CHALLENGES FACED BY SMALLHOLDER FARMERS IN A FORMER CONFLICT AREA IN COLOMBIA: THE CASE OF MONTES DE MARÍA

Retos de Pequeños Productores en Zona de Postconflicto en Colombia: El Caso de los Montes de María

Sofía Lissbrant
Observatorio del Caribe Colombiano

Paula J.P. Espitia
Universidad del Atlántico

Andrés Mendoza
Observatorio del Caribe Colombiano

Sofía Lissbrant
PhD Agronomy. Rural Development and Food Security Research Division, Observatorio del Caribe Colombiano (Ocaribe), Getsemani, Calle del Guerrero #29-02, Cartagena de Indias, Colombia.
sofia.lissbrant@gmail.com

Paula J.P. Espitia
perez.espitia@gmail.com

Andrés Mendoza
acmendoza097@gmail.com

Funding
This study was performed within the project ‘Asistencia técnica a 15 municipios y 2 departamentos de la región de Montes de María para la formulación de programas de inversión para el desarrollo rural’ under the Land and Rural Development Program by the United States Agency for International Development – USAID, through the subcontract signed between this program and the Observatorio del Caribe Colombiano.
Abstract

This article aimed to identify challenges faced by smallholder farmers in Montes de María, a former conflict area and agricultural sub-region in the Caribbean region of Colombia. Fieldwork (September through December 2014) involved 49 workshops with 49 farming associations from the region. Using participatory rural appraisal, difficulties related to the potential execution of productive projects were identified. The main concerns of farmers were related to the productivity and/or profitability of their projects, the lack of access to technical assistance, credits and markets, and deficiency in basic capital available to the farmers. Despite numerous initiatives in Montes de María, smallholder farmers continue to suffer from poverty and cannot easily support their families through agricultural activities. The main obstacles identified were the need for improved technical assistance, access to credit for investment, and support in the commercialization of agricultural products.

Keywords: Smallholder farmers; rural development; former conflict area; peace; poverty

Resumen

Esta investigación buscó identificar retos enfrentados por pequeños productores en Montes de María, área de postconflicto y producción agrícola en la región Caribe de Colombia. El trabajo de campo (septiembre a diciembre, 2014) incluyó 49 talleres con 49 organizaciones campesinas de la región. Fueron identificadas dificultades relacionadas con la ejecución de proyectos productivos usando el método de evaluación rural participativa. Las principales preocupaciones incluyeron la productividad y/o rentabilidad de los proyectos, la falta de asistencia técnica, créditos y mercados, y la deficiencia en capital básico accesible a los campesinos. A pesar de numerosas iniciativas en los Montes de María, los pequeños productores siguen en pobreza y con dificultad de mantener a sus familias mediante actividades productivas. Los principales retos que deben ser enfrentados fueron mejoras en asistencia técnica, acceso a créditos para inversiones y apoyo para comercializar productos agrícolas.

Palabras clave: Pequeños productores; desarrollo rural; área de postconflicto; paz; pobreza
INTRODUCTION

Montes de María is an agricultural sub-region consisting of 15 municipalities belonging to the departments of Bolívar and Sucre, in the Caribbean region of Colombia (Bolívar: María la Baja, San Juan Nepomuceno, El Guamo, San Jacinto, Carmen de Bolívar, Zambrano, and Córdoba; Sucre: San Onofre, Los Palmitos, Morroa, Chalán, Colosó, Ovejas, San Antonio de Palmito, and Toluviejo), with an extension of 6,466km². In 2007, 12.5 per cent of the land in Montes de María was used for agriculture, 54.2 per cent for cattle, and 33.2 per cent had other uses (Baribbi and Spijkers, 2011). The agricultural production has historically been dedicated mainly to food production such as maize, cassava, yam, and avocado (Baribbi and Spijkers, 2011), although palm oil has grown rapidly during recent years, increasing from 900 ha in 2001 to 9,702 ha in 2012 (Aguilera Díaz, 2013). Also, there is local tradition in the cultivation of cacao, tobacco, fruits, among other crops.

The projected population in Montes de María for 2017 was 349,944 persons, whereof 218,284 were from Bolívar and 131,660 from Sucre (DANE, 2011). The region is highly rural, with an estimated 37.6 per cent of the population living in rural areas in 2017, compared to 23.3 per cent on a national level. However, the urbanization process has been rapid in the past 15 years, with the urban population increasing by 8.9 percentage points in Montes de María compared to 3.2 percentage points in the country as a whole. The population growth was much lower in Montes de María between 2002 and 2017 (3.2 per cent) compared to the national estimated growth (19.3 per cent) and the absolute number of rural population decreased during these years by 16.4 per cent. Colombia had by the end of 2015 the second largest population of internal refugees in the world with 6,270,000 persons displaced from their homes (IDMC, 2017), many of them from Montes de María. This accounts for 15.4 per cent of the displaced population in the world and

---

1 This data is based on the last demographic census performed in Colombia in 2005 and the data adjusted in 2011
13.0 per cent of the total population of the country. Displacement results in vulnerability for the population and in 2014, 63 per cent lived under the poverty line and 33 per cent in extreme poverty (NRC and IDMC, 2015).

Montes de María suffers from poverty and inequality. A collection of factors contributes to the lack of human rights in Montes de María, including lack of access to land for food production, lack of employment, and institutional negligence in providing a solution to conflicts originating from land distribution (Hernández Mercado, 2010). In 2015, 39.3 per cent of the population in the department of Bolívar was considered to be living in poverty and 8.3 per cent lived in extreme poverty. In Sucre, 44.7 per cent of the population were living in poverty and 9.4 per cent lived in extreme poverty (DANE, 2016). According to DANE (2012), 46.6 per cent of the population in Bolívar and 54.86 per cent of the population in Sucre lives under conditions of unsatisfied basic needs, with the situation being more severe in the countryside than in the towns. The GINI coefficient was 0.489 in Bolívar and 0.470 in Sucre in 2015 (DANE, 2016). In 2010, 31.6 per cent of the population in Bolívar and 33.3 per cent of that in Sucre reported that they had experienced food insecurity (ICBF, 2010). Although some of the above-mentioned data does not exist for each municipality but only for each department, there is no reason to believe that it would be much different in Montes de María.

Although the purpose of this study was not to analyze the conflicted history of Montes de María, a historical context is presented in order to understand the current needs of the inhabitants.

---

2 Data based on the 2005 census and updated in 2012
3 Gini coefficient is a measurement of income distribution of population; ranging from 0 to 1 indicates the gap between the rich and the poor (0 represents perfect equality and 1 represents perfect inequality). Source: Gini Index Definition Investopedia http://www.investopedia.com/terms/g/ginientaspixzz4WV6a12FX
HISTORICAL CONTEXT

Montes de María during the period of 1980-2000

Montes de María has a long history of conflict and violence, to a great degree as a result of land contention, not only during the last decades of conflict but dating back to the Civil War between 1940 and 1960 (Grajales, 2011) with massive displacement of the rural population as a result. Conflicts have been generated in the area between the large land owners, primarily dedicated to the cattle industry, and the small farmers and indigenous groups, because of the great concentration of land. The government estimates that in Colombia, more than four million hectares of land have been taken from small farmers due to land grabbing (Grajales, 2011). Montes de María has during the past decades been a key area for food production with strong sense of associativism, with the first farming organizations being formed in the beginning of the twentieth century. In the seventies, one of the strongest social organizations that the country has had, the Asociación Nacional de Usuarios Campesinos (ANUC), of Sincelejo was formed, with a process of decentralization of land, accompanied by technical assistance and market strategies as a result. However, the arrival of commercial fertilizers and pesticides and improved seeds caused many farmers to go into debt for changing the local production methods for one that required the continued purchase of chemical products, resulting in many families selling their land (ASDI and PNUD, 2010). This conflict was fueled by the arrival of Guerrilla groups in the beginning of the 1980’s. These groups (Fuerzas Armadas Revolucionarias de Colombia -FARC-, Ejército Revolucionario del Pueblo -ERP-, and Ejército de Liberación Nacional -ELN-) had as their primary income source the theft of cattle and kidnapping of cattle farmers (Machado and Meertens, 2010). They were also responsible for sabotage, armed encounters, illegal road blocks, harassment, attacks on infrastructure, ambush, and assassinations (De los Ríos et al., 2012; Machado and Meertens, 2010). FARC was opposed to farming movements claiming that they were too moderate and close to the
government. Consequently, they assassinated local leaders that did not agree with their use of violence, extorted and kidnapped farm owners, and burnt down farms that refused to pay ‘revolutionary taxes’ (Grajales, 2011).

Paramilitary groups were formed in order to protect large land owners from the harassment of the guerrilla (Gomez et al., 2015; Grajales, 2011) and from landless farmers, appearing in Montes de María in the mid 1990’s (Machado and Meertens, 2010). Paramilitary groups are even accused of taking land that had previously been redistributed to small farmers and returning them to the large land owners (ASDI and PNUD, 2010). Forced displacement has led to land grabbing in many parts of the country, with paramilitary activities serving both as a consequence of this phenomenon, as well as a motive (Grajales, 2013). These paramilitary groups were initially legalized firms providing ‘security services’ and were seen as a way to bring paramilitary groups under public regulation, known as ‘Convivir’ acronym for Servicios Especiales de Vigilancia y Seguridad Privada (Grajales, 2011). In the nineties, around the same time that the paramilitary groups started their activities in the region, drug traffickers also appeared in Montes de María. The drug traffickers had an interest in the area for its strategic location with the main road ‘la Troncal de Occidente’ crossing it on its way from Antioquia to the coast. For this reason, the drug related groups sought to control the area, buying property along the transportation zone. They also invested in valuable land, especially around Golfo de Morrosquillo, a strategic area for shipping drugs to the north (Grajales, 2011). Money from drug trafficking supported paramilitary groups and their activity of getting small farmers to leave their land to the benefit of large land owners and financing electoral campaigns (ASDI and PNUD, 2010).

All this led to escalated violence and between 1999 and 2002 Montes de María suffered 18 massacres causing massive displacement of the population to urban areas (Machado and Meertens, 2010), 1,011 homicides between 2002 and 2011, and 102 kidnapings between 2003 and 2010 (Observatorio de cultura política,
paz, convivencia y desarrollo de los Montes de María, 2010; 2011; 2012). Caught in the middle were the small farmers that risked their lives cultivating land, or, protecting their families. They were forced to abandon or sell their land for prices far below its true worth and migrate to the cities. It is estimated that 81,656 ha were abandoned in Montes de María between 1997 and 2007, most of these in Carmen de Bolívar (De los Ríos et al., 2012).

Montes de María during the period of 2000 – 2015

Substantial changes were made in the strategy of confronting the violent situation in Montes de María with the inauguration of the government of Álvaro Uribe Velez, which identified Montes de María as one of 14 zones of territorial consolidation in the country, focusing its actions in 4 of the 15 municipalities: Carmen de Bolívar, San Jacinto, Ovejas, and San Onofre (De los Ríos et al., 2012). This process was supported by the government of the United States under Plan Colombia (Gómez et al., 2015). The army increased their activity considerably in the region between 2003 and 2005, coinciding with the creation of the ‘Comando Conjunto del Caribe de las Fuerzas Militares’. The confrontations between actors peaked in 2005 and 2006 with, on average, more than 50 combats per year. These decreased substantially in the coming years because of the demobilization of the paramilitaries and the death of the FARC leader in the region (De los Ríos et al., 2012). It is also important to mention the existence of peacemakers and organizations that during the years of conflicts and violence worked to solve local problems and support the population that despite the violent situation chose to stay in the region. Protests and peace marches were performed on many occasions demonstrating the population’s rejection of violence. Numerous women’s organizations were formed in the region and theses groups played an essential part in the recovery process of the area, especially in promoting associativism in general (Machado and Meertens, 2010). Organizations for the victims of violence and organizations for human rights, working for the reparation of victims are also present in the area. However, the process of combating illegal groups in Montes de María has led to the
appearance of external actors, such as investors from the interior of the country, who have taken advantage of the vulnerable situation of the population, buying land from small farmers. This has resulted in massive land purchases, especially during the years 2006 and 2009. Although the sales have been voluntary, these businesses can be said to have taken advantage of the vulnerable situation of the small farmers that have given up their land for a very low price to look for more profitable ways of living (Machado and Meertens, 2010). Also, in the aftermaths of the decades of extreme violence in Montes de María, new groups, known as ‘bandas criminales’ or ‘neo paramilitaries’ have formed, due to a continued interest in illegal activities such as drug trade and extortion (De los Rios et al., 2012; Observatorio de cultura política, paz, convivencia y desarrollo de los Montes de María, 2012). These groups have been responsible for controlling territories and posing threats to the population as well as political leaders in the area. During these years of conflicts, the national government has led initiatives to modernize the rural sector with the creation of policies and institutions. The main purpose of these new policies and institutions is to allow the development of productive projects, increase the economic productivity of farmers and in this way, reduce poverty (Machado and Meertens, 2010). However, according to Machado and Meertens (2010), two problems were never resolved: the poor farmers never had enough land to perform their projects and the government never consolidated a policy of commercialization to guarantee the profitability of the implemented projects. Recently, a greater focus has been put on the importance of the agricultural sector under President Santos’s government. In this context, actions to confront the problems related to rural development have been implemented (Baribbi and Spijkers, 2011). The most recent is the ‘Pacto Agrario’ initiative, in which 16 productive projects from Montes de María (14 from Sucre and 2 from Bolívar) were evaluated as viable (Ministerio de Agricultura, 2016). However, by the time this article was written, no official data on the progress of the implementation of the projects were available, and unofficial reports claim that the implementation has been ‘minimal’ (CONtextoganadero, 2016).
Agricultural development in situations of Violence, Conflict and Post-conflict

Although violence and conflict are two closely related issues, these are not equivalent terms, since violence happens in situations in which the contesting group does not have total control over the population, so violent actions are required to allow them to impose their social order in the selected community. On the other hand, when the contesting group has achieved total control over the population, violent tactics are less needed. In this situation, violence is not exerted, however there is conflict (Arias et al 2018). However, in both situations the population faces conflict resulting in anxiety, distrust, concern, confusion and fear within the community (Arias et al 2018).

Violence evidenced as aggression, such as killing, kidnapping, and maiming, among others, against the population by the contesting groups results in degradation and devaluation of human capital, affecting household income, food production and consumption; thus, both issues affect economic development of societies (Arias et al 2018). Moreover, Bruck et al 2018 has pointed out that both violence and/or conflict affect the food security of the population since these issues affect food availability and consumption, revealed by diminished food production as well as food stocks, and increased food prices.

Thus, households are food secure in these situations when they have “the ability to acquire the food needed by its members to be food secure” (Pinstrup-Andersen, 2009). In addition, agricultural production can be identified at the intersection of conflict and food security. Previous studies have focused on the direct effects of conflict on agricultural development, but according to Arias, Ibañez and Zambrano (2014), conflict affects agricultural production through different channels and is often underestimated during post-conflict scenarios. According to the authors, farmers tend to learn to live and work in conflict situations, making choices that will reduce the risk of loss, but may not use land to its full potential. This mindset may be difficult to change in a post-conflict
Challenges Faced by Smallholder Farmers in a Former Conflict Area in Colombia: The Case of Montes de María

era unless interventions focus on reducing uncertainty, allowing farmers to avoid sub-optimal decisions (Arias, Ibañez and Zambra-no, 2014). In this regard, rural development is an under-researched issue highly relevant for development cooperation (Kurtenbach and Seifert, 2010). Similarly, Arias et al 2018 has indicated that agricultural activities which are characterized as being less lucrative are implemented by the population facing conflict or violence in order to ensure necessary food or to be easily transferable to other locations in case a migration is required for subsistence.

In this regard, Kurtenbach and Seifert (2010) emphasize the importance of including the needs and participation of women and youth in peace processes and not only seeing them as victims but also as autonomous actors.

Numerous analyses have been made regarding the effect of the conflict situation in Montes de María in the Caribbean region of Colombia. However, the results are mainly available in the form of research reports and limited scientific articles have been published. Therefore, this study aimed to identify the main obstacles facing today’s smallholder farmer associations in the context of a former conflict zone.

METHODOLOGY

Location and Research Approach

A qualitative research study was performed in the 15 municipalities that constitute the Montes de María area (departments of Bolívar and Sucre). The research was conducted between September and December 2014.

Workshop Participants

A total of 1,168 persons participated in the workshops, most of them being farmers (931); however, there were also small business owners, community leaders and representatives from the municipal authorities.
Identification of Smallholder Farmers’ Needs

The identification of smallholder farmers’ needs was done thorough the development of workshops. These workshops were developed following the method of “Approach of Participatory Rural Appraisal” (Chambers, 1994). The method of “Approach of Participatory Rural Appraisal” was conducted with focus group, with the main aim to reflect regarding potential rural productive projects among participants. This method allowed identifying difficulties and challenges related to the potential execution of productive projects and reviewed their objectives in a participatory manner which stimulated the evaluation of alternative solutions which might strengthen the projects.

The workshops aimed to collect information needed for the project development and formation, as well as in a participatory manner review the main problems, the objectives of the proposed project, evaluate alternative solutions and ways of strengthening the project. An open discussion was held regarding the main limitations and problems faced by farmers. The workshops were led by a total of nine project formulators, accompanied by an assistant, and in most of the workshops, a project coordinator. The data was later processed and analyzed by the project formulators, as well as reviewed by the project coordinators (one for the projects in Bolívar and one for the projects in Sucre).

RESULTS AND DISCUSSION

This research was carried out considering the conflict situation of Montes de María, the needs of the small farmers and their possibilities of change and development when acting together as farming associations. The results found are presented below.

Characterization of Participants

Forty-five per cent of participants indicated that they were victims of the armed conflict in the region, 26 per cent were women, 5 per cent were Afro-Americans and 8 per cent were of indigenous
descent. Seventy-six per cent of the participants were adults (18 to 60 years), and with the exception of three minors (younger than 18 years), the rest were seniors (older than 60 years).

**Identified Smallholder Farmers’ Needs**

The project topics developed by the farming associations are presented in Table 1. The first category, machinery, was primarily for cattle production, however, a few machines were for agricultural purposes. The workshops revealed that the main concern of the farming associations was limits in productivity and/or profitability of their projects, lack of access to technical assistance and deficiency in basic capital available to the farmers and their families. Also, the need for improvement or maintenance of production systems, lack of access to the market and to production related education raised concern in participants from different associations. In addition, lack of access to credits was identified as a limiting factor, and several associations indicated that their production was restricted by deficient access to machinery, as well as the need for improved access to agricultural infrastructure. To a lesser degree, concerns were expressed regarding lack of associativity, lack of added value to the product, limits in access to land and agricultural inputs, deficient road infrastructure and the need for irrigation systems (Figure 1).
**Table 1. Number of Associations Dedicated to Each Project Type.**

<table>
<thead>
<tr>
<th>Project type</th>
<th>Number of associations</th>
<th>Bolivar</th>
<th>Sucre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machinery</td>
<td></td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Tilapia</td>
<td></td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Sesame</td>
<td></td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Cattle</td>
<td></td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Yam</td>
<td></td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Avocado</td>
<td></td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Plantain</td>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Pork</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Honey</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Pepper</td>
<td></td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Cacao</td>
<td></td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Egg</td>
<td></td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Papaya</td>
<td></td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Fishery</td>
<td></td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Pineapple</td>
<td></td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Cassava</td>
<td></td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>23</strong></td>
<td><strong>26</strong></td>
</tr>
</tbody>
</table>

**Figure 1.** Main Limitations and Difficulties Addressed by the Farmer Associations Participating in the Study in Montes de María.
Challenges Faced by Smallholder Farmers in a Former Conflict Area in Colombia: The Case of Montes de María

Categorizing and exploring the underlying causes of these obstacles in greater depth it could be seen that most of the associations indicated that their production systems are not as efficient as they could be. For example, some of the concerns mentioned were that there is a lack of pork production models that generate sufficient income and that cattle production is deficient due to lack of high quality pastures (Table 2). Associations, such as ‘Coapomiel’ mentioned that profits do not even reach the level of minimum wage and others such as ‘Asociación de Campesinos del Tangal’ indicated that the low incomes are not sufficient to allow for reinvestments in the production system. As indicated by several associations, there is need for improvement and maintenance of the production systems, such as improved management of soils, as well as management of pests and diseases in the permanent crops. Several of the associations indicated that there is little technological advancement in the countryside and certain resistance to change (Table 3). Lack of knowledge on how to implement technological advancement in the field was a common concern in the workshops, as well as lack of access to training and education. One of the main concerns expressed in the workshops was the lack of continuous programs of technical and technological assistance offered to the farmers. For many farming associations, limited access to credits hinders investment possibilities and therefore development of the production business (Table 4). Some concerns expressed were lack of knowledge on availability of financial services for agro-businesses, excessive bureaucratic processes, high capital costs, and shortage of guarantees to manage credits. In addition, there is a need to improve the farmers’ access to the market. For example, it was expressed that there is a high level of intermediation in the commercialization of products, resulting in low profitability and that there is lack of commercial agreements with possible purchasers (Table 4). Lack of knowledge of market needs and lack of ability to meet with demand were other issues identified. Various associations expressed deficiencies in adding value to products such as eviscerating and filleting of fish, processing of meat and milk as well as cocoa and traditional products such as yam and cassava. Improved associativity was
identified by several farming associations as a way of strengthening the business of farmers and commercialization of the products. Five associations indicated that restricted access to land was limiting their production (Table 5). Some simply indicated that properties were too small or that there was limited access to new land while others identified lack of capital resources as the limiting factor. Lack of access of machinery was an important concern for many associations, and 15 of the 49 formulated projects were directly soliciting resources to form machine parks. These were principally destined to improve soils for cultivation of pastures used in cattle production, but also for agricultural purposes. Another example was a concern over a lack of boats that would allow for higher transportation capacity and covering greater areas for fishing activities. Lack of infrastructure, such as storage and distribution centers to improve harvest and post-harvest management conditions was identified as a limiting factor by close to a third of the associations, amongst them for projects in cocoa, papaya, egg, fishery, and honey. Some associations expressed concern about the lack of access to inputs for agricultural and livestock purposes. In two cases, this was related to the limited production of raw material to be used in production plants, restricting productivity of the agro-industrial component of the associations. In two different associations, concern was related to the low availability and high costs of supplemental feed for cattle. One association indicated that they had a need to install an irrigation system to optimize the production of papaya. The lack, or poor condition, of road infrastructure was identified by two associations as a limiting factor for commercialization of the products (Table 6). It was indicated that the state of the roads became worse during the rainy season and that the harvest needed to be transported by animal or trailers that generally are in very bad condition. Many farmers in Montes de María live in poverty, and 82 per cent of the associations indicated that they lack basic capital for their families. Low income, poverty, illiteracy, food insecurity, unemployment, limited access to education, healthcare and decent housing were indicated as deficiencies in the region.
### Table 2. Identified Problems Related to Productivity and/or Profitability and the Need for Improvement of the Production Systems in Farmer Associations in Montes de María

<table>
<thead>
<tr>
<th>topic</th>
<th>Associations (%)</th>
<th>Identified problems</th>
</tr>
</thead>
</table>
| Productivity and/or profitability | 93.9 | • Low productivity in apiculture in the municipality. The associated producers do not manage to generate even minimum salary. (Coapomiel, Carmen de Bolívar, Honey)  
• Deficient cattle production because of the lack of pastures with high nutritional quality. (Cooperativa Multiactiva de Productores de Leche de María la Baja - Coolema, María la Baja, Milk)  
• Low productivity and profitability of crops. Deficient agroindustrial processes. The low income does not allow for investments. (Asociación de Campesinos del Tangal, Zambrano, Sesame)  
• Absence of pork production models that generate more profit. Deficient source of income. (Asoagrocoley, Los Palmitos, Pork)  
• The association does not count with productivity registers or production control. Decrease of the incomes expected from the activity. Lack of information regarding production costs, incomes and expenses. (Comunidad Indígena Villa del Carmen, San Antonio de Palmito, Tilapia)  
• Low fishing productivity due to bad management of the aquatic ecosystems. The volumes of captured fish have suffered a continuous decrease during the last years. (Asociación Unidad Productiva Alojamiento Rural Playas de Quiliten - Asoquiliten, San Onofre, Fishery) |
Sofía Lissbrant, Paula J.P. Espitia, Andrés Mendoza

Improvement and/or maintenance of production systems 79.6

- There is a need to do maintenance on the lands used for forage production suitable for cattle consumption, especially due to the need of forage accumulation for consumption during the dry season. (El porvenir de Caño Limpio, Córdoba, Machinery for cattle production)
- There is a need for the government to do maintenance of the wetland (ciénaga). (Asucaroble, El Guamo, Tilapia)
- The organic matter layer of the soil has been degraded and compacted due to the incorrect use of the land. (Comité de Ganaderos de San Jacinto, San Jacinto, Machinery for cattle production)
- There is an urgent need for maintenance of the established plantations due to the death of avocado trees from the phytosanitary problems that are present in most farms. (Asociación de la Vereda Las Lajas, San Jacinto, Avocado)
- Bad management of the plantain cultivation and presence of pests and diseases. (Empresa Comunitaria de Productores Campesinos de la Vereda Altamira, San Jacinto, Plantain)
- The soils are under-utilized and their true potential is not taken into consideration. (Asociación de campesinos Isla Pereira EAT, Zambrano, Machinery for agriculture)
- The nutrients that the animals are removing when eating the pasture are not replaced. Therefore, the pasture disappears and the productive capacity of the soil decreases. (Alcaldía de Chalán, Chalán, Cattle)
### Table 3. Identified Problems Related to Access to Education in Agricultural Processes and to Technical and Technological Assistance in the Farmer Associations in Montes de María

<table>
<thead>
<tr>
<th>Topic</th>
<th>Associations (%)</th>
<th>Identified problems</th>
</tr>
</thead>
</table>
| Education (related to production) | 65.3             | • Deficiencies exist in the generation and management of productive projects. (Asoagrorecor, Córdoba, Sesame)  
• There is little knowledge in the management of pests that require specialized and continuous attention. (Asociación de Campesinos Retornados de Sanahure, Córdoba, Sesame)  
• There is traditionalism and low technical capacity amongst the producers. (El porvenir de Caño Limpio, Córdoba, Machinery for cattle production)  
• Insufficient technological advancement in the production of pork. (Asucaguamo, El Guamo, Pork)  
• The fishermen do not know of other methods than traditional fishery. Lack of knowledge of policies supporting rural development. Resistance to change. (Asociación Productora y Comercializadora de Peces de la Costa, María la Baja, Tilapia)  
• Lack of access to training and preparation. (Asociación de Campesinos del Veranillo, Zambrano, Cattle)  
• Little technological advancement in the country side. (Asociación de Campesinos del Tangal, Zambrano, Sesame)  |
Technical and technological assistance

89.8

- Lack of institutional accompaniment in technical assistance. Necessity of improved technologies in the transformation process of the product. (Aprocam, Carmen de Bolívar, Cocoa)
- necessity of technology transfer to implement an intensive production system as a substitute to traditional fishery. (Asucaroble, El Guamo, Tilapia)
- Limited technical assistance, technology transfer, and genetic improvement. (Asucaguamo, El Guamo, Pork)
- Lack of direct and continuous technical assistance programs. (Asociación de campesinos Isla Pereira EAT, Zambrano, Machinery for agriculture)
- Technical assistance is not offered to small and medium sized producers. Therefore, the farmers do not keep registers on planted areas, production, productivity, or the zoosanitary and phytosanitary state of the animals and crops. (Asociación de Productores Agroecológicos de Chalán - Asochalan, Chalán, Machinery for agriculture)
- There is insufficiency in the technical assistance provided to the small producers regarding the management and mechanization of the soils. (Asociación de Pequeños Productores Agropecuarios de Colosó - Appacol, Colosó, Machinery for agriculture)
- Deficient training of small cattle producers regarding mechanization of soils, establishment, vegetative development and maintenance of pastures, and overgrazing, knowledge that would allow the farmer to increase the productivity. (JAC La Peña, Ovejas, Machinery for cattle production)
### Table 4. Identified Problems Related to Access to Credits, Access to the Market, Addition of Value of the Products and Associativity of the Farmer Associations in Montes de María

<table>
<thead>
<tr>
<th>Topic</th>
<th>Associations (%)</th>
<th>Identified problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to credits</td>
<td>55.1</td>
<td>• The lack of financial resources has caused a decrease in the production and deficient transformation of the product. (Aprocam, Carmen de Bolívar, Cocoa) • Low financial capacity for the establishment of technified cultivations of avocado. (Asociación de la Vereda Las Lajas, San Jacinto, Avocado) • Excessive bureaucratic processes, high capital costs and shortage of guarantees to manage credits. (Asopram, Bolívar, Avocado) • Lack of knowledge of the availability of financing services for agro business in Colombia. Limited access to capital for production. (Various associations, Bolívar, Sesame) • There are few lines of credits that permit the producers to advance in their projects. (Asochinulito, Ovejas, Cattle) • Low assignation of resources for investment in agricultural projects. Limited access to credits. (Corpoatumar, Sucre, Avocado)</td>
</tr>
<tr>
<td>Access to the market</td>
<td>71.4</td>
<td>• High levels of intermediation in the commercialization of the products which brings negative effects on the profit margins. (Asociación de Campesinos Retornados de Sana-hure, Córdoba, Sesame) • The avocado varieties currently grown are not suitable for the specialized markets. Therefore it is necessary to plant new varieties with better technical standards. (Asociación de la Vereda Las Lajas, San Jacinto, Avocado) • Lack of commercial agreements with possible purchasers. Deficient commercialization strategies. Instability in the prices due to disloyal competition and speculation in prices. Increased vulnerability of the producers due to the use of intermediates. (Asoagro, San Juan Nepomuceno, Yam) • Deficiencies in the commercialization processes. Limited access and lack of knowledge of the market. (Asociación de Campesinos del Tangal, Zambrano, Sesame) • Low production diversification with deficient technological development and few assets for production which leads to low competitiveness in the market. (Alcaldía de Chalán, Chalán, Machinery for agriculture and cattle production)</td>
</tr>
<tr>
<td>Topic</td>
<td>Associations (%)</td>
<td>Identified problems</td>
</tr>
<tr>
<td>-------------</td>
<td>------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Added value | 16.3             | • The processes of transformation and addition of value should be encouraged and improved in order to optimize the benefits of the cocoa. (Aprocam, Carmen de Bolívar, Cocoa)  
• The production of meat, milk and its derivates have little added value. (Comité de Ganaderos de San Jacinto, San Jacinto, Machinery for cattle production)  
• No value is added to the product. (Asochinulito, Colosó, Yam)  
• The commercialization and storage of the products should be improved and value should be added. (Asoagrocoley, Los Palmitos, Pork)  
• No value is added in the distribution of the products. (Asociación de Trabajadores El Nido - Asonido, Morroa, Cassava)  
• Technical processes such as eviscerating and filleting is not applied to the fresh fish. (Asociación Unidad Productiva Alojamiento Rural Playas De Quiliten - Asoquiliten, San Onofre, Fishery) |
| Associativity| 26.5             | • The associative system lacks development and needs to be strengthened as a business. (Asosena, María la Baja, Yam)  
• The lack of associativity generates commercialization difficulties. (Asociación Taller para la Construcción de Sueños, San Juan Nepomuceno, Machinery for agriculture)  
• Necessity of integration of the producers to reduce costs by reaching agreements on the prices and product transportation before the commercialization process. (Asopram, Bolívar, Avocado)  
• Individualism leads to loss of opportunities that can be reached collectively. (Comunidad Indígena Villa del Carmen, San Antonio de Palmito, Tilapia)  
• The community is not organized as an association. (Comunidad Villa Patricia, San Antonio de Palmito, Egg) |
Table 5. Identified Problems Related to Access to Land, Machinery, Agricultural Infrastructure, Agro-inputs, and Irrigation Systems of the Farmer Associations in Montes de María

<table>
<thead>
<tr>
<th>Topic</th>
<th>Associations (%)</th>
<th>Identified problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acquisition, entitlement, formalization</td>
<td>10.2</td>
<td>• The access to more land is restricted due to the producers’ lack of capital resources. (Asociación de Campesinos Retornados de Sanahure, Córdoba, Sesame)\n• Limited access to land. (Fundación Alvaro Ortega Madero, El Guamo, Pineapple)\n• Reduced size of the properties. (Cooperativa Multiactiva de Productores de Leche de María la Baja - Coolema, Milk)\n• Little access to new land (Asoagrorecor, Córdoba, Sesame)</td>
</tr>
<tr>
<td>and access to land</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access to machinery</td>
<td>34.7</td>
<td>• Need for specialized machinery for the establishment and use of improved pastures in order to increase the availability of forrage during the dry season. (El porvenir de Caño Limpio, Córdoba, Machinery for cattle production)\n• Lack of machinery for agricultural activities. High costs of machinery in relation to the size of the properties. (Asociación Taller para la Construcción de Sueños, San Juan Nepomuceno, machinery for agriculture)\n• Lack of machinery for preparation of soils used for cultivating. (Asociación de campesinos Isla Pereira EAT, Zambrano, Machinery for agriculture)\n• Lack of necessary technology to produce silage. (Alcaldía de Ovejas, Ovejas, Machinery for cattle production)\n• The type of boats used for traditional fishery considerably limits the area accessible for fishing, the transportation capacity, and the duration of the transportation of the product to a storage and distribution center. (Asociación Unidad Productiva Alojamiento Rural Playas De Quiliten - Asoquiliten, San Onofre, Fishery)</td>
</tr>
<tr>
<td>Topic</td>
<td>Associations (%)</td>
<td>Identified problems</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Infrastructure for agricultural and livestock processes | 32.7             | • The cocoa storage systems should be optimized by the construction of appropriate centers in different municipalities of Montes de María. (Aprocam, Carmen de Bolívar, Cocoa)  
• Lack of infrastructure for the harvest and post-harvest management. (Asocampes, Carmen de Bolívar, Papaya)  
• Lack of structural and business conditions for the development of economic activities in the sales of eggs and breeding of hens. (Comunidad Villa Patria, San Antonio de Palmito, Egg)  
• Lack of access to the appropriate infrastructure and cooling facilities for the proper management of the product. Conservation of the product is expensive and affects the profitability. (Asociación Unidad Productiva Alojamiento Rural Playas De Quiliten - Asoquilet, San Onofre, Fishery)  
• Weak infrastructure for the production and commercialization of honey. (Coagromiel, Sucre, Honey) |
| Access to agricultural and livestock inputs | 10.2             | • The processing plant is not working 100% due to lack of raw material. This explains the low production and income. (Coapomiel, Carmen de Bolívar, Honey)  
• Lack of planning to produce the raw material for the development of the final product. (Mugesco, San Onofre, Plantain for cookie production)  
• Low availability and quality of forages because of the absence of application of new technologies in cattle production. (Comité de Ganaderos de San Jacinto, San Jacinto, Machinery for cattle production)  
• High costs of silage and nutritional components based on maize used in high quality meat and milk production. (Asoproagritol, Tolúviejo, Machinery for silo production for cattle) |
| Irrigation and drainage                    | 2.0              | • Need of installing a permanent drip irrigation system. (Asocampes, Carmen de Bolívar, Papaya)                                                                                                                     |
Table 6. Identified Problems Related to the Access to Road Infrastructure and Basic Capital of the Farmer Associations in Montes de María

<table>
<thead>
<tr>
<th>Topic</th>
<th>Associations (%)</th>
<th>Identified problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road infrastructure</td>
<td>4,1</td>
<td>• The poor condition of the tertiary roads limits the commercialization of agricultural products and during the rainy period the situation gets worse. The crops need to be transported by animal or with trailers that generally are in bad condition. (Asociación de Productores Agroecológicos de Chalán - Asochalán, Chalán, Machinery for agriculture)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The lack of access roads makes the commercialization and mobilization to the town centers difficult which also limits the possibilities of support. (Asociación Unidad Productiva Alojamiento Rural Playas De Quiliten - Asoqui-liten, San Onofre, Fishery)</td>
</tr>
<tr>
<td>Basic capital (healthcare, education, public services, housing, etc)</td>
<td>81,6</td>
<td>• The low incomes make it difficult for the producers to fulfill their basic needs. (Coapomiel, Carmen de Bolívar, Honey)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The majority of the producers are illiterate and some of their family members are as well, with the exception of the children that get education. (Aprocam, Carmen de Bolívar, Cocoa)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• There is poverty, food and nutritional insecurity and unemployment. (Asucaroble, El Guamo, Tilapia)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The population suffers from food insecurity and unsatisfied basic needs as well as increase in the poverty indices. (Asosena, María la Baja, Yam)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• There are families with very limited access to health care, education, recreation and sports due to the low incomes. (Asociación de Campesinos del Tangal, Zambrano, Sesame)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Bad nutrition of the children of the producers. (Comunidad El Jorro, Colosó, Fish production)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• High levels of poverty, deficient access to health care, housing and education. (Asociación para el Desarrollo Integral para las Migraciones en Colombia - AS DE MI, Los Palmitos, Machinery for agriculture)</td>
</tr>
</tbody>
</table>
Results obtained in this study are explained based on statements by Arias et al (2012). In this regard, according to Arias et al (2012), violence and conflict induce changes in agricultural production, causing the population to select seasonal crops as well as an increased use of pasture to ensure household food security, although the percentage of total production is most likely to be reduced in order to reduce risk to the household. Moreover, these decisions are taken during conflict to protect food consumption and ensure food security. One example of this is the case of Mozambique, in which farmers carried out subsistence agricultural activities while minimizing their intervention in the food market, considering these as “suboptimal production decisions”; however, after conflict these suboptimal decisions might continue limiting population’s potential for food production and profitability. In this context, Arias et al (2012) has indicated that “Households living in conflict regions may produce less, earn lower profits, and face higher costs, despite not being direct victims of conflict induced shocks”. A further example of this is again the case of Mozambique, in which population maintained the suboptimal production decisions even three years after the end of the conflict (Bozzoli and Brück 2009).

**Implemented initiatives**

**National support**

In 1997 a meeting was held in Carmen de Bolívar after which the local authorities asked the national government for direct and immediate support to solve problems related to public order, poverty, impunity and corruption. However, it was not until 1999 that the initiative was taken to develop the Integral Development Plan for the region (Promontes, 2003). In 2003, the United Nations Development Programme (UNDP) initialized project ‘Asistencia Preparatoria para la formulación de un Programa de Desarrollo y Paz en los Montes de María’ (PODEC, 2011). As the main problems, the absence of governability, institutional insecurity, impunity and lack of access to justice and exclusion, marginalization and poverty were
identified. Based on this, the National government in collaboration with the UN, local entities and social organizations developed the main lines of actions for the ‘Programa de Desarrollo y Paz en los Montes de María’. The organization ‘Fundación Red de Desarrollo y Paz de los Montes de María’ was founded in 2004 and shortly thereafter ‘el Tercer Laboratorio de Paz’. In 2008 the ‘Centro de Coordinación Regional de los Montes de María’ was implemented to strengthen the governability, reactivate the economy, provide land entitlements and construct infrastructure and social structures (Aguilera Díaz, 2013). In 2011, the Observatorio del Caribe Colombiano on behalf of the Departamento Nacional de Planeación, performed a prospective study of Montes de María (Construcción de la Visión Prospectiva y Estrategia de Desarrollo de los Montes de María) presenting strategies to bring development to the region (Observatorio del Caribe Colombiano, 2011). More specifically for improving the agricultural sector, in 2011 Instituto Colombiano de Desarrollo Rural (INCODER) initiated the process of constitution of two ‘Zonas de Reserva Campesina’. Another initiative has been the ‘Mesa Regional Campesina de los Montes de María’ with the objective of strengthening the farming communities (Aguilera Díaz, 2013). In recent years, Fundación Semana, with the support of the US Agency for International Development (USAID), developed a strategy named ‘Hoja de Ruta Montes de María’ with recommendations on how to bring development to the region (Fundación Semana, 2014). In 2016, a voluntary agreement regarding a ‘Contrato Plan’ for the area of Montes de María was signed between the governors of Bolívar and Sucre, that will bring projects to improve living conditions of the population (Findeter, 2016).

**International support**

International organizations and entities have participated in projects in Montes de María, including USAID, European Union, The United Nations Children’s Fund (UNICEF), United Nations Refugee Agency (UNHCR), The United Nations Population Fund (UNFPA), United Nations World Food Programme (WFP), United Na-


tions Educational, Scientific and Cultural Organization (UNESCO), Switzerland, Spain, Canada, Sweden, Belgium, Italy, China and Japan, to mention some (PODEC, 2011). One important initiative was the UN Program ‘Reconciliación y Desarrollo’ (REDES) with the objective of supporting the work of overcoming violence and strengthening the construction of public agendas (PODEC, 2011). The Inter-Agency Standing Committee (IASC) has played a role as well, contributing with work in the areas of basic services, food security, infrastructure, amongst others (PODEC, 2011). The presence of the European Union has mainly contributed to the assistance for the victims of the violence and conflict resolution, constructing conditions for lasting peace (PODEC, 2011). In collaboration with the European Union the ‘Tercer Laboratorio de Paz’ was created working in the areas of sustainable development (mainly supporting productive projects), peace and human rights, and governability and community strengthening. The Tercer Laboratorio de Paz works to a great extent with grass root organizations as executing entities and governments and mayor’s offices as collaborative partners, assuring local participation.

Importance of strengthening smallholder farmers to achieve rural development

Land rights have always been a main source of conflict in Montes de María and remains a key issue to be resolved in order to reach a sustainable solution to the conflicts. Colombia is one of the countries in Latin America with recent large land investments (Borras et al., 2012), contributing to land concentration. However, processes are being executed to return land that has been taken from farmers illegally. The current legislation regarding land restitution is regulated by the Law 1448 of 2011: The victims and land restitution law, that came into force in January of 2012. Amnesty International (2014) recognizes that although this law has its weaknesses, it is an important step forward in recognizing the victims of armed conflict and their rights. Grajales (2015) argues that ‘the judicialization of land grabbing in Colombia has been a key step in the
process of defining land not only as an object of business transactions but also as an issue of human rights and collective identities'. The ‘Unidad Administrativa Especial de Gestión de Restitución de Tierras Despojadas (UAEGRTD)’ or ‘Unidad de Restitución de Tierras’ (URT) is responsible for implementing the administrative phase of the land restitution process. By 14 September 2016, since the implementation of the law, 94,975 requests for land restitution had been received and 4,253 had been resolved (URT, 2016). Although the restitution of land was not a main concern for most of the associations participating in the study, it is a prerequisite for the expanded rural development and will make it possibility for the displaced population to return to their lands. It is also a requisite for lasting peace as inequality is an important reason for conflict. Strengthening associations can be an important way of improving economic and social conditions of the population. At least in Colombia, the urban population is to a greater extent dependent on the closest community for their sense of trust, reciprocity and social network, making communitarian networks a buffer mechanism in conflictive environments (Wills-Herrera, 2011). Since the population participating in this study was associated farmers, it is understandable that access to land and associativity were not main concerns, although these are prerequisites to having successful production and access to the market. Instead, the main concerns were lack of productivity of the cultivations, lack of knowledge regarding technology and production methods, lack of access to technical assistance and credits, and a deficient access to markets. These are issues that lead to low profitability, deficient income and, therefore, poverty. Such a situation hinders the development of the region and will interfere with any attempt of reaching lasting peace. Efforts should also be made to reduce uncertainty for farmers, to allow work with a long-term approach, a habit that is often lost in conflict situations and may be difficult to recuperate (Arias, Ibañez and Zambrano, 2014). Therefore, this study shows that previous interventions, although they have greatly contributed to improving the security of the region, have failed in providing conditions
that allow for a decent living for the smallholder farmers. This is a world-wide tendency and as Altieri and Toledo (2011) claim, despite billions of dollars invested in aid and development, the situation of marginalized people has not improved.

The recently renegotiated and signed peace agreement between the Colombian government and the largest guerrilla group, FARC, includes an integral rural reformation where the government commits to increase and facilitate land access for small farmers, execute development programs to decrease the level of poverty and improve living conditions for the rural population, as well as promote agricultural activities through increased access to technical assistance, financial credits, markets, amongst others (Government of Colombia, 2016). Future political processes are pending however, to allow for these actions to be implemented. The results of this study show that despite extensive national and international interventions, farmers still lack basic resources for agricultural production such as improved technical assistance, access to credit, and access to markets, which could help address the current needs of the rural population of Montes de María.

Conclusions

Despite years of intervention and substantial progress in the security situation in the region, the population of Montes de María still lives in poverty. Eighty-two per cent of the participating farming associations indicated that they lack basic capital for their farmers’ families. Agricultural activities are the foundation for the rural economy of the region, as well as the food security of the people. However, these activities are not profitable enough to permit rural families to generate a decent income and live under acceptable conditions. The problems indicated could be overcome by focused governmental intervention through: a) increased and improved technical assistance to farmers to ensure access to knowledge regarding production techniques, as well as business management; b) access to credits to permit the smallholder farmers to make investments necessary for improving and modernizing production systems; and c) access to the market, where
tools, such as associativity and community post-harvest and storage centers, play important roles in lowering costs, fulfilling needs of the buyers, and increasing the profitability for the producers. However, continued efforts are needed to reduce producers’ uncertainty to allow them to make long-term planning and investments. Addressing the needs of the rural population and making a decent living possible in farming communities are essential components for long-lasting peace in Montes de María.

REFERENCES


Observatorio del Caribe Colombiano (2011) ‘Gobernabilidad con Visión Focal de Futuro en la Subregión de Montes de María. Construc-
ción de una Visión Estratégica Territorial Prospectiva en la Subregión de Montes de Mará, Cartagena, 285pp.

Pinstrup-Andersen, P. Food security: Definition and measurement. Food Security, 1(1), 5-7. doi: https://doi.org/10.1007/s12571-008-0002-y


