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POLICY BRIEF

FOOD AID SHARING AND RESILIENCE

The role of collectivity and connectivity in drought-affected pastoralist systems in Ethiopia

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Key messages

- **Drought resilience and recovery:** Resilience to and recovery from drought is not solely determined by access to aid, but also by the social fabric through which it flows. Food aid is one of the few assets that communities have left in a severe drought and the majority will share it with others out of kindness, social obligation and to build social capital.
- **Community solidarity:** Surveyed households expressed robust communal ties, rating highly the perceived strength of their communities across all regions. Findings indicate that 86% of surveyed households received food aid shared by family, neighbours, friends or other community members, thus via local support mechanisms, rather than directly from a non-governmental organisation (NGO) or government.
- **Mutual aid networks:** Social network analysis (SNA) revealed densely connected households that facilitate frequent aid exchanges, establishing dynamic and efficient informal safety nets within communities, and in which women play a central role. These households are critical to the social network in supporting others.
- **Coping mechanisms isolation:** Social networks and other supporting community structures are under strain with fragmentation in social ties observed in the Somali region. This limits the opportunities for coping collectively and highlights a need for intervention.
- **Humanitarian response:** In a humanitarian aid context where there is likely to be less aid flowing to communities in need, aid agencies should be more flexible, open and constructive in their engagement with communities, and co-design with them aid distribution that better reflects their realities and needs.

Introduction

Pastoral systems are essential for food production and livelihoods in the Horn of Africa, especially in dryland areas. The 2020–2023 drought exacerbated existing vulnerabilities among pastoralist communities, resulting in widespread livestock deaths and increased food insecurity. Approximately 22 million people were reported as facing acute food insecurity during this period, with a critical need for effective coping strategies (World Food Programme, 2023). Considerable attention is being given to food aid targeting with concerns around 'diluting' because of food aid sharing or diversion to better-off households. Community social structures and coping mechanisms are perceived by government and aid agencies to be weakening to a point of failure.

Study and social network analysis (SNA)

To explore these issues, a study was undertaken in three specifically selected *kebele* of Su'ula (in Afar region), Asli (Somali) and Fuldowa (Oromia) that had received food aid during the drought of 2020–2023. A similar study conducted in these areas in 2019 following the drought of 2016–2017 allowed for cross-drought analysis. All available household heads (HHs) were interviewed about receiving and sharing food aid, with additional questions focused on the other types of support mechanisms and perceptions of drought coping and recovery. The data was analysed using social network analysis (SNA) to create transaction maps to show the sharing and receiving.

A significant proportion (33%) of those interviewed were women-headed households. The reason that was most commonly given for this overall was that their husband had died (43%), whilst in Somali region, a significant proportion (25%) said it was because their husband was temporarily away for work (for less than one month).

Households seen through the SNA to play an important or clearly connecting role in the food aid sharing and receiving network participated in a more detailed qualitative interview.

Distribution of food aid during the drought

A significant majority of the households reported receiving food aid. Of a total of 1,805 households that were surveyed, 1,546 (86%) reported having received food aid – 97% in Oromia (Fuldowa *kebele*), 88% in Afar (Su'ula *kebele*) and 76% in Somali (Asli *kebele*). Food aid distribution included wheat, flour and cooking oil from different sources, such as the Productive Safety Net Programme (PSNP), United Nations (UN) agencies and NGOs, depending on location. The average time taken to reach distribution centres was 90 minutes. Committees made up of local community members were responsible for developing lists of those households that should receive food aid following agreed-upon criteria and managing community involvement in the distribution process.

Coping with drought

When asked about coping with and recovering from the drought, the majority of HHs scored themselves low (see Table 1).

TABLE 1. HOUSEHOLD-REPORTED DROUGHT COPING SCORES (1–10 SCALE)

Region	Mean score	Std. dev.	Min	Max
Afar	3.14	1.58	1	7
Somali	2.66	1.30	1	10
Oromia	2.24	1.11	1	9

Source: Project data.

Note: 1 = least successful; 10 = most successful

Asked what was the single most important factor that helped them cope with the drought, across all three regions 61% of households reported formal food aid distribution. Selling of livestock was reported as the second most important strategy with 24% across all regions. The severity of the last drought was emphasised, with food insecurity reported by on average 70% of households. In Oromia (Fuldowa), 91% of livestock were said to have died; in Somali (Asli), 85%; and in Afar (Su'ula), 54%.

Sharing of food aid

Food aid sharing between households was found to be widespread, with 86% reporting that they received food aid from another household and not from formal sources, such as government agencies, NGOs, or UN agencies. Seventy-nine percent said that they shared food aid with another household; a significant number both received and shared food aid (Figure 1). This practice was most prevalent in Oromia (Fuldowa), with 98% receiving food aid from another household. Most transactions took place within the *kebele*, highlighting the 'localness' of networks. Most of the food was shared freely without payment, reflecting strong norms of mutual support and solidarity.

Sharing was done mainly with family (46%), neighbours (31%) and kin (10%). Most respondents (61%) said that they shared food aid because the recipient had none, and another 27% said, 'it is normal to share'. In addition to sharing humanitarian food aid, most households also shared other types of food, water, money and livestock.

Individual perceptions of community collectivity and resilience

Evidence from the three study areas shows communities continue to rely heavily on cooperation, solidarity and informal support systems to cope with and recover from drought-induced hardships.

Across all three study areas, households rated the community's communal strength on a scale from 1 to 10, with consistently high averages: 8.8 in Oromia (Fuldowa), 8.7 in Somali (Asli), and 8.0 in Afar (Su'ula), highlighting its robustness despite, or perhaps as a result of, drought stresses. Asked to compare this with the previous major drought in 2016–2017, 89% in Somali (where previously it was relatively lower), 60% in Afar, and 58% in Oromia said there was an increase in communal solidarity. Only 2% of all respondents reported a decline, indicating that recent crises may have reinforced rather than eroded social cohesion.

Households also reflected on their role within networks. In Somali, respondents rated their household's contribution to building the community's communal strength at an average of 8.5, followed by 8.0 in Oromia and 7.0 in Afar. This confirmed a dynamic and reciprocal system of assistance, with active and widely practised social obligations and expectations of collective responsibility. This is reinforced by a willingness to share without expecting anything in return. This altruistic norm was strongly evident across the three study areas, with average scores ranging from 8.7 to 8.8 (see Table 2). Such a high degree of voluntary, non-transactional support points to enduring cultural values of solidarity which function as critical buffers during periods when formal systems may be overwhelmed or slow to respond.

Social network analysis (SNA)

The study used an SNA to analyse collected data to assess the structure, strength and functionality of mutual support systems among pastoralist households during the 2020–2023 drought period. This produced 'graphs of exchange' within a *kebele*, with each dot representing a household and each line (edge) representing the direction of aid flow from giver to recipient.

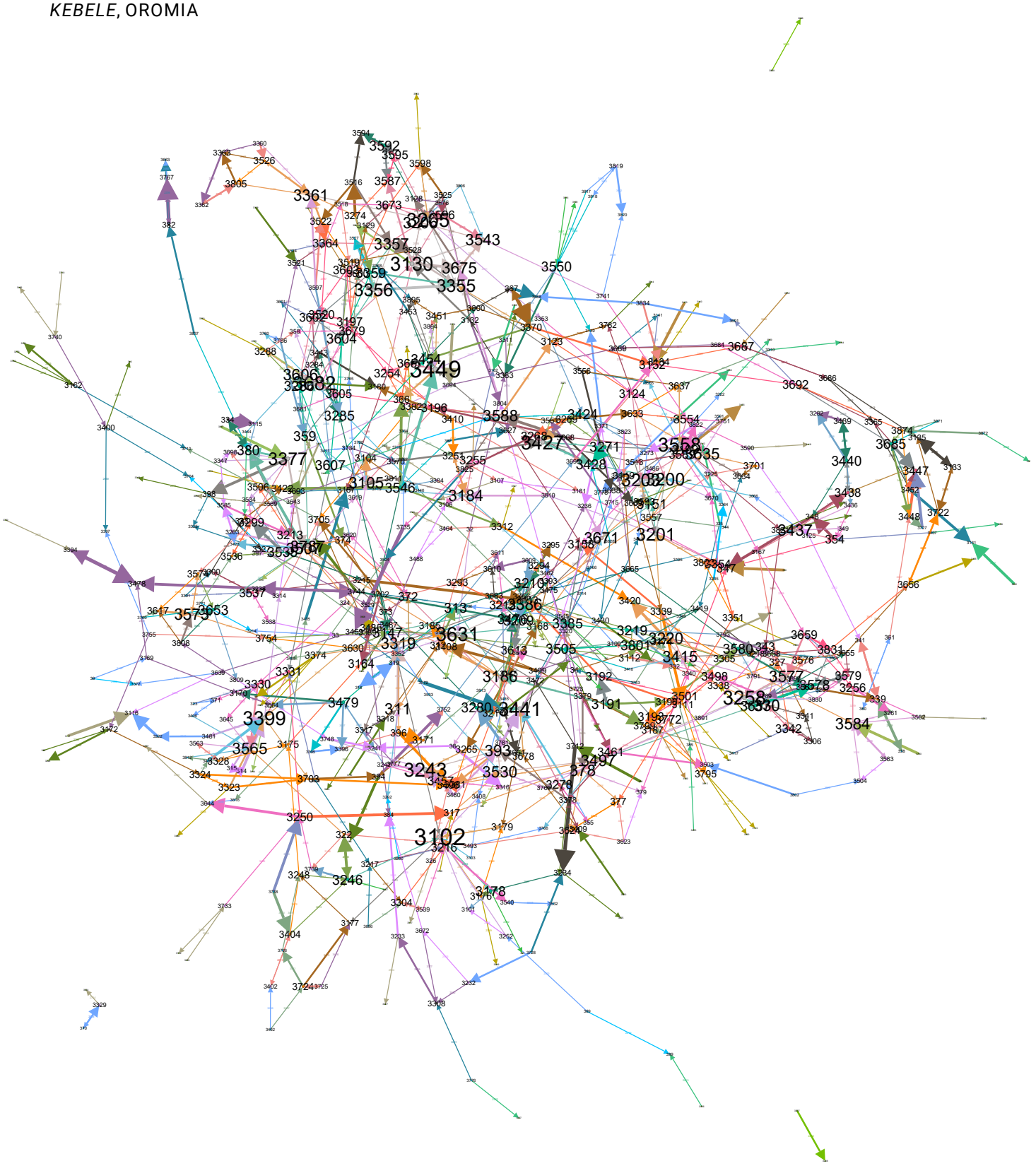
Figure 1 is an example of such a 'graph of exchange'. This shows the food aid sharing (giving) from one household to another. While the details are not visible, the overall picture reveals the dynamic interactions that took place. More information and a detailed breakdown of the SNA will be published in a forthcoming journal article.

TABLE 2. MEAN SCORES OF PERCEIVED COMMUNAL COLLECTIVITY AND RESILIENCE

Indicator	Afar	Somali	Oromia
Perceived communal strength (1–10)	8.0	8.7	8.8
% reporting communal cohesion increased (since 2016–2017)	59.5%	88.5%	57.7%
HH's contribution to community (1–10)	7.0	8.5	8.0
Support received from community (1–10)	7.2	8.5	8.0
Willingness to share without expecting in return (0–10)	8.7	8.8	8.7

Source: Project data.

FIGURE 1. SOCIAL NETWORK MAP OF FOOD AID SHARING AMONG HOUSEHOLDS IN FULDOWA *KEBELE*, OROMIA



Source: Project data.

Node size (HH ID) reflects degree centrality: larger nodes represent households more central/active in sharing food aid, while smaller nodes indicate less connected households. Edge colours denote modularity (community) classes, with each colour marking an interconnected sharing cluster. Edge thickness represents the frequency of food aid exchanges between households, with thicker edges showing repeated sharing and thinner edges less frequent sharing. Arrow size indicates the volume of food aid transferred, where larger arrows represent higher transfers and smaller arrows lower ones. Arrows point from giver to receiver, illustrating the direction of sharing.

Borena (Fuldowa): SNA results

As an example, in Borana, the food aid sharing (giving) network consisted of 713 nodes (households) and 3,713 edges from giver to receiver (shown in Figure 1). Each household shared food aid with on average five other households, with many making repeated transfers. This points to enduring and dependable relationships that could be considered 'strong' ties, characterised by frequent interaction and greater trust within the community. Interconnected clustering of small numbers of HHs that exchange food aid frequently was also found. These locally cohesive units facilitated fast and repeated access to resources.

The SNA also showed that some households held significantly higher influence, serving as central hubs within the sharing system. These central households acted as informal hubs, likely responsible for redistributing the food aid and other assistance that was externally provided across otherwise disconnected parts of the network. Who these people were and the role they played was explored through the qualitative study.

One such example is a household hub of 10 headed by a 48-year-old woman (HH code: KII_FHH_F_02). The drought in Borana wiped out almost all the HH's livestock, leaving only a single cow and a few goats. She has no formal education but plays an active role as a member of a self-help association called Hargessa Soap Production Association. Despite her hardship, her house was a place where others came when they needed help, advice or food. She explained that, even when formal food aid distributions discourage sharing, she could not refuse:

> 'CARE told us not to share the aid they gave but we couldn't deny others, they told us to consume alone but we cannot let our sisters and brothers die of hunger. They even tore the sacks to avoid sales of the aid - they cut a hole in food oil containers so that you cannot sell it in the market.'

What made this woman 'central' in the network was not wealth, but the social trust and ties she had developed through her long-standing social engagement. Her role as cashier, her regular attendance at community ceremonies, and her willingness to visit others in need and offer help, created a dense web of relationships that placed her at the centre of the social network.

This woman maintained 17 direct exchange ties (nine in-degree, eight out-degree) showing both breadth and depth of connections. She was one of the network's most pivotal hubs, ensuring aid flowed across otherwise separate clusters. Her social trust was structurally validated: she was not only well-connected but also strategically positioned to circulate aid, embodying how central households sustain community resilience during drought. She described survival as something that depends entirely on these reciprocal ties:

> 'During drought, if you cannot share the small things you get, it is difficult for you to survive. You can die, a small amount that person gives you helps to eat something for that night.'

Implications

The SNA results provide robust empirical evidence that social networks in the Borana pastoralist communities remain highly functional during a drought crisis. Both food aid and other assistance was distributed through dense, clustered and community-centred networks. The presence of short average path lengths and high modularity values suggests that aid was not only efficiently shared but was also structured in a way that reinforced existing social ties.

Here, modularity measures the extent to which the network can be divided into tight-knit groups with dense internal connections and ties to the rest of the network. This high modularity reveals tight-knit communities capable of localised support. The low average path lengths suggest efficient diffusion of food aid sharing and redistribution, with the weighted degree being high, indicating frequent reuse of existing strong ties.

Afar (Su'ula), with the smallest *kebele* population size, had the highest density and stronger integration reflected in fewer connected components, shorter average path length and more repeated aid exchanges. High density and lower fragmentation are generally indicative of more resilient networks, as they enable redundant pathways for resource flow, rapid response and fallback mechanisms during crisis (Wasserman and Faust, 1994). It should be remembered that Afar scored the highest in recovery from the drought.

In contrast, the Somali network structure revealed significant vulnerabilities. Larger than the other *kebele*, the sharing systems were deeply fragmented,

poorly clustered and inefficiently connected, which probably limited their potential for broad-based drought coping and may have constrained reciprocity and integration.

Overall, the cross-sectional design of the SNA demonstrates that social resilience during a drought is not solely determined by access to aid but also by the social fabric through which it flows. The Borena and Afar communities exhibit more cohesive, moderately dense and efficiently structured networks, with active clustering and fewer isolated households. These structural features suggest a higher potential for adaptive collective responses, informal redistribution and mutual aid in times of drought.

Implications and recommendations for future food aid response

This study shows that the sharing of humanitarian food aid is a common practice in communities experiencing drought. During drought, food aid is one of the few assets that communities have left when almost all else has been lost. Communities will use this asset to fulfil the social obligations so intrinsic to their culture and to keep the community strong. Being able to share food aid allows people to preserve some dignity and belief in themselves as survivors and contributors and reflects the great kindness, empathy and generosity of these communities.

Humanitarian agencies distributing food regularly told recipients not to share it. This reflects an ongoing ignorance of or refusal to acknowledge the important role that food aid sharing plays in communities under stress. It also reveals persistent attempts by external actors to control food aid distribution and a refusal to allow communities to make their own decisions. This suggests a lack of knowledge or trust in community mechanisms that can in fact ensure those who need food aid will get it.

In a humanitarian aid context where there is likely to be less aid flowing to communities in need, aid agencies should be more flexible, open and constructive in their engagement with communities and co-design with them aid distribution that better reflects their realities and needs. This starts with better understanding local social networks, support systems or 'social currency', encompassing who is included and excluded (Kim et al., 2020). Rather than trying to stop or limit their functionality by telling communities not to share food aid, social networks, and within that inclusivity in general, must be strengthened. At best, the demands by humanitarian agencies to stop sharing serve to undercut the important role and impact of sharing in communities, and at worst they cause advertent damage to local systems.

This also means better understanding the role that certain households play as hubs or nodes in the network, not only in sharing food aid but also as emotional support, and how they can best be facilitated in this. Building overlap between emergency relief and early recovery interventions could assist with this. The contextualisation of food aid targeting (as with other aid) needs to be improved through co-design of interventions by humanitarian actors and community members to account for and support household connectivity.

Waiting to receive grain donations at a government-led feeding centre Somali Region. Credit: UNICEF Ethiopia.

Policy recommendations

1. **Leverage local social structures:** Aid agencies should recognise and support existing community networks rather than imposing restrictions on food sharing. This can include training community leaders to enhance the distribution process and validate traditional practices of aid sharing.

2. **Incorporate cultural dynamics into aid design:** Policies should respect cultural norms of sharing and provide frameworks that underpin the social fabric, allowing communities to manage their resources sustainably. The co-design of aid distribution systems with local actors needs to be strengthened to ensure relevance and effectiveness.

3. **Enhance communication and coordination:** Strengthening the communication flow between humanitarian actors and local networks to facilitate input from affected communities in shaping aid responses enhances trust and efficacy. Additionally, strengthening the role that local committees for aid distribution can play will improve efficiency and transparency.

4. **Invest in social capital:** Targeting support for pivotal households identified as hubs can leverage assistance to meet wider community needs. Investment in community-led initiatives such as seed funds for local savings groups should be prioritised.

5. **Integrate disaster risk reduction strategies:** Policies that incorporate proactive disaster risk reduction strategies should be strengthened. This would involve training community members in drought preparation and building resilience, diversifying livelihoods complementary to pastoralism, and enhancing adaptive capacities against climate variability.

Conclusion

The resilience of pastoralist communities in Ethiopia during drought relies heavily on their connectivity and collective efforts. Humanitarian strategies that embrace these dynamics can significantly enhance coping mechanisms and sustainability. Policy-makers must prioritise reinforcing community networks to ensure effective humanitarian responses that are culturally sensitive and community-centred.

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About SPARC

Climate change, armed conflict, environmental fragility and weak governance and the impact these have on natural resource-based livelihoods are among the key drivers of both crisis and poverty for communities in some of the world's most vulnerable and conflict-affected countries.

Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises (SPARC) aims to generate evidence and address knowledge gaps to build the resilience of millions of pastoralists, agropastoralists and farmers in these communities in sub-Saharan Africa and the Middle East.

We strive to create impact by using research and evidence to develop knowledge that improves how the UK Foreign, Commonwealth and Development Office (FCDO), donors, nongovernmental organisations, local and national governments and civil society can empower these communities in the context of climate change.

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