

Socio-economic impacts of conservation on local populations in the Mpem and Djim National Park

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Abstract

The objective of this study is to investigate the socio-economic impact of conservation on village communities in the Mpem and Djim National Park (MDNP). The methodological approach adopted comprises three phases: documentary research, data collection, and processing. This methodology used a participatory approach through tools such as the semi-structured interview consisting of administering an interview guide to a few members of the village, the production of a participatory map of the use of natural resources in the reserve and its outskirts. The results obtained show that the site has a population estimated at 40,235 inhabitants according to the 2018 census reports and is made up of natives (Etons) and non-natives Bavek who live mainly from agriculture and other ancillary activities (hunting, livestock, etc.). There are major conflicts over agriculture and land acquisition. At the end of this study, the impacts of the PNMD on improving the social well-being of the population and maintaining peace were not very noticeable. The implementation of a land use plan could be taken into consideration. A logical framework with monitoring indicators is therefore proposed to serve as a reference for the development of a new five-year social action plan.

Key words: Socio-economic impacts, Conservation, Local communities, Mpem and Djim National Park.

Introduction

At the 1992 Rio de Janeiro Conference, known as the Earth Summit, two major schools of thought clashed over their perception of man's relationship with nature (Milol, 2017). The conversationist movement, which was much more influential, did not place man and economic constraints at the heart of its concerns. It was nature for its own sake, with a right to exist (Joumard, 2021). Thanks to tough negotiations, the proponents of the utilitarian

movement were able to gain acceptance for the idea that nature could be exploited rationally and the standard of living of the people who live there improved (Batalou, 2018). This compromise was the international starting point for participatory management in the various forms we know today.

This management model, enshrined in the Durban Accord and ratified at the Vth World Parks Congress in 2003, affirms the desire to develop a new

approach to protected areas (PAs) based on a "synergy between conservation and general development objectives with the support of the community sector". In line with the Congress recommendations, communities living on the edge of parks were to be supported through local participation, education, revenue sharing, development activities and opening up park resources for local use (Brandon and Wells, 2020).

These new socio-economic expectations regarding environmentally-friendly measures have rekindled interest in existing schemes in northern countries, such as certification marks, and have prompted reflection on their 'transferability' to southern countries, so that they can be used as tools for conservation and local development (Angelsen et al., 2020). The emergence of the concept of 'environmental service' as a new reference point for conservation policies reinforces this dynamic. On the one hand, it is used as an argument to justify the creation and maintenance of PAs and, on the other, as a means of mobilising private funding for these PAs (Wunder, 2020).

The highly valuable ecological potential of PAs could be used to generate income to promote sustainable development around PAs (Karsenty, 2021), which support around 1.1 billion people, or one sixth of the world's population (Brandon and Wells, 2020). Given this dependence and the growing need for land, it is clear that if local residents do not have the same perception of PAs as conservationists, any efforts to protect resources will be doomed to failure. In other words, if local populations perceive PAs as production constraints, they will be less inclined to take action in favour of conservation.

However, sustainable management could be ensured if the local populations benefited from the PAs without posing a threat. The importance of taking socio-economic considerations into account for the success of conservation is no longer in doubt. Like any human activity, the success of the biodiversity conservation process through PAs is conditioned by its socio-economic profitability for the benefit of the various stakeholders, and, more particularly, for the benefit of local populations. It is therefore not so much the concept of conservation that is particular to this study as, above all, the context in which it is conducted. It is an aspect that undermines the way in which the role of PAs in the socio-economic development of the populations involved in their management is envisaged.

The idea that the conservation of projected air cannot be managed at the expense of the populations living around it or in the absence of their active participation, is now one of the consensual concepts in international discourse on environmental protection. However, very few known scientific studies have assessed the socio-economic interrelationships between protected areas (PAs) and local populations in Cameroon. Their actual and potential social contributions therefore remain to be scrutinised, which will have the effect of changing the principles and practice of PA management.

Similarly, the question of whether and to what extent PAs are beneficial or detrimental to populations is the subject of much controversy. Opinions in the mission reports differ as to the social impact of PAs. Some organisations linked to the sector analysed the statistics provided by the managers and concluded that conservation had a positive effect in terms of added value and job creation in rural areas. Others, on the other hand, have pointed out that the country's forestry policies have favoured the control of conservation organisations and that they have had the lion's share. Furthermore, it has been noted that it is precisely in conservation areas that poverty is more serious and entrenched.

Critical reports have cited underfunding of planned areas and poor promotion of livelihoods that encourage people to show goodwill towards conservation as reasons for the shortcomings. What assessment can be made of the integrated conservation and socio-economic development programmes associated with the Park? How can we draw on their past activities to guide the design and implementation of new strategies combining conservation and development?

The main objective of this research is to study the socio-economic impact of protected area conservation on village communities in the Mpem and Djim National Park (MDNP). More specifically, the aim is to take stock of the activities carried out by the reserve on the biological component and to take stock of the activities carried out by the reserve on the social component.

1. Materials Et Methods

The study site is located between 5° and 5°20 north latitude and 11°30 and 12° east longitude. Its exceptional geographical location in the forest-savannah ecotone offers a mix of animal and plant species from tropical forests and savannahs.

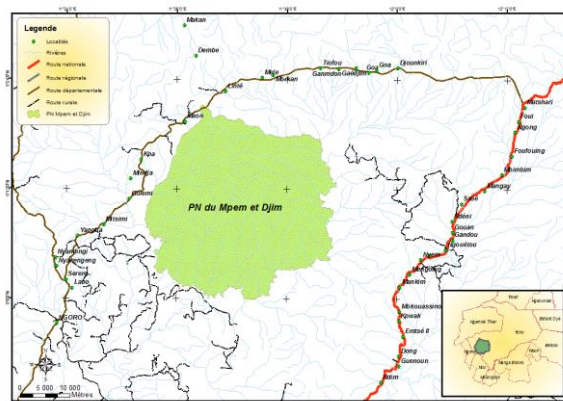


Fig.1. Location of the study area.

This involves identifying the different activities carried out by the populations in order to determine the natural resources used in each sector. Secondly, the natural resources identified are ranked in order of preference by means of a preferential classification applied to each group. A participatory approach will be used using tools such as the semi-structured interview, which consists of administering an interview guide to a few members of the village assisted by the curator, and producing a participatory map of the use of natural resources in the reserve and its outskirts. This map will be used to assess the farmers' level of knowledge of the resources (visualisation maps, (maize and cocoa fields, livestock, fishing, legal and illegal logging, and illegal hunting). The resource persons will be village chiefs, notables, elders, or other people with knowledge of the history, culture, and development of income-generating activities. The information sought by this tool concerned : a brief description of the community, reference events and dates (logging, advent of the community forest possibly), the main activities in the area, the different types of land use by the community as well as the different NTFP species found there, access to natural resources including land tenure, tree management, property rights over the land and the tree, and how these rights have changed over time (making it possible to find out whether the property system can be an obstacle to tree cultivation).

The socio-economic indicators chosen are as follows:

- household demographics,
- socio-economic status and material lifestyle of households,
- household activities.

The numerical data of the area and the extension of activities were surveyed using a GPS (Global Positioning System) and entered into MS Excel. The data was then exported and adjusted in Arcview 3.2 to produce the maps. Descriptive or qualitative data was collected on the basis of summaries of discussions and meetings held with stakeholders. Quantitative data extracted from stakeholder survey questionnaires will be entered into Excel and processed using SPSS (Statistical Package for Social Sciences) version 16.

2. Results and Discussion

3.1 Forestry

MDNP borders four Forest Management Units (FMUs 08004, 08006, 08008, and 08009) to the north, north-east, and north-west. This proximity to the PNMD exposes it to poachers and illegal sawmill operators and makes it easily accessible (Fig. 6). It is true that the logging companies (SCTCB, INC Sarl, SFB, and EFMK) that hold these forestry titles are committed to the sustainable forest management process advocated by the Cameroon government. However, there are still some belligerent local operators who are taking advantage of the presence of community forests and logging sales on the outskirts of the protected area to set up a whole network of illegal sawmills that are difficult for the forestry administration (head of the forestry post and conservation department) to dismantle, as the Ministry of Forests and Fauna is only just beginning the process of traceability to which Cameroon has committed itself through the VPA/FLEGT voluntary partnership agreements.

Figure 3 also shows an increase in the number of large plantations (cocoa, plantain, macabo, etc.) on the outskirts of the protected area, particularly in the south and west of the Park (Voundou, Labo, Nguila-centre, Nguila-Haoussa, Séréré, Yassem). Indeed, there is a rush of people from other localities in Mbam and Kim, but especially from Lekié (Eton) and elsewhere (Bamenda), to work in large plantations, especially cocoa. The corollary of this influx is the development of poaching and the invasion of the protected area.

3.3 Farming

Livestock farming is practised by the large Bororo herders who are based to the north of the PNMD, particularly at Linté. This activity is intensive and is therefore coupled with the establishment of bushfires, which lead to the renewal of pastures. These bushfires spread throughout the protected area, leading to the destruction of wild flora and fauna.

A study carried out by Nguedjio (2018) in the PNMD shows a distribution of late and early fires, illustrated in Figure 4.

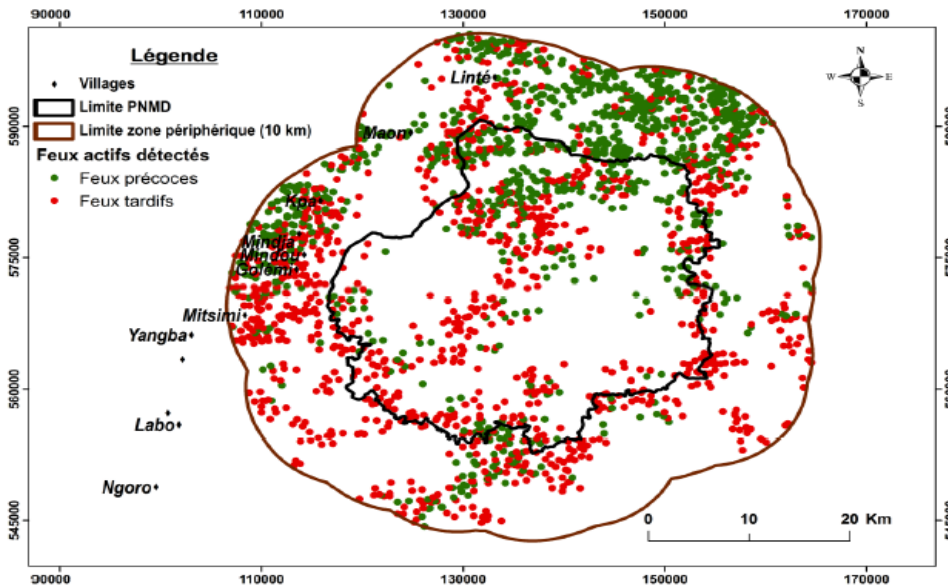


Fig.4. Detecting late and early fires in PNMD (Nguedjio , 2018).

The distribution of these very intense bushfires shows that, in addition to the herders, there are hunters who cause these fires inside the park. The presence of livestock breeders has only been found in the Linté zone to the north of PNMD.

On the other hand, livestock farming coupled with agriculture is leading to pressure on land resources from increasing numbers of non-natives (Eton) in search of arable land, as shown in Figure 5 below.

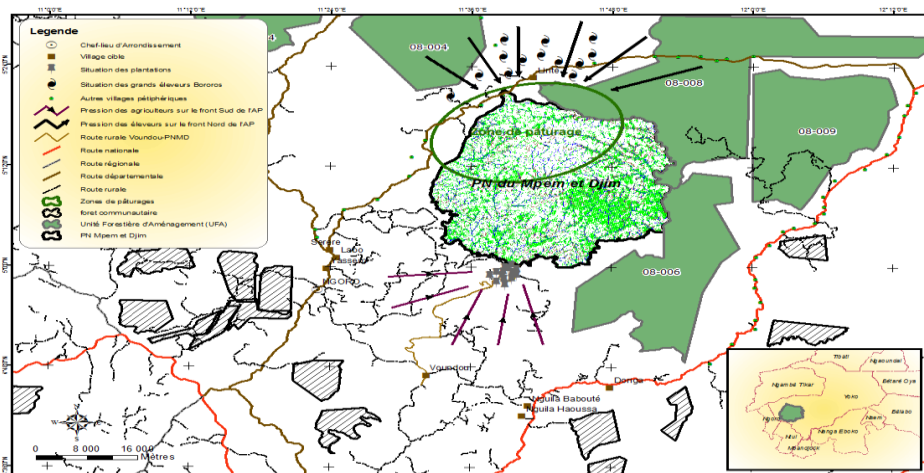


Fig. 5. Pressure from breeders and farmers looking for space on the boundaries of MDNP

3.4 Fishing

The graph below illustrates the numerical distribution of Bayam-sellam for the Voundou and Ngoro markets. Of the eight villages where we carried out our surveys, only Voundou has a large

number of fishermen. The population of Voundou is mainly made up of Eton non-natives who have come in search of arable land for large-scale farming. The existence of the Mpem and Djim rivers has been an opportunity for them to fish. These two markets are

held periodically, on Tuesdays for the Voundou market and on Fridays for the Ngoro market.

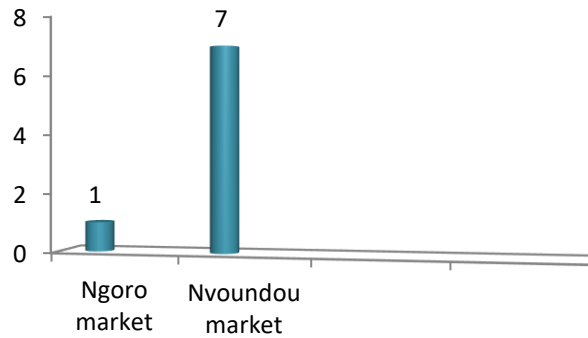


Figure 6 : Numerical distribution of Bayam - sellam for the Voundou and Ngoro markets

3.5 Land use

Our data show that 31.4% of respondents say they do not have access to grazing land. The best grazing land is found inside the protected area. Since access to the PNMD is forbidden to the local population for biodiversity conservation purposes, and due to a lack of real awareness-raising among the local population to prepare them to accept the various restrictions associated with the existence of a national park in their living environment, this situation seems unbearable for those of them who would like to raise large livestock (Fig.7).

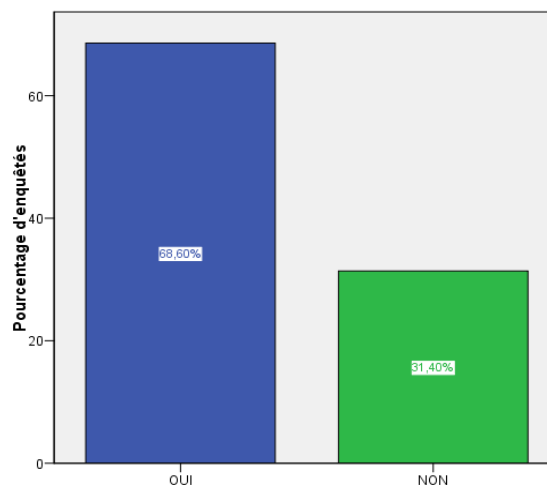


Figure 7 : Access to grazing land by the local population.

Moreover, land security is almost non-existent. According to our surveys, very few farmers (3.5%) have a land title deed, while 73.26 of those surveyed

felt that the land they owned was secured by a "verbal agreement with the alleged owner of the land".

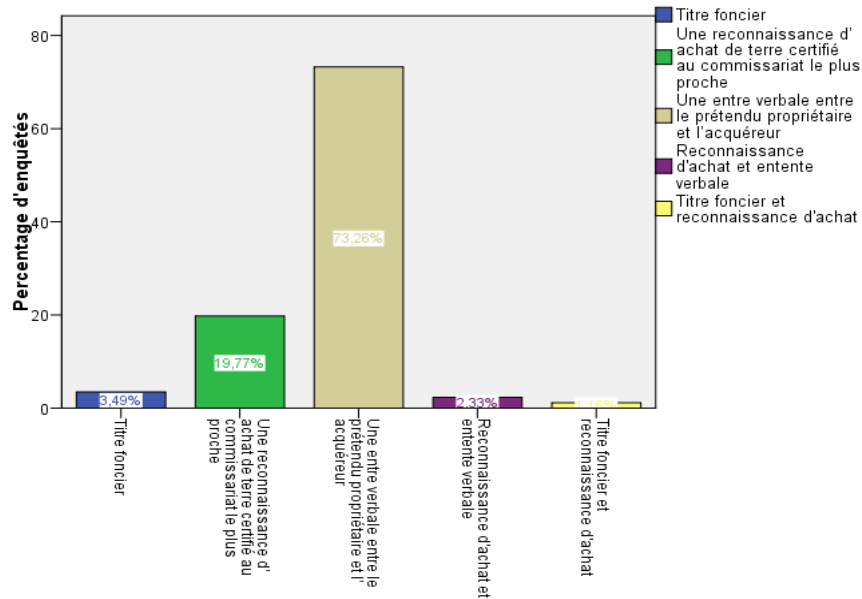


Fig.8. Impressions of land security..

3. Discussion

Logging on the periphery of protected areas has always been a major problem for biodiversity conservation. In PNMD, with four forest management units and the presence of seven felling sales and a few community forests, sustainable management of biodiversity in the park is not easy. In fact, despite the patrols and raids carried out by the conservation department within the protected area, poachers continue to carry out their crimes. In addition, the "Eton" from the Lékié department, who are known to be large-scale farmers, are continuing to move southward through the protected area and are already exerting pressure on the boundaries of the PNMD. Similarly, the acquisition of large tracts of farmland by the local population shows that they are in search of new land, and the presence of PNMD does not allow them to expand.

Farming, which is the main activity of the people living near PNMD, is expanding rapidly, as our surveys clearly showed that the land on which they have been working for the past ten years or so is becoming poorer and poorer. This is leading them to use more and more expensive agricultural inputs.

With the rise in the world price of cocoa over the last ten years, local people have started growing cocoa again, and will therefore need more and more space. This situation is made all the more complex by the fact that there are non-native "Eton" populations who have been settling on the outskirts of the PNMD for over a decade and whose aim is to work the land for sale and over large areas. In other words, in the short term, they will move to new

land to make their business more profitable. In this way, some ignored the very existence of PNMD,

while others made us understand that the eco-guards prevented them from having access to PNMD, hence the uselessness of this protected area in their opinion.

Land distribution is therefore proving to be a major axis of development on the periphery of PNMD in the years to come. The existence of the protected area is in no way responsible for this trend in agriculture, as the area's annual work plan does not include activities aimed at providing farmers with technical support or any other form of awareness-raising.

If 24.4% of respondents continue to conceal the existence of the MDNP (24.4%) and 51.2% of them consider that hunting products are intended for sale, then we can confidently say that the MDNP is a critical poaching area. This is confirmed by the various seizures of bushmeat made by the conservation service on the outskirts and inside the protected area.

The limited financial and material resources available to the conservation service mean that the wildlife control missions carried out are very thinly spread throughout the year, and when they are planned, the small number of eco-guards does not allow for strong interventions capable of reducing the pressure on wildlife within PNMD.

Mbamba Mbamba JP (2023) reports that in the savannahs, with the intention of renewing the grazing for their herds, shepherds anarchically set fires, which they were then unable to contain and which infiltrated the PNMD. When they are late, these fires are devastating for the fauna and their habitats. Nguedjio (2023), in his distribution of active fires from 2001 to 2013, clearly shows in Figure 8 the importance of the anthropogenic

activities of large-scale livestock breeders within the MDNP.

What is worrying are the distances (3 to 25 km) that some pupils have to travel to get to school; we will take the example of the children of Labo who have to travel to Séréré or Ngoro and cover more than ten kilometres to get to school.

The inaccessibility of drinking water in the study area is proof of the difficult living conditions that people living near the PNMD have to endure. Similarly, when there is a local source, it is not always a standpipe or borehole. Existing water points are sometimes located more than 2 kilometres from homes, which makes it particularly difficult to access them and exposes people more and more, particularly to gastric diseases.

4. Conclusion

At the end of this study, it appears that the PNMD still has significant potential in terms of fauna and flora. The fact that the park was created so recently (2004) means that it has not yet been able to benefit from significant financial support from the government or even international development organisations for its conservation. The people who live on the periphery of this protected area are the first to be penalised by this system, as they do not understand how, in the nine years since the park was created, no activity has started. However, they are totally prevented from accessing the land of their ancestors as in the past. This seems difficult for local people, who have always depended on the use of wood and wildlife resources for their livelihood.

The isolation of the villages on the outskirts of the PNMD means that these people are in a state of lethargy in the face of the development that is nonetheless imposed on them. On the one hand, they have no access to natural resources under threat of repression, but on the other hand, for the moment, they have no alternative to fill the gap. This is reflected in the fact that some of them completely ignore the existence of the national park and claim that the eco-guards are preventing them from accessing wildlife resources to feed themselves. Similarly, for others, the national park has brought them nothing so far in terms of development.

In other words, the creation of the PNMD to date has not had a positive impact on improving the living conditions of the local population. However, the conservation department is working hard on its strategy to raise awareness among the various stakeholders, and a number of NGOs are beginning to take an interest in the park, notably CAIDEL.

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