

Examining the State of Pastoral Resources under Common Property Regime, and Pastoralists Accessibility in Drylands of Niger and Nigeria

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Abstract: Pastoralism faces changes in Nigeria and Niger. This raised the call for interrogating the two countries' stewardship of pastoral resources. The objectives of this study were to examine state of pastoral resources and make comparison on how legal and institutional, frameworks determine access to these resources in the drylands of Niger and Nigeria. Cropland, land under permanent meadows and pasture and forests lands data for Niger and Nigeria for 1995, 2000, 2005, 2010, 2015 and 2020 were downloaded from UN Food and Agricultural Organisation website. Seven communities namely: Abalak, Dakoro and Gaya (in Niger) and Augei, Dakingari, Gummi and Wurno (in Nigeria) were purposively selected and pastoralists were interviewed and/or observed. Descriptive statistics was employed in data analysis. We found that croplands in the two countries have significantly expanded. These expansions might have benefited from forestland depletion but not from land under permanent meadows and pastures (LUPMP) especially in Niger. LUPMP has increased in area in the two Countries. Pastoralists in Niger abhor privatization of pastoral resources. They also demand more access to pasture. In Nigeria, encroachment of pastoral resources by farmers, private ranches and mining, scarce and decaying infrastructure, lack of tenure right to pastoral resources are some of the problem's pastoralists face. We conclude that agricultural intensification, through its conversion of other forestlands, threatens livestock production more essentially in Niger than in Nigeria and recommend that pastoral resources need to be prioritized by Governments as a regional strategy for communities' livelihood enhancement and conflict prevention mechanism.

Keywords: Pastoral resources, transhumance pastoralism, drylands, Niger, Nigeria

INTRODUCTION

Pastoral livestock production system is the predominant livelihood of the arid and semi-arid Africa (Assal, 2006). Pastoral production take place in about 61 to 66 per cent of the continent where 55% of the world's pastoralists are located (Oxfam, 2009). The West-African dryland is a transition zone bordering the Sahara Desert in the North and the humid zone close to the Atlantic Ocean in the South. The climate of the drylands has been characterized to be highly variable in both space and time (Ouédraogo et al., 2021). For centuries, the region has been active in providing farmers and herders means of sustenance (Dongmo et al, 2012) and livestock transhumance has been acknowledged to represents a key indigenous adaptation strategy to environmental change and fully make use of seasonal availabilities of watering points and pasture (Umutoni & Ayantunde 2018; Motta et al., 2017; Ayantunde et al., 2014; Moritz, 2008; Pamo, 2008; Scoones & Wolmer, 2006; Adriansen & Nielsen, 2002). It has been reported that restricting livestock mobility often has disastrous consequences (Moritz et al, 2013).

Transhumant pastoral system has a key economic role in the economies of West African countries (SWAC/OECD, 2007; FAO & CIRAD, 2012) where it accounts for around 40% of the

agricultural GDP (ECOWAS/OECD, 2008). In all sub-Saharan Africa, the dryland area, together with the neighbouring humid West Africa, has the preponderance of livestock production whose performance in cattle production is encouraging. Globally a substantial portion of pastoralists live in marginal lands and are highly vulnerable to the impacts of rainfall variability (Adger et al., 2014; Herrero et al., 2010), however, improvement in veterinary medicine and the emergence of large herd owners have led to an increase in the population of livestock. Inter-regional and cross-border mobility remains a potent adaptation strategy by the pastoralists avoiding drought hazard in the region (Umutoni & Ayantunde, 2018).

Pastures and grazing systems are among the basic and most abundant natural resources such as oceans, lakes, fisheries, forests, groundwater basins that are sufficiently large in supply that identifying recognized users and exclusion other users altogether is tedious task (Ostrom, 2008). They are called common-pool resources or common property resources. Common and Stagl (2005) consider that common property resources are environmental resources that the rights to their usage are held by communities of individuals, including the government. Countries and communities' institutional regimes (that is the set of institutional arrangements relating to a resource or a set of natural resources) are crucial in determining access to resources and or its scarcity/marginality for certain resources users. It is obvious that among the institutional arrangements regulating human-nature relationships, rights and obligations to natural resources, access and use rights in particular play a crucial role (van Griethuysen, 2006). Within the four types of regimes vis a vis: open access, state regime, common regime and private property, accessibility to resources decreases or is more restrained and marginality increases as one cross the continuum from open access resource to private property regime.

Marginality or resources deprivation has been a phenomenon that can be found within ecological realms. These include geophysical boundaries, environmental thresholds, or habitats that exclude particular species or populations (Leimgruber, 2004). Resources deprived individuals and groups suffer exclusion in accessing resources due to unfavourable (geographical) location or are normally restricted of local conditions (Gatzweiler et al., 2011). Scarcity or lack of access to resources increases communities' climate change impacts, making adaptation harder especially in constrained low carrying capacity areas (Birkmann et al. 2022). The plights of the pastoralists in the study area represent a vivid practical example of this resource marginalization theory. As a result, they, more than the farmers face adverse effects of environmental variability, socio-economic changes that threaten grazing resources -grazing routes, rangelands, water bodies, veterinary services etc (Adamu & Umar, 2017; Campbell et al., 2007; Boko et al., 2007).

Drylands are low rainfall (arid, semi-arid and dry sub-humid) areas in which the ratio of mean annual precipitation and potential evapo-transpiration of about 0.05 to 0.65 (Feng & Fu, 2013; Safriel, 2005; White & Nackoney, 2003; Hulme, 1996). The dryland zone of West Africa has also been characterized with highly variable rainfall of inter-annual coefficient variation of 25 to 35 % (Adamu & Umar, 2017; Iliya et al., 2011; Adefolalu, 2007). In spite of water shortage challenges, drylands agro-ecosystems across the globe are naturally endowed with pastoral resources such as diverse mix of food, silage and cereals, vegetables, rangeland and pasture species. The aforementioned drylands challenges precipitated into intense competitions for the scarce diminishing environmental resources that often culminate into conflicts (Adamu & Umar, 2017).

It is increasingly acknowledged that major socioeconomic, agro-ecological and institutional changes, are having a profound impact on the setting in which pastoral societies function. Saghir, (2015), noted that business as usual is not an option because it has been projected that by 2030, here will be up to 70% increase of population that are vulnerable to drought. Rapid environmental, climatic variability/changes, poor infrastructure, conflicts and political marginalization combine to threaten TLS (Challinor et al., 2007; Saghir, 2015) especially in the drylands of Northwestern Nigeria and South-central Niger Republic, an ecologically continuum and historically homogenous region. These challenges have raised the need for interrogating the management practices or stewardship of the pastoral common-pool resources in the study area. According to FAO (2011), improving pastoralists' capacities to move towards sustainable management of rangelands requires

among other measures adaptive management approaches, social organization and tenure arrangements that cover the common property resources upon which their livelihoods depend. Hence the objectives of this study were to (a) examine the states of pastoral resources under common property regime in Niger and Nigeria and (b) make comparison on how institutional, legal and policy frameworks determine access to resources in Niger and Nigeria.

METHOD

Description of Study Area

The study area entails a low to moderately rainfall areas (Figure 1). Within the Nigerian part, the area is situated within two distinctive agro-ecological zones viz: (a) semi-arid areas (1) with rainfall between 800-1000mm and semi-arid areas (2) with rainfall between 600 – 800mm and (b) marginal areas of arid zones with annual rainfall between 400mm to 600mm. While the Nigerien part entails low rainfall areas of between less than 150 mm in the Sahara belt - which covers 77% of the total land mass of the country) to 150 – 350 mm in the Sahel-Sahara zone. The pastoral bowls zone is situated within this agro-ecological zone. Lastly, is the 350 – 600 mm in the Sahel Savannah belt and slightly above 600 mm in the Sudano-Sahel strip which latter accounts for only 1% of the Country's total area (Sendzimir et al., 2011). Duration of annual rainfalls, in Niger, stretches from July to September, it rarely commences from June. The pattern of rainfall in all the area (both Northwestern Nigeria and South central and South-western Niger) is characterized with unpredictability and unreliability and highly variable in spatial and temporal dimensions with inter-annual variability of between 15 and 20%. As a result of the large inter-annual variability of rainfall, this zone is subject to frequent dry spells which can result in severe and widespread droughts (Umar & Adamu, 2019; Adamu & Umar, 2017).



Figure 1. Location map of the study area

Agriculture (crop cultivation, agro-pastoralism and transhumance livestock herding) is the main economic activity of communities in the study area. More than 20% of Niger's export earnings are generated by livestock, produced upon rangelands and through transhumant pastoralism (Zakara & Abarchi, 2007). The varying rainfall conditions in the study area has made it to be highly suited for dryland-adapted, pastoral, and agro-pastoral livelihoods (Bruggeman et al., 2010; Mortimore, 1989). Agriculture represents the main source of livelihoods in Northwestern Nigeria. Cereals, legumes, sweet potato, fruits and vegetables are among the crops grown in the study area which is among those with highest fertility rates in the World (Bertoni et al., 2016). Land and forests are crucial for livelihood enhancement of the communities. However, rapid rural population growth accelerates the expansion of cultivated land for subsistence farming and aggravates land pressure as well as land conflicts. Likewise, the steady growth of the urban population fuels the demand for agricultural products, which is a major driver of land-use change (Gado, 2000).

Sampling, Data and Method

Drylands of Northwestern Nigeria and South-western and central Niger republic formed the research population of this study where three communities namely: Abalak (Lat 15.46398, Lon 6.284611), Dakoro (Lat 14.50813 Lon 6.764408) and Gaya (Lat 11.88392, Lon 3.455148) drawn from three out of the eight Niger's regions and four communities namely: Augei (Lat 12.8932 Lon 4.56362), Dakingari (Lat 11.649799 and Lon 4.064435), Gummi (Lat 12.14195, Lon 5.113741) and Wuruno (Lat 13.28543, Lon 5.421276) drawn from three out of seven states of Northwestern Nigeria were purposively selected. These places are important transhumance livestock production points hence pastoralists were interviewed, observed or information regarding their livelihoods are synthesized from the literature. Both primary and secondary sources data were used in this research.

The procedure used for data collection involves acquisition of time series land-use land cover data (specifically the cropland, land under permanent meadows and pasture and forests lands) for the years 1995, 2000, 2005, 2010, 2015 and 2020) downloaded from United Nation's Food and Agricultural Organisation (FAO) STAT website accessible free of charge at <https://www.fao.org/faostat/en/#data/LC>. The data sets contain a large number of classes and subclasses of agricultural land, for which data are annually collected through a questionnaire sent to countries by FAO. This research has been supplemented with data generated through interviews, observations, literature review and synthesis of documentary data and information. Descriptive statistics have been employed in analysing the data generated for this research. Results have been presented in forms of charts, graphs and texts.

RESULTS AND DISCUSSION

State of pastoral resources under property regimes in Niger and Nigeria

Cropland is among the most important component of arable land of a country. Unlike some environmental resources such as permanent meadows and pastures lands, primary forest and other forest that are open access, common pool resources or state regimes, cropland is purely a private property in most countries. Rapid increase in cropland may be a sign of land use conversions of other such as pasture lands, forests (the two are common-pool resources in most countries) etc. to cropland (private regime).

In Niger, the rate of change of cropland indicates an increase of about 152,600 hectares in a year with a highest increase in the years 2010 – 2015 when 45% of the expansion occurred. This has contrasted with Nigeria where there is an increase of about 130,000 hectares of cropland in a year with a highest increase in the years 1995 – 2000 when 85% of the expansion occurred (see Figure 2). This finding has tallied with World Bank, (2016) that from 1990 to 2015 the Nigerien percentage net change of agricultural land (27.7%) is higher than that of Nigeria (13.0%).

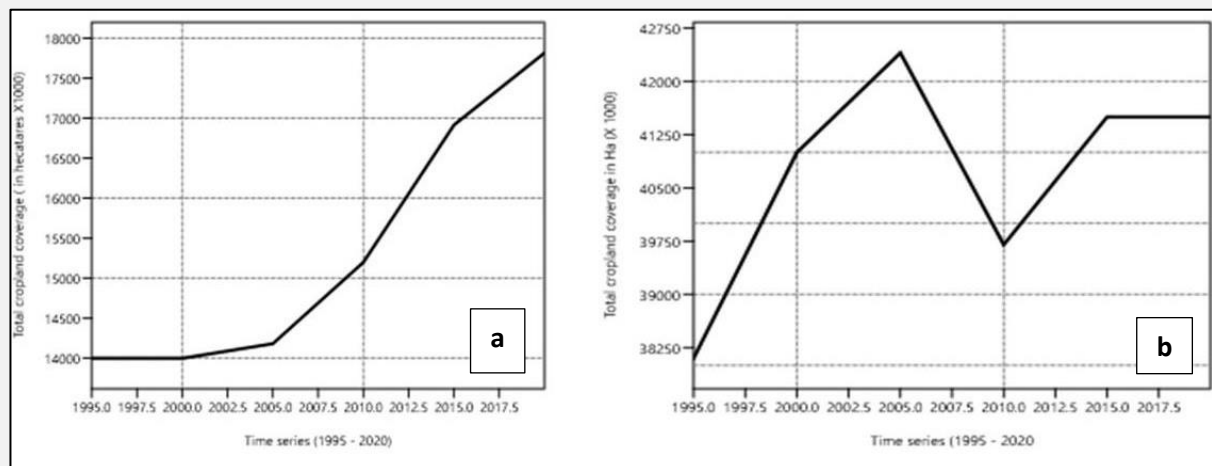


Figure 2. (a) Total Niger's cropland coverage; (b) Total Nigeria's cropland coverage

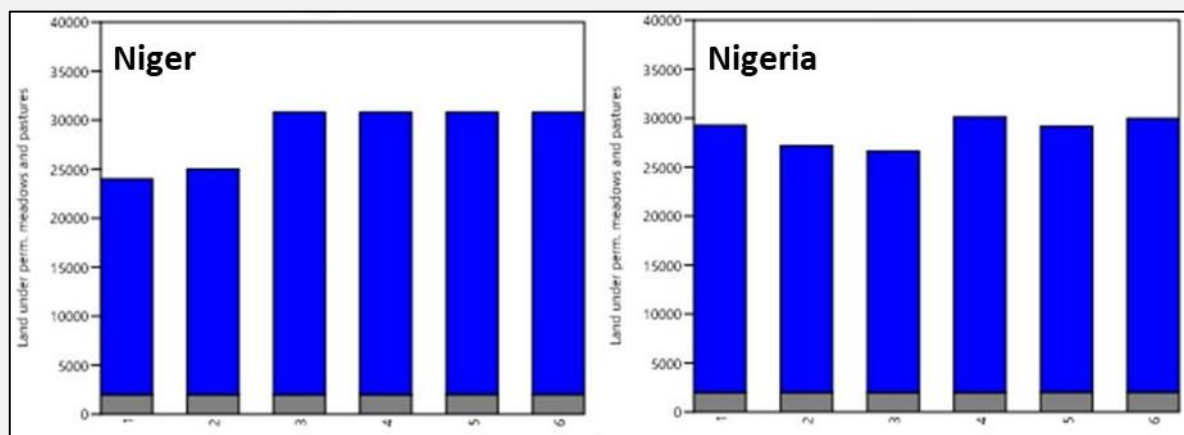


Figure 3. Trend of permanent meadows and pastures lands

With regards to the trend of land under permanent meadows and pastures areal coverage's change in the two countries, Figure 3 shows a steady significant increase in Niger's permanent meadows and pasture lands and a slight increase in Nigeria permanent meadows and pasture lands from 1995 to 2020. So the increase in the croplands that occurred in the two countries did not benefit from land under permanent meadows and pastures especially in Niger. It has been asserted that in Niger, pastoral zone, and cropland have increased, however, the area of available grazing land has decreased (Ibrahim, et. al., 2014).

The trend with regards to the primary forest is that of static (no change) in Niger depicted by a continuous horizontal trend line while a rapid decline or wanton depletion of these resources has been observed in Nigeria. There is however, a sharp decrease in other forest areal coverage in Niger only from 1995 to 2000 followed by a moderate decline from 2001 to 2020 (Figure 4). This finding has been corroborated by Adamou et al. (2021) who posited that in Niger, about 100,000 to 120,000 ha of forest area disappears each year. He further added that the rate of decrease of the forest area between 1990 and 2000 is higher than that of 2000-2016 a fact he attributed to government efforts in combating environmental degradation. But in Nigeria, this trend is that of moderate decline in the areal coverage of other forest from 1995 to 2020 (Figure 4). This result also corroborated World Bank, (2016) that from 1990 to 2015 the Nigerien percentage net change of forest land (area) was -0.6%) which is lower than that of Nigeria's -11.2%. A research by

Achugbu et al. (2022) on land use change from 2000 to 2020 in the Sokoto-Rima River Basin (SRRB) in the Northwestern Nigeria shows that cropland has expanded by 45% areal extent while forest areas have reduced in size by 25%. The marginalization of pastoralists ecologically has been acknowledged (Adger et al., 2014; Herrero et al., 2010; Adamu & Umar, 2017). The foregoing findings preliminary shows that agricultural intensification threatens pastoral livestock production more essentially in Niger than Nigeria through its conversion of other forest lands in Nigeria and Niger.

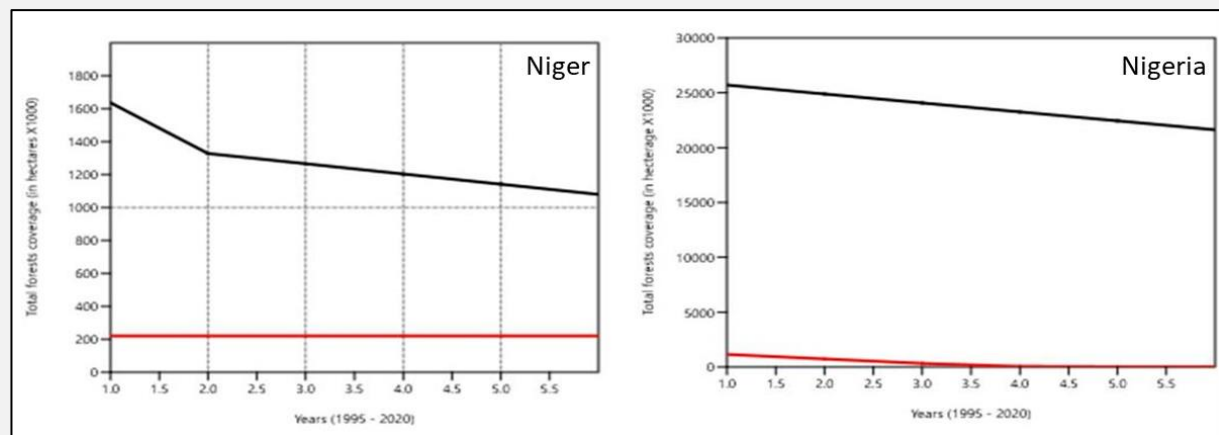


Figure 4. Trend of primary forest (red line) and other forest (black line) lands

The above analysis made use of a coarse resolution data. Exploring a whole country on a snapshot cannot generate a detailed place-to-place environmental variability. Rapid human population increase and urbanization in the Southern Niger have increased pressure on land use demand for crop cultivation. Considerable green spaces (vegetated areas) are converted to farmland or built up gray areas (Adamou et al., 2021). There was conversion of million hectares of forest wetlands and rangelands to farmlands (Cleaver & Schreiber, 1994). It has been reported that over the period 1975-2013, cultivated area increased from 12.6 to 24.5% of the total agricultural land area, which represents a total increase of 94.2% (Adamou et al., 2021). This and the fact that Achugbu et al. (2022) has revealed that, from 2000 to 2020, grass/bare land and shrub land in the SRRB (of Nigeria) decreased by 66% and 67% respectively. This confirmed the need for using higher resolution data for research(es) that will unearth regional and local differences with regards to pastoral resources in the study area. Hence this study feels the need for further future research that will utilize fine resolution data in the study area so as to bridge this identified limitation and knowledge gap.

Legal and policy frameworks for access to resources in Niger

In Niger the management tools used in the stewardship of pastoral resources resulted in emergence of the following legal, institutional and policy framework:

1. The Law N° 61-05
2. Rural Code Regulations
3. The home grazing territory (*terroir d'attache*) and
4. The Sector-Specific Ordinance on pastoralism (2010)

The above mentioned legal, institutional and policy framework precipitated into the following development with regards pastoral resources.

Designation of pastoral zone

The 1961 Law N° 61–05 effectively divided Niger into two sections one for pastoral production and the other for crop cultivation (see Figure 5). This was an effort put to protect pastoral resources and pastoralists' user rights of these resources from agricultural expansion. The law designated 15th degrees parallel far northerly Sahara frontline edge for pastoralism and prohibits rain-fed agriculture north of the 350 mm isohyets (Jamart, 2011; Moutari & Tan, 2008). Dakoro, a low (1 – 2 months) rainfall area that lies at the interface of the agricultural and pastoral zones, in 1947 the colonial administration made a formal distinction between territorial areas for agriculture (*Zone agricole*) and pastoralism (*the Zone pastorale* see Figure 5) (Mohamadou, 2009; Oxby, 2011). Hence, the 1961 Law N° 61–05 reconfirmed this distinction between zones in Dakoro. But presently, farmers have made serious encroachment and pushed the areal limit set aside for agriculture northwards into *the Zone pastorale* through the adoption of irrigation systems.

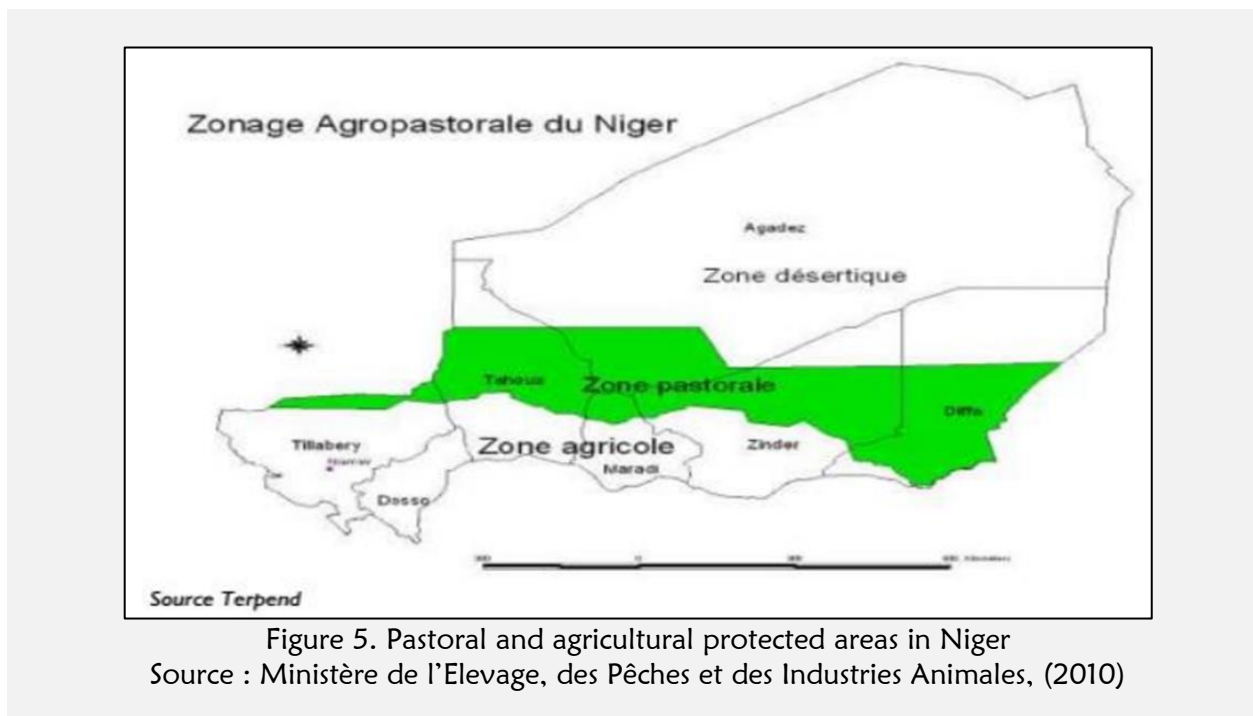


Figure 5. Pastoral and agricultural protected areas in Niger
Source : Ministère de l'Élevage, des Pêches et des Industries Animales, (2010)

It has been observed that pasture has diminished in the Dakoro area owing to factors such as the expansion of agricultural frontiers northwards into more traditional pastoral grazing areas and practice of some farmers and urban-based traders of fodder harvesting in the rangelands and transporting it to store and sell as animal feed to pastoralists during the dry season. Oxby (2011) reported that pastoralists in Dakoro and Abalak face the problem created by hoarders who cut pasture for storage and sale during the dry season. This is straight away a contravention of Niger's 2010 Pastoral Code which makes it illegal for pastoralists to harvest grass for their own livestock's usage apart from grazing the rangelands. However, pastoralists now call for the review of this legislation to allow them to have more access to pasture through harvesting grass during the dry season for personal use, and to disallow farmers and private individuals from making use of pasture for a business or commercial purpose.

Rural Code Regulations

The Law No 61–05 has been implemented at local as well as national levels in the forms of rural code which is one example of national legislation that formally secured existing corridors, enclaves and recognised pastoralists' user rights of grazing resources (Hesse & Odhiambo, 2002; Fava et al., 2018). The 1993 Code being coordinated by the Permanent Secretariat of the Rural Code is also called Ordinance No 93-015. It is a turning point legal framework that is composed

of rules and regulations concerning land tenure and natural resources management and an implementation arrangement (Jamart, 2011). The Code made two important land tenure points with regard to the farm landholders and pastoralists grazing pastoral lands where it granted the former private property regime and the latter State regime enjoying open access.

A significant threat to rural code's provision in Abalak of Tahoua region especially with regards to its open access to the pastoral resources is the wanton privatization of pastoral resources where large-scale land acquisitions for ranching has been the trend. There have been reported proliferations of private cattle ranches created in the Niger's most productive open access pastoral areas. Three private ranches of areal dimensions: 1,200 ha, 2,500 ha and 4,800 ha, each have been reported to be established by some highly influential traders in the Abalak area. It has been estimated that, between 2000 and 2012 so many land acquisition applications for rural concessions covering a total area of 38,500 ha have been made. The most disturbing part of this development is that these ranches are just fenced and used as fodder reserves for the dry season usage, but the ranch owners graze their animals on the neighbouring rangelands during the rainy season, where they compete with the herds of local pastoralists. This causes the smallholder pastoralists to face exclusion from access to pastoral resources. The pastoral system is threatened by this growing large-scale land-grabbing process where about 6,000 Ha of pastoral lands in Abalak and neighbouring areas fenced off for private ranches (Ibrahim, et. al., 2014).

The home grazing territory (*terroir d'attache*)

The home grazing territory (*terroir d'attache*) is defined by Article 2 of the Rural Code as an area (a territorial unit) of land set and recognized by custom and/or legislation on which pastoralists usually reside, live or stay for substantial part of the year. It is the territory to which they feel attached when they move or travel whatever the reason- for transhumance or migration (Moutari & Tan, 2008; Jamart, 2011). The Niger Rural Code has supported pastoral tenure rights through elevating customary systems to the same legal status as statutory land property, and granted the pastoralists with "priority use rights" of natural resources (water, land, pasture, etc.) in their home areas (*terroir d'attache*) to the extent that they have right to claim for compensation in a situation where the state decides to put these resources under a different use for instance mining (de Haan, et al., 2016; Brottem & McDonnell, 2020) However, crop cultivation continues to drift northward without recourse to the law and more recently pressure on land and natural resources in the south of Niger has pushed agriculture further northwards. Besides that, herders and owners of livestock have begun to grow crops as a way of livelihood diversification and poverty eradication strategy (Moutari & Tan, 2008; Moritz et al, 2013). In the Southern Niger areas of mixed land use (agriculture, agro-pastoralism and pastoralism), where mobility is increasingly constrained due to land use competition with crop cultivation and in the more southward areas such as Gaya corridors play a vital function. Here conflict between herders and farmers about pasturelands occupied by farmers often result in fatalities (AREN, 2004).

Ordinance on pastoralism (2010)

The above Ordinance on pastoralism (2010) *Projet de Loi sur le Pastoralism* has been developed by the Permanent Secretariat of the Rural Code as a response to the agitation of the pastoralists. This According to Moutari & Tan (2008), has been the outcome of sustained lobbying by pastoral civil society groups to improve the land tenure security of pastoralists. Hence, Article 3 of the law specifically mentioned that the State recognizes and guarantees pastoralist mobility as a fundamental human right and it no longer has the right to grant private land concessions in the pastoral zone, if they obstruct the mobility of pastoralists. In the 2010 Ordinance, pastoral mobility has been regarded as a rational and sustainable form of land use that can only be restricted temporarily and then only for reasons of security of people, animals, forests or crops. Article 5 prohibits the granting of exclusive land rights that would restrict pastoralists from free access to natural resources. The 2010 Ordinance on pastoralism if enforced effectively it will serve as a way forward to the foregoing challenges in the foregoing three sections.

Legal and policy frameworks for access to resources in Nigeria

Nigeria like Niger also has legal, institutional and policy frameworks enacted for the stewardship of pastoral resources. Some of these frameworks include: Forestry Ordinance of 1916, The Land Use Act of 1978, The Nigerian 1965 Grazing Reserve Law and The Rural Grazing Areas (RUGA) 2019. The Land Use Act of 1978 is the prevailing legislation governing land tenure. It recognizes duality in the management of rural lands where statutory and customary legal systems co-operate side-by-side. In rural areas customary institutions still play a significant role in land management (Hoffmann, 2004).

Forest / Grazing Reserves

Forest reserves were the first protected areas created in Nigeria, in 1896 by the Colony and protectorate of Lagos (Yelwa et al., 2019). In 1908, Forestry Ordinance was promulgated for the establishment of forest reserves. This was revised in 1916 to extend the jurisdiction of the Forest Department to cover the Northern protectorate. The Land Use Act, the nation's legal framework should have set the procedures on how to own, acquire or use lands. This law was considered as a land reform whose principal achievement was nationalisation of all Country's land. It therefore vested all the Country's lands under the control of their respective state governors who are given authority to manage land for the benefit of all Nigerians (Omokhoa & Okuchukwu, 2018). Management of rural land (mostly in terms of allocation) was given to local governments. They have the power to grant customary rights of occupancy for all rural land uses. The Act also restricted transfer of statutory and customary land rights. However, due to legal dualism operating in the Country, rights to land are often determined by customary tenure rules (Hoffmann, 2004).

It has been argued that the Land Use Act does not provide a supportive legal framework for pastoralists' livelihood. They are put at the mercy of their host communities as the Landuse Act does not provide traditional pastoralists with any legal rights over land (Hoffman, 2004). The Act has also been blamed to aid in the low implementation of grazing reserves establishment (Abdullahi et al., 2015; Waters-Bayer & Taylor-Powell, 1984). The Nigerian Grazing Reserve Law, ambitious programme to support pastoral livelihoods was only aimed to settle herders in northern Nigeria (and discourage their century old transhumance mobility) prescribed a minimum of 10% of national territory to be legally acquired as grazing reserves for lease allocation to herders. The Law makes it the prerogative of state governments and local governments to establish grazing reserves (Hoffman, 2004).

In furtherance to the grazing legislation scheme, in 1980, 2.3 million ha of land was acquired by Northern States Governors as grazing reserves. This was only 10% of the total amount of 22 ha earmarked for the scheme. However, the Nigerian central government failed woefully in equipping the reserves with pastoral infrastructure such as water points, veterinary centres and nomadic schools and ensuring their protection from encroachment by farmers or other developments such as settlement, mining etc (Abdullahi, et al, 2015; Waters-Bayer & Taylor-Powell, 1984). Over five decades after the enactment of Grazing Reserve Law, most of these reserve areas are being taken over by other land uses without making alternatives reserves. Limitations of the Landuse Act and Grazing Law in protecting the reserves exacerbate threats to their extinction. Consequently, many of the existing grazing reserves are in deplorable conditions and they also suffer encroachment by agriculture, private ranches and mining, and lack pastoral infrastructure to support a large pastoral population/production. Some of the degraded grazing reserves are hosting cattle rustlers and other criminals (Abdullahi et al., 2015). Therefore, some pastoralists interviewed in Gummi on 23rd April 2016 generally expressed dismay with the Governments initiatives towards their livelihoods. They confirmed utilization of forest reserves, and grazing reserves resources. They however, maintained that indiscriminate encroachment into the already established grazing lands meant for the headsmen by farmers lead to several clashes. In the same vein pastoralists interviewed in Augei, Kebbi state on 12th February 2019 maintained that they prepared to go to central and southern part of Nigeria than to settle in some of the forest and grazing reserves within the SRRB where his security and that of his cattle are not guaranteed.

Similar to the 1964 grazing reserve bill, there was in 2016 National Grazing Reserve Bill proposed to be established in each of the States of the Federation Nigeria which is yet to see the light of the day or implemented. The objectives of this Bill are geared towards improving livestock farming and curb incessant conflicts between cattle farmers and crop farmers through discouraging transhumance and encouraging or enforcing private ranching and restricted grazing. The influence of this Bill is visible in the National Livestock Transformation Plan (NLTP), a ten-year project designed to run from 2019 – 2028 that attempts to address pastoral production challenges including the low performance of grazing reserve initiative. Crop-livestock integration was proposed to be exit not only in the reserve but beyond there. This was planned to maximize the utilization of farms residues and minimizing sources of friction that lead to clashes between farmers and herders. However, the plan was formulated using top-down approach because some transhumant herders interviewed in Wurno of Sokoto 23rd April 2016 and Dakingari of Kebbi state on 12th February, 2019 opined that they don't welcome any Government intervention or initiative that will restrict the mobility of their cattle for search of pasture. They added that, to them ranching is not economical and alien to their culture.

CONCLUSION

We conclude that croplands in Nigeria and Niger have significantly expanded in areal dimension from 1995 to 2020. These expansions might have benefited from forestland depletion but not from land under permanent meadows and pastures (LUPMP) especially in Niger republic. LUPMP has increased in area in the two Countries. The trend of land under permanent meadows and pastures areal coverage's change in the two countries show a steady significant increase in Niger while permanent meadows and pasture lands in Nigeria was of a slight increase from 1995 to 2020. It has been asserted that in Niger, pastoral zone, and cropland have increased, however, the area of available grazing land has decreased. Therefore, agricultural intensification through its conversion of other forest lands threatens pastoral livestock production more essentially in Niger than in Nigeria.

Pastoralists in Niger abhor large scale private acquisitions of land for ranching which excludes smallholder pastoralists. They also demand more access to pasture. In Nigeria encroachment of pastoral resources by farmers, private ranches and mining, scarce and decaying infrastructure, lack of tenure right to pastoral resources are some of the problem's pastoralists face. We recommend that pastoral resources need to be prioritized by Governments as a regional policy and strategy for communities' livelihood enhancement and conflict prevention mechanism.

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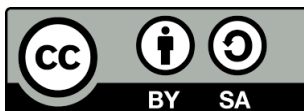
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