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Abstract

Somalia has experienced prolonged and recurrent crises driven by climate shocks, displacement, and conflicts prompting substantial international humanitarian aid interventions. While humanitarian aid assistance has been critical in addressing immediate food insecurity, its long-term effects on local agricultural systems remain contested. This study examined the impact of humanitarian aid on local agricultural production in Southwest of Somalia particularly focused on Baidoa. The methodology combined quantitative surveys of 400 with qualitative interviews and focus group discussions. The study explored how various forms of humanitarian aid including in-kind, cash-based transfer and resilience programs influence local farming practices, market dynamics and institutional capacity. The findings reveal that poorly timed and misaligned humanitarian aid interventions can distort local markets, reduce demand for locally produced food and discourage farmers from investing agricultural production. Furthermore, the study assessed the effectiveness of humanitarian peace development (HPD) nexus, highlighting both its potential to enhance local community resilience and its limitations due to fragmented coordination and limited local community participation. The study concluded that humanitarian aid must be context sensitive and aligned the local agricultural calendars and development goals to avoid undermining long term food security. It offers actionable recommendations for policy makers, humanitarian actors and development agencies to harmonize relief efforts with sustainable agricultural development in fragile states like Somalia.

Keywords: *Humanitarian aid, market distortion, dependency, humanitarian peace development nexus, community resilience, integrated support, market-supportive modalities.*

1.0 Introduction

Somalia's economy relies heavily on natural resources, particularly livestock, agriculture, and fisheries, with most of the country's GDP derived from the livestock and agricultural sectors (Ministry of Planning, Investment & Economic Development [MoPIED], 2020). Production systems are shaped by geographic and climatic conditions: the Northern and Central regions, which are arid and semi-arid, support mainly pastoral communities, while the Southern regions benefit from higher rainfall and access to water from the Juba and Shabelle rivers, sustaining agricultural and agro-pastoral livelihoods. The main crops cultivated in Somalia include maize, sesame, sorghum, and cowpea, which remain central to rural household food security and local market supply (MoPIED, 2020, pp. 182, 195). Despite this agricultural potential, productivity remains constrained by inadequate inputs, limited irrigation infrastructure, and structural underdevelopment that has persisted across decades of instability (FAO, IFAD, & WFP, 2024).

Somalia's central government collapsed in 1991, triggering protracted civil conflict that destroyed critical infrastructure, displaced farming communities, and severely disrupted agricultural production across the country. The resulting institutional vacuum weakened land tenure systems, disrupted input supply chains, and fragmented governance structures that once supported rural development (Heritage Institute for Policy Studies, 2020). Over three decades of intermittent conflict have compounded poverty and food insecurity, leaving vast agricultural areas either abandoned or inaccessible due to insecurity. Farmers who remained on their land faced rising costs, limited access to markets, and an absence of government extension services (Ali, Hassan, & Yusuf, 2024). This prolonged instability created the structural conditions for chronic food crisis and entrenched dependence on external humanitarian assistance as a substitute for functional national food systems.

Climate-related shocks have further compounded the impacts of conflict on Somalia's food systems. Droughts, floods, and locust infestations have repeatedly devastated harvests and disrupted seasonal farming cycles. The 2020–2023 drought was the most severe in 40 years, destroying pasture and crops across large parts of the country, while floods in 2023 displaced approximately 1.2 million people and inundated arable land in the south (Green Climate Fund, 2024). Nearly 49% of the population is undernourished, driven partly by extremely low productivity on rain-fed staple crops and recurring weather extremes (Green Climate Fund, 2024). Somalia remains classified as one of the world's most acute humanitarian crises, with 6.9 million people requiring assistance in 2024 (OCHA, 2024). These overlapping shocks have created cycles of displacement and agricultural collapse that recur with increasing frequency.

In response to Somalia's chronic instability and food insecurity, the international community has made Somalia one of the largest recipients of global humanitarian funding. In 2023 alone, donors committed approximately USD 1.8 billion to the Somalia Humanitarian Response Plan (OCHA, 2024). Aid agencies have provided a broad range of services including food distribution, nutrition programs, seed and tool distribution, cash transfers, and rehabilitation of rural infrastructure. Over decades, billions of dollars have been invested to prevent famine and protect lives during peak emergencies (World Bank, 2013). However, despite the scale of these investments, aid delivery in Somalia frequently occurs in environments where state institutions are weak or absent, resulting in poor inter-agency coordination, fragmented planning, and limited integration of humanitarian responses with national development frameworks (United Nations, 2023b).

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The long-term effects of humanitarian assistance on local agricultural systems remain contested and insufficiently understood. While aid is often lifesaving during acute crises, its sustained presence can generate unintended negative consequences for local food production. The widespread distribution of free or subsidized food can depress local commodity prices, reducing the financial viability of smallholder farming and discouraging investment in crop production — a dynamic commonly referred to as "food aid dependency" (Adan, 2023; Research Square, 2024). Decades of donor-driven food aid have, in many cases, displaced local grain and livestock producers unable to compete with zero-cost alternatives (PMC, 2024). Moreover, the concentration of humanitarian resources on emergency response often diverts attention from more sustainable agricultural development investments, leaving farmers without access to essential tools, irrigation, credit, and technical training (Hassan, 2024; FAO, IFAD, & WFP, 2024).

Weak or absent state institutions further complicate aid delivery and undermine any potential links between humanitarian relief and long-term agricultural development. Understanding the specific constraints that humanitarian interventions create is therefore essential for designing programs that complement, rather than hinder, local food production. This includes examining how aid affects land use decisions, labor availability, farming practices, and market access (Ali et al., 2024; NET, 2022). The humanitarian-peace-development (HPD) nexus has emerged as a key policy framework for bridging emergency response and long-term development in fragile, conflict-affected contexts (United Nations, 2015). By promoting coordination among humanitarian, development, and peacebuilding actors, the HPD nexus aims to make aid more coherent and produce durable outcomes beyond immediate crisis response (Oxfam, 2020).

In Somalia, however, the HPD nexus is applied inconsistently, and its potential remains largely unrealized. Coordination between humanitarian organizations and development agencies is frequently fragmented, while peacebuilding efforts are often sidelined due to political sensitivities and funding constraints (United Nations, 2023b; PBF, 2024). As a result, emergency responses continue to take precedence over programs that address the structural causes of food insecurity and agricultural underdevelopment. This study examined these dynamics in Baidoa, Southwest Somalia, exploring how the presence, structure, and timing of humanitarian aid affect local agricultural systems. It assessed the effectiveness of the HPD nexus and whether current aid strategies align with development and peacebuilding objectives, with the broader aim of identifying strategies that support sustainable agricultural production in fragile state contexts.

1.1 Problem Statement

Farming has historically been the backbone of Somalia's economy, yet the sector has suffered significant decline since the collapse of the central government in 1991, resulting in deteriorating infrastructure, reduced local agricultural output, and growing dependence on foreign aid and imports (Hassan, 2024; U.S. International Trade Administration, 2023). Nearly 60% of the population depends on pastoralism or agro-pastoralism for livelihoods that remain chronically underfunded and vulnerable to erratic rainfall, land degradation, and water scarcity (PMC, 2024). Forty-nine percent of the population is undernourished, driven largely by very low productivity on rain-fed staple crops (Green Climate Fund, 2024). Local farmers face compounding structural challenges including limited market access, inadequate transportation networks, poor storage facilities, a shortage of quality seeds and fertilizers, and frequent climate shocks such as droughts and floods that disrupt planting and harvest cycles (Green Climate Fund, 2024; NET, 2022; Ali,

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Hassan, & Yusuf, 2024). Agricultural input support programs often fail to align with the specific needs of local farmers or the agro-ecological zones in which they operate, and aid distributions frequently coincide with critical planting periods, diverting labor and attention away from fields at the most consequential times of the agricultural calendar (FAO, IFAD, & WFP, 2024).

While humanitarian aid has undeniably saved lives during acute crises, growing evidence suggests that certain modalities, particularly in-kind food aid, can harm local food production and market stability over the long run. Decades of donor-driven food distributions have in many cases displaced local grain and livestock producers who are unable to compete with zero-cost imported alternatives, suppressing local prices and eroding producer incentives (PMC, 2024; Adan, 2023). Rather than empowering farmers, sustained aid availability can foster dependency, reducing farmers' inclination to invest in crop production (Research Square, 2024). In areas where aid distribution is politicized or captured by local elites, smallholder farmers may be excluded from benefits entirely, exacerbating inequality and deepening conflict dynamics (PMC, 2024). The relationship between humanitarian assistance and local agricultural development in Somalia is therefore complex and multifaceted: aid that is poorly timed, misaligned with local needs, or inadequately coordinated with development objectives risks undermining the very food systems it seeks to support (Hassan, 2024; United Nations, 2023b). This study examines these dynamics in Baidoa, Southwest Somalia, to identify pathways toward aid approaches that complement rather than displace local agricultural production.

1.2 Research Questions

The study sought to find out the impact of humanitarian aid on local agricultural production but more Specifically, the research sought to answer the following research questions:

- i. What are the constraints local agricultural production faces due to humanitarian aid in Somalia?
- ii. How effective is the humanitarian-peace-development nexus in Somalia?
- iii. What strategies can be implemented to strengthen local agricultural production amidst humanitarian aid?

1.3 Research Objectives

The main research objective was: assessing the impact of humanitarian aid on local agricultural production. Specifically, the research was guided by the following research objectives:

- i. To analyze the constraints local agricultural production faces due to humanitarian aid in Somalia.
- ii. To examine the effectiveness of the humanitarian-peace-development nexus in Somalia.
- iii. To explore strategies that can be implemented to strengthen local agricultural production amidst humanitarian aid.

2.0 Literature Review

Humanitarian aid encompasses support and actions designed to save lives, alleviate suffering, and preserve human dignity during and after emergencies. It is guided by the principles of humanity, neutrality, impartiality, and independence, and is intended primarily as a short-term intervention during and immediately after a crisis (United Nations, 2015). In practice, however, the boundaries

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between emergency relief and longer-term recovery are difficult to define, particularly in protracted crises such as those experienced in Somalia (FAO, IFAD, & WFP, 2024). Humanitarian assistance is delivered by a range of actors including governments, NGOs, multilateral organizations, domestic agencies, and private companies, each operating with varying definitions of what constitutes humanitarian action (OCHA, 2024). Beyond immediate relief, humanitarian aid can encompass risk reduction, disaster preparedness, and early recovery efforts, though these dimensions are not consistently integrated into emergency programming in fragile contexts (United Nations, 2023b).

Somali farmers face profound structural challenges that constrain agricultural productivity independent of humanitarian aid. The most pressing constraints include a severely limited labor force and reliance on rudimentary equipment such as hand hoes and aging tractors, with access to mechanized farming remaining largely out of reach for smallholders (Abdi-Soojeede, 2018). Knowledge of modern farming practices remains scarce across the sector, with misinformation about agricultural inputs prevalent not only among farmers but also among traders and input suppliers (FAO, IFAD, & WFP, 2024). The land tenure system presents an additional barrier, as farmers increasingly struggle to access essential inputs from vendors who demand upfront cash payments that financially distressed households cannot meet (Ali, Hassan, & Yusuf, 2024; Heritage Institute for Policy Studies, 2020). Crop losses caused by locusts, fall armyworm, dry spells, and plant diseases have been reported extensively across Lower Shabelle, Togdheer, Sanaag, and Bakool regions, while the early ending of the Gu rainy season has further reduced agricultural income across southern Somalia (NET, 2022).

Evidence on the relationship between food aid and local agricultural production in Somalia is mixed and context dependent. Kanyare (2020) found in the Afgoye district that food aid did not negatively affect local production, because domestic output was structurally insufficient to meet population needs, and aid primarily served internally displaced persons who had been forced off their farmlands by drought, insecurity, floods, inter-communal conflict, and lack of capital. In that context, food aid filled a supply gap rather than displacing local production. By contrast, Adan (2023) found significant negative effects in the Bal'ad district, where food aid disrupted local markets, suppressed prices for domestically produced cereals, and shifted consumption patterns away from traditional staples such as sorghum and maize toward imported substitutes including rice and wheat products. These contrasting findings suggest that the impact of food aid on local agriculture is determined largely by delivery modality, timing, targeting accuracy, and the structural conditions of local food markets rather than by aid volume alone (Research Square, 2024).

Foreign aid has also generated measurable positive outcomes across multiple sectors in Somalia. Humanitarian assistance has been vital in providing immediate relief during acute crises, reducing mortality and addressing the basic needs of affected populations through food distributions, medical supplies, and emergency response operations (World Bank, 2013). Aid investments in healthcare have strengthened health systems, improved access to essential medicines, and supported the control of infectious diseases, while education assistance has funded school construction, teacher training, and expanded access to quality learning for Somali children (World Bank, 2013). Livelihood support programs including microfinance, vocational training, and small-business development have helped communities generate income and reduce poverty (World Bank, 2013). Peacebuilding initiatives such as disarmament, demobilization, and reintegration programs have contributed to stabilizing conflict-affected areas, while pre-war infrastructure

investments in roads, ports, and irrigation systems laid important foundations for agricultural productivity and trade (United Nations, 2015).

Despite these contributions, Somalia's sustained reliance on food aid and cash transfers has created a negative cycle of dependency that delivers value to intermediaries without generating durable solutions for displaced agricultural communities (PMC, 2024). Most internally displaced persons who have settled in Baidoa continue to live as agricultural laborers without access to the land or inputs needed for independent production, making agricultural revitalization a strategic priority for long-term recovery (Ali et al., 2024). Breaking the dependency cycle requires a deliberate shift from emergency relief toward community-based economic empowerment, including investments in access to arable land, irrigation infrastructure, quality seeds and tools, and training in climate-resilient farming methods (Green Climate Fund, 2024; FAO, IFAD, & WFP, 2024). Public-private partnerships, microfinance institutions, and farmer cooperatives all have important roles to play in expanding market access, financing, and collective bargaining power for smallholder farmers and entrepreneurs (Heritage Institute for Policy Studies, 2020). Sustained progress requires coordinated efforts among government, donors, the private sector, and local communities to anchor agribusiness development within value chain frameworks that support long-term food sovereignty.

2.1 Theoretical Literature

According to Enmesh Okechuku (2013), the dependency theory aims to explain a country's economic development by considering the external forces that shape its national policies. These external factors include foreign aid, multinational corporations, international commodity markets, and other ways by which developed countries can advance their economic interests in poorer nations. The theory is centered on the idea that countries are divided into two types: those at the core of the economy, which are wealthy and dominate the periphery, and those on the periphery, which are impoverished. In this dominant relationship, the poorer countries are expected to provide raw materials and cheap labor to the core countries. The theory argues that the system only benefits the core countries, which develop and become wealthier over time, while the poorer countries become increasingly underdeveloped and impoverished (Okechuku, 2013, pp. 4-5). Underdeveloped countries typically share several standard features, including widespread poverty, markets for surplus agricultural products and manufactured goods from developed countries, and highly dependent economies that produce primary products for the developed world (Okechuku, 2013, p. 2).

Richard Vengroff's 1982 study, "Food and Dependency: PL480 Aid to Black Africa," examined 32 African countries that gained independence in the 1960s. He chose these nations because they have been and continue to be recipients of American food aid. The PL 480 program aimed to distribute aid based on three factors: need, trade access for the United States, and political alliance. To be included in the study, countries had to receive PL480 food aid for at least 10 years, which all 32 countries met. At the time, Vengroff found that PL480 aid to Africa could be viewed through a dependency theory lens, as it was closely tied to the US's penetration of markets and access to raw materials for natural resource extraction. He concluded that the primary goal of PL480 seemed to be securing raw materials and markets (Vengroff, 1982, pp. 42-43).

Regarding the current study, the Dependency Theory sheds light on how humanitarian assistance affects local agricultural production in Somalia, specifically in Baidoa. It helps explain why the

area's agrarian resilience may be weakened due to ongoing external support. This theory highlights the drawbacks for local farmers, market disruptions and the dominance of umbrella aid systems over market aid governance. It informs the analysis of the paradox between food relief and resilience programs and their influence on agricultural aid in Somalia.

3.0 Methodology

The study adopted both quantitative and qualitative methods. Quantitative methods were used to measure numbers, frequency, and statistical relationships. Qualitative methods help provide deeper insights that quantitative methods alone cannot offer (e.g., understanding experiences, perceptions, motivations, and the reasons behind observed trends, as well as rich contextual details). The study focused on local farmers, humanitarian actors, IDPs, local Government personnel, and local agricultural cooperatives in Baidoa.

Yamane's formula (1967) was used to determine the correct sample size. This formula is commonly used in social sciences to calculate sample sizes when the population is known.

$$n = \frac{N}{1 + Ne^2}$$

Where

n = required sample size

N = population size

e = margin of error (level of precision)

Based on these calculations, a sample size of approximately 400 respondents was found to be ideal for a 5% margin of error.

4.0 Data Presentation, Analysis, And Interpretation

4.1. Demographic Characteristics of Respondents

Table 1 Demographic Characteristics of Respondents

Demographic variable	Category	Frequency	Percentage
Gender	Female	178	45.5%
	Male	222	55.5%
Age group	20–30	106	26.5
	31–40	111	27.75
	41–50	95	23.75
	51–60	79	19.75
	Above 60	9	2.25
Marital status	Married	226	56.5%
	Single	66	16.5%
	Widowed	29	7.3%
	Divorced	79	19.7%
Occupation	Famer	100	25
	humanitarian worker	100	25
	IDP	100	25
	local	100	25

The demographic data shown in table1 indicates that an overview of key social and economic characteristics of the respondents who participated in the study. 400 individuals were surveyed to know the population in terms of gender, age, marital status and occupation. The study found that 55.5% of the respondents were male and 45.5% were female, showing that gender representation in the survey is secured though male respondents is slightly higher than that of female. This shows that both male and female insights were plenty represented in the study.

The age distribution indicates that most of respondents were within 20 – 30 years (26.5%),31-40(27.75%) 41– 50 years (23.75%) ,50-60 (19.75%) and above 60 years (2.25%) categories. This emphasizes that most participants were Middle-Aged Adults: The age group from 30 to 50(51.5%) this is considered an age group, who is socially accountable and energetic. The younger group 20-30 years (26.5%) aged this show that significant number of the population are youth. Most respondents (56.5%), were married, followed by divorced (19.7%), single (16.5%), and widowed (7.3%). This indicates that most respondents married while there are significant number of divorced, widowed and single., which could impact their economic and livelihoods. High number of divorced widowed and single status this are the neediest in the community as they need support economically. The occupation of the respondents includes a mix of IDPs (25%), farmers (25%), local community members (25%), and humanitarian workers (25%). This mix gives the study perspectives from both aid recipients and implementers.

4.2. Results Based On the Objectives of the Study

4.2.1. Constraints local agricultural production faces due to humanitarian aid in Somalia.

Table 2: Constraints local agricultural production faces due to humanitarian aid in Somalia.

	Response	Frequency	Percentage (%)
Humanitarian food aid has a negative effect on local agricultural markets due to less demand for locally produced food	Agree	242	60.5
	Disagree	25	6.25
	Neutral	48	12
	Strongly Agree	63	15.75
	Strongly disagree	22	5.5
Somali farmers are discouraged from investing in agricultural production by their continued reliance on food aid	Agree	234	58.5
	Disagree	24	6
	Neutral	71	17.75
	Strongly agree	59	14.75
	Strongly disagree	12	3
The needs and timing of local farming systems are well-aligned with humanitarian aid programs in Somalia.	Agree	101	25
	Disagree	131	33
	Neutral	44	11
	Strongly agree	47	12
	Strongly disagree	77	12
Short-term relief is given priority over long-term agricultural development in most humanitarian aid efforts in Somalia	Agree	216	54
	Disagree	23	5.75
	Neutral	71	17.75
	Strongly agree	84	21
	Strongly disagree	6	1.5
Humanitarian aid can destroy farmer resilience and local agricultural institutions if it is not properly managed	Agree	223	55.75
	Disagree	21	5.25
	Neutral	55	13.75
	Strongly agree	92	23
	Strongly disagree	9	2.25

The results in table 2 summaries the overview perceptions of the respondents regarding questions being asked. most respondents (60.5%) agreed that humanitarian food aid negatively affects local agricultural markets. This suggests that the influx of free or imported food aid can reduce local farmers' sales and discourage local production. Only a small proportion disagreed, indicating limited confidence in the local market's ability to compete with aid-supported supplies. When asked the dependency of humanitarian aid the respondents (58.5%) and (14.75) either agreed or strongly agreed that dependency on food aid discourages farmers from making long-term investments in agriculture. This implies that aid dependency may create a disincentive to produce, weakening the sustainability of local food systems.

With regards to the timing and alignment of farmer needs of humanitarian intervention Responses were mixed, (33%) disagreed, indicating that humanitarian aid timing and local agricultural calendars are not always matched. Some humanitarian programs may deliver aid late, reducing its effectiveness for farmers who rely on timely inputs such as seeds and fertilizers. For the

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periodization of short-term humanitarian interventions over long term programs, significant respondents (54%) agreed that humanitarian organizations tend to prioritize short-term interventions such as food distribution over long-term agricultural development. This imbalance limits resilience-building and self-reliance among farming communities. In terms of coordination and well management of humanitarian aid programs a large proportion of respondents (55.75%) agreed that poorly managed aid can weaken local institutions and create dependency. This supports the idea that resilience requires careful coordination between humanitarian and development actors which in turn leads program sustainability and residence for the community.

For FGDs, themes of declined local markets and dependency and reduced motivation by local farmers were discussed, where Farmers and traders emphasized that in-kind food aid reduces demand and prices for local crops like maize and sorghum, particularly when aid distributions coincide with harvest seasons.

Overall there are lack of coordination among humanitarian actors and national authorities to align humanitarian programs with needs of the local people which creates duplicates efforts. Short term interventions are given priority over long term, which undermines sustainable, and the resilience of the local community hence reduces their local productions.

4.2.3 Effectiveness of the humanitarian-peace-development nexus in Somalia.

Table 3: Effectiveness of the humanitarian-peace-development nexus in Somalia.

Question	Response	Frequency	Percent (%)
Local communities and authorities are appropriately included in decision-making in Somalia's current implementation of the HPD (Humanitarian-Peace-Development) nexus.	Agree	161	40.25
	Disagree	105	26.25
	Neutral	84	21
	Strongly agree	38	9.5
	Strongly disagree	12	3
Integrating agricultural aid, including training, equipment, and seeds, into humanitarian programs improved local agricultural production.	Agree	169	42.25
	Disagree	104	26
	Neutral	61	15.25
	Strongly agree	48	12
	Strongly disagree	18	4.5
The humanitarian-peace-development nexus has improved the long-term resilience of communities affected by conflict in Somalia	Agree	250	62.5
	Disagree	69	17.25
	Neutral	42	10.5
	Strongly agree	28	7
	Strongly disagree	11	2.75
	Agree	231	57.75

Question	Response	Frequency	Percent (%)
The effectiveness of humanitarian aid interventions in Somalia is limited by fragmentation between the humanitarian, peace, and development sectors.	Disagree	76	19
	Neutral	60	15
	Strongly agree	26	6.5
	Strongly disagree	7	1.75
In Somalia, development, humanitarian, and peacebuilding actors work together to effectively address the underlying causes of crises	Agree	193	48.25
	Disagree	98	24.5
	Neutral	45	11.25
	Strongly agree	45	11.25
	Strongly disagree	19	4.75

Table 3 summaries the views of the participant regarding the following statements.

For location participation and engagement, respondents generally agreed (40.25%) that local participation in humanitarian planning remains limited. This shows that decision-making often remains centralized among international actors, reducing ownership by Somali institutions and communities.

The integration of agricultural support significant respondents (42.25%) agreed that integrating agricultural support into humanitarian programs leads to more sustainable outcomes. Joining immediate relief programs with agricultural investment can strengthen food security and reduce aid dependency and leads sustainability and resilience during crises. In terms of community resilience, the results show that respondents (62.5%) agreed that the HPD nexus has contributed positively to community resilience by promoting joint interventions. However, a minority felt the approach has not yet translated into tangible benefits on the ground.

In view of coordination among different stakeholders, a significant number of respondents (57.75%) agreed that lack of coordination among different sectors limits the overall impact of aid. This fragmentation leads to duplication of efforts and missed opportunities for sustainable outcomes. In terms of collaboration among different stakeholders for effective program implementation the responses suggest (48.25%) moderate agreement that collaboration among actors exists, though not always effectively implemented, there remains room for improved coordination to ensure long-term solutions to recurrent crises.

For focus group discussion the participant mostly agreed that there are Weak Coordination Between Actors Humanitarian, development, and peacebuilding organizations are often unaligned, causing fragmented support and short-lived impact. On the other hand, they significantly show Positive View of Integrated Programs Community members value integrated projects that combine humanitarian support with development activities like farming, training, and cash-for-work.

4.3.1. Strategies that can be implemented to strengthen local agricultural production amidst humanitarian aid.

Table 4: Strategies that can be implemented to strengthen local agricultural production amidst humanitarian aid.

Question	Response	Frequency	Percentage (%)
Buying food aid from local Somali farmers rather than relying on imports will promote the expansion of the agricultural industry.	Agree	211	52.75
	Disagree	103	25.75
	Neutral	63	15.75
	Strongly Agree	13	3.25
	Strongly Disagree	10	2.5
Integrating agricultural aid, including training, equipment, and seeds, into humanitarian programs improves local agricultural production.	Agree	233	58.25
	Disagree	107	26.75
	Neutral	45	11.25
	Strongly Agree	8	2
	Strongly disagree	7	1.75
When agricultural supplies are delivered on time for the planting season, humanitarian aid are more successful.	Agree	241	60.25
	Disagree	99	24.75
	Neutral	36	9
	Strongly Agree	14	3.5
	Strongly disagree	10	2.5
To reduce reliance on food aid from humanitarian organizations requires improving rural roads and irrigation systems.	Agree	222	55.5
	Disagree	121	30.25
	Neutral	40	10
	Strongly Agree	12	3
	Strongly disagree	5	1.25
Strengthening local institutions and farmer cooperatives improves the long-term viability of agricultural production during crises	Agree	252	63
	Disagree	97	24.25
	Neutral	35	8.75
	Strongly Agree	11	2.75
	Strongly Disagree	5	1.25

When asked buying humanitarian aid from Local markets instead of importing from foreign, most of the respondents (52.75%) agreed that sourcing aid locally would encourage agricultural production and strengthen local markets. Local procurement also ensures that aid supports the domestic economy rather than foreign suppliers. For integration of agricultural sector into humanitarian aid programs significant respondents strongly (58.25) supported the integration of agricultural sector into aid programs, emphasizing the need for technical support to strengthen productivity and resilience among smallholder farmers in the region. In terms of timely

implementation of humanitarian interventions, majority of the participants (60.25) agreed that the success of humanitarian agricultural programs depends on timely delivery of inputs. Late deliveries reduce crop yields and limit the intended benefits of aid interventions. For infrastructure improvements the respondents (55.5) agreed that infrastructure improvements, particularly irrigation canals and transportation like roads are important for achieving self-reliance. Improved infrastructure improves access to markets and supports sustainable agricultural development. Strengthening local institutions and farmer cooperatives, majority respondents (63) agreed that strong local institutions and farmer cooperatives are crucial for ensuring agricultural resilience during crises. This shows support for a locally driven and community centered approaches to development and aid coordination.

In focus group discussion the following were discussed and the participants shed light on the importance of localization and locally led humanitarian programs and integration with local farming systems with humanitarian aid. Local Adaptation and Innovation Farmers are using cooperatives, drought-resistant seeds, and informal partnerships to stay productive despite market disruptions.

Preference for Local Procurement and Long-Term Solutions, participants consistently urge aid agencies to buy from local farmers, link aid with agriculture, and prioritize developmental over emergency projects. In overall buying humanitarian aid from local markets enhance local production, create job opportunities, reduce Humanitarian aid dependency and encourage local farm production.

4.3 Summary of Findings

Humanitarian food aid has adverse effects on local markets by reducing demand for domestically produced crops and discouraging producers from investing in agriculture. Short-term aid prioritizes over long-term development, weakens local institutions, and promotes dependency. Inadequate coordination among humanitarian actors and national authorities equally limits sustainable agricultural development.

Humanitarian food assistance harms local markets via reduced demand for homegrown crops and discouraging farmers from planting crops. Short-term support comes at the expense of long-term development, eroding local institutions, and creating dependency. Ineffective coordination between humanitarian organizations and national governments also hinders sustainable agricultural growth. Procuring food assistance locally, incorporating agricultural assistance within humanitarian interventions, and providing timely farm inputs were cited as the main strategies to support the strengthening of agricultural productivity. Improvements in infrastructure and firm local institutions or cooperatives are necessary to minimize aid dependence and increase resilience. Locally initiated, well-coordinated interventions build more sustainable and self-dependent farming communities.

Locally producing food support, mainstreaming farm assistance in humanitarian programs, and the delivery of timely farm inputs were regarded as key strategies in developing agricultural resilience. Good infrastructure and sound local institutions or cooperatives are essential to reduce dependence on aid and enhance resilience. Well-coordinated, locally driven interventions result in more resilient and sustainable farming communities.

Humanitarian Peace Development nexus has enhanced moderately community resilience with collaborative programs but with minimal farmers' and local authorities' engagement in decision-making. Divided efforts and coordination weakness by humanitarian, peace, and development actors reduce overall effectiveness. The Humanitarian Peace Development nexus has enhanced community resilience to some degree through the application of concurrent programs but the inclusion of local authorities and farmers in decision-making is not extensive. Ineffective coordination and fragmented activity among humanitarian, peace, and development actors reduce overall effectiveness. Conjoint approaches that connect relief with development activities are more likely to have lasting effects. Overall, integrated strategies that incorporate relief plus development activities have greater potential for sustainable outcomes

5.1 Discussion, Conclusion, And Recommendations

5.1. Discussion of Findings

5.1.1 Constraints local agricultural production faces due to humanitarian aid in Somalia.

Market influences and population discouragements: Majority of respondents from Baidoa agreed that humanitarian aid depresses demand for locally produced food and discourages farmers agricultural investments. (60.5% and 58.5% respectively), with many also perceiving that short term relief is prioritized over long term programs that focus on long term development (54%). Therefore, this view aligns with (%). These views align with Adan (2023), who found that food aid in Bal'ad disrupted markets, shifted consumption toward imported cereals, lowered local prices, and dampened producer incentives. The Baidoa data thus reinforce that, under certain delivery patterns (especially around harvests), in-kind food aid can cause standard price and incentive effects that undermine local producers (Adan, 2023).

The timing, alignment and instructional damage: Thirty-three percent (33%) of the respondents said that humanitarian interventions are not matched with the agricultural calendars. And (55.5%) agreed that poorly managed humanitarian aid can weaken local farmer's resilience and institutions. These insights are consistent with the empirical literature noting coordination gaps, weak alignment to seasonal needs, and institutional erosion when aid is not integrated with local systems (FAO et al., 2014; Ali et al., 2024; Heritage Institute, 2020; NET, 2022). Through contrast, Kanyare (2020) reported that in Afgoye, food aid did not significantly affect local production because domestic supply could not meet total needs; aid filled a structural deficit. The Baidoa, results diverge from that conclusion: respondents felt market displacement and discouragement effects. Which is reasonable for this difference is context and timing Baidoa experienced large, recurrent inflows of humanitarian aid that sometimes coincided with harvests, alongside preference shifts to imported rice/wheat; such dynamics can create local price suppression even when aggregate supply remains insufficient. The extent and timing of distributions, targeting practices, and commodity mixes thus appear to condition whether aid is complementary (as in Kenmare's case) or displacement-prone (as in the baidoa case) (Kanyare, 2020). Conflict, climate and structural constraints interacting with aid. Respondents', narratives about insecurity, input access and shocks (locusts, dry spells) echo studies that identify conflict, climate hazards, and land/infrastructure constraints as primary production bottlenecks (Abdi-Soojeede, 2018; FAO et al., 2014; NET, 2022). In Baidoa these factors likely the market effects of humanitarian aid. Baidoa, these factors likely intensify the market effects of humanitarian aid: when farmers already face high costs/risks, even modest price depressions or uncertainty about future aid distributions

can tip planting decisions toward caution, thereby reinforcing low output stabilities. Overall, the Baidoa evidence most closely aligns with the strand of literature alarming that how humanitarian aid is delivered matters than how much is delivered. Mis-timed, in-kind distributions and weak coordination can reduce local incentives and strain institutions, while context-sensitive modalities mitigate such risks (FAO et al., 2014; Adan, 2023).

5.1.2 Effectiveness of the humanitarian-peace-development nexus in Somalia.

Positive and mixed of perceptions of resilience benefits: Majority of the participants (62.5%) agreed that humanitarian-peace-development nexus has improved long term local community resilience; (48.25%) recognized that some collaborations exist. These findings resonate with post-2016/17 drought learning that lifesaving action alone is insufficient and that resilience, safety nets, and social coherence investments are essential an emphasis reflected in Somalia's nexus task forces and donor shifts since 2020 (Oxfam, 2020; United Nations, 2015; World Bank, 2013) Gaps in coordination remains bidding. At the same time, (57.75%) agreed that fragmentation between humanitarian development and peace actors limits impacts, and (48.25%) perceived that local in decision making remain limited. This idea is consistent with Oxfam's caution that the nexus implies structural changes in planning/financing and that integration challenges are persistent. The literature also notes substantial peacebuilding and state-capacity investments (e.g., PBF allocations; Somalia Joint Fund) alongside continuing constraints, corruption risks, insecurity, aid diversion that complicate HPD operationalization (PBF, 2024; United Nations, 2023b). Agreement with prior debates the survey's moderate support for integrated agricultural assistance with humanitarian programs (42.25%) agreements empirically underlines the conceptual claim that nexus coherence is most credible when it materialized in joining up livelihood oriented designs like cash for work, food for training linked with water conservation , rehabilitation of irrigation canal, agricultural inputs sequenced with protection /social cohesion activities (Oxfam,2020; United Nations,2015).

5.1.3. Strategies that can be implemented to strengthen local agricultural production amidst humanitarian aid.

Local sourcing and market supportive modalities: Over half of the respondents (52.75%) supported that sourcing humanitarian assistance locally than importing. This aligns with market supportive assistances that reduces displacement risks and keep value in local market system's stability especial in quality assurance, forward contracts and price bands are used. it also programmatic bridge between lifesavings imperative and production incentives; local and regional procurements can be paired with cash-based transfer to stimulate the market. Integrated timely agricultural support and timely inputs: robust majorities of the respondents endorsed that integrating training, farm tools and seeds into humanitarian programs (58.25) and ensuring seasonal timeliness (60.25%). These views echo resilience and HPD the best practice and the literature's emphasis on coupling relief with on-farm productivity and market access measures (FAO & ITU, 2022; FAO et al., 2014). Enabling environment: Infrastructure and institutions. most respondents shed light on rural roads/ irrigations (55.5%) and strengthening institutions and cooperatives (63%), shows that community members see system constraints in logistics, water control aggregations and bargaining power as decisive. This idea supports arguments on institutional capacity and the benefits of collective action for inputs, finance, and market linkage (Ali et al., 2024; Heritage Institute, 2020). The Baidoa results largely agree with the strategies

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proposed in the literature: local procurement where markets permit; integration of agricultural services into relief; time-sensitive inputs and investments in irrigation, roads and farmer organizations augmented by digital tools and locally led governance (FAO & ITU, 2022).

5.4. Conclusion

The study concludes that in Baidoa specific design of humanitarian aid especially poorly timed in-kind food distributions and weak alignment with agricultural farming calendars are associated with depressed local demand, reduced producer incentives and perceived erosion of local institutions.

While conflict, climate shocks remain foundational constraints, the modalities and timing of aid can either cushion or compound these pressures; humanitarian action must therefore reduce market distortions and protect (or stimulate) local production incentives (Adan, 2023; FAO et al., 2014).

Generally, respondents acknowledged that resilience gains from more integrated programming but highlighted persistent fragmentation and limited local voice. Somalia's HPD architecture in practice is uneven: to realize its promise, joint analysis, planning, financing, and measurement must be institutionalized, with stronger municipal and farmer-organization participation in decisions that affect agrarian systems (Oxfam, 2020; PBF, 2024)

Stakeholders favored package of market-supportive and productions enabling strategies. local procurement where feasible, integrated agricultural services in relief, seasonal timeliness, and investments in irrigation/feeder roads and cooperatives supplemented by inclusive, digitalized services (FAO & ITU, 2022; Ali et al., 2024).

5.5 Recommendations

5.5.1 Recommendations Based on Objectives of the Study

Reduce market distortion: Prioritize cash-based transfer and local procurement /regional procurement (LRP); when in-kind is necessary, enforce harvest sensitive timing and market aware volume. Use joint seasonal calendars with farmers to set no delivery window during harvest; apply price ban triggers to pause or scale LRP target in-kind to isolate or thin markets only; and publish monthly market/ harvest bulletins co- signed local authorities and cluster leads. Baidoa respondents linked in-kind distribution to depressed prices and lower farmer incentives; cash/LRP and timing protocols directly mitigate these effects while preserving humanitarian objectives (Adan, 2023; Kanyare, 2020).

Operationalized locally HPD nexus : Institutionalize joint planning cells at Baidoa municipal /state level with standing seats for farmer cooperatives , women/youth groups and chamber for commerce. Align pooled financing like (joint fund window) to multi-year based plans ; every humanitarian grant in Baidoa should include at least one co-design resilience or social cohesion deliverable ; adopt shared outcome indicators (e.g. Irrigated hectares restored, cooperative membership development ,conflict-sensitization coverage). While many perceived resilience gains, fragmentation and limited local inclusion persist joint, locally chaired mechanisms address these bottlenecks (Oxfam, 2020; United Nations, 2023b).

Combine relief with productivity and system investment: Bundle season timely input (seeds, tools and training), cash for work feeder roads, water catchment areas and invest in farmer cooperatives and digital services (price, mobile finance and weather). Use community contracts, rehabilitate roads head of Gu/Dayr; sign forward-delivery agreements with cooperatives for local cereals; deploy IVR/SMS advisories; link savings groups to micro-finance and Sharia-compliant products; and provide governance coaching to cooperatives. Significant respondents highlighted well-timed inputs, infrastructure and robust associations; literature underscores digital/organizational capacity as multipliers of sustained production (FAO & ITU, 2022; Ali et al., 2024).

Humanitarian aid can harm agriculture in the long run if not done right. To prevent this, we need sustainable approaches that empower local communities, boost agricultural productivity, and reduce reliance on outside help. These could include using cash-based interventions to support local markets, investing in climate-resilient farming methods, backing farmer cooperatives, and bringing regional players into the planning and execution of aid programs. Additionally, development partners and humanitarian agencies must take a more integrated and context-specific approach. This means investing in early recovery efforts, promoting inclusive governance, and increasing local control over development processes. These strategies support agricultural growth while also advancing peacebuilding and social unity.

5.6 Limitations of the Study

The study employed a cross-sectional survey (n≈400) and qualitative FGDs/KIIs in Baidoa. Although the sample was diversified, findings capture perceptions and associations at a point in time; they cannot on their own, establish causality or present all southwest Somalia context. This may temper the universal applicability of recommendations. To mitigate, the study triangulated quantitative summary with qualitative insights to strengthen imperative validity.

Several key construct (e.g. market effects timing alignment) rely on respondent perceptions that can be influenced by recent events or personal aid experience. Such bias could over or understate true effects, affecting precision in policy prescriptions. We partially addressed this by drawing on convergent patterns across respondent groups by cross referencing prior documented studies.

Security, access and resource limits constrained deeper market monitoring (e.g. high-volume data / high frequency price) which did not permit panel design. This restricts the granularity which timing /volume threshold humanitarian aid can be specified.

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