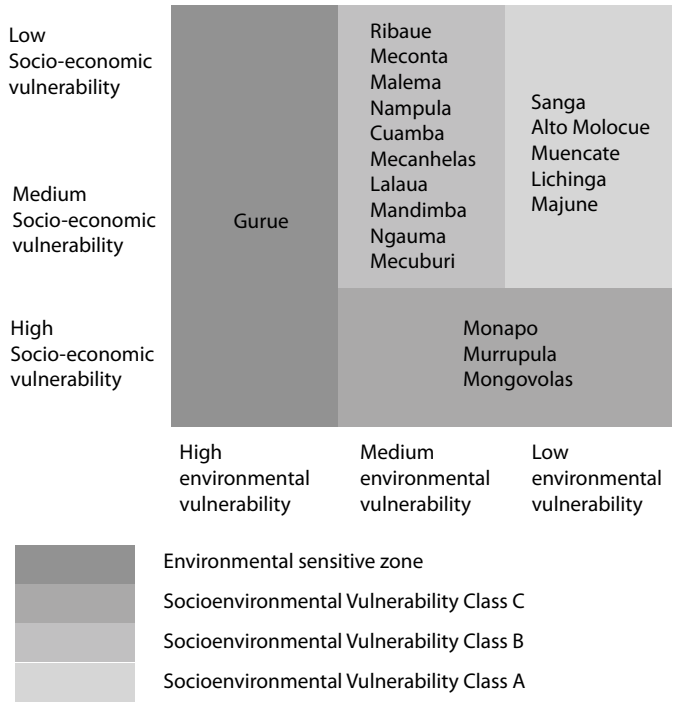


**Figure 2. Socio-environmental vulnerability categories for 19 districts under ProSavana.**
Source: ProSavana-PD draft report 2.

The region was then divided into six recommended agricultural management zones based on the classification of districts (Figure 2), current land use and cover, and the distribution of land for large-, medium- and small-scale farming according to crop suitability (ProSavana-PD report 2) (Table 9 and Figure 3).

In areas identified as best suited to management type 1, no agricultural activity is recommended because of high environmental vulnerability. Small-scale farming is recommended in the other five management types, with medium- and large-scale farming limited to agricultural management types 2–5 and 2–4, respectively.

**Table 9. Management types set out in the ProSavana draft strategy draft.**

| Management type | Description | Small farms | Medium Farms | Large farms |
|---|---|---|---|---|
| 1 | No agricultural activity recommended | X | X | X |
| 2 | All scales of production are allowed | √ | √ | √ |
| 3 | Production allowed with special consideration of the environment | √ | √ | √ |
| 4 | Production allowed with important consideration of the environment required | √ | √ | √ |
| 5 | Production allowed with important consideration of the environment required | √ | √ | X |
| 6 | Production allowed with important consideration of the environment required | √ | X | X |

Source: ProSavana-PD report 2

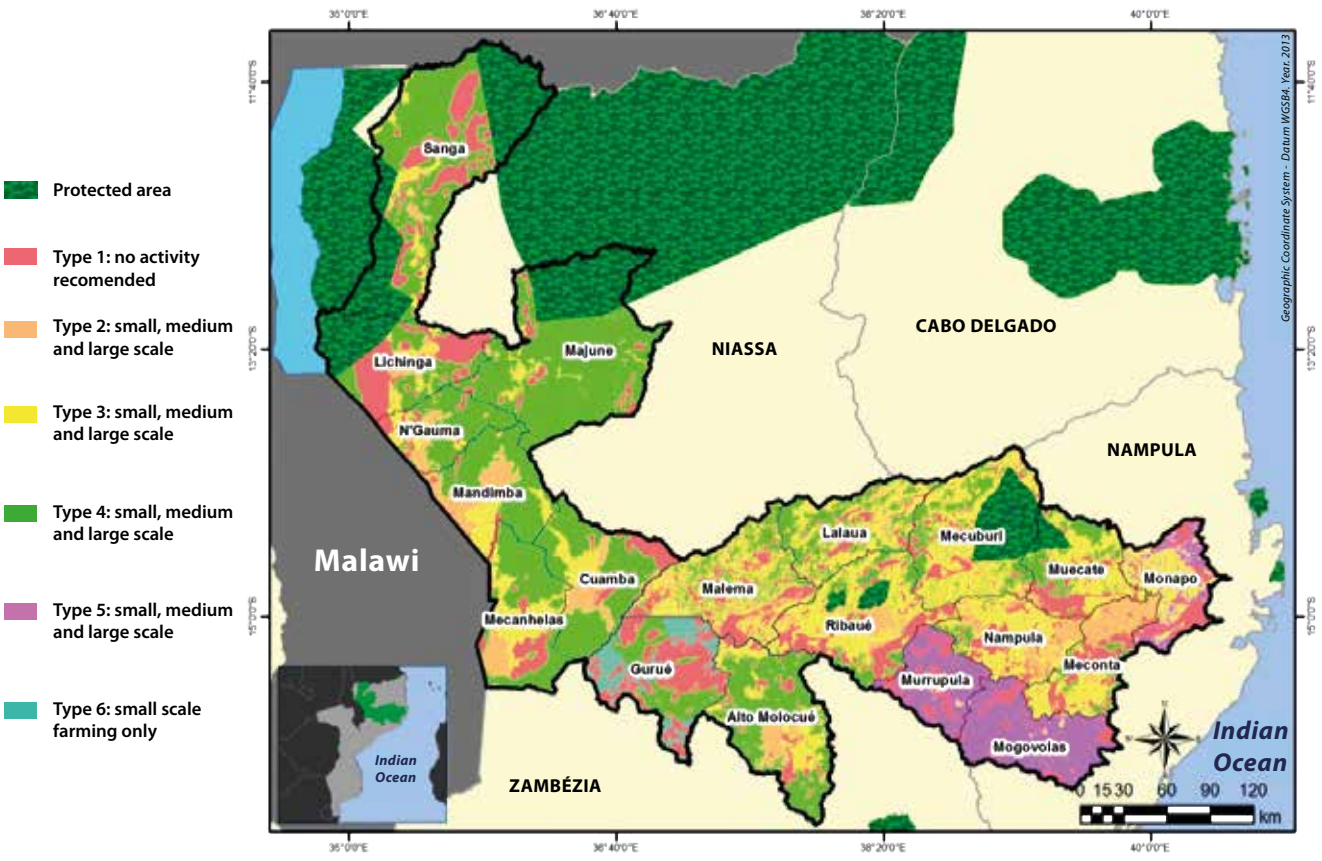


**Figure 3. Map of management suitability types in the ProSavana districts.**

Source: Adapted from map provided by Oriental Consultants and FGV, Presentation with civil society, Nampula, 22 March 2013.

Mozambique's Territorial Planning Law stipulates that land planning must be based on zoning "which is described as qualifying and dividing the territory into areas preferentially suited to certain economic, social and environmental activities" (Norfolk 2009, 28). Based on the management types and analysis of crop suitability, six zonal strategies have been drawn up, and ProSavana-PD has recommended the development of seven potential clusters along the Nacala Corridor to stimulate synergies and suitable investments (Table 10 and Figure 4).

According to the ProSavana-PD plan, small-scale farming is to be supported throughout the corridor. A contract farming model is emphasized wherever large farms are recommended. Similarly, all six clusters will incorporate smallholders in various ways, whereas only one cluster (cluster VI) focuses primarily on large-scale farming developments. An overview of the strategies, cluster projects, crops and management types recommended for the ProSavana area is given in Table 11.

**Table 10. Potential clusters in the Nacala Corridor.**

| | Cluster name | Main production category | Location (District) | Possible produce |
|---|---|---|---|---|
| 1 | Integrated Grain Cluster | Large farm through contract farming | Majune | Soybean, maize, sunflower, elephant grass, poultry |
| 2 | Family Food Production Cluster | Smallholders | Malema | Maize, cassava, cotton, vegetables, groundnuts |
| 3 | Grain and Cotton Production Cluster | Medium and large farms | Lioma Plains (Gurue) | Soybean, maize, cotton, poultry |
| 4 | Cashew Production Cluster | Medium farms and small-holders | Monapo, Mogovolas, Meconta, Muecate | Cashew, maize, beans, cassava, groundnuts, sesame, vegetables and eucalyptus |
| 5 | Integrated Food and Grain Production Cluster | All categories of farmers | Ribaue | Soybean, maize, cotton, seeds, vegetables and poultry |
| 6 | Tea Production Cluster | Medium farms and smallholders | Gurue | Tea |
| 7 | Cuamba Agricultural Infrastructure Cluster | Nonagricultural activities | Cuamba | Infrastructure, logistics, inputs and services |

Source: PD interim report II

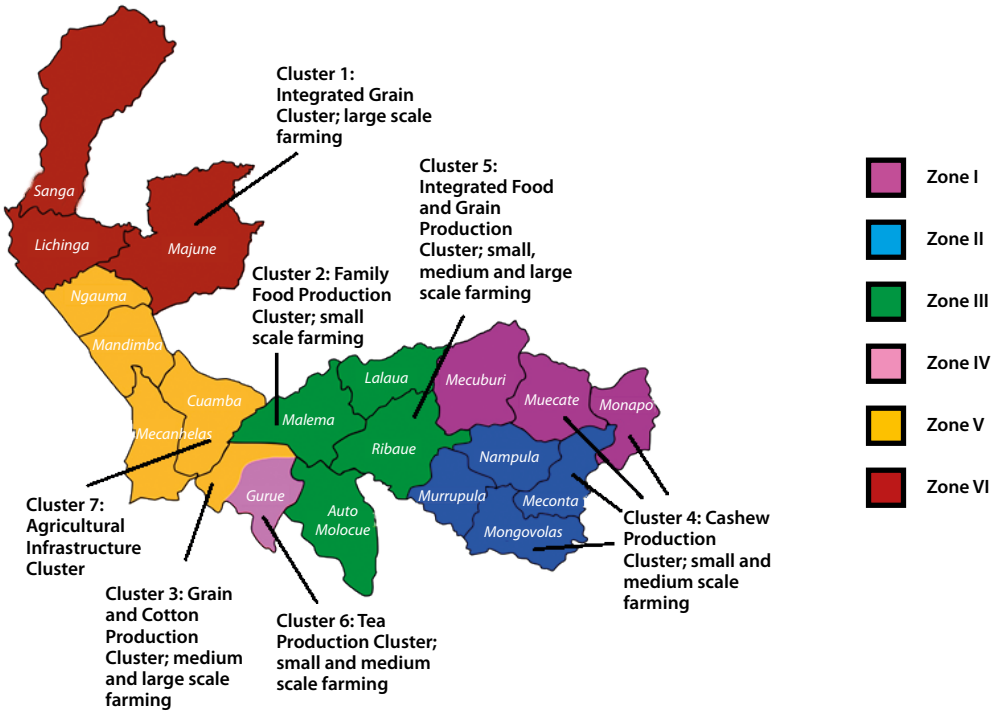


**Figure 4. Map of proposed clusters in the ProSavana area.**

Source: Adapted from Oriental Consulting and FGV presentation, Nampula, 22 March 2013.

**Table 11. Overview of clusters and zonal strategies.**

| Zone | Districts | Clusters | Farm scale | Notes | Crops/Industry |
|---|---|---|---|---|---|
| I | Mecuburi<br>Muecate<br>Monapo | Cashew Production Cluster (4) | Small and medium | • Existing cashew processing units to be upgraded<br>• 600 smallholders to be involved in the cluster project<br>• Each farm will grow crops on 2 ha with DUATs, of which 1 ha will be solely for food production, and 1 ha will be intercropped with cashew trees and food crops<br>• Careful control of expansion into new farmland because of high population density and risk of conflicts<br>• Reforestation to combat soil erosion and to supply the local demand for wood as fuel | • Cashew production and processing<br>• Maize, cassava, production and processing mills<br>• Cotton production and processing<br>• Biomass production for local fuel needs<br>• Medium and large agroprocessing facilities |
| II | Nampula<br>Murrupula<br>Moglovas<br>Meconta | | | | |
| III | Malema<br>Ribaue<br>Lalaua<br>Alto Molocue | Family Food Production Cluster (2) | Small | Malema:<br>• 1000 smallholders to be involved in the cluster project, organized into five associations of 200 farms producing commercially on 5000 ha.<br>• Each family farm will be given 6.3 ha, of which 5 ha will be for commercial production, 0.5 ha for forest planting and 0.5 ha of cultivation for household consumption. The farmers will receive DUATs to the land. | • Cassava production and processing<br>• Poultry industry<br>• Maize and sorghum processing mills<br>• Cotton production and processing facilities<br>• Seed production and processing |
| | | Integrated Food and Grain Production Cluster (5) | Small, medium and large | Ribaue:<br>• 1000 small farmers to be involved in the cluster project as contract farmers. Each farmer is to receive 1 ha of improved food seeds to allow for cultivation of crops for household consumption.<br>• Establishment of one Seed Processing Unit and adjoining farm of 10,000 ha to ensure that the plant operates at a minimum of 50% capacity<br>• Promotion of contract farming<br>• Risk of resettlement of farmers | |
| IV | Gurue | Tea Production Cluster (6) | Small and medium | • Promotion of outgrower schemes for tea production through Gurue's Tea Producers Association<br>• Revitalization of the tea industry by replacing old trees with improved strands from Malawi, and rehabilitation of 2800 ha of tea gardens (damaged during the civil war).<br>• Reforestation to combat soil erosion and illegal logging to supply wood to the tea processing industry.<br>• Strictly control any expansion of new farmland because of high environmental vulnerability. | • Tea production and processing |

| Zone | Districts | Clusters | Farm scale | Notes | Crops/Industry |
|---|---|---|---|---|---|
| V | Cuamba<br>Mecanhelas<br>Mandimba<br>Ngauma<br>Lioma Plains (Gurue) | Grain and Cotton Production Cluster (3) | Small, medium and large farms | Lioma:<br>• Primary focus on existing companies/ farms; 13,000 ha is currently under cultivation by 8500 family farmers<br>• Establishment of farmers cooperatives and promotion of contract farming<br>• Risk of resettlement of local farmers | • Production of soybean, maize and cotton.<br>• Animal feed<br>• Poultry industry<br>• Medium to large agroprocessing facilities |
| VI | Lichinga<br>Majune<br>Sanga | Integrated Grain Cluster (1) | Small, medium and large | Majune:<br>• One large farm of 60,000 ha operating as five individual units of 9000 ha each<br>• Establishment of 1000 poultry farms<br>• Promotion of contract farming<br>• Risk of resettlement of local farmers | • Grains (soybeans, maize and sunflowers) and animal feed<br>• Vegetable production<br>• Poultry industry<br>• Medium to large agroprocessing facilities |

## 3.5 Quick Impact Projects (ProSavana-PD)

A series of so-called Quick Impact Projects (QIPs) will be carried out to initiate development and generate more immediate impact. In general, QIPs will last for about three years, and some were scheduled to begin before the finalization of the Master Plan (October 2013). Two such early start projects are the DUAT registration project (1) and the project to strengthen extension services (7).

The purpose of the QIPs is to initiate the preparatory activities for the development of the various clusters. If successful, the projects will demonstrate the potential for agricultural development along the Nacala Corridor. This can attract funding for further development projects from other donors, and investments from local and foreign companies into agribusiness projects, according to one ProSavana official interviewed.

In total, 32 QIPs have been identified for implementation through public funding so far (Table 12). Eight of these were selected as priority projects to be implemented first.

Approximately two thirds of the QIPs directly target small- to medium-scale farmers as beneficiaries. Six projects are aimed at larger investments in production and processing. In particular, ProSavana QIPs address calls from farmers associations for policies to improve access to rural credit, extension services, irrigation, native resilient seeds, rural infrastructure and marketing of smallholders' products (UNAC et al. 2013); see QIPs number 16, 30, 28, 25, 23, 22, 17, 15, 12, 11, 10, 9, 8, 7 and 3. However, given the tensions with UNAC, it is uncertain whether collaboration with such large farmers associations will be possible.

For this study, the research team attended one consultation meeting between ProSavana officials and seven communities in the district of Muecate. The QIPs address all the issues and concerns that farmers raised at the meeting, with the main grievances voiced being poor access to markets and buyers, need for storage facilities and irrigation, lack of mechanization and lack of access to credit.

According to interviewed representatives, ProSavana projects will be added and adapted as the situation on the ground evolves. ProSavana will therefore be under continuous change to maintain relevance to the local contexts.

Another point that emerged through interviews with ProSavana officials and IIAM and the draft report, ProSavana projects will generate impact collectively; they cannot be implemented in isolation as focusing on only one segment of the value chain would fail to generate sustained benefits.

**Table 12. Proposed Quick Impact Projects in the draft Master Plan.**

| | Proposed QIPs in the Master Plan (32) |
|---|---|
| 1 | DUAT registration* |
| 2 | Land survey to identify available land for land investments* |
| 3 | Strengthening the enforcement and monitoring of environmental regulations |
| 4 | Basic water resource management study |
| 5 | Forest initiative project |
| 6 | Strengthening agricultural research capacities |
| 7 | Strengthening agricultural extension services |
| 8 | ProSavana agricultural academy: Center for Agricultural Development |
| 9 | Development of community farmers' leadership skills |
| 10 | Training of agricultural input distributors |
| 11 | Project on improved access to fertilizers |
| 12 | Promotion of local high-quality seed production* |
| 13 | Promotion of tractor rental services to farmers |
| 14 | Rehabilitation of existing irrigation infrastructure |
| 15 | Improved irrigation technology and construction |
| 16 | Project on vegetable production model* |
| 17 | Establishment of financial mechanisms for small to medium farmers, agribusiness and agricultural associations |
| 18 | Formulation of the national plan for agribusiness development along the Nacala Corridor (Nacala Fund) |
| 19 | Establishment of an organization to support the investment and development of agricultural value chains |
| 20 | Project to develop capacity within service delivery and business development |
| 21 | Development of modern agricultural cooperatives |
| 22 | Improvement of access to market information |
| 23 | Standardization system of agricultural products |
| 24 | Rehabilitation of agricultural storage facilities |
| 25 | Improved infrastructure and roads for agricultural activities* |
| 26 | Project for the ProSavana Special Agricultural Zone* |
| 27 | Integration of grain clusters |
| 28 | Model food cluster production for household farms* |
| 29 | Development of cluster production of grain and cotton |
| 30 | Pilot project for the cluster production of cashew<br>• renewal of cashew trees* |
| 31 | Integration of cluster production for grains and food produce |
| 32 | Revitalization of the tea industry |

*priority projects to be started first

For example, an increase in production must be accompanied by greater market access and storage facilities, improved seeds distributed to farmers must be complemented by extension and training services, and so on. The project reports state that only if all constraints are addressed concurrently can sector-wide transformation be achieved (ProSavana-PD report 2).

## 3.6 An agricultural "big push"

ProSavana appears to have adopted a similar approach to that underlying "big push" theory, although that theory, developed by Rosenstein-Rodan in the 1940s, is based on industrial development rather than the agricultural sector. "Big push" theory holds that substantial investment is needed to jumpstart economic development, as smaller and more narrowly focused approaches cannot push the economy into a growth path and trigger transformation.

Establishing entire value chains requires coordinated investments in complementary areas, as industries and value chains comprise complementary activities; therefore, if each potential firm's success is dependent on inputs from other complementary upstream and downstream firms that do not yet exist, then none of the potential firms may emerge (Lin and Chang 2009). Under this view, simultaneous investments along a value chain and in complementary industries are needed, and with no individual firm able to carry the costs of being the first mover, the role of initiating, catalyzing and coordinating the transformation falls on the state (Lin and Chang 2009). In the absence of such simultaneous investments, the country risks being trapped in a lower equilibrium (Rodrik 2004; Lin and Chang 2009).

ProSavana's cluster approach to development, which requires high government visibility, is in essence based on the idea of a big push to jumpstart sector-wide transformation, generate the necessary components of the value chains and thus achieve sustained growth.

A ProSavana representative emphasized that a large-scale holistic approach with long-term support is more likely to achieve sector-wide transformation, as opposed to narrow programs or projects that focus only on one crop or on a smaller area. The interviewee argued that the government must take a coordinating role to encourage investments in

areas that will generate the desired synergies and development and that the aim of developing several clusters concurrently is to create synergies between them. The ProSavana-PD project documents argue that the proposed projects and strategies are supplementary and reinforce each other and that they must all be implemented concurrently to achieve sector-wide transformation.

## 3.7 Agribusiness pilot projects: Models for cooperation

Five agribusiness pilot projects have been set up to test different models of contract farming, and to demonstrate to potential investors and farmers how agricultural development can take place through the collaboration of smallholders and large farms. To finance the pilot projects, the ProSavana Development Initiative Fund (PDIF) was set up by GAPI, MINAG and JICA, with a starting balance of US$750,000 (Table 13).

One interviewee from the JICA technical team argued that contract farming is the easiest way to finance smallholders and that the pilot projects can demonstrate to investors how activities can be run in collaboration with communities. In total, 932 small- and medium-scale farmers are covered by the pilot projects, cultivating a wide range of crops across a total of 1370.5 ha.

The JICA technical team visits these pilot projects and inspects fields weekly to provide advice to the companies and contracted farmers and to monitor the progress of crops and their strands. At the end of each season, yields are measured against baseline measurements from the previous year, and recommendations will accordingly be incorporated into the Master Plan.

Two companies running pilot projects were visited on three occasions as part of the field research: Lozane farms in Maputo and in Alto Molocue, and Matharia Empreendimentos on their farming site in Ribaue (Box 1).

**Table 13. ProSavana pilot projects for contract farming /out grower models.**

| Company | Location | Project overview | PDIF funding |
|---|---|---|---|
| Lozane Farms | Alto Molocue (Zambezia) | • Seed production company<br>• Provides inputs and intensive training on agricultural practices and management | $2,500,000 |
| **IKURU** (a farmer-owned trading company, with Oxfam Novib and GAPI holding 45% shares each) | Monapo and Mogovolas (Nampula) | • Contract farming with written agreements<br>• Provides full input services (fertilizers, quality seeds, tractor and technical extension services) | $2,860,000 |
| **Oruwera Seed Company** | Murrupula and Mogovolas (Nampula) | • Contract farming of seed production<br>• Provides intensive technical extension services | $2,800,000 |
| **Matharia Empreendimentos** | Ribaue (Nampula) | • Promotion of soybean production by smallholders<br>• Vegetable production with small holders by providing technical support<br>• Production of soybeans on smallholder farms (5 ha) | $1,640,000 |
| **Santos Agricola** | Meconta (Nampula) | • Contract farming for vegetable production<br>• Vegetable production on own farm with irrigation system (20 ha) | $1 680 000 |

**Box 1. Lozane and Matharia farms.**

***Lozane Farms***

Lozane Farms is a seed production company that targets the local market. The main seeds are soybeans, but it also produces other vegetables such as cowpeas, tomatoes, corn and sunflower.

Originally a small farm of only 1 ha, it now consists of two concessions totaling 1200 ha of land in Alto Molocue. The company operates mainly on a contract-farming basis, with 473 farmers producing soybeans over a total of 389 ha. Lozane also plants soybeans on 20 ha of its own land for seed production. Local communities reside and farm for their own consumption on both of Lozane's concessions, as they have good, long-standing relationships with the owner of Lozane Farms; this means that Lozane's actual farming area is less than 1200 ha. The resident farmers are not the same farmers who are contracted to produce soybeans for Lozane. The expected output in 2013 is 400 tons, which will be sold on the local market.

The company hopes to expand its success to Malema District in Nampula Province by obtaining a concession of 500 ha. Finding available land is difficult, but the company has a history of building good relationships with local communities and the owner believes it will be possible to reach an agreement with farmers in the area. As there is a lot of interest among farmers to switch to soybean cultivation, the company believes that farmers in the area are open to cooperating with them, because Lozane can provide the necessary inputs.

In contrast to reports from nearby farms that farmers have not repaid the contracting company for the inputs, Lozane has not experienced any problems with credit extension to farmers. The company attributes this to the owner's strong and long-standing personal relationships with the surrounding communities and contracted farmers. Ultimately, Lozane is a profit-seeking company, but the company has found that assisting farmers to sell their produce with a good profit margin is necessary to create demand for their seeds and it is in their interest to ensure that the farmers succeed.

The poultry industry is the driver of the demand for soybean cultivation, but Lozane Farms hopes to diversify the demand base away from a reliance on the poultry industry, by importing 12 tofu and soymilk processing machines from China. These machines will be distributed to the 12 associations of contract farmers that Lozane operates with. In this way, the company is creating a parallel market for soybeans, forcing the poultry industry to pay higher prices for feed. According to the company's calculations, its soymilk can compete with cow's milk, and they also believe that they will be able to convince people to eat tofu as a source of protein, as it is much cheaper than meat.

The company stated that one of its biggest constraints is obtaining capital to fund expansion plans and upgrade its facilities. The PDIF offers much more reasonable terms than banks because (i) the fund is focused on financing agricultural activities and (ii) its interest rate of 10% is considered fair by the company. However, there is significant red tape and unreasonable collateral requirements of 120% that will bar most farmers from accessing the funds. Funding from the PDIF was delayed and the company had to use other funds to plant the soybeans before the end of the planting season. Nevertheless, the company is positive about the ProSavana program, and a ProSavana agricultural technician is working with the company to improve production.

Soybeans at Lozane farms, Alto Molocue. The farm does not use irrigation, and the road infrastructure is deficient. In 2011, the entire tomato crop was destroyed while en route to market because of the poor roads.

***Matharia Empreendimentos, Ribaue***

Matharia used to produce tobacco, but in 2012, for regulatory reasons, the company had to close down the production. The company is therefore now looking to switch production to other crops. This happened around the same time that the PDIF was set up, and Matharia managed to obtain the necessary financing to restructure its business. The company also receives technical expertise and advice from the ProSavana research team to produce new crops. The ProSavana research team uses the farm as a center to meet with local farmers to demonstrate techniques and crops (by holding events called "Dia do Campo"), and regularly visits nearby farms belonging to contracted farmers.

As 2013 was the initial year since its shift away from tobacco, the company is still in a learning process and is experimenting with various strands of crops, most notably soybeans. The farmland covers 1500 ha. However, because of the transition from tobacco to production of new crops, only about 20 ha is being farmed in 2013, of which 5 ha is being planted with various strands of soybean. By 2014, the company will have a better understanding of which strand is best suited for the soil and expand production. Some plots show an estimated yield of more than 2 tons/ha, whereas other plots will likely yield less than 1 ton/ha. In addition, 2 ha is being planted with sunflowers, and the company is considering buying sunflower oil processing machinery if the yields are good. The company also produces onions and tomatoes destined for the local market, especially the booming domestic poultry industry.

The company uses a contract-farming model, providing inputs such as seeds, technical expertise and fertilizers on a credit basis. It buys crops from surrounding smallholders and employs people from the surrounding local community to work the company's own land. Three to four workers are hired per hectare depending on the season and the workers are paid monthly. Currently, the company has 250 contracted farmers, of whom 230 plant soybeans over a total of 72 ha; the other 20 farmers plant tomatoes on a total of 10 ha. In addition, the farmers plant cassava and maize for household consumption. Matharia also uses contract farmers for onion production on a smaller scale. If the results from 2013 are encouraging, the company hopes to expand the number contracted farmers.

Arturu, a Matharia contract farmer farming soybeans for the first time on 1 ha. He also grows cassava and maize for personal consumption. His soybeans are showing signs of a virus infection; the ProSavana research team gives him advice on how to minimize the damage.

## 3.8 ProSavana in relation to PEDSA

ProSavana largely follows Mozambique's national strategy for developing the agricultural sector, as set out in PEDSA (2010). It is hoped by ProSavana officials that targeting small-scale farmers and commercializing the agricultural sector will lead to a reduction in poverty.

The goal of PEDSA (2010) is to convert the agricultural sector from one that is dominated by subsistence agriculture into one dominated by competitive and sustainable market-oriented production. By comparison, the ProSavana agreements signed by Brazil, Japan and Mozambique state that the program aims "to improve the competitiveness of the sector, in terms of food security, increase in productivity of small producers, and the generation of exportable surpluses from the agriculturally oriented agribusiness" (minutes of meetings between Japan, Brazil and Mozambique, 2011), and that the objective is "to create new models of sustainable agricultural development in the tropical savannah region of Mozambique through triangular cooperation among Japan, Brazil and Mozambique, while taking into account preservation of the environment and seeking market-oriented agricultural/rural/regional development with a competitive edge" (minutes of meetings between Japan, Brazil and Mozambique, 2009). In brief, PEDSA and ProSavana have the same aims: to increase agricultural productivity and commercialize the sector.

In contrast to the approach characteristic of Structural Adjustment Programs, PEDSA allows more room for state intervention in the agricultural sector, effectively reinstating the government in its role as a buyer of last resort, to reduce the risk for farmers who venture into the production of new crops. Similarly, the significant role of coordinator assigned to the government of Mozambique by the proposed ProSavana strategy echoes the call for greater government involvement to transform the sector.

This call for increased state involvement in the development of the agricultural sector is made alongside calls for greater private investment to supplement public funding to finance the transformation. In the view of one government interviewee, the Mozambican government does not possess the necessary capital to transform the agricultural sector and so private investment is essential to carry out some of the projects in partnerships with the public sector. A land consultant interviewed pointed out that funding streams for NGO projects tend to be unreliable, and projects rarely run for more than a few years, whereas Mozambique's agricultural sector will need substantial continuous funding over 20–30 years if sector-wide transformation is to be achieved. The interviewee added that, by attracting private investments, the project could secure a longer-term supply of capital and projects driven by profit are more likely to be self-sustainable than those that depend on aid as their primary source of revenue.

PEDSA (2010) heavily emphasizes the establishment of entire value chains to ensure value creation domestically, as well as ensuring a market for farmers switching to commercial farming, particularly in the Nacala, Beira and Maputo Corridors. Likewise, ProSavana puts a heavy focus on cluster development and the value chain approach. As one ProSavana representative interviewed stated, there is no point in increasing production if you cannot ensure access to markets. Several projects identified in the Agricultural Master Plan deal not only with input chain but also with the post-production segments of the value chain. That is, the ProSavana-PD document proposes strategic projects covering production, processing, transport links, storage and marketing, among others. Examples of post-production aspects addressed in the Master Plan are projects on building capacity for business development, improving access to market information, using standardization systems to access EU markets and rehabilitating storage facilities.

Similarly, ProSavana's proposed QIPs largely correspond to the needs identified in PEDSA (2010). A comparative overview of challenges identified by PEDSA and addressed in the Master Plan projects is given in Table 14.

The crops targeted by ProSavana are also those identified by the Mozambican government as of the greatest importance to the country's market and industry: soybean, maize, cassava, rice, cashew, cotton, sesame, beans and pulses. Such correlations indicate that ProSavana can be viewed as matching the Mozambican government's agricultural strategies, based on a corridor approach. This is not to say that ProSavana does not contain contentious aspects surrounding how large-scale

**Table 14. Overview of ProSavana QIPs and needs identified in PEDSA**

| PEDSA | ProSavana |
|---|---|
| Road rehabilitation to access markets (p. 27) | QIP 25: Improved infrastructure and roads for agricultural activities |
| Rehabilitation of irrigation infrastructure (p. 28) | QIP 4: Basic water resource management study<br>QIP 14: Rehabilitation of existing irrigation infrastructure<br>QIP 15: Improved irrigation technology construction<br>QIP 16: Project on vegetable production models with small pumps |
| Increase in farmers' knowledge of modern technologies and access to extension services (p. 36) and increase in fertilizer use (p. 39) | QIP 7: Strengthening agricultural extension services<br>QIP 9: Development of community farmers' leadership skills<br>QIP 10: Training of agricultural input distributors<br>QIP 11: Project on improved access to fertilizers |
| Increase in investments in agriculture, including credit and development infrastructure (p. 36) | QIP 17 Establishment of financial mechanisms for small to medium farmers, agribusiness and agricultural associations |
| Research on improved seeds and methods of cultivation, and establishment of service centers (p. 37) | QIP 6: Strengthening agricultural research capacities<br>QIP 8: Establishment of ProSavana agricultural academy: Center for Agricultural Development.<br>QIP 12: Promotion of local high-quality seed production |
| The establishment of land-use maps and DUAT registration (p. 45) | QIP 1: DUAT registration<br>QIP 2: Land survey to identify available land |
| Mechanization of agricultural activities (p. 39) | QIP 13: Promotion of tractor rental services |

farms are meant to interact alongside smallholders or the degree to which Mozambique benefits from foreign investments into land (as opposed to agro-processing); certainly, ProSavana does intend to attract investors engaging in the primary production segment of the value chain. However, this is not the primary nor sole focus of ProSavana. Rather, the ProSavana program aims, to a large degree, to engage with the commercialization of small- to medium-sized farmers, and to attract foreign investment mainly in the agro-processing stages of the value chain (interview with ProSavana representative). As a result, ProSavana cannot be said to contradict national agricultural strategies; rather, it has been developed within the existing policy framework.

## 3.9 Crops supported by ProSavana

The ProSavana-PD draft plan drew on technical studies, data collection and analysis to recommend the support of certain crops according to agricultural conditions, as mapped out by the zonal strategies. As government officials interviewed pointed out, these are the same crops identified in PEDSA as important for Mozambique's food security. A World Bank study (2009) evaluating the potential competitiveness of Mozambican crops found that the produce was unlikely to be able to compete as exports given the prevailing conditions on the international market. The crops will therefore mainly be destined for local and regional markets. A ProSavana official interviewed stated that producers are free to export produce if they wish, but that ProSavana will focus on crops that are in high demand in Mozambique.

The domestic demand for **soybean**, a relatively new crop in Mozambique, is described by the ProSavana-PD plan and PEDSA as booming. This same view emerged throughout the interviews with stakeholders, including farmers, producers and NGOs, and was confirmed by the literature on soybean cultivation in Mozambique.

Interviews with stakeholders during the scoping study do not support claims that the soybeans produced are destined for export to Asian markets (GRAIN 2012). Rather, all those interviewed maintained that the local market for soybean holds great potential because of the expansion of the poultry industry and that current domestic

production is nowhere near able to supply the growing demand. According to a representative of an NGO working to introduce soybean to farmers, switching to soybean cultivation offers substantial benefits relative to the additional effort needed to learn how to produce a new crop.

Under ProSavana, production and processing of soybeans will be supported in zones III, V and VI to meet the demand for animal feed and edible oil. The **poultry industry** will also be promoted in these zones to ensure proximity and synergy between the industries.

**Maize**, one of the region's staple crops, has been found to be a good complement to soybeans for crop rotation. IIAM has expressed the hope that ProSavana will lead a fourfold boost in production from the current low yields of approximately 1 ton per hectare. Based on agricultural conditions, maize is recommended for production in zones I, II, V and VI. Small-scale processing mills will be established in all zones to meet local demand.

**Vegetable and potato** production will be promoted in zones III, IV, V and VI as the climatic conditions are favorable. Produce in zone V may also be used to supply the Malawian market, given its proximity.

**Cassava** production will be promoted in zones I and II, with processing mills set up in zones I, II, III and IV to serve local demand.

Production and processing of **cash crops** such as tobacco, cashew and cotton will be promoted in zones I, II, III, V and VI. In zone IV, the focus will be on the revitalization of the tea industry. Cowpeas, sesame and pigeon peas will be supported in zones I and II to supply both local and international markets.

# 4. ProSavana, forests and people

As discussed in Section 4, ProSavana largely follows Mozambique's national strategy for developing the agricultural sector, as set out in PEDSA (2010). It is hoped that, by targeting small-scale farmers and commercializing the sector, the development of agriculture will reduce poverty.

## 4.1 Establishment of large-scale farming

The ProSavana rhetoric of agricultural development through cooperation between small- and large-scale farmers raises questions about how this can and should be done. The suggestion that large farms should be invited to contribute to the development of the sector has raised concerns, particularly with regard to the availability of land to establish such farms and potential land grabbing to the detriment of smallholders already present in the area.

It is very difficult to estimate how much land is potentially available for large-scale developments because most farmers lack DUATs and land is often not formally registered. However, it is estimated that potential areas for medium-scale developments or the expansion of smallholders do exist in nearly all districts except Monapo and Nampula, which have very high population density, according to the ProSavana-PD project documents.

In cases where farming is likely to be more efficient on a larger scale than a small scale, ProSavana recommends organizing farmers into larger units and associations. One ProSavana official interviewed stated that:

> Basically, we do not believe there is much space for developing huge farms, but where benefits of scale exist they can be achieved by coordinating farmers into organized associations. At the moment most farms are less than 10 ha, and the total number of farming households in the region of ProSavana is 700 000; according to other estimations even up to 1 million households [are] engaged in farming.

The review of the ProSavana-PD draft plan and interviews indicate that the program will promote contract farming and outgrower models in cases where large-scale production of crops is expected to be more efficient than small/medium-scale farming. The pilot projects financed by PDIF are intended to demonstrate how local farmers and larger investors can collaborate. The ProSavana project document also draws upon the experiences of the Beira Agricultural Growth Corridor initiative, in which various partnership models between farmers and investors were tested (ProSavana-PD interim report).

The few areas where land is believed to be available for larger developments are reflected in the zoning and cluster strategies. Small and medium-sized farms are to be promoted throughout the region, but large-scale farming will be promoted in three clusters (1, 3 and 5) in zones III, V (Lioma administrative post in Gurue) and VI.

**Zone III** contains **the Integrated Food and Grain Production Cluster** (**no. 5**) in Ribaue, which seeks to encourage farming of all scales for the production of seeds. The cluster project aims at involving 1000 farmers in seed production. To reduce the risks for small-scale farmers, each farmer who participates will receive 1 ha of improved seeds to increase food crop production yields (beans, maize, groundnuts) so they can maintain food self-sufficiency during their transition into commercial farmers.

An initial investment by a single pioneering company to operate vertically along the value chain is being sought to establish the cluster. The company will operate on a contract-farming basis, and will be responsible for the inputs and machinery necessary for seed production. The company will also be responsible for processing seeds at a capacity of 20,000 tons annually. It is argued in the ProSavana-PD draft report that, to ensure that the Seed Processing Unit operates at a reasonable capacity (minimum 10,000 tons/year), the company should be allocated 10,000 ha for the cultivation of seeds to supply the unit, of which 8000 ha should be intended for soybean seed production, 1330 ha for cotton, 1000 ha for sunflower and 667 for maize seed production (ProSavana-PD report 2).

According to estimates by the ProSavana study team, Ribaue contains approximately 28,000 ha of available land.[1] However, this does not mean that there is a continuous stretch of 10,000 ha, as needed for the Seed Processing Unit. It is also quite possible that the Seed Processing Unit will have to be located near existing infrastructure and therefore be placed in an area that is already populated rather than being built in an underdeveloped area. As a result, even though the cluster project does not aim to support large farm developments, there is a risk that some communities may have to relocate.

The development of the Seed Processing Unit will begin in 2014.

**The Cotton Production Cluster (no. 3)** in Lioma plains in Gurue District (zone IV) also aims to stimulate agricultural activity at various scales. Due to the high environmental vulnerability of the region, new farmland expansions must be carefully controlled according to the zonal strategy (ProSavana-PD report 2). The cluster will mainly focus on developing existing structures, but it will also attempt to attract public–private investment in infrastructure developments. The cluster project plan states that there may be a need to resettle some people.

Large-scale agricultural activity will also be promoted in zone VI, Majune District, to develop the **Integrated Grain Cluster (no. 1)**, as the area is characterized by low socioeconomic and environmental vulnerability. The investments and management of grain production and processing will be the responsibility of one company ("one single legal entity"), which shall feed the future poultry industry in the district.

This company will cover a total area of 60,000 ha, divided into five modules of 9000 ha, each operating as individual producers. The plan is to cultivate the land through a crop rotation of maize, soybeans and sunflowers. The processing industry is expected to start operation in the fifth year of the project, and the poultry industry to follow. The plan is to establish approximately 100 poultry modules with a total annual production capacity of 1 million chickens.

Because Majune District was added to the ProSavana program in early 2013, research on the district is still ongoing and it is not included in the project reports obtained by the scoping team. According to other sources, the area is sparsely populated, with only 2.6 habitants per km$^2$ and official statistics put the area under cultivation at 18,500 ha (Ministry of State Administration 2005; Orgut 2012). As the total area of the district is 1,152,000 ha, it is plausible to assume that more land is available for large-scale developments in Majune than in other districts. Although there is always a risk that local communities will have to be resettled to allow the investments and consequent agricultural transformation, the low population density of this area means that these risks are smaller in Majune District than in more populous areas of the Nacala Corridor.

Civil society can play a positive role in monitoring the potential resettlement requirements arising from the investments in the district to ensure the protection of farmers' rights and compliance with Mozambican law and Principles of Responsible Agricultural Investment (PRAIs). In particular, civil society can work to check that projects and investments under ProSavana meet the project aim of ensuring that people are not relocated to areas that are not connected to the value chains that are to be developed.

In the case of land investments, it is a legal requirement that investors hold consultations with the local community and reach an agreement for the transfer of use rights to land belonging to the community. However, these consultations are sometimes performed merely as lip service to the law. The question of who represents and negotiates on behalf of the community is central (Kaarhus and Martins 2012). Often, traditional authorities negotiate with investors on behalf of up to tens of thousands of community members, who remain uninformed of the concrete details of the agreement and know of few avenues for voicing grievances (Kaarhus and Martins 2012). Kaarhus and Martins (2012) suggest that such consultations can be improved by inviting local farmers associations to participate, thus broadening the representation of farmers in the decision-making process.

1 The definition of "available land" used by the ProSavana program excludes land that is covered by productive forests; conservation areas; mangroves; farmlands; tree farms; forestry plantations; dunes; riverbeds; residential areas; forested areas under shifting cultivation; wild animal ranches; concessions (mining and forestry); community areas; and areas currently under local and donor-aided initiatives. The identification of available land concentrates on plots larger than 1000 ha. Expansion of smaller and medium-sized farms may thus still be possible in areas labeled as having no available land.

Although many reports of investments detail imperfect land acquisition processes, it is important to note that, in several cases, investors and communities have reached mutually beneficial agreements and cooperation, as seen with the companies involved in ProSavana's pilot projects. Therefore, it is inaccurate to see investments as unequivocally negative. The question of whether investment under ProSavana will ultimately benefit smallholders does not therefore have a single answer for all areas along the corridor; that is, while some smallholders may face resettlement, ProSavana projects may offer other smallholders opportunities for prosperity and change.

## 4.2 Principles of Responsible Agricultural Investment (PRAIs)

It is often argued that agricultural investment is desirable as long as it is conducted responsibly, and that it is not a question of whether or not to invest in agriculture, but how to do so ( United Nations Conference on Trade and Development, Food and Agriculture Organisation, International Fund for Agriculture and Development and the World Bank, 2010). ProSavana takes a similar stance.

Although the majority of projects focus on smallholders and contract farming is promoted for large farm developments, investments nevertheless carry risks for the most vulnerable social groups. ProSavana includes recommendations for mitigating and compensating the risks and losses sustained by farmers subject to land negotiations. The Principles of Responsible Agricultural Investment (PRAIS) upheld by ProSavana are based on seven principles laid out by UNCTAD, FAO, IFAD and the World Bank. Although these principles are promoted as voluntary guidelines by the international community, many of them have been incorporated into Mozambican law (for example, farmers without formal use rights are still legally entitled to the land they occupy; consultations with current occupants are mandatory) and are therefore not voluntary for investors operating in Mozambique. One ProSavana official stated that projects that do not comply with the PRAIs will not be eligible to operate with the support of ProSavana. The principle behind this rule is that the health of an investment relies on the company having a good relationship with surrounding communities and that it is in the investors' interest to avoid conflicts.

Many farmers who have undergone "negotiations" with investors have found that their well-developed legal rights are not protected in reality, and conflicts arising from land investments are well documented (e.g., Theting and Brekke 2010; Hanlon 2011a; Kaarhus and Martins 2012). As a result, the smallholder farmers' legal rights and promises that responsible investment principles will be upheld have thus offered little comfort to farmers involved in land deals with investors. One ProSavana representative interviewed noted that there is commonly a disparity between communities' expectations and investors' intentions for compensation, which triggers conflicts. In other cases, the amount of compensation agreed upon was disbursed but did not ensure a sustainable income for those affected. In these cases, there is a high risk of conflicts arising even after the investor has fulfilled its promises, because resettled people, having used up the one-off benefit from the compensation payment, have no other viable means of making a living, according to one ProSavana representative interviewed. The ProSavana-PD draft plan therefore suggests that, in the event of resettlement, productive villages should be formed that link in to the clusters and value chains and so offer the people affected an opportunity to generate sustainable incomes, because they too will derive ongoing benefits from the investment activities (ProSavana-PD report 2). The draft plan requires that affected communities be involved in the development of the resettlement plan and DUATs to the new land must be awarded to relocated people.

To strengthen the enforcement of Mozambican regulations and mitigate the risk of conflicts, the ProSavana-PD draft plan makes the following recommendations (ProSavana report 2):

(i) that an autonomous body be established to monitor the process of investments to ensure that they adhere to Mozambican laws and best practices as outlined in the PRAIs.

(ii) that clear information on the regulations and expected best practices be made available to stakeholders. To achieve this two sets of guidelines will be created, one serving as information for potential investors to ensure that investors are familiar with their obligations and the other directed to government officials to improve their capacity to enforce regulations and proper conduct throughout the process. Information on land rights will also be disseminated in conjunction with projects aimed at smallholders.

(iii) that compensation given to farmers should aim at improving living standards, and, at a minimum, conditions should be equal to the farmer's original conditions.

In Mozambique's current policy environment, investments in agriculture would occur even without the ProSavana program. It is therefore fair to state that ProSavana does focus on smallholders and smallholders' rights; however, concrete plans and mechanisms for ensuring that these rights are protected are lacking. These aims need to be translated into more tangible projects, given the past failures to ensure farmers' rights are respected in practice.

## 4.3 Shift toward settled farming

A recurring theme in the ProSavana-PD strategy is to encourage farmers to move away from fallow farming toward settled farming. As described above, population pressures and the expansion of farming into marginal land are believed to be major causes of the fall in productivity along the Nacala Corridor.

Low inputs mean farmers must engage in fallow farming over extensive areas of land if they are to maintain soil productivity, which results in large tracts of land lying idle at any point in time. However, such land cannot be considered "free" because smallholder farmers need it to maintain their level of total output over the years. As such, this "idle" land is locked into a system of fallow farming and, to maintain production levels, farmers need an area of land 2–5 times larger than the area actually cultivated because the soil takes a long time to recover its fertility (ProSavana-PD interim report, section 4.1). This creates a major constraint given the rapid population growth in all three provinces covered by ProSavana, as well as increased interest from investors.

ProSavana's approach to boosting productivity involves improving farmers' access to inputs (such as seeds, fertilizers and mechanized tilling) and training them in modern farming techniques. Maximizing the use of land will involve intercropping and rotation of compatible crops (such as maize and soybeans, cashew trees and food crops), according to one ProSavana representative interviewed.

Intensifying agriculture and increasing productivity per hectare will free up land in the heavily populated areas where land pressures are high, according to one ProSavana representative interviewed. That is, by increasing yields and the amount of land under cultivation at any point in time through effective rotation of complementary crops and use of inputs, population pressures on land will be alleviated. Farmers can choose either to expand their farms or "sell" (transfer use rights) some of the previously idle land while maintaining the farm's original production levels. This creates an opportunity for investors to find land in this environment.

It is noted, however, that farmers tend to give up their land to investors rather than expand their own production because many smaller farmers do not have the capacity to put more land into effective use. As there is no ownership of land, only use rights, farmers cannot rent land to investors (Kaarhus and Martins 2012). Farmers holding use rights to the land are therefore at risk of receiving only a one-off compensation payment at the time the rights are transferred, rather than receiving a sustained income in the form of rent (ProSavana representatives acknowledge this as a source of conflict). Others (Åkeson et al. 2009) argue that if consultations are conducted in the correct and intended manner, then a win–win situation can be achieved: "Investors get their land, while communities have a say in how the investment is carried out and gain real resources which they can invest in their own development — in the land they have left" to raise productivity. Receiving income from investments may be more sustainable than depending upon continuous development assistance from donors and NGOs (Åkeson et al. 2009, 11).

Aside from large investments by outsiders, demand for land will continue to increase because of rapid population growth and increasing population pressures. Without alternative employment opportunities, future generations will need larger areas of land under production. This will result in the further shrinkage of farm sizes; the expansion of agricultural land at the expense of forests or onto marginal lands; or the reduction of fallow times, which could lead to insufficient recovery of soil fertility. Consequently, further declines in productivity can be expected. Intensification and increased productivity per hectare will therefore be necessary if the region is to achieve stable growth and improved food security.

## 4.4 Registration of DUATs and creation of a land database

One of the priority QIPs is the Project for DUAT Registration (QIP 1). The QIP got underway in April 2013. Its aim is to formalize small- and medium-scale farmers' legal rights to the land they cultivate.

Several organizations are involved in similar projects in the region, such as Cooperative League of the United States of America (CLUSA), Associacão rural de adjuda Mutua (ORAM), Forum Mulher, Millennium Challenge Accounts (MCA–USAID) and the Union of Cooperatives and Associations of Lichinga (UCA). Yet some experts argue that "far more efforts and resources are needed to get invisible legal rights into official maps and records" (Norfolk and Tanner 2007, x). The QIP complements ongoing activities as it implements the process in areas not covered by other formalization projects, with the aim that all districts in the ProSavana area eventually undergo a process of formalizing farmer's land rights. The QIP aims to directly build on the experiences learned by the MCA by collaborating with MCA staff.

A DUAT may strengthen farmers' sense of entitlement to the land during negotiations with investors and raise farmers' awareness of their land rights. For example, in Gurue, women reported that they felt empowered by the process of obtaining a DUAT during a registration project (Kaarhus and Martins 2012). In addition, those with a DUAT reported that credit had become easier to access, which enabled some farmers to increase production (Kaarhus and Martins 2012). Norfolk and Tanner (2007) argued that registration of farmers' land rights is necessary but should be complemented with civic education and capacity building, as even people who hold basic knowledge of their land rights may not know how to assert these when negotiating with more powerful stakeholders.

With a growing interest in land investments, there is an increasing need to formalize peasants' land rights to strengthen their position (Norfolk and Tanner 2007). A land consultant and expert on the DUAT process stated in an interview that, by holding formalized rights to their land, smallholders can improve their bargaining power and strengthen their positions in negotiations with investors. DUATs and delimited land are essential foundations for agribusiness investments to be ethically sound, according to the consultant.

In densely populated areas, land conflicts are increasingly frequent. Therefore, a clearer understanding of land occupancy and use is needed to manage the pressures on land. One of the major problems linked to large investments is the acquisition of land already in use by local farmers, which might appear to be available but in reality forms part of farmers' fallow farming system. The lack of oversight of land use complicates the process of awarding land for investments and the identification of the stakeholders. Increasing the number of registered DUATs and establishing a database of occupied and available land will make the task of identifying land areas for investors less onerous for district officials, and reduce the risk of land conflicts.

However, according to other Mozambican land consultants interviewed, the formalization of land rights carries a threat to more vulnerable members in communities if the project is not designed carefully. The process of individual land titling creates opportunities for intra-community land grabbing by those community members possessing more power; women are almost certain to lose their resources to the benefit of their male counterparts. Any project on DUATs must therefore recognize the complexities of internal land distribution within communities (Kaarhus and Martins 2012).

According to reports by NGOs working on the DUAT process, women tend to not express an interest in obtaining a DUAT if information meetings with communities are conducted with members of both genders present. When information meetings were held separately for women and men, women showed an interest in acquiring DUATs but none could make the decision, as they felt the need to obtain approval from their husbands first. To involve women, the NGO found that men needed to be informed of the importance of their wives obtaining DUATs and encourage their wives to participate (Kaarhus and Martins 2012). This experience demonstrates the importance of carefully designing the gender component of the project.

Furthermore, to obtain a DUAT, the applicant must hold an ID card, but women are more likely than men not to hold an ID card (Kaarhus and Martins 2012). If supporting activities to assist women to obtain ID cards are not underway, they may be vulnerable to relinquishing the formal rights to their land to male relatives rather than obtaining the DUAT in their own name (Kaarhus and Martins 2012).

One land expert interviewed suggested that DUATs be awarded to smallholders on a community level as a group. This approach could have the effect of strengthening the community's bargaining power in negotiations with investors by uniting the farmers and their individual titles. However, awarding DUATs at a community level would not necessarily help women secure their rights to their land as they often stand to lose their land if they are widowed or divorced (Kaarhus and Martins 2012). The NGO ORAM works to remediate this by securing individual titles for women within community delimited land (Kaarhus and Martins 2012). Kaarhus and Martins (2012) recommended that the promotion of DUATs for women should be a main priority within community delimitation of land.

The ProSavana-PD QIP outline does specify that precedence will be given to those classified as most vulnerable (women, elderly and sick) and opens up the possibility of running the project at a community rather than individual level. However, details are lacking on whether the project will have a gender strategy and what this will contain.

Despite the challenges linked to the process of formalizing land rights, Kaarhus and Martins (2012, 35) argued that it "still seems necessary, and the right thing to do".

## 4.5 Potential impacts on the Miombo forest

The Miombo forest covers two thirds of Mozambique, and is concentrated in the northern region of Mozambique. The western parts of Nampula and Niassa exhibit the highest forest coverage of the Miombo and account for nearly 45% of the total land use along the Nacala Corridor (ProSavana-PD interim report). The forests provide important services to local communities in the form of fuel, medicines, food and construction materials (Salomão and Matose 2007). Local communities have a "deep relationship" with the Miombo forests, according to the ProSavana-PD project document. The maps in Figure 5 and Figure 6 show the distribution of forests in Mozambique. Due to the high population density in Nampula, little forest area remains in the eastern parts of the province; by contrast, Niassa Province still has large areas of forest.

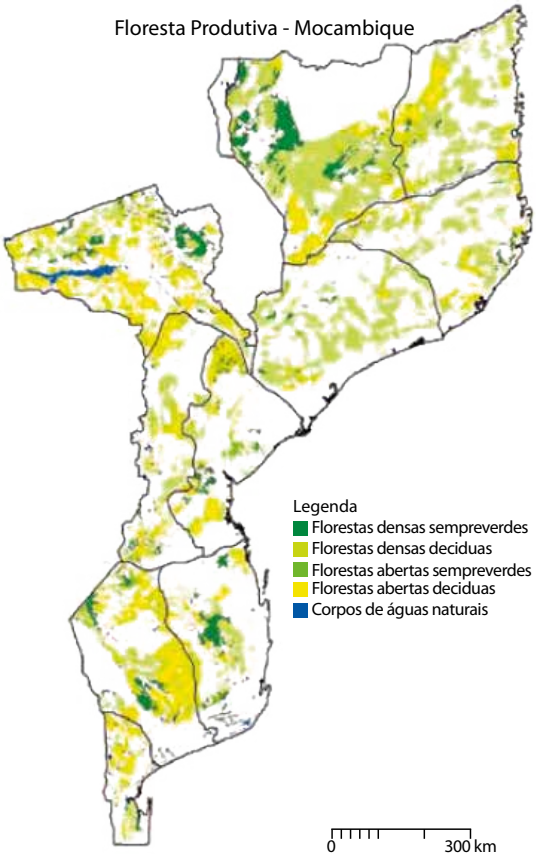


**Figure 5. Productive forests in Mozambique.**
Source: German and Wertz-Kanounnikoff (2012, 29)

Although illegal logging is a serious threat to Mozambique's forests, the production of charcoal is one of the biggest drivers of deforestation (Table 15). Populations in both rural and urban areas rely on energy from wood/charcoal for their cooking needs (ProSavana-PD interim report). Forest clearance for agricultural activities is common, especially in densely populated areas such as in the eastern part of the Nacala Corridor. Next to charcoal production, slash-and-burn clearance of land for farming is a major driver of deforestation in Mozambique (ProSavana-PD interim report).

**Table 15. Forest cover and deforestation rates in provinces covered by ProSavana.**

| Province | Forested areaa | Deforestation rates |
|---|---|---|
| Nampula | 35.5% | 1.18% |
| Niassa | 75% | 0.22% |
| Zambezia | 49% | 0.71% |

[a] Forest cover is defined as having more than 10% of the area covered by trees taller than 5 m.

Source: ProSavana-PD interim report

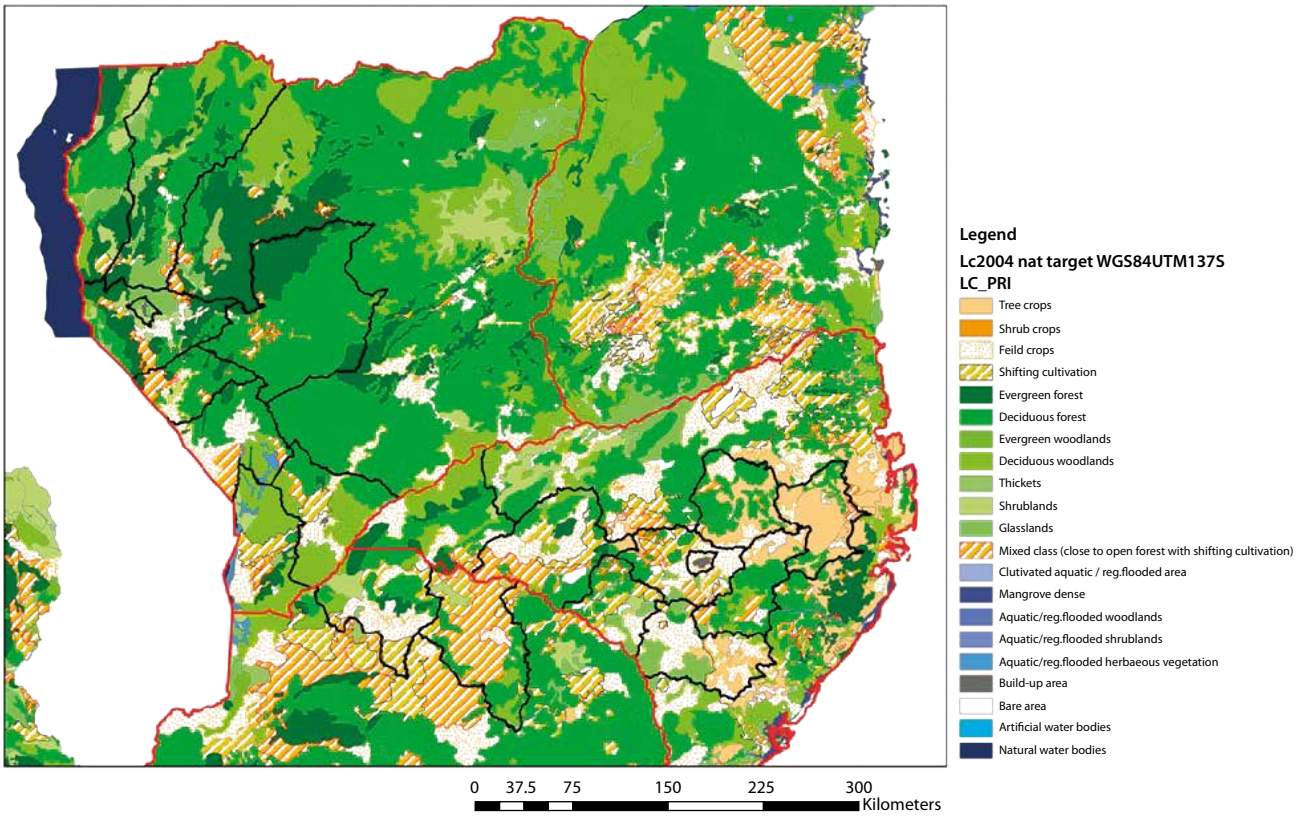


**Figure 6. Forest coverage in ProSavana area.**
Source: ProSavana-PD interim report

According to the Provincial Department of Agriculture- Forestry section (DPA), ProSavana will focus on areas that are already under agricultural production and so does not pose much threat to land expansion at the expense of forests, and the development of ProSavana is generally not incompatible with forest conservation. However, any recommendations to convert a forested area to other productive uses will be seriously considered by the DPA. Forested areas near riverbanks are an example of areas where forests may have to give way to infrastructure developments, according to the DPA. One land and forestry consultant interviewed predicts that logging and deforestation will most likely not be a major problem because JICA is opposed to the clearance of forest land for agricultural expansion under ProSavana (Box 2).

Available land suitable for development by ProSavana has been identified in Majune District; the proposed farm setup requires five plots of 9,000 ha each. However, the area is covered by Miombo woodlands and so there is a risk of deforestation of these forests. Given the very low population density in the district, deforestation may not have an overall large negative socioeconomic impact, but it is a cause of concern for biodiversity conservation.

This problem of pockets of potential deforestation is acknowledged in the ProSavana-PD documents. However, the documents state that a balanced evaluation between the benefits of forests and the benefits of development must be made in each

**Box 2. Areas classified as sensitive by JICA guidelines.**

- Primary and natural forests in tropical areas
- Important ecological habitat
- Habitat of rare species
- Areas in danger of significant salt accumulation and/or soil erosion
- Areas with unique archaeological, historical or cultural value
- Other areas with a special social value linked to indigenous and minority traditions

Source: ProSavana-PD interim report

case to justify any proposed clearance of forests. The documents also propose that guidelines be developed for determining whether an area should be environmentally conserved or be subject to agricultural development (ProSavana-PD interim report; ProSavana-PD report 2). A government official echoed this in an interview, saying that the costs and benefits must be evaluated to determine the acceptable levels of negative impact on the environment are and how to mitigate this impact: "We should not completely avoid developing because there is a cost to the environment, but we need to find the right balance, between improvement of agriculture and incomes, and preserving natural resources."

The ProSavana-PD project documents call for a set of standards and guidelines for evaluating and judging what levels of forest clearance may be acceptable in cases where development necessitates deforestation, in order to determine the desirability of a project (ProSavana-PD interim report).

Three of the priority public QIPs have been identified as potentially having a direct adverse impact on nearby forests and so require an Environmental Impact Assessment (EIA) before possible approval:

QIP 25: Improved infrastructure and roads for agricultural activities

QIP 26: Project for the ProSavana Special Agricultural Zone

QIP 28: Model food cluster production for household farms.

QIP 25 will be implemented in the districts of Gurue and Ngauma (zone V). It consists of improving market access through the construction of two paved road segments between the administrative post of Nintulo to Impisa (19 km) and between Tota and Matamanba (17 km). The project preparations and design will start in early 2014, with construction planned to begin in 2015. Suggested measures to minimize forest clearance are to employ environmentally conscious route planning, structural design of the road and work methods. In addition, HIV/AIDS awareness campaigns will be run to mitigate the potentially adverse health effects caused by the increased mobility of people.

QIP 26 will be implemented in the western part of Malema District (zone III). It consists of forming five farmers associations of 200 families each to produce food crops. The approximate location of the project is displayed in Figure 7. Each family will receive a DUAT for 6.28 ha, out of which 0.5 ha must be reserved for forests. However, given that the current average farm size is about 1.25 ha per farmer, this could mean that nearly 5000 ha of additional land must be identified if each family is to end up with 6.28 ha. This implies that farmland may be expanded, at the expense of forest. The project is set to begin in 2014 with the establishment of one association initially, and another association added each year until 2018.

A scientific survey of flora and fauna and a strategic environment and social assessment are being carried out to evaluate the validity of the Master Plan in its entirety from socio-environmental perspectives and make recommendations for amendments to the plan to avoid any significant and/or irreversible adverse impacts on the environment identified during the assessment (ProSavana-PD report 2). These studies are not yet publicly available, but interviews with ProSavana representatives indicated that the assessments are underway and nearly complete.

The ProSavana PRAIs stipulate that people must be compensated for loss of forest resources resulting from forest clearance (ProSavana interim report). However, this raises the question of how to set a value on the services provided by the forest and quantify the appropriate compensation, and what form the compensation should take (monetary or access to other resources of equivalent value). Furthermore, the issue of implementation remains. Mozambique has well-developed regulations to benefit local communities, but, as discussed in Section 5.2, there exists a large gap between practice and paper. The level of protection that regulations for compensation offer to local communities will depend entirely on the government's ability to enforce these regulations. Expansion of roads and easier access to previously remote areas will likely increase economic activity in these areas; although this may be desirable for development, it does pose a threat to forests.

Two of the QIPs outlined in the Master Plan aim to avoid the unsustainable depletion of forests: establishment of a Forests Initiative Fund (QIP 5) and strengthening enforcement of monitoring and environmental regulations (QIP 3).

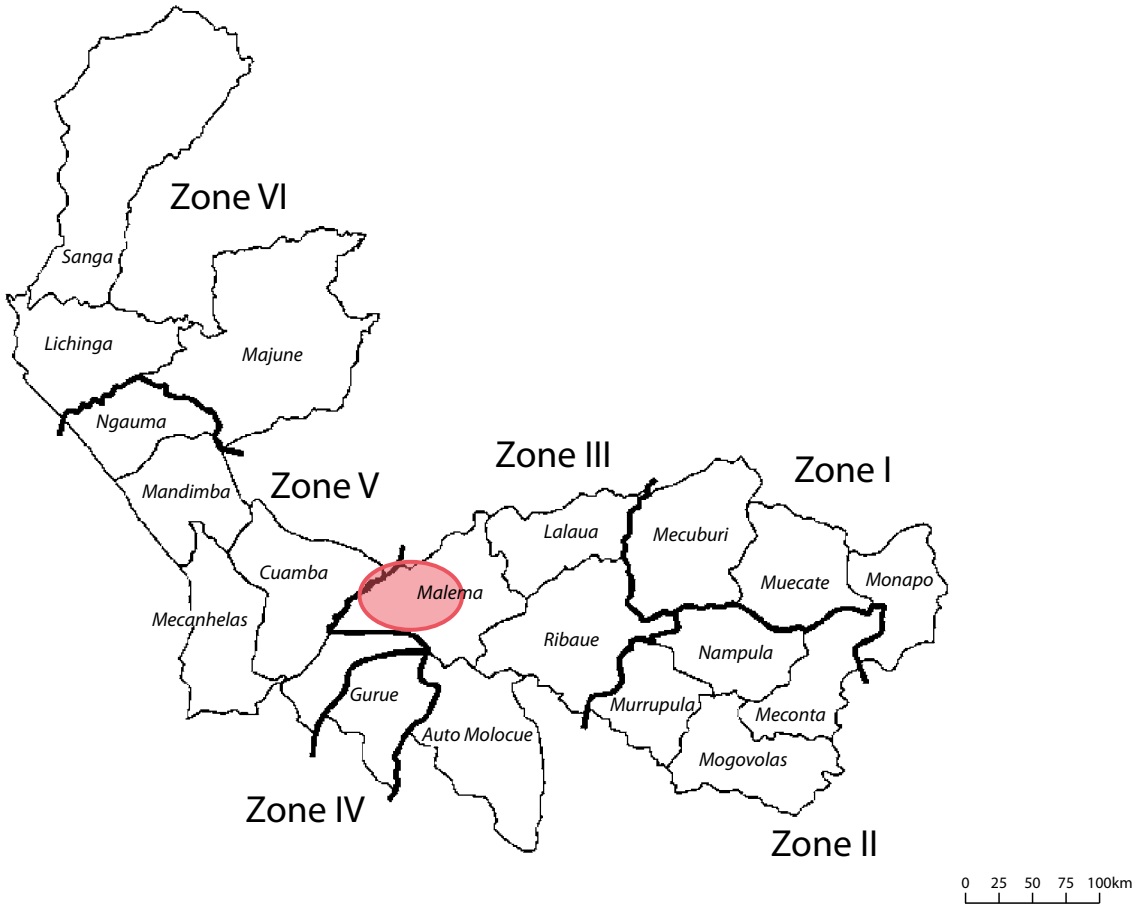


**Figure 7. The approximate QIP 26 project area.**
**QIP 28 will be implemented in the district of Cuamba (zone V). It entails the establishment of an agricultural economic zone over an estimated 500 ha. The consultation phase of the project will start in 2014, with the exact location to be determined in 2015.**
Source: ProSavana-PD report 2

The aim of the Forests Initiative Fund project is to raise funds through activities that generate negative impacts on forests and channel these to establish public and small-scale private nurseries. In contrast to other companies operating timber plantations, which supply industrial demand, these nurseries would serve the local market for biomass (charcoal and fuelwood consumption). The view is that engaging local communities in reforestation will relieve pressures on native forests to provide these services, as well as generating alternative sources of incomes and consumption for people. The fund is also earmarked for use in developing other forest activities, such as the creation of ecological corridors and training in forest management and sustainable exploitation of forests. The project will initially run in Gurue, where biomass supply is low and environmental vulnerability is high, according to one ProSavana consultant, but ultimately it will be applied throughout the ProSavana area. The project will involve collaboration with NGOs with technical expertise in the area.

QIP 3 aims to strengthen the capacity of MICOA (Ministry for Coordination of Environmental Affairs) through budget support, procurement of equipment, technical training and certification of environmental auditors. In addition, the project aims to disseminate information and increase transparency by establishing a publicly accessible online database containing investment project documents, EIA reports and supervision reports; it will also involve activities to raise local communities' awareness of PRAIs and their land rights (ProSavana-PD report 2).

ProSavana is likely to have both positive and negative impacts on the forests surrounding the project areas. Some forest clearance linked to priority QIPs seems inevitable. At the same time, ProSavana also proposes projects designed to mitigate deforestation by creating alternative sources of wood and fuel and strengthening environmental monitoring and enforcement of regulations. As details of the projects and exact locations are yet to be determined, it is not possible to quantify the impact at this stage, making an overall evaluation difficult.

## 4.6 Perspectives of civil society organizations

As little detailed information on ProSavana had been published at the time of the study, civil society members, namely farmers associations and socio-environmental NGOs, lacked information on what ProSavana is and how it will affect local communities. A majority of the civil society organizations interviewed were skeptical about ProSavana at best, and opposed to the program at worst. A lack of trust as to how benevolent the program will be to local farmers is generally evident.

All NGOs and farmers associations interviewed described the lack of information about the program as a great concern. With limited information available, farmers associations have looked to PROCEDER for answers on how ProSavana may play out. As ProSavana took the slogan of "exporting the Brazilian experience", the assumption has been that ProSavana will resemble PROCEDER. From the civil society platform meetings in Nampula and interviews with community members, it has become clear that much of the information and perceptions held by civil society in Nampula stem from interaction with a Brazilian NGO that has been campaigning against PROCEDER in the Cerrado. As a result, the prevailing perception is that ProSavana will bring in Brazilian farmers to establish large mechanized farms.

This belief combined with past failure to uphold farmers' land rights has diminished any confidence that farmers will be fairly compensated in the case of resettlement. As a result, UNAC published a letter in October 2012 stating its opposition to the program.

In March 2013, a series of open meetings with civil society were held to disseminate information and to answer questions about ProSavana. The meetings were welcomed by those civil society members interviewed, but concerns about details of the program remained. Although ProSavana was generally viewed more positively after these meetings, some larger associations and organizations are hesitant to accept the validity of the information given to them by the government, maintaining the belief that Brazilian farmers will grab large tracts of land from Mozambican farmers and that the model used will be large-scale farming as in the Cerrado.

Other organizations interviewed stated that they wanted to have an active role in the program and did not feel that they and their resources had been appropriately included in the process. They argued that with their local expertise they could offer useful assistance and advice for the agricultural development of the Nacala Corridor and play an important role in ensuring that benefits accrue to local communities. Furthermore, they criticized the information meetings for the short advance notice, which prevented some interested parties from attending.

However, other NGOs working on issues related to ProSavana, such as those promoting soybeans as a commercial crop and DUAT registrations for smallholder farmers, hold a more positive view of ProSavana. They stated that they were looking forward to potential future collaboration but that they did not yet possess enough information on what the program would entail.

## 4.7 Rumors of land grabbing under ProSavana

Three sources stated that they had heard of instances where communities had already been requested to resettle because activities under ProSavana, but were unable to name these communities or their locations with any certainty. Two communities were named as possibly being subject to ProSavana resettlement: Muazia community in Nampula District and Nacoma community in Meconta District. For logistical reasons, only the community in Muazia was visited.

When asked, the farmers in Muazia said that they had not been asked to leave their land or resettle. In addition, the ProSavana draft project documents discourage large land investments in Meconta and Nampula.

The farmers learned of ProSavana when they attended a seminar run by a Brazilian NGO, which provided information on the Cerrado model and warned them that they are at risk of losing their land. The farmers reiterated that they were unclear what ProSavana is about and that they had not received any official information from the government. They expressed dissatisfaction that they had not been consulted about the program, especially as they know ProSavana will be implemented in the future.

Communication on ProSavana is a challenge, given the variety of languages spoken along the corridor, the lack of proficiency in Portuguese and the high illiteracy rates. According to a government official working on ProSavana, disseminating information on the program is a time-consuming task because they must visit each community to reach farmers. Dissemination started in early 2012, but the frequency was low until late 2012, when the frequency of these meetings increased. The leaked project documents reveal that the communication work was impeded by a lack of funds, but was reprioritized toward the end of 2012; this shift is likely a result of increased pressure from civil society for more information on ProSavana.

# 5. Conclusion

The ProSavana program attempts to transform the agricultural sector along the Nacala Corridor by promoting collaboration between small and medium-sized farmers and investors. It operates on the principle that the question is not *whether* to make investments in the agricultural sector, but rather *how* such investments should be made.

In contrast to widespread beliefs, ProSavana is not a replica of PROCEDER. In recognition of the heterogeneity of the region, various zonal strategies and management models have been developed to suit the local conditions. Context-sensitive strategies have been drawn up based on research of the region to coordinate public and private investments and build full value chains.

Judging by interviews with ProSavana representatives and project documents, it is clear that the program is closely aligned with the priorities of PEDSA and CAADP, and that small- to medium-scale farmers are targeted as beneficiaries in most of the projects, while allowing for investors to make a profit. However, as with any wide transformation, even if the impact of the program is positive overall, it is almost certain that some spheres will be adversely affected and will have to make compromises if change is to take place.

Given the current state of declining yields, stagnating poverty levels and increasing population pressures on land, preserving the status quo would represent a failure to appreciate the challenges and constraints that the farmers in the region struggle to overcome. The question then becomes: "How can adverse impacts be minimized and those who incur losses be compensated?"

As the program is still in its initial stages, it is not yet possible to measure the potential adverse impacts. The ProSavana project documents and interviews with representatives indicate that the issues will be addressed through the development of PRAIs (Principles for Responsible Agricultural Investments), although as these PRAIs have not been finalized, it is difficult to evaluate their effectiveness. As many cases of investment in the past paid only lip service to regulations, serious questions arise as to how the PRAIs and Mozambican laws can be made effective and enforced.

The ProSavana program suggests that an autonomous third-party body be established to check that agreements between investors and communities are honored and that land acquisition processes comply with laws and best practice. The establishment of such a body could constitute a QIP in itself, with the aim of mitigating the risks of conflicts, losses and exploitation of vulnerable stakeholders. At the same time, mechanisms for quantifying losses incurred by local communities in cases where investments restrict their access to land and/or forests need to be made more concrete.

Although most projects and initiatives under ProSavana appear to target small- to medium-scale farmers as beneficiaries and large investments will take place within agro-processing and through the promotion of contract farming, it is also clear that communities will increasingly have to engage with investors; past experiences of the relationships between investors and communities indicate that investments may put farmers at risk. Further safeguards to guarantee smallholders' land rights in relation to investors are necessary.

The idea of establishing an autonomous body as outlined in the ProSavana-PD draft report to assist and monitor the investment processes and its impact on local communities should be explored further and concrete suggestions for its establishment should be made. The establishment of this body could form an important part of the ProSavana strategy and projects and would offer a platform for local civil society organizations to provide their expertise. The draft ProSavana-PD plan does not contain any concrete suggestions for creating a mechanism to determine the level of compensation and to set the value of the informal services provided to local communities by surrounding lands, rivers and forests. Establishing such measures or mechanisms is undoubtedly a challenging task, but it is important to ensure a fair transformation process. More developed and concrete guidelines to assist stakeholders in the negotiation process would be welcome.

Further attention should be devoted to the capacity and structure of community consultations, such as training facilitators who can make sure that consultations are more inclusive and that all affected farmers receive the necessary information. Well-trained facilitators would be of benefit to investors as well, as they could assist investors in identifying opportunities for sustained good relations with surrounding communities. Training of facilitators who can arrange effective community consultations could be included in the ProSavana program as a separate QIP.

It is clear that ProSavana does acknowledge the various socio-environmental risks associated with its projects. Nevertheless, some members of civil society are questioning whether such risks are receiving enough appropriate attention and priority at this stage, given the past failure of "responsible investment principles" to ensure that negotiations between smallholders and incoming investors are fair and the low capacity of Mozambican land law to protect local communities' rights.

As ProSavana is a top-down initiative, priority should be given to communication, access to information by (and from) civil society groups, and potential avenues for collaboration. The failure to implement an effective communication strategy has led to the alienation of some local organizations that could serve as useful partners to the ProSavana program. ProSavana project documents state the intention to collaborate with organizations such as UNAC, but in the current environment, it is unclear how such partnerships will be built. Relationships could be repaired by developing a stronger platform for inclusion and information sharing between provincial governments, donors and civil society organizations in the area.

In contrast to media reports, ProSavana is not a replica of Brazil's PROCEDER with a primary focus on large-scale land investments. Rather, it is an ambitious program that aims to develop agricultural value chains along the Nacala Corridor by focusing on commercializing small- to medium-scale farmers and investing in agro-processing. Whether or not it will manage to live up to its aspirations remains to be seen.

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This study forms part of a greater project, New South–South Development Trends and African Forest, carried out in Gabon, Mozambique and Cameroon. In Mozambique, the project focused on the Brazilian–Japanese–Mozambican trilateral program ProSavana. At the time the study began, there was little information or previous work on the topic. This paper should therefore be treated as a scoping study. During the course of this scoping study, only a few papers based on field research were published, and the initial findings of this study are largely in line with this research. This paper supplements the existing literature by adding depth from field interviews in Nampula and Zambezia as well as an examination of the draft ProSavana reports, which became available in May 2013.

This paper finds large misconceptions about what the ProSavana program is and what agrarian models will be implemented under the program. The ProSavana program team's inadequacy in effectively communicating the program's mission, methods and content has led civil society to look to PROCEDER for clues as to how ProSavana will play out in Mozambique. However, the findings from field visits, interviews with a range of stakeholders and a review of ProSavana project documents reported in this paper are that ProSavana will not be a replica of PROCEDER and the strategies proposed do align well with Mozambique's agrarian strategy, known as PEDSA, and by extension the Comprehensive African Agriculture Development Programme (CAADP). ProSavana must therefore be evaluated on its own merit.

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