

## EFFECTIVENESS OF ALTERNATIVE DISPUTE RESOLUTION STRATEGIES IN IMPROVING FARMERS-PASTORALISTS RELATIONSHIP IN NASARAWA AND NIGER STATES, NIGERIA.

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### ABSTRACT

The study examined the effectiveness of alternative dispute resolution strategies in improving farmers-pastoralists relationship in Nasarawa and Niger States, Nigeria. A sample size of 379 farmers and pastoralist were selected in the state using multi-stage sampling method. Structured questionnaire complimented with interview scheduled used for data collection. Data collected were analyzed using descriptive statistics such as (frequency, percentages and mean). The findings reveal that 96.3% were males in the active age of 40.4 years. The mean household size was 8.5 persons while the mean experience was 16.6 years. Damage to crops (81.0%) and attack on cattle by farmers (48.8%) were the major causes of conflict in the study area. Also, mediation by elders (=2.59) and compensation and punishment( =2.41) were the most effective ADR strategies used for improving farmers and pastoralists relationship. It is recommended that government should place embargo on open grazing by introducing cattle routes for pastoralist in order to reduce their contact with farmers, curfew should be impose on the area affected by conflict in order to reduce tension. Lastly, stakeholders involved in conflict should create awareness on the need for farmers and pastoralist to access formal education and training that would enhance their harmonious relationship

**Keywords:** Effectiveness; ADR; Strategies; Farmer-Pastoralists; Relationship

### INTRODUCTION

Conflict can be defined as an inevitable phenomenon within a society which occur as a result of disagreement and misunderstanding from two or more parties. Conflict arises whenever people disagree over their values, ideas, motivation and desire which later result to hatred among one another (Mwajaide *et al.*, 2015). Farmers and pastoralists conflict have been a dwindling issue affecting many countries Nigeria inclusive. The country has witnessed re-occurrence of farmers and pastoralists' dispute in the past, which has not only deteriorates farmers and pastoralists relationship but also resulted into losses of lives and properties. The occurrence of conflict is always associated with struggle for inadequate resources and egocentric. Conflict create an avenue for dispute resolution, and dispute resolution has the capacity to reduce or eliminate causes of underlying conflict with the agreement of both parties involved (Mwajaide *et al.*, 2015).

Alternative Dispute Resolution (ADR) encourages consensus-based approaches for managing and resolving conflicts. ADR has been used widely in American environmental conflicts since the 1970s. It is seen as a flexible as well as low-cost substitute to adversarial legal proceedings and adjudication. The main ADR techniques include interest-based negotiation, multi-stakeholder dialogue and negotiated rule-making with strong dependence on the role of facilitators. Considerable attention is also directed in ADR towards capacity building. The advocates of ADR see it as a means of encouraging creative "win-win" settlements and its emphasis on training and building social capital are portrayed as enlarging human and social capital when promoting social justice (Solagberu and Oluwasegun, 2013). Alternative dispute resolution (ADR) has been useful in restoring farmers and pastoralists relationship in the past with other traditional means of dispute resolution. According to Craig and John (2015), Arbitration, mediation and negotiation have shown a significant success in settling dispute between farmers and pastoralists. Furthermore, Oladele and Oladele (2015) reported that between 2014-2016 a total number of 800 disputes were reported between farmers and pastoralists in Nasarawa State and only 80 were resolved using mediation and negotiation. Olaleye *et al.* (2010) identified the following strategies such as intervention by traditional leaders, payment of compensation to victims, court verdicts, dialogue between parties involved, intervention of Miyetti Allah cattle breeders association, local community crop farmers/herders intervention and establishment of grazing routes, educating farmers and herders by person or bodies responsible for conflict resolution have played vital roles in conflict resolution between farmers and pastoralists. Some researchers have linked this crisis to the theory of eco-violence (Ugwu and Enna, 2015), where environmental factors and exploitation of scarce resources leads to conflict and violence.

ADR and other methods of dispute resolution have played active roles in conflict settlement between farmers and pastoralists; but yet there exist a knowledge gap as regard to the effectiveness of these strategies in improving farmers-pastoralists relationship. Specifically, the study tend to achieve the following objectives; describe the socio-economic of respondents in the study area, identify

the causes of conflicts between farmers and pastoralists and determined effectiveness of the alternative dispute resolution strategies used in improving farmers-pastoralists relationship.

## METHODOLOGY

Nasarawa State is one of the States where this research was conducted. Nasarawa State is located between Latitudes 7° and 9° N and Longitudes 7° and 10° E. It shares boundaries with Benue State to the South, Kogi State to the West, the Federal Capital Territory (FCT) to the North-West; Kaduna and Plateau States to the North-East, and Taraba State in the South-East. Nasarawa State has a land area of 28,735 square kilometers and is divided into thirteen (13) Local Government Areas (LGAs). The 2006 population census pegs the state's population at 1,863,275 million, the projected population as at 2018 using 2.5% growth rate is 2,456,955 million (Nasarawa State Ministry of Information, 2015). The major occupation of the people in Nasarawa State includes farming, pastoralists fishing, dyeing, weaving, carving and blacksmithing. The State lies within the Guinea Savannah eco-geographical zone and has rich soil for agriculture.

The major crops produced are cassava, yam, rice, maize, guinea corn, cowpea, soya bean, acha, melon and millet. Nasarawa State has 13 Local Government Areas (LGAs) with a multiplicity of ethnic groups within the State such as: Eggon, Tiv, Alago, Hausa, Fulani, Mada, Rindre, Gwandara, Koro, Gbagyi, Ebira, Agatu, Bassa, Aho, Ake, Mama, Arum and Kanuri (Nasarawa State, 2015). Niger State is another State where this research was conducted. The State can be found in the Guinea Savannah ecological zone of Nigeria. In terms of land mass, it is the largest State in Nigeria. It covers a total land area of 74,224 km<sup>2</sup> thus accounting for about eight percent of Nigeria's land area. About 85% of its land area is good for arable crop production (Niger State Geographical information system, 2007). It is located within Longitude 3° 30' and 7° 20' East & Latitude 8° 20' and 11° 30' North, with a population of about 3,950,249 (NPC, 2006) and with a growth rate of 3.2%, the State has an estimated population of 5,586,000 in 2018 (Niger State Geographical Information System, 2015). The soils are fertile, its hydrology permit the cultivation of most of Nigeria staple crops and still allows sufficient opportunities for grazing, fresh water fishing and forestry development. Most of the communities in the State are predominantly agrarian. Some of the crops grown in the area are yam, cotton, Shea-butter, maize, sorghum millet, cowpea, soybean, beans, rice and groundnut. Some of the tree crops are Mango, citrus, coconut, cashew, banana, pawpaw. The inhabitants of the State also rear some livestock like goats, sheep, cattle and chicken among others. The Other non-agricultural activities engaged in by men include blacksmithing, leatherwork, mat and basket making,

trading while women also engage in technical handicraft and trading.

Multi-Stage sampling technique was used to select respondents from the study areas in the two states; Nasarawa and Niger. The first stage involved purposive selection of three (3) Local Government Areas in each State across agricultural zones Akwanga, Awe and Karu from Nasarawa State and Mariga, Mokwa and Shiroro from Niger State making a total of six (6) Local Government Areas. The second stage involved random selection of three (3) villages from each of the Local Government Areas selected making a total of eighteen (18) villages. The third stage involved the use of proportional sampling to select 10% of the farmers to give a total number of 290 crop farmers. For the pastoralists Snowball sampling method was used through the help of their umbrella body Miyetti Allah Cattle Breeders Association of Nigeria (MACBAN) in each State. The leadership assisted the researcher to select one pastoralist who assisted in locating other pastoralists due to their nature of settlement (*Rugage*). A total of eighty nine (89) herdsmen were targeted. The sample size of three hundred and seventy nine (379) was used for the study, consisting of two hundred and ninety farmers (290) and eighty nine (89) pastoralists. Primary data was used for this research.

Data were collected by researchers assisted by trained enumerators using structure questionnaire and interview schedules. Objectives i, ii and iii were achieved using descriptive statistics such as frequency distribution, percentage, mean and standard deviation. Effectiveness of ADR strategies was measured using 3-points likert types scale of very effective = 2, effective = 1 not effective = 0. These were added together (3+2+1)/3 to get a mean value of 2.0. The decision rules is  $\geq 2$ =effective,  $< 2$ =not effective

## RESULTS AND DISCUSSION

### Socio-economic characteristics of the respondents

Table 1 revealed that majority (98.9%) and (95.6%) of pastoralists and farmers in respectively were males. The pooled results revealed that 96.3% of the respondents were males. This finding revealed there are more male farmers in the study area. This also might be due to tedious, difficulty and strenuous activities involved in conflicts and restriction of women in conflict zones. This result collaborates with the findings of Ior *et al.* (2018) who reported that the men were the dominance in conflict areas. Aliyu *et al.* (2018) reported that majority of farmers in conflict prone area of Bauchi State are male. Entries in Table 1 indicated the mean age of farmers was 41.1 years while that of pastoralists was 39.6 years. The pooled results showed a mean age of 40.4 years. This implies respondents in the study area were still within the active and productive age,

strong, energetic and full of innovative ideas that could be advantageous in seeking for best ADR that will enhance their peaceful coexistence. This finding agreed with Owolabi *et al.* (2016) who stated that majority farmers and pastoralists in Kaduna State were still in their active age.

Table 1 showed that the mean household size of farmers was 9.0 person while that of pastoralists of was 8.0 persons. The pooled results showed a mean household size of 8.5 person. This implies that farmers and pastoralist in the study area have large household size. This could implies serve as source of labour for farming activities and also influence decision making when it comes ADR strategies to be adopted. This result is in consonance with that of Adisa (2012) that most families in conflict prone areas have average family size of between 5-10 members. In fact, it can be a disadvantage as this would mean having more none productive mouths to feed (Ojeleye, 2015). Table 1 revealed that mean farming experience of farmers was 18.8 years while that of pastoralists was 14.4 years. The pooled

results indicated a mean farming experience of 16.6 years. High experience can serve as incentives in managing a conflict and curb the problem associated with conflict management in the study area. This finding is in consonance with Owolabi *et al.* (2016) who stated that large percentage of farmers and pastoralists in Kaduna State had high experience in crop farming and herding. Table 1 showed that the mean years spent in formal education for farmers was 11.1 years while that of pastoralist was 0.5 year, implying that farmers have more literacy level than pastoralists. This is not less expected because majority of pastoralists were constrained in education due to their nature of settlement and low level of exposure. The pooled results showed mean years in formal education of 5.8. This implies low literacy level and this could negatively influence effectiveness of ADR strategies. This finding is in consonance with Agada and Igbokwe (2017) who reported that inadequate literacy level affect farmers-pastoralists capacity to adapt to change or ability to deal with conflict incidence.

**Table 1: Distribution of respondents according to socio-economic characteristics**

<b>Variables</b>	<b>Farmers (n=290) Freq (%)</b>	<b>Pastoralists (n=89) Freq (%)</b>	<b>Pooled (n=379) Freq (%)</b>
<b>Gender</b>			
Male	277 (95.5)	88 (98.9)	365 (96.3)
Female	13 (4.5)	1 (1.1)	14 (3.7)
<b>Age</b>			
≤30	54 (18.6)	17 (19.1)	71 (18.7)
31-40	98 (33.8)	30 (33.7)	128 (33.8)
41-50	94 (32.4)	35 (39.3)	129 (34.0)
51-60	40 (13.8)	7 (7.9)	47 (12.4)
>60	4 (1.4)	0	4 (1.1)
Mean	41.1	39.6	40.4
<b>Household size</b>			
1-5	87 (30.0)	21 (23.6)	108 (28.5)
6-10	126 (43.5)	50 (56.2)	176 (46.4)
11-15	40 (13.8)	18 (20.2)	58 (15.3)
≥16	37 (12.8)	0	37 (9.8)
Mean	9.0	8	8.5
<b>Experience in farming/herding</b>			
1-10	106 (36.6)	44 (49.4)	153 (40.4)
11-20	79 (27.2)	28 (31.5)	107 (28.2)
21-30	68 (23.5)	10 (11.2)	78 (20.6)
31-40	24 (8.3)	7 (7.9)	31 (8.2)
>40	13 (4.5)	0	13 (3.4)
Mean	18.8	14.4	16.6
<b>Educational level</b>			
Adult Education	14 (4.8)	5 (5.6)	19 (5.0)
Quranic Education	37 (12.8)	36 (40.5)	73 (19.2)
Primary education	52 (17.9)	3 (3.4)	55 (14.5)
Secondary education	84 (28.9)	2 (2.3)	86 (22.7)
OND/NCE	52 (17.9)	0	52 (13.7)
HND/Degree	51 (17.6)	0	51 (13.5)
None	0	43 (48.3)	43 (11.3)
Mean	11.1	0.5	5.8

Sources: Field survey, 2019

### Causes of conflict between farmers and pastoralists

Table 2 revealed the distribution of farmers and pastoralist opinions on the causes of conflict. The finding in the study area indicated that damage to crops ranked 1<sup>st</sup> as the major causes of conflict between farmers and pastoralists. This usually arise when cattle trespass on farmers' farm thereby grazing and causing destruction on the crops. This finding agreed with Urama *et al.* (2018) reported attack of crops is the major causes of conflict between farmers and pastoralist in Enugu State, Nigeria. Attack on cattle by farmers ranked 2<sup>nd</sup>. The attack on cattle sometime occur when pastoralists left their cattle unattended to thereby rendering havoc by eating up farmers produce. Stealing of crops was ranked 3<sup>rd</sup>, this is common when pastoralists engaged in

pilfering on farmers' farm land in which farmers took law into their hands by attacking them which could later lead to reprisal attacks. More so, lack of respect of both parties was ranked 4<sup>th</sup>, competition for land and water ranked 5<sup>th</sup> and overgrazing on farm land ranked 6<sup>th</sup>. This finding is in consonance with Garba *et al.* (2015) reported that major losses incurred due to conflicts include destruction of crops, attack on cattle, stealing of crops and completion of land and water are one the causes of conflict. Other causes of farmers pastoralist conflicts includes; illegal incursion of farmland by pastoralists ranked 7<sup>th</sup>, indiscriminate bush burning ranked 8<sup>th</sup> and drunkenness ranked 9<sup>th</sup>. This agreed with Urama *et al.* (2018) reported that bush burning is one the major causes of conflict between farmers and pastoralists in Enugu State, Nigeria.

**Table 2: Distribution of farmers according to causes of conflicts**

Causes of conflicts	Farmers (n=290) Freq (%)		Pastoralists (n=89) Freq (%)		Pooled (n=379) Freq (%)	
		Rank		Rank		Rank
Damage to crops	253 (87.2)	1 <sup>st</sup>	54 (60.7)	1 <sup>st</sup>	307 (81.0)	1 <sup>st</sup>
Competition for land and water	115 (39.7)	6 <sup>th</sup>	31 (34.8)	3 <sup>rd</sup>	146 (38.5)	5 <sup>th</sup>
Stealing of crops/cattle	141 (48.6)	2 <sup>nd</sup>	19 (21.4)	6 <sup>th</sup>	160 (42.2)	3 <sup>rd</sup>
Illegal incursion of farmland by pastoralists	112 (38.6)	8 <sup>th</sup>	19 (21.4)	6 <sup>th</sup>	131 (34.6)	7 <sup>th</sup>
Hostilities to one another	94 (32.4)	10 <sup>th</sup>	13 (14.6)	9 <sup>th</sup>	107 (28.2)	10 <sup>th</sup>
Indiscriminate bush burning	118 (40.7)	5 <sup>th</sup>	11 (12.4)	10 <sup>th</sup>	129 (34.0)	8 <sup>th</sup>
Attack on cattle by farmers	135 (46.6)	3 <sup>rd</sup>	50 (56.2)	2 <sup>nd</sup>	185 (48.8)	2 <sup>nd</sup>
Overgrazing on farm land	113 (38.9)	7 <sup>th</sup>	28 (31.5)	4 <sup>th</sup>	141 (37.2)	6 <sup>th</sup>
Rivalry between both parties	78 (26.9)	12 <sup>th</sup>	8 (8.9)	12 <sup>th</sup>	86 (22.7)	12 <sup>th</sup>
Lack of respect for both parties	130 (44.8)	4 <sup>th</sup>	28 (31.5)	4 <sup>th</sup>	158 (41.7)	4 <sup>th</sup>
Drunkenness	96 (33.1)	11 <sup>th</sup>	14 (15.7)	8 <sup>th</sup>	110 (29.0)	9 <sup>th</sup>
Drug abuse	97 (33.5)	9 <sup>th</sup>	9 (10.1)	11 <sup>th</sup>	106 (27.9)	11 <sup>th</sup>

Sources: Field survey, 2019

### Effectiveness of ADR in improving farmers and pastoralists relationship

Table 3 showed the result of effectiveness of ADR strategies in improving farmers and pastoralists relationship in the study area. The findings showed that the following ADR strategies were effective respondents in the study area; mediation by elders ranked 1<sup>st</sup> with mean value of ( =2.59), this implies intervention of elders of both groups for effective conflict resolution and ensuring harmonious relationship. This strategy is effective because of respects accorded to elders in the rural area of Nigeria. Also, compensation and punishment ranked 2<sup>nd</sup> with mean value of ( =2.41), signifying payment of compensation to victims by culprits involved in order to serve as corrective measures for future offenders. This agreed with Ioret *et al.* (2018) who reported that compensation is one of the strategies for conflict resolution in Benue State. Also, reward ( =2.33) and peace education/teaching ( =2.29) ranked

3<sup>rd</sup> and 4<sup>th</sup> respectively. Other findings showed that use of marriage ( =2.19) and reconciling both parties ( =2.16) were found to be effective and ranked 5<sup>th</sup> and 6<sup>th</sup> respectively. However, the following strategies were not effective use of propoganda ( =1.80), use of sanction ( =1.76) and imposing curfew ( =1.66). The findings according to farmers showed that the followings were effective in order of hierarchy, mediation by elders, compensation and punishment, use of marriage and peace education /teaching while uses of propogandas, use of sanction, imposing curfew on the area affected by conflict were not effective. The pastoralists showed that the following strategies were effective; mediation by elders, compensation and punishment, peace education/teaching, rewards, good governance, tendering apology/use of negotiation and interfaith dialogue while use of marriage, use of propoganda, use of sanction, traditional oath taking and imposing a curfew on the affected area.

**Table 3: Distribution of respondents according to effectiveness of ADR**

Variables	Farmers (n=290)			Pastoralist (n=89)			Pooled (n=379)		
	Mean ( $\bar{x}$ )	Rank	D	Mean ( $\bar{x}$ )	Rank	D	Mean ( $\bar{x}$ )	Rank	D
Imposing a curfew on the area	1.59	13 <sup>th</sup>	NE	1.72	13 <sup>th</sup>	NE	1.66	13 <sup>th</sup>	NE
Use of propaganda	1.71	11 <sup>th</sup>	NE	1.89	10 <sup>th</sup>	NE	1.80	11 <sup>th</sup>	NE
Compensation and punishment	2.52	2 <sup>nd</sup>	E	2.31	2 <sup>nd</sup>	E	2.41	2 <sup>nd</sup>	E
Traditional oath taking	2.22	8 <sup>th</sup>	E	1.79	12 <sup>th</sup>	NE	2.00	10 <sup>th</sup>	E
Rewards	2.38	3 <sup>rd</sup>	E	2.27	4 <sup>th</sup>	E	2.33	3 <sup>rd</sup>	E
Mediation by elders	2.57	1 <sup>st</sup>	E	2.61	1 <sup>st</sup>	E	2.59	1 <sup>st</sup>	E
Reconciling both parties	2.28	6 <sup>th</sup>	E	2.03	7 <sup>th</sup>	E	2.16	6 <sup>th</sup>	E
Tendering apology/use of negotiation	2.05	10 <sup>th</sup>	E	2.07	6 <sup>th</sup>	E	2.06	9 <sup>th</sup>	E
Ritual treaties/blood covenant	1.54	14 <sup>th</sup>	NE	1.32	14 <sup>th</sup>	NE	1.43	14 <sup>th</sup>	NE
Use of sanction	1.63	12 <sup>th</sup>	NE	1.88	11 <sup>th</sup>	NE	1.76	12 <sup>th</sup>	NE
Good governance	2.15	9 <sup>th</sup>	E	2.13	5 <sup>th</sup>	E	2.14	7 <sup>th</sup>	E
Use of marriage	2.38	3 <sup>rd</sup>	E	1.99	9 <sup>th</sup>	NE	2.19	5 <sup>th</sup>	E
Peace education/teaching	2.30	5 <sup>th</sup>	E	2.28	3 <sup>rd</sup>	E	2.29	4 <sup>th</sup>	E
Inter-faith dialogue	2.23	7 <sup>th</sup>	E	2.01	8 <sup>th</sup>	E	2.12	8 <sup>th</sup>	E

Sources: Field survey, 2019

Note: D= Decision, E=Effective, NE=Not effective

**CONCLUSION AND RECOMMEDATIONS**

It can be concluded that both farmers and pastoralists were dominated by young males with low literacy level and high experience in farming and herding. The major causes of conflicts between farmers and pastoralists in the study area were damage to crops, Attack on cattle by farmers, stealing of crops, lack of respect of both parties and competition for land and water. More so, mediation by elders, compensation and punishment, reward and peace education/teaching of farmers and pastoralist were the most effective ADR strategies used in improving farmers and pastoralists' relationship. It is recommended that government should place embargo on open grazing by introducing cattle routes for pastoralists in order to reduce their contact with farmers, curfew should be impose on the area affected by conflict in order to reduce tension. Lastly, stakeholders involved in conflict should create awareness on the need for farmers and pastoralists to access formal education and training that would enhance their harmonious relationship.

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