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Dynamics of Communal Conflicts on Agricultural Productivity and Food Security in Communities of Southern Cross River State, Nigeria

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Abstract

This study examined the dynamics of communal conflicts and their effects on agricultural productivity and household food security in communities of Southern Cross River State, Nigeria. Specifically, it investigated the impact of communal conflicts on agricultural productivity and assessed their influence on household food security. A cross-sectional survey design incorporating both quantitative and qualitative approaches was adopted. Data were collected from 624 respondents selected through purposive and simple random sampling from conflict-prone communities in Biase, Akamkpa, and Odukpani Local Government Areas. Information was obtained using questionnaires, interviews, focus group discussions, and field observations, and analyzed with descriptive statistics. The findings revealed that communal conflicts significantly reduced agricultural productivity, with output declining by 41.4 percent for cassava, 40.3 percent for yam, 37.2 percent for maize, 44.7 percent for cocoa, and 42.6 percent for plantain. Livelihood impact indices ranged from 55.6 percent in Ojor versus Uyanga to 86.3 percent in New Natin versus Odukpani, while household income declined by 63.4 percent in severely affected communities. Food security was similarly compromised, as household food self-sufficiency decreased from 74.5 percent to 46.2 percent, and the average number of meals consumed per day fell from 3.0 to 1.9. The study concluded that communal conflicts have profound negative effects on agricultural productivity and household food security in Southern Cross River State. It recommended strengthening conflict resolution mechanisms, implementing livelihood support programmes, and developing policies that enhance agricultural resilience and promote sustainable food security.

Keywords: Communal conflicts, Agricultural productivity, Food security, Rural livelihoods, Household resilience, Food-sufficiency

Introduction

Communal conflicts have become a major socioeconomic and developmental challenge, with serious consequences for agricultural productivity and food security, especially in rural areas where agriculture remains the principal source of livelihood. In many agrarian communities, farming provides

food, employment, income, and raw materials for both households and wider economies. However, the occurrence of communal conflicts, often linked to disputes over land ownership, boundary disagreements, competition over natural resources, and tensions between farming groups and herders, has continued to threaten the stability of agricultural production systems. According to Okonkwo, Chris, and Udegbumam (2023), inter-communal conflicts in Nigeria have generated severe socio-economic disruptions that negatively affect food production and household food security. Zhirin, Dauda, and Zailani (2022) similarly observed that communal conflicts reduce agricultural output by restricting access to farmland, disrupting labour supply, and exposing farming communities to persistent insecurity. These conditions often result in the destruction of crops, the displacement of farmers, the abandonment of agricultural lands, and the interruption of planting and harvesting cycles, thereby weakening the productivity of rural farming systems.

Beyond their effect on agricultural output, communal conflicts pose serious threats to food security by reducing food availability, limiting access to markets, and increasing the vulnerability of affected populations to hunger and poverty. George and Adelaja (2022) noted that armed conflicts and displacement often deprive households of access to productive assets and place additional pressure on food resources in host communities. In the same vein, Okafor and Chioma (2022) found that communal clashes significantly affect agricultural production through reduced farm activities, loss of labour, and destruction of productive resources. In areas where such conflicts persist, food shortages, rising food prices, and declining rural incomes often become common outcomes. Furthermore, Ozuma (2024) emphasized that communal crises have evolved beyond local disputes into major threats to sustainable food systems and rural livelihoods. This makes the study of communal conflicts and their effects on agricultural productivity and food security particularly important, as understanding these dynamics provides a basis for promoting peace-building, strengthening agricultural resilience, and improving food security outcomes.

The dynamics of communal conflicts on agricultural productivity and food security have attracted global concern due to their multidimensional effects on livelihoods, rural development, and sustainable food systems. Globally, communal conflicts are increasingly recognized as major drivers of food insecurity, particularly in regions where fragile governance structures, environmental stress, and resource competition intersect. Violent conflicts often disrupt agricultural production by displacing farming populations, destroying productive assets, reducing market access, and weakening food supply chains, thereby undermining both food availability and stability. Olga Shemyakina argues that conflict and food insecurity are deeply interconnected, as insecurity reduces productive capacity while food scarcity can further intensify social tensions. Across developed nations, although communal conflicts may be less intense, conflicts over land use, migration pressures, and environmental resources still influence agricultural systems, though stronger institutions and advanced technologies often cushion these effects. In contrast, in many parts of the Global South, food insecurity is compounded by conflict, poverty, and climate pressures, creating more severe vulnerabilities (Ogwu, Izah, Ntuli, & Odubo, 2024). In Africa, these dynamics are even more pronounced, where communal and resource-based conflicts often emerge around grazing routes, water sources, and farmland, directly affecting food production and rural stability. Bedasa and Deksis (2024) observed that in East Africa, the interaction between violent conflict and climate stress has worsened agricultural disruptions and deepened food insecurity. Similarly, experiences in Ghana show that while technological adaptation can improve resilience, unresolved resource conflicts continue to threaten agricultural sustainability (Forkuor, Amponsah, Oteng Darko, & Osei, 2022). These global and continental realities demonstrate that communal conflict is not only a security issue but also a structural challenge affecting agricultural productivity and food systems.

In Nigeria, the dynamics of communal conflicts are particularly shaped by farmer-herder tensions, land disputes, ethnic rivalries, and climate-induced pressures, all of which have significant implications for agricultural productivity and food security. Nnaji, Ma, Ratna, and Renwick (2022) found that recurrent farmer-herder conflicts in rural Nigeria reduce crop output, discourage farm investments, and heighten household food insecurity. Okonkwo, Chris, and Udegbumam (2023) similarly noted that communal conflicts generate socioeconomic instability that weakens agricultural livelihoods and limits food access. Akanwa et al. (2023) further linked climate-induced conflicts between rural farmers and cattle herders to broader threats to sustainable agriculture in Nigeria. At local levels, studies have shown that communal

clashes often result in farmland abandonment, destruction of crops, and shrinking agricultural activities (Okafor & Chioma, 2022). In Cross River State, the dynamics of communal conflicts reflect struggles over communal boundaries, access to natural resources, and socio-political tensions, often affecting farming communities whose livelihoods depend heavily on land. Kenneth and Uwem (2024) observed that communal resource conflicts in Cross River State have implications not only for socio-economic development but also for agricultural stability. In the Ogoja agricultural zone and other parts of Southern Cross River State, recurring communal tensions have reportedly disrupted farming seasons, reduced output, and threatened household food security (Effiong & Machu, 2025). Within communities of Southern Cross River State, these dynamics are further shaped by dependence on subsistence agriculture, fragile rural infrastructure, and limited conflict management mechanisms, making communal conflicts a significant factor undermining both agricultural productivity and sustainable food security.

One of the major problems motivating this study is the persistent disruption of agricultural productivity caused by communal conflicts, which has continued to threaten rural livelihoods and food systems in many farming communities. In conflict-prone communities, disputes over land boundaries, access to natural resources, and competition between user groups often lead to the destruction of farmlands, the displacement of farmers, the abandonment of cultivated lands, and interruptions in planting and harvesting activities. These conditions have contributed to declining crop output, reduced farm incomes, and weakened agricultural sustainability. Across the Global South, food security challenges have become increasingly complex due to the interaction of conflict, environmental stress, and socio-economic vulnerability (Ogwu, Izah, Ntuli, & Odubo, 2024). Violence linked to communal and resource-based conflicts in Africa continues to undermine agricultural systems and deepen rural insecurity, particularly where climate pressures intensify competition over land and water resources (Bedasa & Deksisia, 2024). In Nigeria, the problem has become increasingly evident through recurring communal clashes and farmer-herder conflicts, which have disrupted food production and threatened household livelihoods (Okonkwo, Chris, & Udegbumam, 2023). Climate-induced tensions have further aggravated these problems by increasing pressure on scarce resources, thereby worsening threats to sustainable agriculture and food security (Akanwa et al., 2023). Despite the significance of these challenges, the extent to which communal conflicts continue to affect agricultural productivity in communities of Southern Cross River State remains inadequately examined, creating a need for empirical investigation.

Another major problem underlying this study is the growing threat that communal conflicts pose to food security and socio-economic stability in rural communities. Conflict-related disruptions often reduce food availability, increase food prices, weaken access to markets, and expose households to hunger and livelihood insecurity. In many affected communities, the destruction of productive assets, loss of labour, displacement, and insecurity around farming spaces have contributed to declining food access and weakened resilience among households. Studies in Nigeria have shown that communal clashes significantly affect agricultural production and food supply systems, often pushing vulnerable communities into deeper poverty and food insecurity (Okafor & Chioma, 2022). Communal resource conflicts have also emerged as a development problem in Cross River State, affecting both economic activities and social stability in agrarian communities (Kenneth & Uwem, 2024). Evidence from farming communities in the Ogoja agricultural zone further suggests that communal conflicts continue to generate socioeconomic hardships and disrupt agricultural livelihoods (Effiong & Machu, 2025). However, in Southern Cross River State, there remains a limited localized understanding of the dynamics through which communal conflicts shape agricultural productivity and food security outcomes. This inadequate empirical knowledge, coupled with recurring tensions and their consequences for food systems, constitutes a major problem requiring systematic investigation. It is against these persistent challenges of declining productivity, food insecurity, rural vulnerability, and inadequate conflict-related evidence that this study becomes necessary.

Communal conflicts and agricultural productivity in communities

Studies have shown that communal conflicts negatively affect agricultural productivity in rural communities through disruption of farming seasons, destruction of resources, and reduced access to farmland. In Benue and Nasarawa States, Zulum, Lada, and Zailani (2022) examined the impact of communal conflict on agricultural productivity and conflict resolution strategies among farming

communities using a survey design. The study found that conflicts displaced farmers, reduced crop yields, and interrupted farming activities, and recommended stronger conflict resolution mechanisms. In Awka North Local Government Area of Anambra State, Okafor and Chioma (2022) investigated the effects of communal clashes on agricultural production and found that conflicts caused destruction of farms, reduced cultivated land, and lowered food production. The study recommended effective land dispute management and support for affected farmers. Similarly, Okpa, Ajah, Eze, and Enweonwu (2023), in a broader study on communal conflict and violence, found that communal violence disrupts productive activities and weakens rural agricultural systems, recommending stronger local institutions for conflict prevention. These studies suggest that communal conflicts remain a major constraint to agricultural productivity in affected communities.

Further evidence shows that conflict-related insecurity, displacement, and resource pressures continue to undermine agricultural performance. George and Adelaja (2022), studying armed conflict and displacement in host communities, found that conflict reduces labour availability and affects farm productivity, recommending peace-building and livelihood recovery measures. In Nigeria, Okonkwo, Chris, and Udegbuma (2023) reported that intercommunal conflicts between farmers and herders reduce agricultural output and weaken rural livelihoods. Likewise, Wanjara and Ogembo (2023), working in north-eastern Kenya, found that communal tensions and environmental pressures negatively affect livelihoods and productive activities, and recommended adaptive resource management. Kaur et al. (2022), though from a different perspective, showed that cooperative and stable production systems improve agricultural performance, reinforcing the importance of social stability for productivity. Taken together, these studies indicate that communal conflicts pose serious challenges to agricultural productivity, yet limited studies have focused specifically on communities in Southern Cross River State.

Influence of communal conflicts on food security among households

Studies have shown that communal conflicts significantly influence food security among households by disrupting food production, reducing access to food and weakening household livelihood systems. Shemyakina (2022) examined the relationship between war, conflict and food insecurity and found that conflict often reduces food availability through displacement, destruction of productive assets and disruption of local food systems. The study concluded that conflict is a major driver of household food insecurity and recommended stronger conflict prevention and food support interventions. In East Africa, Bedasa and Deksis (2024) investigated the combined effects of violent conflict and climate pressures on food insecurity and found that recurring conflict reduces agricultural production, limits food access, and increases household vulnerability to hunger. The study recommended integrated strategies combining peace-building, climate adaptation, and food security interventions. Similarly, Junaid and Gokce (2024), in their study on global agricultural losses and their causes, identified conflict-related disruptions as major contributors to reduced food supply and household food insecurity. These findings suggest that communal conflicts threaten food security by affecting both food production and access at the household level.

Again, studies indicate that the influence of conflict on food security extends beyond immediate food shortages to long-term effects on household resilience and livelihood sustainability. A study by Moore, Graff, Ouellet, Leslie, and Olwee (2022), though focused on agricultural land use and food systems in the United States, showed that pressures affecting agricultural resources can have implications for food security, reinforcing the importance of protecting productive systems. Shemyakina (2022) further noted that conflict often affects market systems, incomes, and food affordability, making households more vulnerable even where food may be physically available. Bedasa and Deksis (2024) also found that conflict exposed rural households to chronic food insecurity through displacement and weakened coping capacity.

The studies generally concluded that communal conflicts have significant influence on household food security and recommended policies that promote peace, livelihood recovery and protection of agricultural production systems. However, limited studies have examined this relationship specifically among households in communities of Southern Cross River State, creating the need for further investigation. Consequently, this study was designed to assess the dynamics of communal conflicts on

agricultural productivity and food security in selected communities within Southern Cross River State of Nigeria.

Materials and methods

This study adopted a cross-sectional survey research design, integrating quantitative and qualitative methods to examine the dynamics of communal conflicts on agricultural productivity and food security in communities of Southern Cross River State, Nigeria. The mixed method approach was considered suitable because it enabled the collection of both numerical and descriptive data, thereby providing a broader understanding of the problem. Data for the study were obtained from both primary and secondary sources. Primary data were collected through structured questionnaires, interviews, focus group discussions, and field observations among farmers, households, and other residents in conflict-affected communities, while secondary data were sourced from documented literature, reports, and related materials. The study focused on selected conflict-prone communities in Biase, Akamkpa, and Odukpani Local Government Areas (FIG. 1), purposively chosen based on histories of communal conflicts, while respondents were selected.

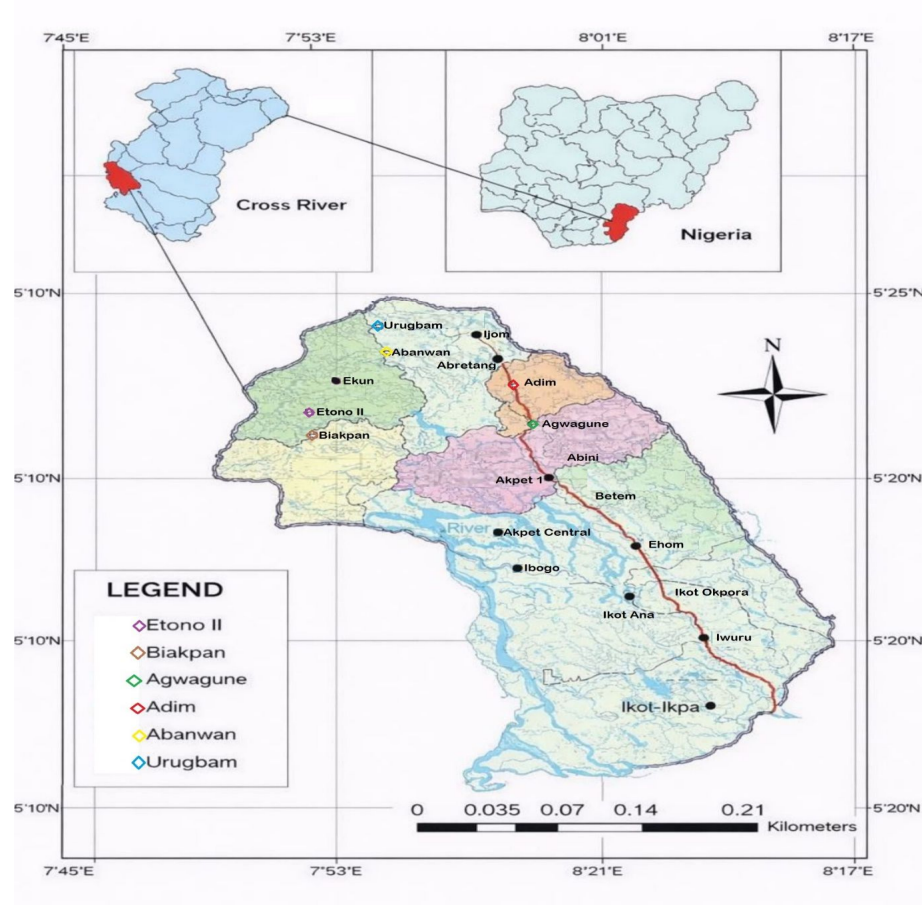


FIG 1: Map of Biase L.G.A, showing conflict-prone communities.

Source: Geographical information system laboratory. Department of Geography and environmental science University of Calabar, Calabar.

through simple random sampling to ensure representativeness. A total sample size of 624 respondents was determined using the proportional allocation method and distributed across the sampled communities.

Data collected addressed issues relating to the effects of communal conflicts on agricultural production, household food security, livelihood conditions and coping mechanisms adopted by affected

communities. The study population comprised about 70,632 persons across the selected communities. The use of questionnaire, oral interviews, and direct observation enhanced the reliability and depth of information generated, while the five point Likert scale guided responses on key study variables. Quantitative data were analyzed in line with the research objectives and hypotheses, while qualitative responses were used to support the interpretation of findings.

Discussion of Findings

Table 1 shows that communal conflicts in Southern Cross River State have significantly affected both livelihoods and agricultural productivity, with the most severe cases recorded in Ebanwan versus Urugbam and New Natin versus Odukpani. These conflicts recorded very high livelihood impact indices of 82.7 percent and 86.3 percent, respectively, alongside major declines in crop production and household income. Staple crops such as cassava, yams, and maize were most affected, with production drops ranging from about 31 percent to nearly 59 percent. Overall, food security stress levels ranged from moderate to very high.

Table 2 further shows the wider socio-economic effects of communal conflicts, including farmland abandonment, population displacement, and disruption of rural markets. New Natin versus Odukpani recorded the highest levels of displacement and crop loss value, followed by Ebanwan versus Urugbam, indicating that more intense conflicts produce greater livelihood disruption. In all communities, increases in poverty rates and farm labour loss were recorded.

Table 3 presents a clear decline in major agricultural products over a ten-year period in conflict-affected communities. All key crops recorded significant reductions, with cocoa showing the highest decline at 44.8 percent, followed by plantain at 42.7 percent and cassava at 41.5 percent. Other crops such as yams, maize, and oil palm also experienced steady decreases in output. These trends show that insecurity, farmland inaccessibility, and labour shortages have reduced agricultural productivity and worsened food insecurity, as illustrated in Plate 1 showing vandalized Brotherhood Bethel in Biakpan and Plate 2 showing a destroyed building in Urugbam due to communal conflicts.

Table 4 shows that communal conflicts have negatively influenced household food security across the affected communities through reduced food availability, inadequate access to food, and rising food costs. Communities such as New Natin versus Odukpani and Ebanwan versus Urugbam recorded the lowest food availability and access scores, alongside the highest months of food shortage and dependence on coping strategies, indicating more severe food insecurity. The table also shows a sharp rise in household food expenditure after conflict across all communities, suggesting that conflict has made food less affordable while increasing pressure on household livelihoods.

Table 5 further confirms the worsening food security situation, as household food self-sufficiency declined from 74.5 percent to 46.2 percent, while average meals per day also dropped significantly. At the same time, dependence on purchased food, child malnutrition, and the effects of food price inflation all increased considerably after a conflict. These trends indicate that communal conflicts have not only reduced food production and access but have also weakened household resilience and intensified food insecurity in the study area.

Table 1: Communal Conflicts, Extent of Impact on Community Livelihood and Agricultural Production

Established Communal Conflict	Conflict Periods	Nature of Conflict	Estimated Households Affected	Extent of Impact on Community Livelihood (Impact Index over 10 years, %)	Major Agricultural Products Affected	Average Production Before Conflict (Tons/Year)	Average Production After Conflict (Tons/Year)	Percentage Decline in Agricultural Production	Estimated Household Income Decline (%)	Food Security Stress Level
Adim versus Agwagune	1983 to 1984; 1986, residual impacts 2016 to 2025	Boundary conflict	1,285	68.4	Cassava, Yam, Maize, Cocoa, Plantain	4,820	2,910	39.6	46.2	High
Ebanwan versus Urugbam	2018 to 2024	Land and resource control	1,764	82.7	Cassava, Rice, Oil Palm, Banana	5,230	2,540	51.4	58.6	Very High
Biakpan versus Etono II	2003, residual impacts 2015 to 2025	Farm boundary encroachment conflict	1,116	74.5	Yam, Cassava, Cocoyam, Vegetables	3,940	2,050	48.0	52.8	High
Ojor versus Uyanga	2010 to 2012	Farmland boundaries	694	55.6	Cassava, Plantain	2,860	1,970	31.1	33.5	Moderate
New Natin versus Odukpani	2015 to 2017	Land resource control	1,972	86.3	Cassava, Cocoa, Oil Palm, Banana	5,680	2,360	58.5	63.4	Very High

Source: Source: Fieldwork, 2026.

Table 2: Conflict Impact on Community Livelihoods

Conflict Communities	Farmland Abandoned (Hectares)	Population Displaced	Rural Market Disruption (%)	Households Experiencing Food Shortages (%)	Average Farm Labour Loss (%)	Poverty Increase Over 10 Years (%)	Annual Crop Loss Value (₦ Million)
Adim versus Agwagune	1,145	2,830	84	61.5	34.8	29.6	184.3
Ebanwan versus Urugbam	1,620	4,116	127	74.2	49.5	41.8	263.7
Biakpan versus Etono II	1,090	2,205	91	66.8	42.1	36.5	191.4
Ojor versus Uyanga	635	1,287	53	48.6	26.4	21.3	108.6
New Natin versus Odukpani	1,884	4,832	146	79.4	54.7	45.2	301.8

Source: Fieldwork, 2026.

Table 3: Decline of major agricultural products in conflict-affected communities

Agricultural Product	Average Output in 2015 (Tons)	Average Output in 2025 (Tons)	Decline (Tons)	Percentage Decline
Cassava	8,951	5,241	3,710	41.4
Yam	5,126	3,060	2,066	40.3
Maize	3,862	2,426	1,436	37.2
Cocoa	2,978	1,647	1,331	44.7
Oil Palm	4,483	2,715	1,768	39.4
Plantain/Banana	3,542	2,034	1,508	42.6

Source: Fieldwork, 2026.

Table 4: Influence of communal conflicts on food security among households

Conflict Community	Average Household Size	Households Affected	Food Availability Score (1–10)	Food Access Score (1–10)	Dietary Diversity Score (1–10)	Months of Food Shortage per Year	Households Relying on Coping Strategies (%)	Average Monthly Food Expenditure (₦) Before Conflict	Average Monthly Food Expenditure (₦) After Conflict
Adim versus Agwagune	6	1,285	7.2	6.8	7.0	3	62.4	48,500	72,300
Ebanwan versus Urugbam	6	1,764	5.1	4.9	5.3	5	78.6	51,200	89,600
Biakpan versus Etono II	5	1,116	5.8	5.5	5.9	4	71.2	44,800	73,900
Ojor versus Uyanga	5	694	6.6	6.3	6.5	2	55.8	39,400	58,700
New Natin versus Odukpani	7	1,972	4.6	4.3	4.8	6	82.9	52,600	97,800

Source: Fieldwork, 2026.

Table 5: Food security indicators across all communities

Indicator	Before Conflict Average	After Conflict Average	Percentage Change
Household food self-sufficiency (%)	74.5	46.2	38.0 decline
Frequency of meals per day	3.0	1.9	36.7 decline
Reliance on purchased food (%)	41.3	69.8	69.0 increase
Child malnutrition cases (%)	12.4	28.7	131.5 increase
Food price inflation impact on households (%)	18.6	44.9	141.4 increase

Source: Fieldwork, 2026.

Conclusion

The study established that communal conflicts have significant effects on agricultural productivity and food security in communities of Southern Cross River State, Nigeria. Findings revealed that recurrent conflicts have disrupted farming activities, caused destruction and abandonment of farmlands, displaced households and reduced access to productive resources, resulting in noticeable declines in the production of major crops such as cassava, yam, maize, cocoa and oil palm. The study further showed that these conflicts have weakened household livelihoods through loss of income, reduced market access, labour shortages, and rising poverty levels. The evidence from the study confirms that the intensity and persistence of communal conflicts are closely associated with declining agricultural productivity and growing livelihood instability in the affected communities.

The study also found that communal conflicts have adversely influenced food security among households through reduced food availability, limited access to food, increased food costs, and growing dependence on coping strategies. Declining household food self-sufficiency, fewer meals consumed daily, and rising cases of food shortages and malnutrition further reflect the severity of the problem. The study, therefore, concludes that communal conflicts constitute a major threat not only to agricultural production but also to sustainable livelihoods and household food security in Southern Cross River State. Addressing these challenges requires effective conflict resolution mechanisms, protection of rural livelihoods, and policies that strengthen agricultural resilience and food security in conflict affected communities.

Recommendations

Government and community stakeholders should strengthen conflict prevention and resolution mechanisms, particularly on land and resource disputes, to promote peace and create a stable environment for agricultural production. There is a need to support affected farming households through agricultural inputs, rural infrastructure development, livelihood restoration programmes, and food security interventions to improve productivity and household resilience. Policies should also promote community-based peace building, sustainable resource management, and improved security measures to reduce recurrent communal conflicts and protect livelihoods in Southern Cross River State.

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