

SOCIO-ECONOMIC EFFECTS OF LAND AND WATER CONFLICTS ON PASTORAL LIVELIHOODS IN IMO AND ABIA STATES, NIGERIA.

* **Ajaero, J.O., Chikaire, J.U and Aminu, G.O**

Dept. of Agricultural Extension, Federal University of Technology, Owerri, Imo State, Nigeria;

Email : futoedu23@gmail.com 08065928862

ABSTRACT

Conflicts alter livelihoods of people in conflict situation. The pastoralists are not left out since animal production is their way of life. This study therefore investigates the effect of conflicts on their livelihoods. The specific objective were to identify perceived effects of conflict on pastoral livelihoods; identify perceived conflict shocks/trends and ascertain appropriate response strategies for cushioning the effects of conflicts on pastoral livelihoods. Data were collected from 120 pastoralists in their various camps in the States with the aid of a questionnaire and oral interview. Mean and standard deviation were used to analyze the data. Livelihood assets of the pastoralists were grouped into 4 classes which included - natural, physical, financial and physical assets. With a mean response (M) of 2.50 and above, conflicts affected pastoral livelihoods in the following ways - limited access to grazing areas (M=3.25), blockage of migratory routes (M=2.67), death of cattle owners (M=2.64), animal diseases outbreak (M=3.27), forced pastoral migration (M=3.31), market closure (M=2.90), death of animals (M=2.93), blockage of major roads (M=2.51), failure of public security (M=2.61) among others. The conflict shocks experienced were reduced access to pasture (M=2.44), reduced market access (M=2.80), cattle raiding (M=2.35), death of grasses (M=2.49), human and livestock diseases outbreak with (M=2.43) and (M=2.37), respectively. To cope, the following were agreed upon; improved access right to resources, improved access to migrating routes, provision of micro-credit schemes, income stream diversification, improved innovative techniques for livestock production among others.

Keywords: Pastoralists, conflicts, livelihood, water, land

INTRODUCTION

Pastoralism is a creation methodology wherein individuals raise crowd creatures as a way to procure a job. Pastoralism depends on the accessibility of water, fields and work to flourish—with water as the deciding variable. The lacking precipitation limits crop-cultivating exercises so individuals are left with pastoralism or roaming pastoralism as the most possible and steady reasonable livelihood (IISD and Omosa,2005). Pastoralism creates to benefit from the chance given by a satiate of water and different assets in great seasons, and acknowledges misfortunes in low seasons. They understand this by expanding animals numbers in great seasons to amplify accessible assets and continue sufficient

solid stock to accommodate means during the dry seasons.

Pastoralism is additionally a profoundly adaptable framework. The combination of animals is a framework to oversee hazard. Little stock like goats and sheep, albeit more powerless against sickness when contrasted and enormous stock, are cash cradles, for they have a high propagation rate and they lactate during dry periods. Goats and camels can endure longer dry periods than dairy cattle and sheep. The organization of animals per family is dictated by factors like individual inclinations, biological conditions, family size and accessible work(IISD and Omosa,2005).

Across the African landmass, 268 million individuals practice pastoralism, both as a lifestyle and a vocation methodology, contributing between 10 to 44 percent of the GDP of African nations. As of late, this versatile creature creation framework has confronted developing outer dangers because of issues, such as environmental change, political unsteadiness, farming extension, and rustic banditry that have changed the rangelands in which they work (IFAD, 2017a;IFAD2017b). From Mali to South Sudan, governments, local bodies, peace-builders, advancement offices, hippies, financial specialists, and security powers are effectively endeavoring to address the wellsprings of brutality and flimsiness that influence both peaceful networks and the rustic social orders with whom they share assets and scenes (African Union Department of Rural Economy and Agriculture2013).

These mediations are regularly molded by contrasting presumptions about the source and nature of these contentions, regardless of the accessibility of broad exploration and examination. Despite the fact that the neighborhood elements of contention shift across various settings, various patterns and discussions show up all through the writing on pastoralism and struggle (IISD and Omosa, 2005). In spite of the fact that clashes over land and water assets in the Sudano-Sahel have for quite some time been a political concern and were a significant disputed matter in the pilgrim and post-autonomy periods, they have acquired unmistakable quality lately because of the progressing spread of savagery, unsteadiness, and relocation across the locale. Idle strains over asset access and control, which verifiably just infrequently prompted brutality, have now emitted sometimes into patterns of mass killings and retaliations (Webb,1999).

In Nigeria, raising rustic banditry and response brutality among ranchers and pastoralists has left

thousands dead and a lot more dislodged. In focal Mali, the acceleration of these struggles finished in the slaughter of 160 individuals from the Fulani ethno-etymological and customarily pastoralist bunch in Ogossagou in March of 2019, just as resulting response savagery (Umar,1994). What's more, across Sudan, South Sudan, and the Central African Republic (CAR), clashes identifying with domesticated animals movement and cows burglary have played a basic and destabilizing part in inward rebellions and cross-line struggle. Thus and that's only the tip of the iceberg, struggle elements identifying with pastoralism and peaceful networks have become a common strategy need all through the district.

Water is restricted both as far as quality and amount. Extensive stretches of shortage of water infer that the networks have developed systems of dealing with the little water that is accessible to accommodate their necessities. The pastoralists apply rules, guidelines and punishments as one approach to accomplish supportable water the board amidst shortage (Umar,1994). Admittance to water is constrained by bunch participation so unapproved use might be met with influence, power or lawful activity. Non-individuals are just permitted admittance subsequent to settling on considerable installments or arrangements. To the pastoralists, this isn't worthy as they consider water to be land as regular endowments that nobody ought to deny others from getting to.

The capacity of individuals to access, control and utilize an asset like water is characterized by rules and accepted practices of a specific culture. The presence of decides and guidelines suggests that individuals esteem water and might want to oversee it reasonably. They additionally disagree that rules ought to administer admittance to land and water. Without appropriate administration, individuals will utilize strange intends to get to water for their animals. This is probably going to cause clashes and furthermore bring to surface shortcomings like absence of administering and the board frameworks for water (Umar (1994)

Clashes over water are not new to pastoralists' networks. Customarily, the different peaceful networks and groups led attacks and counter strikes as a coordinated and administered endurance system, particularly during times of serious dry spell. When clashes happened, there were socially characterized and satisfactory methods of arranging or battling. Be that as it may, of late, the utilization of current weaponry and a developing absence of regard for the customary standards have enormously expanded the power, casualty and degree of these contentions.

Conflict therefore emerges as one way in which human society adjusts in the face of scarce resources. Conflicts are complicated issues that get interwoven with other social, economic, environmental and political activities within a society. However, we do

not know how pastoralists feel the effects of land and water conflicts, this study seeks to xray the effects on pastoral livelihood.

The specific objectives are to –

- a) identify livelihoods assets of pastoralists;
- b) determine perceived effects of land and water conflicts on pastoral livelihoods;
- c) ascertain perceived conflict shocks and trends in the area; and
- d) examine perceived response capacity for coping with land and water conflicts in the area.

METHODOLOGY

Abia State lies within approximately latitudes $4^{\circ} 40'$ and $6^{\circ} 14'$ north, and longitudes $7^{\circ} 10'$ and 8° east. The state shares common boundaries to the north with Ebonyi state; to the south and southwest with Rivers State; and to the east and southeast with Cross River and Akwa Ibom states respectively. To the west is Imo state, and to the northwest is Anambra State. The state covers an area of about 5,243.7 sq.km which is approximately 5.8 percent of the total land area of Nigeria (NPC, 2006) Abia state has a variety of land forms, despite the fact that it is dominated by flat and low-lying land, generally less than 120m above sea-level (Dale, 2010). The low-lying plain is the inland extension of the coastal plain from the Bight of Benin.

There are two seasons in the year, namely: the rainy season and the dry season. The rainy season begins in March and ends in October with a break in August usually referred to as the "little dry season." The dry season which lasts for four months begins in November. Heavy thunderstorms are characteristic of the onset of the rainy season. The total rainfall decreases from 2200mm in the north to 1900 in the south. The hottest months are January to March when the mean temperature is above 27 degrees Celsius (Dale, 2010). The vegetation in Abia State is ordinarily considered part of tropical rain forest which is the dominant natural vegetation in most parts of the southern Nigeria. The northern part of the state has rich savannah vegetation of which the bamboo (*Dendrocalamus strictus*) is a typical grass specie.

Imo State lies within latitudes $4^{\circ}45'N$ and $7^{\circ}15'N$, and longitude $6^{\circ}50'E$ and $7^{\circ}25'E$ with an area of around 5,100 sq km. It is bordered by Abia State on the East, by the River Niger and Delta State on the west, by Anambra State to the north and Rivers State to the south (Imo State Government (IMSG), 2010). The state is rich in natural resources including crude oil, natural gas, lead, zinc. Economically exploitable flora like the iroko, mahogany, obeche, bamboo, rubber tree and oil palm predominate. However, with a high population density and over farming the soil has been degraded and much of the native vegetation has disappeared. This deforestation has triggered soil erosion which is compounded by heavy seasonal rainfall that has led to the destruction of houses and

roads. The rainy season begins in April and lasts until October with annual rainfall varying from 1,500mm to 2,200mm (60 to 80 inches). An average annual temperature above 20 °C (68.0 °F) creates an annual relative humidity of 75% with humidity reaching 90% in the rainy season (IMSG, 2010). The dry season experiences two months of Harmattan from late December to late February. The hottest months are between January and March.

Purposive sampling technique was used to select 60 respondents from Abia State and another 60 respondents from Imo State making a total of 120 respondents. Primary and secondary data were used to collect the sample from the field. A four-point likert type scale of Strongly agreed (4), Agreed (3), Disagree (2) and Strongly disagreed (1) was used to analyze objective 1 represented

mathematically,

$$X = \frac{4+3+2+1}{4} = 2.5$$

Therefore a mean value of 2.5 was accepted as perceived effects of conflicts on pastoral livelihoods. While objectives 2 and 3 were analyzed on a three-point likert type scale of Strongly agreed (3), Agreed (2), Disagree (1) represented as follows

$$X = \frac{3+2+1}{3} = 2.0$$

Therefore a mean value of 2.0 was accepted as conflict shocks and appropriate coping response.

RESULTS AND DISCUSSION

Conflicts and Livelihood Assets of Pastoral Communities

Table 1 showed that conflicts destroy or undermine not only the lives pastoralist, but their entire livelihood assets. Four major assets recognized and threatened were **a)** natural assets, seen in their limited access to grazing areas (M=3.25), overgrazing of accessible areas (M=3.30), blocked of migratory route (M=2.67), and limited access to water (M=3.25). During conflicts, pastoralist would not have access to grazing fields as the farmers would block access and prevent them from use of the field, this action forces the pastoralists to overgraze or continue to graze their animals on the limited available field they have access to. Migratory routes and water wells/sources are other natural assets of pastoralist-affected during conflicts. The crop farmers block water wells/sources and migratory routes to prevent access to them.

b. Human asset, such as death of cattle/owners/rearers (M=2.64), forced labour/pastoralist migration (M=3.31), diseases outbreak affecting pastoralists (M=2.7) were effects of conflicts on pastoral livelihoods. The death of individual owner of lands affects the family life as their breadwinner would be no more. Others may migrate to another area and even fall sick due to diseases/epidemic situation.

c. Conflicts also affect **financial assets** as seen in the market closure/prevention of sales (M=2.90), death/loss of animals (M=2.93), sharp variations in market prices (M=3.21), delay in accessing remittances/income (M=3.14). Conflict situation affects sales of goods and services/transaction of any type of business. Treatment/handling of sick animals during conflict is not possible due to the absence of veterinary workers who flee for their dear life, and animals are killed during this period.

d. Physical assets are also threatened. These physical assets included blockage of roads to water areas (M=2.51), blockage of roads to grazing fields (M=2.81), failure of public security (M=2.61), destruction of communication line/networks (M=2.57), blockage of access to education/health facilities (M=2.55).

Clashes influence actual admittance to schools and to other learning organizations. Understudies and educators can't go to class (86%) because of uncertainty coming about because of struggles. Much of the time, schools get shut. Educators who come from outside the locale like to get back to their home zones at whatever point there are clashes. More established understudies, through demands from guardians, or dependent on friendly social and family commitments, surrender school (69%) to go along with others in "battling the foe." Children are compelled to exit school when families choose to move to different territories looking for actual security. Indeed, interruption of school prompts low degrees of training, keeping an ever increasing number of individuals to pastoralism as the solitary wellspring of a job. The huge number of individuals depending on pastoralism infers huge groups of domesticated animals kept. The groups require water, particularly during dry seasons (Omosa, 2005; Webb, 1999). As talked about, absence of admittance to water prompts rivalry and clashes. Water asset based contentions carry a great deal of enduring to numerous occupants as uncovered by 80% of the respondents who said that actual frailty implies that little youngsters are unreliable and the best option is for them to remain at home, away from school.

Water-based struggles meddle with individuals' admittance to medical care administrations and offices. Would-be suppliers like non-administrative associations, strict establishments and the private area are fended off by weakness. Simultaneously, individuals need pay to pay for administrations because of absence of admittance to pay creating exercises. Most (99%) of the respondents announced that uncertainty and absence of water prompts the conclusion of wellbeing offices (Omosa, 2005). Because of instability, the primary NGO which gives medical care administrations around there, can't convey meds to support focuses; and because of frailty, individuals can't go far looking for medical services.

Table 1: Livelihood and Conflict Effects

Assets/effects of conflicts	Mean	SD
Natural Assets		
Limited access to grazing assets	3.25	0.814
Overgrazing of accessible assets	3.30	0.643
Blockade of migratory routes	2.67	0.787
Limited access to water	2.50	0.664
Human Assets		
Death of cattle owners/rearers	2.64	0.662
Forced labour/pastoral migration	3.31	0.971
Diseases outbreak affecting pastoralist	3.27	1.011
Financial Assets		
Market closure/prevention of sales	2.90	0.854
Breakdown of veterinary services	2.76	0.745
Death/loss of animals	2.93	0.641
Sharp variations in market prices	3.21	1.025
Delay of accessing remittances/income	3.24	0.977
Lack of access to alternative income sources	3.41	0.760
Physical Assets		
Blockade of roads to water areas	2.51	0.541
Blockade of roads to grazing fields	2.81	0.613
Failure of public security	2.61	0.701
Destruction of communication lines networks	2.55	1.042
Blocks access to education and health facilities	2.55	1.042

Accepted mean =2.50

Conflict Shocks and trends Affecting Respondents.

Conflicts bring with its occurrence certain sudden onset and unpredictable events and long term changes such as raiding of animals (M=2.15) by bandits who wants to steal the animals, livestock diseases outbreak (M=2.37) and human diseases outbreak (M=2.43) which occurs because of poor quality ration and stress arising from tiredness and unsanitary environment, market ban and reduced market access (M=2.89). This happen when sales are not taking place and markets are closed due to disturbances, food prices increases (M=2.20), and reduced livestock holding (M=2.61) are shocks and sudden changes which the respondents closed and cannot be controlled. Increasing drought/water scarcity (M=2.41), pastoralists dropping out of business (M=2.35), reduced access to pasture (M=2.24) which happens when their animals have either died or been killed, death of succulent grasses/ legumes (M=2.49), dryness of water wells scarcity of water (M=2.50) and converting grazing lands into farm lands (M=2.24). All of these sudden situations occurs during and after conflicts leaving the pastoralists in a hopeless situation.

A large portion of the respondents said their relatives don't move openly when clashes are progressing. For those whose developments are not influenced (10%), the reasons given went from the way that they are utilized to such struggles, to accessibility of enough security, and no danger of being slaughtered. The

individuals who said their developments are meddled with gave dread as the principle reason. During strikes and battles, individuals get slaughtered or harmed. Demise and wounds are an expense to families, for they meddle with the stream and allotment of assets for means, and have high odds of starting new struggles through vengeance (Omosa, 2005) Pastoralism blossoms with portability and includes the partition of animals into numerous units to move to better places looking for assets for their endurance. It likewise includes draining and singular creature thoughtfulness regarding keep an eye out for sickly ones and treat them. So if a few group are removed, particularly in the dry season to proceed to battle as opposed to taking domesticated animals to far away places looking for water; at that point animals as the primary wellspring of milk, meat, blood and pay are adversely influenced. Individuals not having the option to get by on domesticated animals, will be decreased to interminable dependence on help food.

Pastoralism makes due on continuous developments because of accessibility of water. This requests that the transitory courses are protected. Water asset clashes lead to actual instability (81%), which thusly impacts contrarily on admittance to touching and watering focuses (IFAD, 2018a, b,c). Others (79%) are constrained by conditions to move to drier however secure regions (nine percent). Over-convergence of individuals and domesticated animals in little zones will prompt emission of more struggles as individuals begin to contend and battle about the

restricted water assets, making greater uncertainty in the already secure regions (Omosa, 2005) However, the exploration discoveries show that because of contentions at close by watering focuses, the greater part (58%) individuals are compelled to move or move their animals to boreholes around there. Constrained relocation prompts more contentions as those from fighting gatherings can meet and restore old struggles while in unfamiliar land. More than 95% of the respondents announced

that they dread going to watering focuses in the midst of struggles (Omosa, 2005) The explanation given is that since the battles are over water, watering focuses experience successive battles, making the spots unreliable both for individuals and domesticated animals. The outcome is here and there harm to the borehole, which makes it wasteful, bringing about limitations on the quantity of days when water can be gotten to, and consequently more and extreme contentions over water

Table 2: Conflict Shocks and trends

Shocks/trends	Mean	SD
Livestock diseases outbreaks	2.37	0.664
Human disease outbreaks	2.43	0.501
Market bans or reduced market access	2.89	0.561
Conflict and raising of animals	2.30	0.771
Food prices increase	2.20	0.593
Reduced livestock holding	2.61	0.746
Increasing drought/water scarcity	2.41	0.637
Pastoralist drop out of business	2.35	0.678
Reduced access to pasture	2.24	0.794
Death of succulent grazers / legumes	2.49	0.810
Dryness of water well/scarcity of water	2.51	0.945
Converting grazing land into	2.24	0.697

Accepted mean=2.00

Appropriate Response Capacity/Strategies for Coping

The response for coping during conflict could come from both the government and the pastoralists as shown in table 3. Both have parts to play in helping diffuse, reduce and manage conflict. The following responses were identified: (**M = 2.33**). These resources could be land, grasses/pasture, water and other natural resources available and lively to be used by the pastoralists. When right of access is granted, pastoralists would like to survive in their trade. Improve access to migratory routes (**M = 2.54**) will also help cope during conflicts. Instead of blocking migratory routes entirely discussion could be held so that pastoralists will pass freely without being harassed And without allowing their animals graze on crops as they move to their campaign area provision of animal health services (**M=2.40**) for handling diseases outbreak of animals, diversity income streams (**M=2.5**), improve innovative techniques for livestock production (**M=2.09**) provision of community micro-credit schemes (**M=2.19**). Income sources diversification helps fall back on other survival activities pending normalization of situation for business transaction. Modern and best production practices in rearing/managing animals be introduced and taught the pastoralists due, to our socio-economic changing world and lifestyle. Introduction of soft loan schemes, advices credits and input supplies will go a long way in cushioning the effects of conflicts.

Other measures were improve/enhance communication opportunities (**M=2.23**), improve traditional security forces (**M=2.41**), provision of alternative resources (**M=2.21**), negotiate access with conflict stakeholders (**M=2.60**), and provision of conflict resolution support system (**M=2.08**). Communication helps to educate, empower and enlighten people. Opportunities for communication be improved so that all conflict part will exchange ideas, views and know situation that will improve or enlighten their existence. Alternative sources of feeding could be discovered for use during conflict situation by the pastoralists. They could approach heavy multi-national companies for purchase of their waste products. While, this is being done, negotiation with other conflict parties will show sign of proves and peaceful living. Traditional security forces such as vigilante, town unions among others need to strengthen for effective functioning/discharge of duties.

Finally, abandoned/discussed wells could be rehabilitated, (**M=2.50**), boreholes constructed (**M=2.09**) for animals. Immediate attention be paid to water availability by constructing bore holes for use even on a temporary basis, abandoned water wells be re-open and cleaned and shared by all till periods of hostilities are over.

Supporting the above, Mercy Corps (2019) reported that projects can be designed in ways to promote peacebuilding. Co-management of development projects (getting stakeholders from diverse groups

working together), enhancing communication opportunities (e.g. through radio networks and transportation routes) and establishing shared public and animal services are some examples. A focus on strengthening social cohesion for improved land and natural resource governance can work well in contexts where pastoralists and their neighbours have relatively good relations, for example where pastoralists are transhumant and stay for a

considerable percentage of the year in locations with farming communities (ILC, 2014). Improved consultation and participation mechanisms for pastoralists, as citizens with legitimate rights, can strengthen inter-community relations and lessen the likelihood of conflicts. Fostering communication and dialogue helps to strengthen connections and interaction over a common goal such as resolving land use conflicts.

Table 3: Appropriate Response Capacity for Coping

Strategies for coping	Mean	SD
Improve access right to some resources	2.33	0.484
Improve access to migratory routes/corridors	2.54	0.507
Provision of animal health services	2.40	0.456
Improve innovative techniques for livestock production	2.09	0.341
Diversify income streams	2.15	0.791
Provision of community micro-credit scheme	2.19	0.591
Improve/enhance communication opportunities	2.23	0.447
Improve traditional security forces	2.41	0.632
Provision of alternative resources	2.21	0.792
Negotiate access with conflict stakeholders	2.60	0.656
Provision of conflict resolution support system	2.08	0.451
New water wells/points could be executed	2.49	0.581
Rehabilitation of abandoned/disused water wells	2.50	0.811
Construction of born holes for animal use	2.09	0.441

Accepted mean=2.00

CONCLUSION

Conflict over resources is a risk in climatically unstable rangeland environments where people and their animals are routinely moving in search of water, forage, and markets. In Nigeria, it has become clear that the security situation in many pastoral areas is, in fact, deteriorating. An upsurge in violence caused by conflict over increasingly scarce land and water resources has been exacerbated by the ready availability of automatic weapons, increasing resource scarcity—demographic pressure, the conversion of rangeland to other uses, and growing lack of respect for the traditional rules have greatly increased the intensity. Conflicts over water are not new to pastoralists' communities. The situation has resulted in high poverty levels, reduced livelihoods of local populations and continues to increase the likelihood of insecurity and instability at the local, national and regional levels.

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