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Farmland management and community conflicts in the commune of Gogounou

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Abstract

Sustainable land management is at the heart of Africa's development challenge. However, access to and control over natural resources is becoming the main source of conflict between rural producers, particularly farmers and agropastoralists. The aim of this study is to analyse farmland management and community conflicts in the commune of Gogounou. The methodological approach is based on data collection, processing (statistical processing; cartographic processing with ArcGIS) and analysis of the results using the SWOT model (Strengths, Weaknesses, Obstacles, Threats). A total of 128 producers were interviewed using an interview guide and a questionnaire. The results of this methodological approach show that the main method of acquiring agricultural land is inheritance (55.86%), which is used for farming (77%) and livestock rearing (23%). However, crop rotation (72.80%) is the most widely used farmland management technique. For 82% of farmers, boundary disputes are the most dominant issue, followed by family disputes (14%) and, lastly, litigation (5%). The main players involved in conflict management are the district chiefs, village delegates or chiefs, the town hall, the police station and the court. In order to deal with this situation, it is imperative that prospects be defined for better land management and real development of farming activities.

Keyword: Management; Agricultural land; Community conflicts; Gogounou

1. Introduction

Sustainable land management is at the heart of Africa's development challenge. Land is one of the most important resources on the African continent (UNCCD and FAO, 2009, p.10). The whole of West Africa is a huge peasantry, with around 80% of its population living off the land, as part of the rural civilisations inherited from a long history (Paul Pélissier) quoted by (O. I. John, 2020, p.118). The World Bank, for example, has renewed interest in the agricultural sector, which is also evident in Africa, through the much-publicised rise of a new agrarian capitalism based on the creation of huge farms (A. Dubresson, 2011, p.109). Conflicts between users of natural resources are a major concern in Sahelian countries. Despite the existence of policies and legislative and regulatory texts, it is clear that they are on the increase (MOPSS, 2022, p.1). The unique agricultural and pastoral systems and peoples of the West African Sahel appear to be increasingly vulnerable to conflict as demographic pressure, changing socio-economic conditions and weather patterns affect everything in the region (International Research and Development, 2000, p. 1). Furthermore, land and natural resource management are among the critical challenges facing developing countries today (United Nations Inter-Agency Group on Preventive Action, 2012, p.3). In Benin, the development policy and strategy documents drawn up in recent years (NLTPS, OSD, DSCR, Agenda 21, PAE, etc.) have unanimously recognised that the material and human foundations of long-term development are precarious and require strategies to perpetuate their potential, particularly land resources, which are in fact inextensible, with a view to reversing critical trends. However, the management of land and farmland has been shown to be inextricably linked to the development and renewal of agriculture (A. Torre et al., 2023, p.10). As Benin is an agricultural country, land is the primary factor of production. The ever-increasing agricultural population in the face of ever-smaller areas of farmland justifies the extremely high agri-land pressure that currently characterises the rural land situation in Benin (REDD, 2016, p.14). Similarly, most of the population of Alibori

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derives its livelihood from the exploitation of land and natural resources. But the existence of a variety of activities that use the same medium, land, has led to the emergence of divergent interests and the birth of an atmosphere of antagonism between the players involved. As a result, conflicts have arisen everywhere around land in the commune of Gogounou.

2. Framework of study

Table 1 Geographical and administrative features of the commune of Gogounou

1	Physical characteristics of the Commune	
	Area	4910 km ² (18.66% of the Alibori department - 26,303 km ² - and 4.36% of the national territory)
	Geographical location	It is located between 11° 12" and 10° 20" north latitude and between 2° 15" and 3° 15" east longitude.
	Geographical boundaries	North-east: Kandi commune; North-west: Banikoara commune; East: commune of Ségbana; West: commune of Kerou ; South: Borgou department
	Relief	It consists of plains and plateaus topped in places by hills with maximum heights of around 300m and favourable to agriculture (INSAE, 2016, p. 4) and to human settlement for agricultural activities.
	Watercourse	Ouémé River and its tributary Zou; main lakes: Azili, Taffè, Founta, Gninko, Trili and many bodies of water
	Climat	Sudano-Guinean: a rainy season from May to October and a dry season from November to April with a harmattan period from November to February. Average annual precipitation: 1058.61mm (ATDA-Gogounou) Agricultural profitability after each growing season
	Vegetation	- Vegetation formations: wooded savannahs, herbaceous shrubs and forests. - Gallery forests: (along rivers) with large trees: <i>Khaya senegalensis</i> (caïlcédrat), <i>Carpus urinaceus</i> (vein), <i>Azalia africana</i> (ling), <i>Adansonia digitata</i> (baobab), <i>Ceiba pentandra</i> (cheese).
	Soil Context	Ferruginous granito-gneissic basement soils suitable for agriculture (INStaD, 2016, p. 4). Alluvial soils, clay-sandy soils rich in organic matter. Arable area; 1705 km ² , or about 35% of the total area (4910 km ²). The fertility of the soil makes the community attractive, especially since today agriculture is the main source of income for the commune of Gogounou.
	Fauna	<i>Hippotragus equinus</i> (coba), <i>Kobus Ko</i> (Buffon's Cob), <i>Simiiformes/Simiens</i> (monkeys), <i>Cephalophes</i> (hinds), <i>Phacochoerus</i> (warthogs), <i>Alectoris</i> (partridge).
2.	Populations, Ethnicities and Religions	
	Population	- Fourth General Population and Housing Census (RGPH4, 2013): 117,523 inhabitants. - Density: 24 inhabitants/km ² compared to 80,013 inhabitants in 2002 with a density of 16 ha/km ² , i.e. an increase rate of 3.5%. - Female: 58018 (49%) - Male: 59505 (51%).
	Ethnicities	- Baatombu 53.8% - Fulani (41.16%) - Foreigners from other localities in Benin (4.4%) and the sub-region (Niger, Nigeria, Burkina Faso, Togo, etc.)
	Religions	- Islam: dominant religion (67.1%) - Catholicism (7.8%)

		- Protestantism (0.9%) - Traditional religions (11.1%)
3.	Administrative organization	
	Administrative Units	Six (6) districts: Gogounou, Gounarou, Sori, Wara, Sougou-Kpantrossi and Bagou and 66 villages and city districts

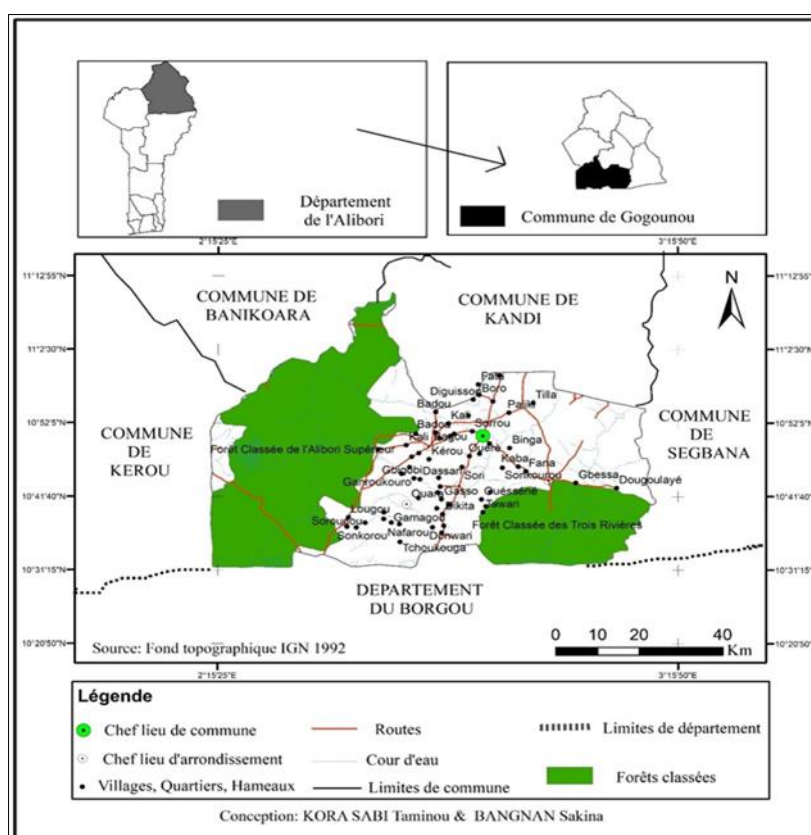


Figure 1 Geographical location of the commune of Gogounou

The local economy is dominated by the informal sector, with the formal sector limited to a few public administrative and social services. The activities that drive this sector are: agriculture, livestock farming, fishing, crafts, trade and transport.

Agriculture is the most important economic activity. Farms total 5,203 ha, of which 4,557 ha (87%) are managed by men and 646 ha (12%) by women. There are an estimated 29,831 farm workers, including 16,698 men and 13,133 women. Cotton, rice, maize and groundnuts are the main cash crops. The arable area is estimated at 1,705 km², or 35% of the total area. The remainder is made up of protected areas (177,200 ha), pastures (123,500 ha) and lowlands (360 ha), of which around 150 ha are farmed. As this is a sector that provides employment, many people turn to it to meet their needs. This competitive situation is a source of tension, leading to community conflicts in the commune. Extensive farming puts pressure on fertile land and leads to illegal logging. The practice of transhumance and uncontrolled bush fires, hunting and the cutting down of large trees for house-building are also activities that are not conducive to sustainable forest management.

- Gogounou is a livestock area with a large herd of cattle, small ruminants (goats, sheep, etc.) and poultry. Large livestock farming is the preserve of the Fulani population. Notwithstanding the problems of water, grazing and transhumance during the dry season, livestock farming remains a flourishing activity for the Peulh and Gando ethnic groups.
- Fishing and hunting are secondary activities for the people of Gogounou.

- Trade plays an important role in the economy of the commune of Gogounou. However, the majority of traders operate on an informal basis.

3. Methodological approach

The methodological approach followed in this study is based on the collection and processing of data and finally the analysis of the results. The data are of a socio-economic, demographic and physical nature relating to the environment. Data collection involved documentary research and fieldwork. This approach is supported by the Active Participatory Research Method (APRM).

- Documentary research consisted of exploring a number of documentation centres that are sources of information. These included: the University library and the CAEB library in Parakou, the INSTaD documentation room, the UNDP, WFP, WHO, the Union Communal des Producteurs, the Gogounou ASECNA town hall and the Internet.
- Fieldwork involved the use of appropriate tools and techniques to collect information from target groups identified on the basis of a precise sample with a view to identifying agricultural land management methods and community conflicts in the area. The tools used were questionnaires, interview guides and observation grids for structured and semi-structured individual and focus group interviews, and participant observation.

Sampling was based on the random selection method. Thus, 4 of the 6 districts in the municipality were investigated. These were the arrondissements of Gogounou, Gounarou, Bagou and Wara. Three (3) villages were selected in each arrondissement. As for the local authorities and technical staff at the town hall, the choice took into account the position held. For the population, the choice took into account the following criteria:

- Be at least 20 years old
- Have lived in the locality for at least the last five (5) years.

The table below shows the breakdown of the sample by district.

Table 2 Breakdown of the sample by 4 districts

Districts	Total population in 2013	Persons surveyed
Bagou	29 958	38
Wara	16 061	34
Gogounou	14 248	27
Gounarou	14 017	24
Total	74 284	123

Source : INSTaD (RGPH4), 2013 and field works

In addition to the local population, 2 local councillors and 3 technical staff from the town hall were included. In total, 128 people were surveyed, including all target groups.

- The data was processed statistically using Excel software, which was used to generate summary tables and figures. Cartographic processing was carried out using Arc View software to spatialise the data with a view to drawing up the various maps contained in the document.
- The results were analysed using the Strengths, Weaknesses, Opportunities and Threats (SWOT) model. This model was used to analyse internal factors (strengths and weaknesses) and external factors (opportunities and threats). The identification of internal and external factors has enabled us to define the best strategies for maximising strengths and opportunities on the one hand, and minimising the impact of weaknesses and threats on the other, and if possible transforming them into strengths or opportunities.

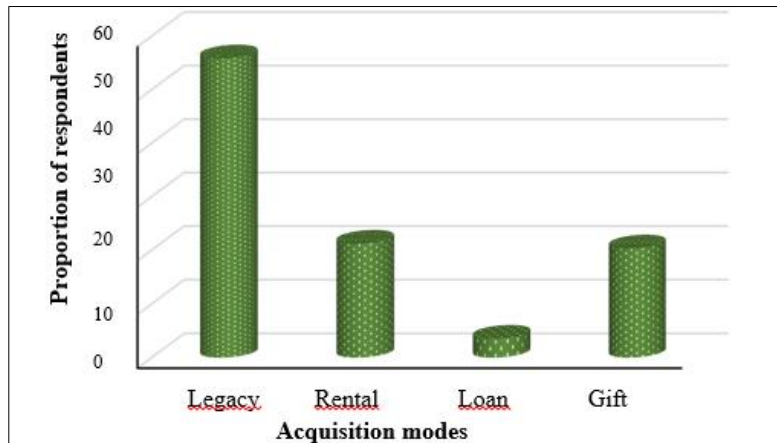
4. Results

4.1. Farmland management methods

The management of agricultural land in the commune of Gogounou can be explained by several factors such as the mode of acquisition, management, techniques of use and purpose.

4.1.1. Farmland acquisition methods

In the commune of Gogounou, four methods of land acquisition were identified: inheritance, renting, borrowing and donation (see Figure 2).



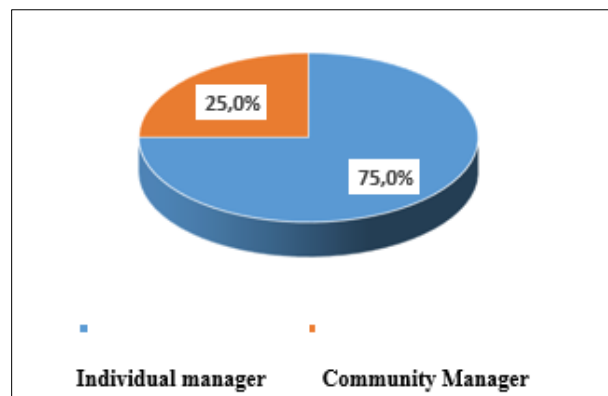
Source: Fieldwork, Gogounou, July 2023

Figure 2 How local people acquire farmland

Figure 2 shows that 55.86% of land is acquired by inheritance, followed by donation (20.35%) and rental (21.23%), while 4% of the population have recourse to loans. The last method identified is acquisition by purchase, a very recent practice that has appeared in the locality due to the arrival of foreigners (2%). This practice of selling land is forbidden by Baatonou and Peulh traditions, which are the dominant socio-cultural groups in the locality.

4.1.2. Farmland management methods

Two types of farmland management prevail in the commune of Gogounou: individual management and collective or community management. These are illustrated in Figure 3.



Source: Fieldwork, Gogounou, July 2023

Figure 3 Forms of farmland management in the commune of Gogounou

Figure 3 shows that 75% of people manage their farmland individually, compared with 25% who manage it communally. This second form mainly concerns farmers' groups, cooperatives and family fields.

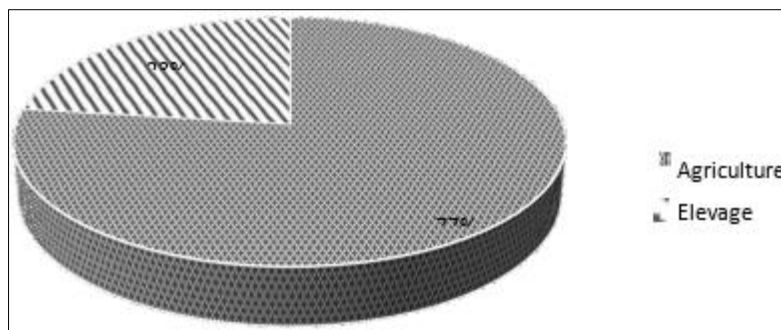
Farmers use a number of techniques to manage farmland in order to maintain its sustainability, including crop rotation (72.80%), which is generally done with several varieties: maize, cotton, soya and yam. Others use power tillers or tractors for ploughing (12.80%), while 9.60% fallow for grazing or use fertiliser to get a good yield. Photo 1 shows the use of agricultural machinery (plough on the left and tractor on the right) to farm the land.



Shot: A. C. M. BEKPA-KINHOU, July 2023

Figure 4 Power tillers in the village of Gounarou

Land is used for agriculture and livestock farming. Figure 4 shows the proportion of land devoted to each of these activities.



Source: Fieldwork, July 2023

Figure 5 Proportion of land occupied by agriculture and livestock farming

77% of the population in the commune of Gogounou farm their land for agricultural purposes, compared with 23% for livestock farming, which is the second most common land-use activity, devoted to large ruminants. Plate 1 illustrates the joint use of land by farmers and livestock breeders.



Figure 6 Livestock in the commune of



Figure 7 Yam field in Wara

Shot: A. C. M. BEKPA-KINHOU, July 2023

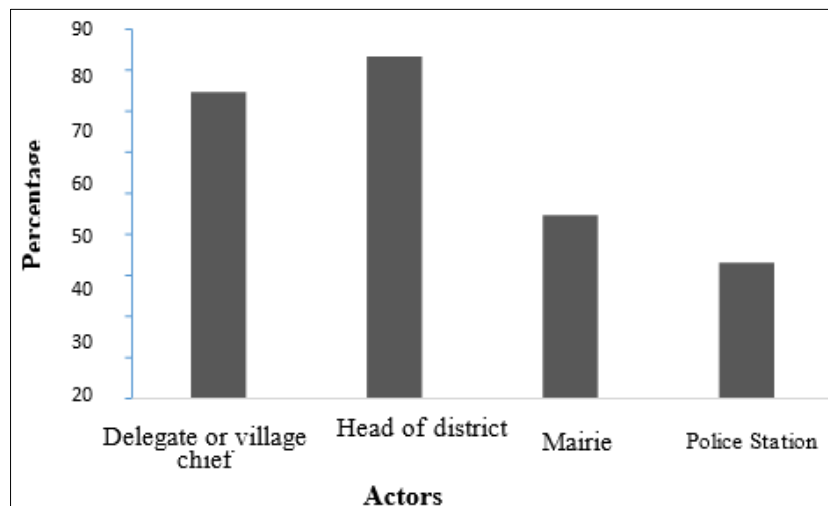
4.1.3. Typology of community conflicts linked to farmland management

The management of agricultural land in the commune of Gogounou, as in other communes, gives rise to numerous conflicts between the stakeholders concerned. 67% of producers acknowledge the existence of these tensions, which are linked to: boundary problems, family conflicts and state and land disputes. By analysing the typology of conflicts in the municipality, we arrive at the following observations: for 82% of the population, boundary disputes are the most dominant, followed by family disputes (14%) and finally state disputes (5%).

According to 65% of the population, boundary disputes often arise between herders and farmers and between farmers and herders. Failure to respect cattle corridors and arable boundaries leads to the destruction of crops by grazing oxen on the one hand, and the uncontrolled occupation of arable land on the other, leading to conflicts over the boundaries of arable land between farmers and herders.

Family conflicts are caused by the misallocation of inherited estates between the rightful owners and other envious and jealous family members. This is also the case when a family or community's landholdings are sold to third parties without the agreement of the other members.

Land disputes between producers and local administrative authorities such as village chiefs or councillors. Some farmers sell their land to several people in bad faith. Also, some farmers who do not have a legal document (estate sale agreement; inheritance division minutes; deed of gift; certificates of customary law) or who have not farmed on their land for a long time find themselves dispossessed of their arable land. Several players are involved in managing the various types of conflict. Foremost among these are the local authorities (arrondissement chiefs, village delegates or chiefs, mayoral officials, police station). Figure 6 shows the players involved in managing conflicts relating to agricultural land



Source: Field survey results, July 2023

Figure 8 Actors involved in managing conflicts relating to agricultural land

For 84% of farmers, conflicts relating to the management of agricultural land are settled by district chiefs; 75% by village delegates/chiefs through the local conflict management committee set up in the villages. Conflicts are also managed by the town hall and police stations, according to 45% and 33% of producers respectively. Each of these actors contributes as much as they can to resolving the various conflicts relating to agricultural land. Finally, these conflicts are managed by the conciliation tribunal at the town hall when the village and district committees feel incompetent to resolve them. When disputes are not resolved at these various levels, they are referred to the local court of first instance

5. Discussion

In the commune of Gogounou, people know of four different ways of acquiring agricultural land. These are inheritance, rental, donation and loan. In the same vein, F. Kombieni (2020, p. 191) has shown that in the Bétérou district, access to

land takes several forms. The main methods of accessing land are inheritance, purchase, gift and loan. People in the commune of Gogounou use their land for agriculture, which is the main activity, followed by livestock farming, which is the second most common use of farmland, especially for raising large ruminants. This result is similar to those of B. Abdoulaye and N. Sabam Hamissou, (2021, p. 29) who specified that in the commune of Djougou, two types of activity are mainly carried out by the population: agriculture, which is the main activity, followed by livestock rearing.

Farming techniques in the commune of Gogounou are characterised by crop rotation followed by the use of tractors or power tillers for ploughing, fallowing and increasing the amount of fertiliser to achieve good yields. These results are in line with those of M. Lawani & H. Sinagarigui (2020, p. 30), who showed that farmers in the commune of Kouandé adopt several cropping techniques, including slash-and-burn shifting cultivation, followed by semi-multiple cropping, rotation and fallow. These conclusions are in line with those of the FAO. Sustainable land management is the adoption of land use systems that, through appropriate management practices, enable land users to optimise the economic and social benefits derived from the land while maintaining or enhancing the ecological support functions of the resources (FAO, 2005, p. 21). Thus, when well managed, land resources can provide a range of sustainable livelihoods for different land users, accelerate sustainable rural development and improve the quality of life of the whole community (FAO, 2005, p. 6).

Several conflicts have been identified in the commune of Gogounou. These include boundary disputes, family disputes and litigation. Failure to respect cattle corridors and arable boundaries leads to the destruction of crops by oxen when grazing, on the one hand, and the uncontrolled occupation of arable land on the other, leading to conflicts over the boundaries of arable land. These results are similar to those of F. Kombiéni, (2021, p. 14) who showed that in the commune of Natitingou, land conflicts have become increasingly frequent in certain villages, resulting in the overstepping of boundaries or encroachment on neighbours' land during field work, as well as the existence of land disputes. Despite the trivialisation of these conflicts due to their recurrence, they give rise to general concern among the stakeholders, who are unanimous in their view that the tensions affect social cohesion (GPRN, 2022, p. 1). This is how pernicious conflicts linked to the management of space and natural resources on the one hand, and that of the herds grazing on these spaces, and the behaviour of herdsmen and farmers themselves on the other, have emerged (K. Sokemawu, 2015, p. 31). For example, conflictual relations have increased in the Ouémé basin with the deterioration in climatic and environmental conditions, and the expansion of cultivated areas is not only the main source of destruction of plant resources but also the main source of land pressure on grazing areas and passage corridors (G. L. Djohy et al., 2021, p. 10). Similarly, several West African countries have seen an escalation in conflicts between herders and farmers in recent years. These conflicts, which escalate over time and space into deadly intercommunity clashes, each time leave a disastrous mark on the collective memory and fuel the desire for revenge, which perpetuates the cycle.

The same observations have been made by a number of authors. The causes of these conflicts have been sufficiently diagnosed, as has the search for appropriate solutions to prevent, resolve or at least mitigate them (WARN, 2020, p. 2). This is the case in the Dosso and Maradi regions of Niger, where conflicts between farmers and livestock breeders mainly arise when they use the same land or when livestock move around or feed on cultivated land. The traditional mechanisms for resolving these conflicts, in particular the intervention of village chiefs, are becoming less and less effective in a context of population growth and increased competition between a growing number of stakeholders. The introduction of mediation mechanisms and discussions that do not rely on a single person and that operate, if possible, upstream of conflicts seems to be a path to be favoured (FAO, 2021, p. 3).

Thus, the local authorities are the actors involved in the management of conflicts relating to agricultural land and are made up of the district chiefs, village delegates, the town hall and also the police stations. In the same vein, M. Camaleonte (2003, p. 40) shows that the methods used to resolve conflicts on the outskirts of the W National Park (Benin) depend on how serious they are. If it is not serious, it will be settled out of court. If it is serious, it will be necessary to call in the delegate and the expert. The village chief estimates the damage and fines the farmer according to its seriousness. If the owner of the livestock does not pay the fine, he will be taken to court in Kandi. These results corroborate those of F. Kombieni, (2021, p. 91) who explains that in the face of conflicts arising from the exploitation of agricultural land, it is urgent to put the players on the same level of information in order to restore the social fabric. However, building the capacity of farmers' organisations to control land, its boundaries and the fragmentation of farmland will ensure stability in the agricultural sector, so as to encourage long-term investment to improve farmland management; protect fertile farmland by halting the phenomenon of unequal fragmentation and the disappearance of farmland. Promote the governance of managers and elected representatives with regard to the management of agricultural land in order to prevent the sale of agricultural land in the commune; ensure that land is passed on through inheritance in order to encourage sustainable investment in family farms; ensure land security for farmers, individuals

and farming communities; put in place competent people for the efficient, equitable and sustainable management of rural resources.

The conclusions of AFD (2020, p. 45) are in the same vein. In fact, the rational exploitation and management of agricultural, forestry and pastoral resources; the settlement of rural disputes; the application of texts and policies relating to rural development and sustainable land management. These include the State (technical ministries and other relevant public institutions), local authorities, traditional chiefs, land commissions, rural groups (rural cooperative and mutual organisations of farmers, livestock breeders or craftsmen, rural economic interest groups etc.), non-governmental organisations (NGOs) working in rural areas (Ministry of the Environment, Urban Health and Sustainable Development, 2014, p. 12).

6. Conclusion

Farmland management in the commune of Gogounou is characterised by several modes of access. Inheritance, rental, donation and borrowing are the modes of access identified. The land is used for farming and livestock rearing, especially large livestock. To keep the land sustainable in the commune of Gogounou, local people use a number of techniques, including crop rotation and the use of ploughing machinery (plough, tractor). However, the management of agricultural land leads to community conflicts in the commune between the various stakeholders involved, based on divergent interests. The causes of these conflicts include boundary disputes linked to the non-respect of passage corridors by both farmers and livestock breeders, family conflicts linked to a poor division of land inheritance, and land ownership disputes.

A number of players are involved in resolving these conflicts, including the district chiefs, the village delegates/chiefs, the town hall, the police station, the village conflict management committee, the conciliation court and the court of first instance.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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