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ETHNO-RELIGIOUS CONFLICT AND AGRICULTURAL LIVELIHOODS IN LAMURDE LOCAL GOVERNMENT AREA OF ADAMAWA STATE

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Abstract

This study examines ethno-religious conflict and agricultural livelihoods in Lamurde Local Government Area, Adamawa State, Nigeria. A descriptive survey of 385 respondents was used to investigate conflict exposure, crop production, farmland access, livestock livelihoods, and agricultural rehabilitation. Data were collected through a structured questionnaire and analysed using frequencies and percentages. Conflict exposure was reported by 300 respondents (77.92%), while 215 (55.84%) described significant or severe agricultural disruption. Reported crop-yield reductions exceeded 50% for 225 respondents (58.44%), and 175 (45.45%) reported severely reduced or completely lost farmland access. Herd-size reduction was reported by 250 respondents (64.94%), while 205 (53.25%) selected livestock-income loss categories exceeding 50%. Agricultural rehabilitation was reported by 270 respondents (70.13%). Agricultural inputs were the most frequently selected recovery option, followed by equipment support and financial aid. These findings indicate widespread perceived disruption across crop and livestock livelihoods and highlight the importance of combining agricultural assistance with secure access to productive resources. Interpretation is limited by self-reported outcomes, the descriptive design, and inconsistencies in conditional response totals. The study recommends conflict-sensitive input assistance, livestock services, inclusive local mediation, and improved monitoring of agricultural recovery. It contributes locally grounded evidence on the livelihood challenges experienced by agricultural communities in a conflict-affected setting.

Keywords: *Ethno-Religious Conflict, Agricultural Livelihoods, Crop Production, Livestock, Rehabilitation, Lamurde*

Introduction

Agricultural production depends on more than the availability of land and labour. Farmers must be able to reach their fields, obtain inputs, coordinate work, and sell output within a predictable environment. Livestock keepers similarly depend on access to grazing, water, veterinary services, and markets. Violence can interrupt these relationships even where farms and animals remain physically intact. The resulting losses can therefore include forgone cultivation, delayed operations, reduced sales, and the depletion of assets needed for future production. Examining these channels at the local level helps identify recovery needs that aggregate agricultural statistics may conceal.

In Nigeria, ethnic and religious identities form part of a wider political and social landscape in which disputes over belonging, representation, and resources can become contentious. Osaghae and Suberu (2005) place identity-related conflict within this historical institutional setting. Their perspective cautions against treating identity diversity itself as a sufficient explanation for violence. For agricultural communities, the relevant questions concern how disputes develop, how access to productive resources changes, and whether public institutions can protect livelihoods without reinforcing exclusion. A local

agricultural survey can document reported consequences, although it cannot independently establish the motives of actors involved in particular incidents.

Lamurde Local Government Area provides the setting for this study. Agricultural livelihoods in the surveyed communities involve crop cultivation, livestock keeping, and mixed farming. The survey includes respondents from different ethnic and religious backgrounds, making inclusive recovery a central concern. Farmers and livestock keepers may share markets, labour, transport routes, and water points while experiencing different forms of insecurity. Examining both production systems provides a broader understanding of agricultural vulnerability and helps ensure that rehabilitation is not equated solely with the distribution of crop inputs. The local focus also allows agricultural disruption to be considered alongside the practical conditions under which households seek to rebuild production.

The connection between conflict and agriculture also raises a measurement problem. A household reporting a decline in harvest has not necessarily experienced an equivalent decline in yield per hectare or total factor productivity. Reduced output may arise because less land was cultivated, because labour was unavailable, or because yields on cultivated land fell. Fuglie and Rada (2013) examine agricultural productivity within a broader framework of resources and policy conditions. In the present survey, respondents reported categorical losses rather than measured output and input quantities. Consequently, the study uses agricultural livelihoods as its organising concept and treats references to productivity in the questionnaire as respondents' own assessments.

Agricultural rehabilitation requires attention to both the coverage of assistance and the conditions that enable recovery. Aid receipt, perceived effectiveness, and restored production are separate outcomes. A programme may reach many households but deliver support after the planting season. Another may provide useful inputs while insecurity continues to restrict farmland access. Perceived recovery may also reflect favourable weather, household investment, or improved market conditions alongside assistance. Understanding these distinctions is necessary for identifying unmet needs and designing support that responds to the production constraints experienced by agricultural households.

This study has three objectives: to examine reported conflict-related disruption to crop production and farmland access; to assess reported changes in livestock holdings, output, and income; and to evaluate rehabilitation coverage and perceptions of recovery support. The analysis considers these outcomes within a common agricultural-livelihood framework. Its contribution is to document local experiences across crop and livestock activities and connect those experiences to practical recovery priorities. The findings provide a basis for discussing agricultural assistance, resource access, and inclusive peacebuilding in Lamurde, while recognising the limits of descriptive survey evidence.

Literature Review and Analytical Framework

Conflict identity and resource governance

Ethno-religious conflict refers here to violence or antagonism understood by respondents as involving ethnic or religious group divisions. The questionnaire does not identify particular events, verify their causes, or distinguish communal conflict from other forms of insecurity. The term is therefore an operational label attached to reported experience. It should not be interpreted as evidence that a particular ethnicity or religion causes agricultural losses. This distinction is especially necessary where occupational, territorial, and identity boundaries overlap, and where the same household may cultivate crops and keep livestock.

A resource-governance perspective emphasises the institutions through which competing claims to land and water are handled. Benjaminsen and Ba (2009), studying a farmer–herder conflict in Mali, examine actor interests, pastoral marginalisation, and administrative rent seeking. Their evidence indicates why analysis should extend beyond physical resource scarcity to the way authority and claims are exercised. Applied to Lamurde as an analytical proposition, this perspective suggests examining whether access rules, dispute procedures, and recovery assistance are perceived as fair. These institutional mechanisms were not directly measured by the survey.

Moritz (2010) approaches herder–farmer conflict as an unfolding process. Structural pressures alone do not explain why some disputes escalate while others are resolved. Interactions between parties and the

sequence of responses matter. This insight is relevant to agricultural recovery because restoring a damaged asset may leave the underlying dispute unresolved. Reopening a route or distributing seed can be undermined by renewed threats. A recovery strategy should therefore consider the relationship between immediate production support and the local procedures that allow people to use resources safely.

Environmental pressures may influence resource competition, but they cannot be treated as a complete explanation for communal violence. Raleigh and Urdal (2007) examine environmental degradation and armed conflict in a spatial framework that takes contextual factors seriously. The Lamurde questionnaire contains no rainfall, water-availability, soil-quality, or climate-exposure measurements. Environmental explanations remain plausible subjects for subsequent investigation rather than findings of this study. Linking all reported losses to a single cause would obscure the potential contributions of weather, prices, pests, and input constraints.

Theoretical perspectives

Relative deprivation theory directs attention to the gap between expectations and perceived opportunities. Gurr (1970) relates grievance to perceived deprivation rather than merely to absolute material scarcity. Within an agricultural setting, households may interpret restrictions on land, unequal assistance, or inadequate protection as evidence that their position has deteriorated relative to others. This perspective helps frame questions about fair access and programme legitimacy. It does not permit grievance levels or conflict motives to be inferred from the demographic composition of the sample.

Social identity theory offers a complementary account of how group membership can influence perceptions of social relations. Tajfel and Turner (1979) explain intergroup differentiation through social categorisation and identification. In agricultural disputes, claims about land or compensation may be interpreted through wider group boundaries. Yet group affiliation is not synonymous with hostility, and shared economic activity may also provide a basis for cooperation. The survey records ethnicity and religion descriptively, but it provides no measures of identification, prejudice, trust, or discriminatory conduct. The theory therefore informs interpretation without being statistically tested.

Horizontal inequality provides an institutional bridge between identity and material conditions. Stewart (2000) identifies political, economic, and social inequalities among groups as relevant to conflict prevention. This framework suggests that recovery programmes should examine who receives assistance and who can participate in decisions. Equal numbers of male and female respondents, or the inclusion of several ethnic groups, do not demonstrate equality in land ownership or access to support. The present aggregate tables cannot reveal whether the reported rehabilitation coverage was evenly distributed across those groups.

Together, these perspectives provide a framework for understanding the relationship between insecurity and agricultural livelihoods. Disputes may restrict access to productive resources, damage assets, interrupt exchange, and weaken confidence in future investment. Rehabilitation may reduce some constraints through input replacement and service restoration, while mediation and fair governance address conditions that can sustain disruption. The framework guides the interpretation of the survey findings. It identifies plausible mechanisms connecting conflict, agricultural activity, and recovery without assuming that the descriptive analysis estimates the strength of each relationship.

Evidence on production assets and household resilience

Evidence from other conflict-affected settings shows why production and welfare should be analysed together but measured separately. Bozzoli and Brück (2009) study agriculture, poverty, and reconstruction in northern Mozambique using micro-level evidence. Their work connects postwar rural development with production decisions and market opportunities. It supports examining how households rebuild their economic activities rather than assuming that the end of violence automatically restores livelihoods. Differences in conflict history and agricultural conditions prevent their results from being transferred numerically to Lamurde.

Livestock losses also require a distinction between asset destruction and household coping. Verpoorten (2009) examines cattle sales during war and peacetime in Rwanda. A reduced herd may reflect sale in

response to income shocks as well as direct loss. For Lamurde, this means that the reported reduction in herd size cannot be equated with the number of animals killed or stolen. Understanding the mechanism would require questions on mortality, theft, distress sales, movement, and animal purchases. Those details are absent from the questionnaire.

Food security and resilience can change through different pathways. Brück et al. (2019), using household panel evidence around the Gaza conflict, distinguish the capacity to withstand shocks from contemporaneous food-security outcomes. This distinction cautions against using a single agricultural-loss category as a measure of food insecurity or resilience. A household may temporarily maintain consumption through savings, transfers, or assistance while losing productive assets. Conversely, low food consumption can occur without a reported production shock. The Lamurde survey did not collect a dietary or consumption-based food-security measure.

D'Souza and Jolliffe (2013) investigate conflict, food-price shocks, and food insecurity among Afghan households. Their analysis illustrates the importance of prices and conflict exposure being considered jointly when assessing welfare. In Lamurde, livestock-income losses could reflect fewer sales, lower sale prices, increased transport costs, or reduced animal output. The response categories do not distinguish nominal from real income. Consequently, the study reports perceived income decline without interpreting it as an equivalent reduction in physical livestock productivity or household purchasing power.

Although the literature establishes the relevance of conflict to agricultural production and household welfare, locally grounded evidence remains necessary for designing recovery interventions. The present study addresses this need by examining crop and livestock livelihoods together and incorporating respondents' perceptions of rehabilitation. This focus recognises that agricultural households can experience several interconnected constraints rather than one isolated production shock. The study contributes contextual evidence for Lamurde and provides a basis for discussing how resource access, agricultural assistance, and community relations can be considered jointly in recovery planning.

Methodology

Study Setting and Design

The study was conducted in Lamurde Local Government Area of Adamawa State, Nigeria, using a descriptive cross-sectional survey. Field-survey data collected in 2024 were used to examine agricultural households' reported experiences of conflict and rehabilitation. The analysis covers crop farming, livestock keeping, and mixed farming. These activities provide complementary perspectives on agricultural vulnerability because they depend on different combinations of land, labour, animals, inputs, and market access. A cross-sectional design was appropriate for describing respondents' experiences and identifying the distribution of reported livelihood constraints at the time of the survey.

The quantitative analysis uses responses to a structured household questionnaire. The instrument organises information into respondent characteristics, conflict-related agricultural disruption, changes in livestock livelihoods, and rehabilitation support. This structure allows the three research objectives to be addressed through comparable descriptive distributions. The study focuses on the survey component and reports no qualitative interview findings. Because observations were collected at one point in time, comparisons with earlier agricultural conditions depend on respondents' recollection rather than repeated measurements of the same household. The design therefore supports descriptive interpretation of perceived changes.

The questionnaire asks whether respondents experienced ethno-religious conflict during the preceding five years. Other questions ask about perceived agricultural disruption, categorical crop-yield loss, farmland access, herd reduction, animal output, livestock income, and rehabilitation. Although these questions invite respondents to attribute changes to conflict, attribution within a questionnaire is not independent verification. Responses may combine direct experience, community-level perceptions, recall, and expectations about the purpose of the study. These characteristics define the data as reported experience rather than measured agricultural performance.

Sample and selection procedures

The target population comprised adults engaged in farming and pastoral activities in conflict-affected communities in Lamurde. The sampling approach involved purposive selection of ten affected villages and systematic household selection from local rosters. Selecting affected villages focused the investigation on communities where agricultural disruption and recovery were relevant concerns. However, purposive selection at the village level limits generalisation beyond the surveyed communities. Interpretation therefore centres on the experiences represented in the sample rather than treating the results as a population estimate for all agricultural households in the local government area.

The analytical sample comprised 385 respondents. This total is consistent across the gender, age, occupation, ethnicity, and religion distributions. The sample included 150 crop farmers, 100 livestock farmers, and 135 mixed farmers. The inclusion of mixed farmers is relevant because crop and livestock activities may share household labour, capital, and income. Primary occupation was treated as a descriptive characteristic rather than a complete record of every agricultural activity undertaken by the household. All full-sample percentages were calculated using the same denominator to maintain consistency across the descriptive analysis.

The sample was intended to capture a range of agricultural experiences within the selected communities. Nevertheless, the purposive village selection and limited documentation of household selection probabilities prevent design-based estimates of sampling precision. No population weights were applied. The study does not report a response rate because the numbers of distributed and unreturned questionnaires were not recorded in the analytical summary. These constraints are considered when discussing the scope of the findings. Sample composition is presented transparently so that readers can assess which livelihood and demographic categories are represented.

Measures and descriptive analysis

The unit of tabulation is the respondent. Conflict exposure is a binary response. Overall agricultural disruption and farmland access are ordinal categories. Crop-yield, herd-size, and livestock-income losses are reported in four percentage bands. Livestock milk or meat output is recorded as a perceived degree of decline. Rehabilitation receipt is binary, intervention types permit multiple selections, and effectiveness and restoration are ordinal responses. A final question asks respondents to choose the intervention they consider most effective for recovery.

For each response category, the frequency was divided by the analytical sample size of 385 and multiplied by 100. Percentages are presented to two decimal places. Combined categories were calculated from summed counts rather than by adding rounded percentages. For example, significant and severe agricultural disruption comprises 215 respondents, equivalent to 55.84% of the sample. Severely reduced or completely lost farmland access comprises 175 respondents, equivalent to 45.45%. This procedure maintains a consistent denominator and avoids small arithmetic discrepancies arising from the addition of rounded values.

The analysis uses frequencies, percentages, and selected combinations of adjacent response categories. These statistics describe the prevalence of reported experiences within the sample. No mean percentage loss was calculated from the interval categories because the actual values within each band were not measured. Regression analysis and significance tests were not undertaken. Separate response distributions cannot identify individual-level relationships between conflict exposure and losses or between assistance and recovery. The discussion consequently interprets reported patterns and their practical implications without treating them as estimates of causal effects.

Consistency checks and research ethics

Three questionnaire-routing issues are material. First, crop-loss responses total 385 even though only 285 respondents identify crop or mixed farming as their primary occupation. Second, herd-loss bands total 330, whereas 250 respondents answer yes to herd reduction and 235 identify livestock or mixed farming as their primary occupation. Third, rehabilitation effectiveness and restoration distributions total 385 even though only 270 respondents report receiving assistance. These inconsistencies prevent

reliable conditional comparisons; the analysis therefore retains the observed counts and does not assign responses to unrecorded categories.

The herd-loss bands were analysed using the common denominator of 385. Their frequencies sum to 330, equivalent to 85.71% of the sample; the remaining numerical difference of 55 responses was not assigned to an unrecorded category. Intervention types were treated as multiple-response selections and expressed as percentages of the full sample. Effectiveness and restoration ratings were also tabulated for the full sample. Given the inconsistency between these totals and the reported number of assistance recipients, the ratings are interpreted as overall reported perceptions rather than verified beneficiary-only outcomes.

The questionnaire informed respondents that their information would be treated confidentially and used for academic purposes. Results are reported in aggregate form, and no respondent names or identifying household details are included. The analysis recognises the sensitivity of ethnic and religious affiliation in a conflict-affected setting. These characteristics are presented to describe sample composition and are not used to assign responsibility for violence. Formal ethics approval and completed reliability statistics were not documented. The study therefore avoids claims about approval or instrument reliability that cannot be supported by the available research records.

Results and Discussion

Respondent characteristics

Table 1

Characteristics of surveyed respondents

Indicator	Response category	n	%
Gender	Male	200	51.95
	Female	185	48.05
Age group	18–30 years	90	23.38
	31–45 years	130	33.77
	46–60 years	100	25.97
	Above 60 years	65	16.88
Primary occupation	Crop farmer	150	38.96
	Livestock farmer	100	25.97
	Mixed farming	135	35.06
Ethnicity	Bwatiye Bachama or Bata	160	41.56
	Fulani	120	31.17
	Hausa	70	18.18
	Other	35	9.09
Religion	Christian	210	54.55
	Muslim	140	36.36
	Traditional	25	6.49
	Other	10	2.60

Note. N = 385. Source: Field survey, 2024. Each characteristic totals 385. Percentages may differ slightly from 100 because of rounding.

The sample includes 200 men (51.95%) and 185 women (48.05%). Respondents aged 31–45 form the largest age group, accounting for 130 (33.77%). Those aged 46–60 account for 100 (25.97%), while 90 (23.38%) are aged 18–30 and 65 (16.88%) are above 60. This distribution indicates that the survey results include adults across several stages of working life. It does not reveal whether age or gender is associated with exposure, losses, or recovery.

Crop farmers account for 150 respondents (38.96%), mixed farmers for 135 (35.06%), and livestock farmers for 100 (25.97%). The substantial mixed-farming group is relevant because losses in one activity may affect resources available for another. However, occupation is recorded as a primary category rather than a complete inventory of household activities. The descriptive analysis does not

include farm size, herd ownership, education, household composition, or cultivated area. The categories should therefore inform interpretation without being used to construct unobserved household profiles.

Bwatiye respondents comprise 160 (41.56%), Fulani respondents 120 (31.17%), Hausa respondents 70 (18.18%), and other ethnic affiliations 35 (9.09%). Christian respondents comprise 210 (54.55%), Muslim respondents 140 (36.36%), traditional religious adherents 25 (6.49%), and other affiliations 10 (2.60%). These figures describe participation in the survey. They do not identify conflict perpetrators, establish group-level exposure differences, or show unequal treatment. Such conclusions would require respondent-level cross-tabulations and independent information about the incidents concerned.

Conflict exposure crop losses and farmland access

Table 2

Reported conflict exposure and crop related disruption

Indicator	Response category	n	%
Conflict experienced	Yes	300	77.92
	No	85	22.08
Agricultural disruption	Not at all	30	7.79
	Slightly	55	14.29
	Moderately	85	22.08
	Significantly	110	28.57
	Severely	105	27.27
Reported crop yield decrease	0–25%	60	15.58
	26–50%	100	25.97
	51–75%	120	31.17
	76–100%	105	27.27
Farmland access	No effect	35	9.09
	Slightly reduced	70	18.18
	Moderately reduced	105	27.27
	Severely reduced	120	31.17
	Complete loss of access	55	14.29

Note. N = 385. Source: Field survey, 2024. Crop-loss responses were tabulated for the full sample. Loss bands reflect respondent reports rather than independently measured yields; activity-specific eligibility was not separately recorded.

Conflict exposure is reported by 300 respondents (77.92%), while 85 (22.08%) answer no. In a separate distribution, 110 respondents (28.57%) describe significant agricultural disruption and 105 (27.27%) describe severe disruption. Together, these categories contain 215 responses (55.84%). A further 85 respondents (22.08%) select moderate disruption. The pattern indicates that substantial agricultural difficulty is widely reported within the sample, but the absence of cross-tabulations prevents the disruption categories from being assigned specifically to exposed respondents.

The crop-loss distribution contains 120 responses (31.17%) in the 51–75% band and 105 (27.27%) in the 76–100% band. The combined count is 225 (58.44%) selecting losses exceeding 50%. This is a share of responses, not the average percentage reduction in local crop production. The 0–25% category includes zero and should not be interpreted as proof that every respondent experienced a positive loss. The questionnaire also lacks a defined pre-conflict harvest baseline, crop-specific quantities, and cultivated-area measures.

Farmland access is severely reduced for 120 respondents (31.17%) and completely lost for 55 (14.29%). Together, those categories account for 175 responses (45.45%). Another 105 respondents (27.27%) report moderately reduced access. Access restriction is therefore a prominent reported constraint. It offers a plausible explanation for disrupted agricultural activity, but the tables do not establish whether households with restricted access also occupy the highest crop-loss categories. Nor do they distinguish permanent loss of land rights from temporary inability to reach a field safely.

Livestock holdings output and income

Table 3

Reported changes in livestock livelihoods

Indicator	Response category	n	%
Herd size reduced	Yes	250	64.94
	No	135	35.06
Reported herd size decrease	0–25%	65	16.88
	26–50%	90	23.38
	51–75%	95	24.68
	76–100%	80	20.78
Milk or meat output	No effect	50	12.99
	Slight decrease	85	22.08
	Moderate decrease	125	32.47
	Significant decrease	125	32.47
Reported livestock income decrease	0–25%	80	20.78
	26–50%	100	25.97
	51–75%	120	31.17
	76–100%	85	22.08

Note. Percentages use N = 385. Source: Field survey, 2024. Herd-loss bands sum to 330 and 85.71%, rather than 385 or the 250 reporting herd reduction. This inconsistency limits conditional interpretation; no missing category has been imputed.

A reduction in herd size is reported by 250 respondents (64.94%), while 135 (35.06%) answer no. The subsequent herd-loss categories contain 65, 90, 95, and 80 responses, respectively. Their total of 330 does not match the 250 respondents who reported a reduction. Consequently, the conditional extent of herd loss cannot be established. The two highest categories contain 175 responses, but presenting this as the proportion of affected livestock owners would require a verified denominator that is unavailable.

For milk or meat output, 125 respondents (32.47%) report a moderate decrease and another 125 (32.47%) report a significant decrease. These categories together account for 250 responses (64.94%). Slight decrease is selected by 85 respondents (22.08%), while 50 (12.99%) select no effect. The question combines milk and meat output and does not separate species, production cycles, or quantities. It therefore documents perceived livestock-output disruption without identifying which product or husbandry process contributed most.

Livestock-income losses in the 51–75% and 76–100% bands are reported by 120 and 85 respondents, respectively. Together, 205 respondents (53.25%) select a decline exceeding 50%. These reports indicate perceived pressure on livestock-based livelihoods. However, income from animal sales, milk, meat, and other livestock products is not separately recorded. The data cannot distinguish lower quantities from price changes or establish whether an income decline resulted from distress sales, fewer animals, restricted markets, or higher costs.

Rehabilitation coverage and recovery perceptions

Table 4

Reported rehabilitation receipt and perceived recovery support

Indicator	Response category	n	%
Rehabilitation received	Yes	270	70.13
	No	115	29.87
Intervention type received	Financial aid	90	23.38
	Seeds or seedlings	120	31.17
	Fertilisers	110	28.57
	Farm equipment	100	25.97
	Training or skills development	65	16.88

Indicator	Response category	n	%
Effectiveness rating	Not effective	35	9.09
	Slightly effective	65	16.88
	Moderately effective	100	25.97
	Very effective	120	31.17
	Extremely effective	65	16.88
Reported restoration	Not at all	40	10.39
	Slightly	85	22.08
	Moderately	110	28.57
	Significantly	105	27.27
	Fully restored	45	11.69
Most effective recovery option	Financial aid	90	23.38
	Agricultural inputs	120	31.17
	Equipment support	105	27.27
	Skills training	40	10.39
	Market access support	30	7.79

Note. Percentages use N = 385. Source: Field survey, 2024. Intervention types permit multiple responses and total 485 selections. Effectiveness and restoration ratings each total 385 although only 270 respondents report assistance receipt; ratings should not be interpreted as verified beneficiary-only estimates.

Rehabilitation receipt is reported by 270 respondents (70.13%); 115 (29.87%) report no receipt. Among intervention-type selections, seeds or seedlings have the highest count, at 120 (31.17% of the sample), followed by fertilisers at 110 (28.57%), equipment at 100 (25.97%), financial aid at 90 (23.38%), and training at 65 (16.88%). The 485 selections exceed the sample size because the questionnaire allows multiple responses. The table cannot show which combinations reached particular households or whether support matched their main production activity.

Very effective and extremely effective ratings contain 120 and 65 responses, respectively, giving 185 (48.05%) across the full-sample distribution. Moderately effective contains 100 responses (25.97%). Not effective and slightly effective together contain 100 responses (25.97%). The range of ratings indicates that perceptions of rehabilitation vary. However, the ratings were not restricted to the 270 respondents reporting assistance receipt. They therefore describe the overall response distribution and cannot establish satisfaction among verified beneficiaries or the comparative performance of particular programmes. This qualification is relevant when interpreting the apparent relationship between assistance and recovery.

Full restoration is selected by 45 respondents (11.69%), significant restoration by 105 (27.27%), and moderate restoration by 110 (28.57%). Slight restoration is selected by 85 (22.08%), and no restoration by 40 (10.39%). The modest full-restoration count merits attention, yet it does not provide an estimate of the share of assisted households that remained unrecovered. Timing, assistance intensity, baseline conditions, and actual output were not recorded. The distribution supports further assessment of recovery needs rather than a definitive judgment that assistance succeeded or failed.

Agricultural inputs are selected as the most effective recovery option by 120 respondents (31.17%), followed by equipment support at 105 (27.27%) and financial aid at 90 (23.38%). Skills training attracts 40 selections (10.39%), and market access support 30 (7.79%). This ranking indicates the relative frequency of selected options. It is not a comparison of treatment effects or cost-effectiveness. Low selection of market support, for example, cannot establish that market access is unimportant when respondents may have experienced different interventions or interpreted the options differently.

Discussion

Agricultural disruption and access to productive resources

The results identify three prominent reported difficulties: substantial agricultural disruption, crop-loss categories above 50%, and restricted farmland access. Their coexistence is compatible with a resource-

access mechanism in which insecurity prevents timely cultivation and reduces the effective use of land. However, the individual relationships are unobserved. Some respondents may report high losses without restricted access, while others may retain output through smaller plots or alternative activities. These possibilities cannot be resolved from separate marginal distributions.

An important policy implication is that replacing inputs alone may be insufficient where access remains insecure. Seeds and fertilisers generate returns only if households can prepare land, plant, manage crops, and harvest safely. This is an interpretation of the reported constraints rather than an estimated complementarity between security and aid. The programme-design question is whether productive-resource support is accompanied by practical access arrangements. Local verification should establish where farms are inaccessible and whether the barrier concerns threats, transport, displacement, or contested claims.

The survey also warns against equating perceptions of conflict-related loss with measured agricultural productivity. A reduction in cultivated area can reduce total harvest without changing output per hectare. A decline in herd size can reduce total milk output while output per animal remains unchanged. For research and monitoring, these distinctions determine which intervention is appropriate: land-access restoration, animal replacement, husbandry services, or improvements in production efficiency. The present findings identify concerns requiring investigation, but do not quantify these separate components.

Livestock vulnerability and differentiated recovery

Livestock results broaden the recovery agenda beyond crop cultivation. Herd reduction, lower perceived animal output, and income decline appear together in the response distributions. Their combined presence suggests that livestock support warrants explicit attention, even though ownership and conditional denominators remain uncertain. Animal-related losses can weaken both income-generating capacity and household liquidity. Recovery assessments should therefore identify the actual assets held, the type of loss experienced, and the practical conditions under which restocking or husbandry assistance would be useful.

A uniform package risks overlooking these differences. A crop household with restricted field access may need safe return arrangements before receiving seed. A livestock keeper who sold animals to meet urgent expenses may face a different recovery problem from one whose herd was stolen. A mixed farmer may need to balance crop investment with animal feed and veterinary costs. These are programme-design scenarios derived from the livelihood categories, not documented individual cases. Their value is to guide assessment questions rather than to substitute for household-level evidence.

Demographic diversity also requires careful targeting. The sample includes substantial participation by women and several age and identity groups, but participation alone does not demonstrate equal losses or equal access to rehabilitation. Decisions should be based on verified needs and transparent criteria. Public communication should avoid labelling all members of an ethnic or religious category as occupying a single livelihood position. In practice, collecting sex-disaggregated and activity-specific beneficiary records would allow planners to evaluate coverage without relying on assumptions about group membership.

Rehabilitation reach effectiveness and peacebuilding

Reported rehabilitation coverage of 70.13% indicates that assistance is visible within the sample. Yet coverage is only one dimension of programme performance. The intervention rankings suggest interest in tangible production resources, while the restoration distribution shows that complete recovery is not the dominant reported category. Because ratings are not restricted to verified beneficiaries, the size of any gap between receipt and recovery cannot be calculated. A defensible interpretation is that reported assistance and continuing difficulty coexist in the community-level evidence.

Peacebuilding and productive recovery can be coordinated around concrete shared interests. Access to water, transport routes, local markets, and fair grievance procedures may offer opportunities for collaboration across agricultural activities. Such coordination should not assume that assistance automatically reconciles communities. Programme staff need to monitor whether allocation processes or

the siting of facilities create new disputes. Transparent beneficiary criteria, accessible complaints procedures, and the inclusion of women and less influential producers can make recovery decisions easier to scrutinise.

The study provides descriptive evidence of frequent agricultural disruption and continuing recovery concerns. Its contribution is to identify locally reported constraints that warrant attention in agricultural planning, rather than to estimate causal effects. The distinction is useful for policy: descriptive patterns can guide needs assessments, while programme evaluation requires clearer baselines, beneficiary identification, and follow-up measures. Future monitoring can build on the present survey by linking exposure, support received, and production outcomes at the household level. Such evidence would help determine which recovery measures work best under different livelihood conditions.

Conclusion

This study finds widespread reported agricultural disruption in Lamurde Local Government Area. Among 385 respondents, 77.92% report conflict exposure, 55.84% describe significant or severe agricultural disruption, and 45.45% report severely reduced or lost farmland access. Crop-loss responses, livestock-output perceptions, and income-loss categories indicate difficulties spanning several agricultural activities. The findings highlight the vulnerability of productive livelihoods when access to land, animals, and markets is insecure. Because the measures are self-reported and the design is descriptive, the results establish reported experience rather than causal effects or independently measured productivity changes.

Agricultural rehabilitation is reported by 70.13% of respondents, with agricultural inputs emerging as the most frequently selected recovery option. Nevertheless, inconsistencies in conditional response totals limit beneficiary-specific conclusions about effectiveness. Agricultural recovery should combine secure access to productive resources with livelihood-specific assistance and inclusive mediation. Clearer monitoring of assistance receipt, production outcomes, and recovery over time is also necessary. The study contributes local evidence on the interconnected crop and livestock challenges experienced in a conflict-affected setting and supports a coordinated approach to restoring agricultural livelihoods.

Policy Implications and Recommendations

First, agricultural rehabilitation should begin with a locally verified assessment of access constraints. Local authorities, community representatives, and agricultural officers should identify areas where insecurity prevents cultivation or livestock movement and agree on lawful, inclusive procedures for resolving contested access. Protective measures should support civilian livelihoods and avoid making assistance conditional on ethnic or religious affiliation. Monitoring should track whether households can actually use land and routes after support is provided.

Second, input support should be matched to production activity, season, and documented losses. Crop assistance may include appropriate seed, fertiliser, and equipment access; livestock assistance may include veterinary services, feed support, and carefully assessed restocking. Equipment-sharing arrangements require clear ownership and maintenance rules. Cash support can be considered where markets function and beneficiary needs differ, but its suitability should be assessed locally. The survey's preference ranking does not establish which package will produce the greatest return.

Third, recovery programmes should coordinate assistance with inclusive dispute resolution. Mediation structures should include crop farmers, livestock keepers, mixed farmers, women, young adults, and relevant traditional and local-government actors. Their role should include early reporting of disputes, agreed procedures for claims, and referral where legal adjudication is needed. Productive-resource investments should be reviewed for their distributional effects before implementation, so that restoring one group's access does not create an unmanaged barrier for another.

Fourth, programme monitoring should distinguish reach, usefulness, and recovery. Beneficiary records should identify the assistance received, its timing and value, and the household activity it supports. Follow-up should measure cultivated area, crop-specific harvests, animal holdings, relevant output quantities, and inflation-adjusted income where feasible. Perception questions remain useful but should

supplement those measures. Restoration should be defined against a clear baseline and should not be inferred solely from the number of input packages distributed.

Finally, future surveys should enforce questionnaire routing and retain anonymised respondent-level data. Crop questions should identify eligible cultivators, livestock questions should verify ownership or involvement, and aid-effectiveness questions should separate recipients from nonrecipients. Field teams should document selection procedures, nonresponse, consent, and instrument testing. These improvements would allow subgroup comparisons and more credible evaluation. Until such evidence is available, the present results should guide investigation and planning rather than numerical claims about intervention impact.

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