

# Assessing Pastoralists' Patronage of Gongoshi and Nyibango Grazing Reserves in Adamawa State

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## ABSTRACT

**Background and Objective:** This paper examined the patronage of grazing reserves by pastoralists in Adamawa State. This study was aimed at evaluating the level of patronage of the grazing reserves by pastoralists since its establishment, to examine the pattern of grazing among the pastoralists and to appraise the available infrastructure in the two grazing reserves. **Materials and Methods:** The study was carried out in two of the pilot grazing reserves in the State. Grazing reserves were primarily established to solve the problem of transhumance, improve the welfare of the nomadic pastoralists and their herds and formalize the land tenure right of the pastoralists. They offer the security of tenure as an inducement for sedentarisation by providing land for grazing and a permanent water supply. Primary data were collected through Focus Group Discussion (FGD) and with the aid of a scheduled interview. Descriptive statistics were used to analyze the data collected. **Results:** There was a high level of patronage of the two reserves at their inception, but the trend was declining due to resource scarcity and inadequacy and dilapidating infrastructure. **Conclusion:** Government efforts in the establishment of grazing reserves have succeeded in transforming livestock production from a nomadic into a transhumance system.

## KEYWORDS

Patronage, grazing reserve, pastoralists, infrastructure, pastoralist, livestock

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## INTRODUCTION

Grazing reserves are tracts of land specially set aside by State Governments for use by herders to hold and graze their cattle and other animals<sup>1</sup>. Ranch, grazing reserve, herding territory, enclosure, station and rangeland are different names used in different parts of the world to connote an area of the landscape set aside primarily for raising grazing livestock such as cattle, sheep, among others<sup>2,3</sup>. Ranching originated in Spain out of necessity for handling large herds of grazing animals on dry land. However, the idea of ranching spread to other parts of the world and constitutes one of the most important economic activities of the planet<sup>4</sup>. The idea of grazing reserves was introduced into many countries by the colonial government. Findings from the literature affirmed that the great majority of grazing reserves in Malaysia were identified since the 1930s while the country was under colonial rule. Although the concept of preserving rangeland for the exclusive use of livestock was a common practice throughout the pastoral area of Africa<sup>5</sup>, such practice dates to pre-colonial times<sup>6</sup>.



Grazing reserves are established in many countries of the world, to provide opportunities for a more productive and profitable livestock production where diversified income streams are possible and at the same time contribute to increased vegetation cover, soil organic carbon and to resolve conflicts and inequalities related to land<sup>7</sup>.

In Nigeria, the stated purpose of grazing reserves is the settlement of nomadic pastoralists. They offer the security of tenure as an inducement to sedentarisation through the provision of land for grazing and permanent water<sup>8</sup>. Another reason for the establishment of grazing reserves is to get and protect pasture space for the national herds and remove discord between agronomists and pastoralists. By separating the herders from the cultivators, the government intends to foster peaceful coexistence between them by making the grazing reserve a zone of no conflict<sup>8</sup>. An ideal grazing reserve should be equipped with boreholes, fences, fire breaks, veterinary services, access roads, pasture development centers, schools, human clinics, security posts and dams<sup>9</sup>.

Only a few studies have been undertaken to examine the patronage of grazing reserves by pastoralists since their establishment in Adamawa State. The infrastructural facilities that encourage sedentarisation in grazing reserves are not fully investigated. Therefore, this study was initiated to evaluate the infrastructural facilities and to assess pastoralists' patronage of Gongoshi and Nyibango grazing reserves in Adamawa State. To achieve this, the study seeks to assess the level of patronage of the grazing reserves by pastoralists, examine the grazing patterns of the pastoralists and the available infrastructure.

## **MATERIALS AND METHODS**

**Study area:** The study was conducted at Gongoshi and Nyibango grazing reserves in the dry and rainy seasons, precisely from March to September, 2017. Gongoshi grazing reserve was established by the 1965 Grazing Reserve Law for Northern Nigeria. It lies between Latitude 9°9'0" and 9°15'0"N and Longitude 12°4'30" and 12°9'0"E. The reserve was the first to be established in 1975 and the second largest in Adamawa State, it covers a total land area of 96 km<sup>2</sup>. While Nyibango grazing reserve is located between Latitude 8°31'0" and 8°34'0"N and Longitude 12°6'0" and 12°7'0"E, it was established in 1986 and has a total land area of 7 km<sup>2</sup>. These reserves were acquired, developed and released by the State Government to pastoralists.

### **Methodology**

**Sampling procedure and sampling size:** A combination of purposive and random sampling procedures was adopted in the selection of the study area and respondents. One grazing reserve each was purposively selected from Mayo Belwa and Jada Local Government Areas of Adamawa State, respectively.

Gongoshi and Nyibango grazing reserves have an estimated population of about 72 and 35 pastoral households, respectively. As 40 (55.5%) and 20 (57%) of pastoral households living Gongoshi and Nyibango grazing reserves, respectively were interviewed. A total of sixty pastoral household heads were interviewed.

The data for the study was collected from male household heads through Focus Group Discussion, interview method using structured interviews and an infrastructure checklist.

**Statistical analysis:** The data collected from the field using the above-mentioned tools need to be analyzed to provide meaningful information that best describes and interprets the findings of the research as well as helps the researcher derive deep insights from the study. The data collected was analyzed using descriptive statistics such as charts, line graphs, frequency tables and percentages. These statistical tools were found to be more appropriate in presenting the type of data used in this study.

## RESULTS

**Level of patronage of the grazing reserves as indicated by pastoralists:** The trend of pastoralists' sedentarisation and utilization of Gongoshi Grazing Reserve (GGR) and Nyibango Grazing Reserve (NGR) was depicted in Fig. 1. In GGR majority of the pastoralists, (52%) indicated that they have been settled in the reserve for a period of over forty years while 8% of the pastoralist had been utilizing the reserve for a period of one to ten years.

Based on the pastoralists' years of sedentarisation in the reserve, it could be deduced that there is a dwindling trend in the pattern of pastoralists' patronage in the reserve over the years. A larger proportion of the pastoralists had settled in the reserve for more than forty years and the lower proportion had stayed from one to ten years. Some studies pointed out that pastoralists' trend of sedentarisation is mostly accomplished through a flexible movement pattern that involved exploiting new arable communities every year. The trend of pastoralists' sedentarisation in Gongoshi grazing reserve is observed to follow a gradual pattern of decline that could be attributed to resource scarceness.

The level of utilization of NGR by pastoralists reveals that 20% of the pastoralists have been utilizing the reserve for twenty years. While 50% have been using the reserve for grazing for 21 to 40 years whereas, 30% have been patronizing the reserve for over forty years when it was a forest reserve before its conversion into a grazing reserve in 1986. This reserve provides grazing land for pastoralists. This agreed with the findings of other scholars who established that grazing reserves are areas where pastoralists could graze their livestock during the rainy season when crop cultivation is being carried out by farmers to avoid conflict.

The period between 30-40 years has the least patronage in the two reserves, this period coincides with the 1980s famine of Northern Nigeria which was described as the most disruptive historical famine in the country as shown in Fig. 1. That could be the likely reason for the low patronage of the grazing reserves during this period, but the decline in patronage in the reserves could be linked to resource depletion in the two reserves.

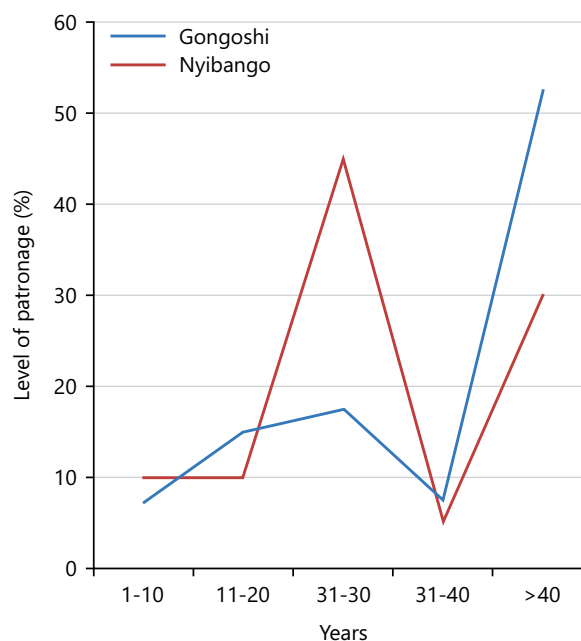


Fig. 1: Trend of pastoralists' utilization of Gongoshi and Nyibango grazing reserve

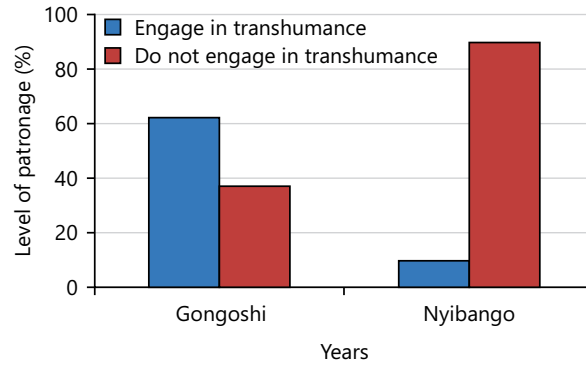


Fig. 2: Pastoralists' involvement in transhumance

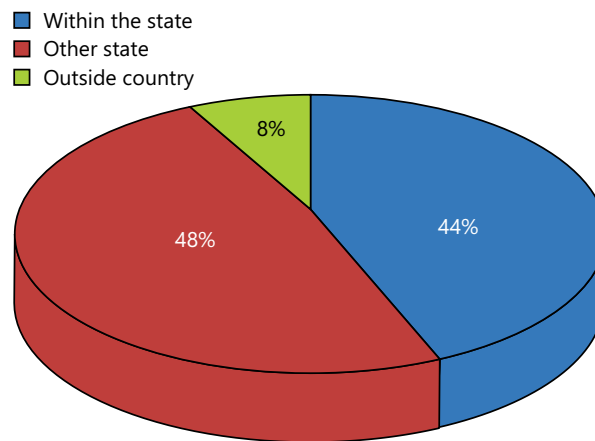


Fig. 3: Distance travelled by transhumance pastoralists

As 37.5% of the pastoralists in Gongoshi, indicated that they mainly grazed their livestock in the reserve throughout the year, whereas 62.5% engaged in transhumance during the dry season as indicated in Fig. 2. In Nyibango 10% of the pastoralists engage in transhumance livestock-management system, however, 90% do not engage in transhumance. According to those pastoralists who engage in transhumance, the major reason is the inadequate feed resources for livestock utilization. Nevertheless, most of the pastoralists in Nyibango were observed to be less engaged in the transhumance practice of livestock production. This showed that pastoralists in Nyibango are more sedentary than those in Gongoshi. It was also observed that as pastoralists become sedentary, their movement tends to decrease. It can be said that the Nyibango pastoralists are experiencing an agricultural transition.

**Distance travelled by respondents during transhumance:** As 44% of the pastoralists in the Gongoshi reserve indicated that their movement is within Adamawa State, particularly along the bank of the river Benue as shown in Fig. 3. While 48% of the pastoralists move to other States, particularly Taraba and Benue States, 8% of the pastoralists indicated that they also graze their livestock outside Nigeria in neighboring countries like Cameroon. Previous studies showed that the movement of livestock herds is a central component of land management. Pastoralists have access to forage and water across space and time through reciprocal rights to common-pool resources sometimes belonging to other people.

**Available infrastructure in the grazing reserves:** The existing infrastructure in Gongoshi and Nyibango grazing reserves and their state as functional or non-functional were shown in Table 1.

Table 1: Available infrastructure in the study area

List of infrastructure	Gongoshi			Nyibango		
	Status	Quantity	Condition F or NF	Status	Quantity	Condition F or NF
Schools	A	2	F	NA	-	-
Clinic	A	1	F	NA	-	-
Electricity	NA	-	-	NA	-	-
Borehole	A	3	2=F,1=NF	NA	-	-
Well	NA	-	-	A	1	F
Earth Dam	A	3	2=F, 1=NF	A	1	NF
Veterinary clinic	A	1	NF	A	1	NF
Veterinary officer	-	-	-	A	-	F
Milk collection center	NA	-	-	NA	-	-
Seed and hay store	A	-	NF	A	-	NF
Access road	A	-	F	A	1	F
Garage and implement shed	NA	-	-	NA	-	-
Pasture plot	UC	1	UC	A	-	NF
Security Post	NA	-	-	NA	-	-
Staff quarter	A	2	NF	A	2	F

Source: Fieldwork 2017, A: Available, NF: Not functioning, NA: Not available, UC: Under construction and F: Functioning

In GGR, there are two primary schools situated in the reserve, one is a Model Nomadic Primary School (MNPS) while the second is a Regular Primary School. Both the schools are functional only because they lack basic facilities like pupils' desks and a library, but the schools have a staff room, toilet and staff quarters but none of the staff is living in the reserve.

There is one human clinic with two staff and some equipment. There is also a veterinary clinic in the reserve but there was no staff. Three boreholes were sunk in the reserve of which two are functional. There is also one hay store and two staff quarters. There are three Earth dams in the GGR, one has silted while the other two are functioning.

In Nyibango grazing reserve, the infrastructure available is one earth dam, but the dam has silted, a veterinary clinic, two staff quarters, a pasture plot, one hay store and an access road but some of the infrastructures are dilapidated except the staff quarters, well and an access road which is functional.

## DISCUSSION

The government over the years has invested much in the establishment of grazing reserves to boost livestock production in the country. One of the cardinal reasons for these reserves as reiterated by the grazing reserve bill was to discourage Transhumance and encourage and enforce ranching and restricted grazing in Nigeria. The findings of this work revealed that these grazing reserves had not yielded the expected result as most of the pastoralists in the study area still engage in transhumance, which was pointed by previous study as major cause of conflicts between herders and farmers in Nigeria<sup>10-13</sup>. This movement was occasioned by resource depletion and inadequate forage in the two reserves. This was occasioned by the 1980s famine of Northern Nigeria as discussed by Umar and Danjuma<sup>14</sup>.

The environment in which the pastoralists live restricts livestock production throughout the year because of deforestation, desert advancement, drops in the water table in the dry season and erratic weather which narrow the scope of livestock production. Mobility was seen as a natural strategy of pastoralists to optimize production under a diverse landscape and a precarious climate. The search for water and forage, triggers mobility and migration. It was also discovered that most of the infrastructural facilities in the reserves were not functioning. Therefore, to encourage the sedentarization of pastoralists in grazing reserves, there is a need for modification of the environment or alternative ways of providing the basic needs of pastoralists by improving the quality of services and facilities within the grazing reserves<sup>13</sup>.

It is thus recommended that beyond establishing grazing reserves, the extant laws that regulate the movement of the pastoralists in the State should be enforced. This can be managed by the government prioritizing the resource need of the pastialists as recommended by Nwangwu *et al.*<sup>15</sup>. Pastoralists should be trained in haymaking and be provided with appropriate tools or any logistic support to alleviate the problem of feed shortage during the dry season. This would, in turn, improve food security and the livelihood of the pastoralists by preventing or at least minimizing the morbidity and mortality of animals during the dry season. The pastoralists should be educated and enlightened to see pastoralism as a business and not just a way of life; thus, they should learn to invest more in it by providing adequate feeds for their livestock instead of depending majorly on natural pastures.

## **CONCLUSION**

This paper examines pastoralists' patronage of grazing reserves in Adamawa State. It was supposed that establishment of grazing reserves will fulfill certain objectives, one of such objectives is to discourage transhumance and encourage sedentarization of pastoralists. This will be achieved through the provision of resources and facilities for modern livestock training of pastorialists in hay making to reduce over dependance on natural forage. There is the need to enforce extant laws that regulate the movement of the pastoralists in the state. These measures will improve food security and the livelihood of the pastoralists by preventing or at least minimizing the morbidity and mortality of animals during the dry season.

## **SIGNIFICANCE STATEMENT**

The feedback provided by this study is beneficial to stakeholders in livestock production in the provision of appropriate strategic intervention and policies and programs that will help to promote the optimum utilization of grazing reserves in the state and the nation at large. It also helps researchers as it provides information on the low level of their utilization due to resource depletion. The composition and the palatability of available pastures in the reserves can be further studied.

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