

# Defining Pendular Movements: dynamics and drivers within the Mander Triangle (tri-border region of Kenya, Ethiopia, and Somalia)

This infographic explores cross-border and pendular movements within the Mander Triangle, the tri-border region of Ethiopia, Kenya, and Somalia. Using a non-probability sampling approach, the data allows for a spatial and temporal mapping of these movements, their drivers, and migrants' community support mechanisms and assistance needs. There remains an empirical evidence gap on pendular movements, particularly within the Horn of Africa. This snapshot aims to help reduce this gap, and to inform the work of the Danish Refugee Council's 'Building Opportunities for Resilience in the Horn of Africa' project (BORESHA-NABAD), and other humanitarian and development actors working in this complex, borderland region.

## METHODOLOGY

### DATA COLLECTION SITES:

Mandera town, Kenya (n=400)  
 Dolo Odo, Ethiopia (n=318)  
 Beled Hawo, Somalia (n=178)  
 Dollow Somali, Somalia (n=138)

### DATA COLLECTION PERIOD:

4 September – 3 October 2024

### METHODOLOGY:

In-person surveys

### SAMPLE SIZE:

1,034 respondents who crossed the international borders of Ethiopia, Kenya, and Somalia within the last 12 months from the interview.

## Background

- **Pendular movements, also called cross-border movements, refer to the cyclical or repeated movements of individuals or groups living in border areas between two or more locations, often crossing international borders.**<sup>1</sup> Migrants engaging in such movements often move between two bordering countries without seeking permanent residence.<sup>2</sup> This form of mobility is central to livelihoods within a borderland region, as it influences daily practices and adaption to economic, environmental, and other shocks.<sup>3</sup> Moreover, borderland communities are inter-connected and share a common language, history, and clan-based familial ties, making cross-border engagements an essential parts of people's social lives.<sup>4</sup>
- **The Mander Triangle, a borderland region covering parts of Kenya, Ethiopia, and Somalia,** is an area prone to recurring environmental shocks including droughts and floods, and varied levels of conflict and insecurity.<sup>5</sup>
- **Consecutive failed rainy seasons have exposed the Triangle's communities to food insecurity and water scarcity,** eroding their agricultural and pastoral livelihoods, and have shifted seasonal migration patterns and intensified displacement and cross-border mobility.<sup>6</sup>
- **With a population of approximately 350,000 people,<sup>7</sup> residents of Mander Triangle are some of the most underprivileged populations within Africa,<sup>8</sup>** possessing lower skill levels and mainly working in the sectors of small-scale trading and pastoralism.<sup>9</sup>

## Respondent profiles

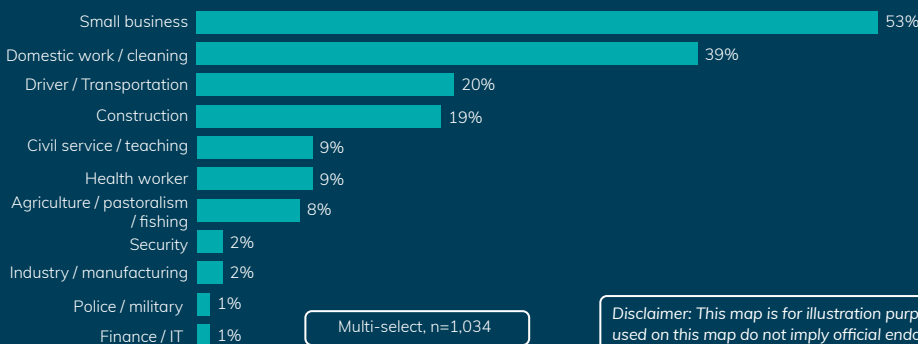


61% were household heads\*

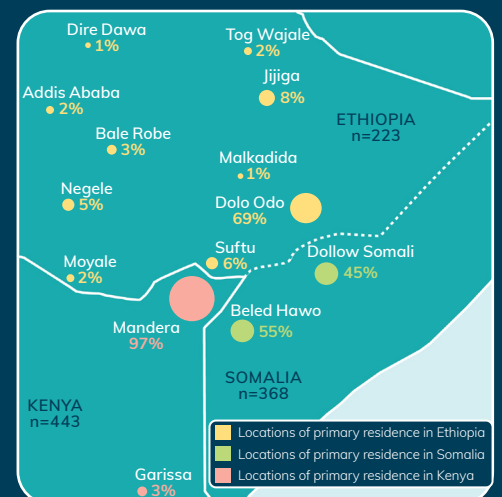
### Age and gender



### Employment activities



### Locations of primary residence\*\*



Disclaimer: This map is for illustration purposes only. The boundaries and names shown, and the designations used on this map do not imply official endorsement or acceptance by MMC.

\*Household head is the person in the household who is responsible for making decisions and earning money.  
 \*\*The location of primary residence refers to the place where an individual lives most of the year and that is considered their home. Therefore, primary residence is considered as the base from which respondents undertake cross-border movements and to which they return.

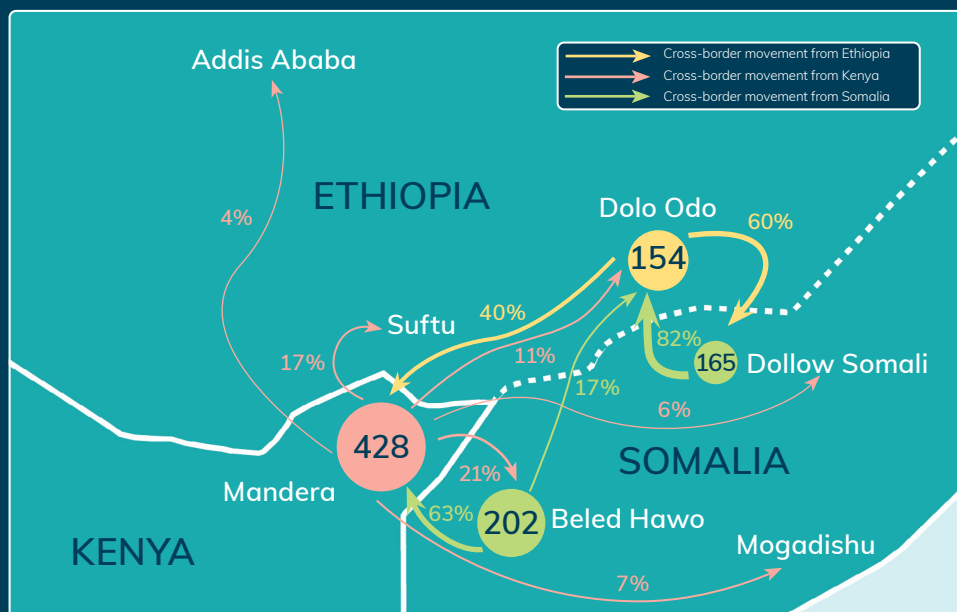
Note: The sample is purposive. Data presented in this snapshot cannot be considered representative of the full population in the Mander Triangle.

1 World Bank (2022). [The Big Questions in Forced Displacement and Health](#)  
 2 Ortiz Piedrahita, V., et al. (2023). [Feminization of pendular and floating migration trajectories on the Colombian-Venezuelan border](#)  
 3 World Bank (2020). [From Isolation to Integration: The Borderlands of the Horn of Africa](#)  
 4 BORESHA (2022). [Accelerating community economic development through cross-border interventions](#)  
 5 Ibid (2022)

6 UNDRR (2024). [Horn of Africa floods and drought, 2020-2023 - Forensic analysis](#)  
 7 BORESHA (2020). [Building resilience of cross-border communities through diversified livelihoods](#)  
 8 BORESHA (2021). [Sustainable economic development, greater and peaceful resilience in borderland areas](#)  
 9 World Bank (2020). [From Isolation to Integration: The Borderlands of the Horn of Africa](#)

## Mapping pendular movements and their drivers

Top movements between respondents locations of primary residence and destinations across the border



## Main reasons to cross the border

Driver of movement	Ethiopia-Kenya border (n=345)	Ethiopia-Somalia border (n=397)	Kenya-Somalia border (n=377)
Business/trade	49%	73%	49%
Job opportunities	60%	70%	40%
Pastoralism	17%	17%	8%
Family reunification	27%	15%	41%
Access to services	25%	24%	30%
Environmental factors	4%	2%	5%
Violence/insecurity	1%	3%	6%
Culture of migration	0%	0%	1%

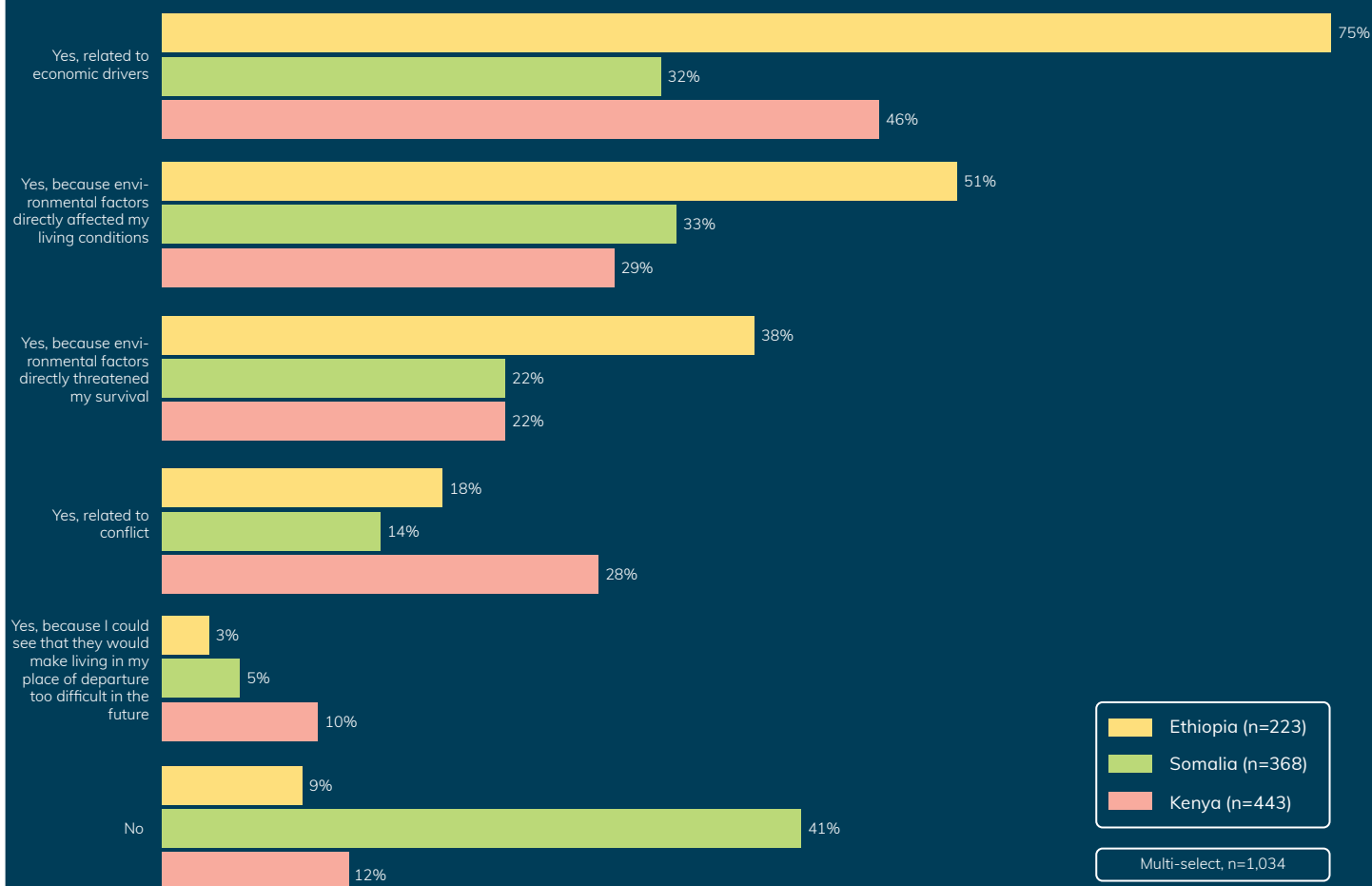
Multi-select, n=1,034

## Key findings

- While all respondents had crossed a minimum of one international border, **8% had crossed multiple international borders in the past 12 months.**
- Respondents residing in Kenya exhibited more diverse destinations**, and more destinations beyond the Mendera Triangle, for instance in Mogadishu (7%) and Addis Ababa (4%). These respondents had lower education levels than the residents of Somalia and Ethiopia, but similar employment activities to them; hence, the reasons underpinning these more diverse mobility patterns are unclear.
- The prominence of economic factors as drivers of pendular movements suggests that **border crossings are deeply tied to livelihood strategies**, with individuals and households relying on border economies for income generation. This highlights the need for policies that facilitate safe and regulated cross-border trade and employment opportunities.
- Access to essential services such as healthcare and education** is also a driver of cross-border mobility, for all three borders.
- No major differences were observed between men and women's drivers of cross-border movement.**
- 23% or 144 respondents had households across the border from their locations of primary residence, **demonstrating the strong family ties spread across this borderland.**

## Effects of environmental factors in decision to cross borders

Are issues relating to the climate or the natural environment a factor in your decision to cross borders? By country of primary residence

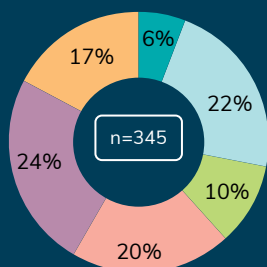


## Key findings

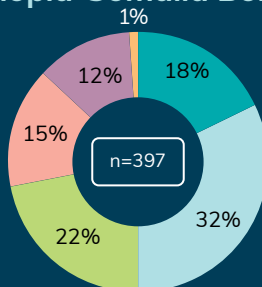
- While few respondents (4%) identified environmental factors as the main reason for cross-border movement, the majority (78%) cited environmental factors had influenced their decision to cross borders when directly prompted. Respondents often point to the direct causes or triggers of their movement, such as loss of livelihoods, when describing the drivers of their movement, obscuring the role of underlying factors linked to climate disasters or environmental change, like crop failure or livestock loss, which may have contributed to the loss of livelihoods.<sup>10</sup> Targeted survey questions to untangle the interactions between environmental drivers and other drivers are therefore key and reveal the important **role of environmental factors in shaping patterns of pendular movements in the Mandera Triangle**.
- Among residents of Ethiopia, environmental factors had a greater influence on cross-border movement compared to those from Somalia and Kenya, suggesting **greater vulnerability to climate-induced mobility**. 75% cited climate impacts on economic drivers (vs. 46% in Kenya and 32% in Somalia), 51% reported impacts on living conditions (vs. 33% in Somalia and 29% in Kenya), and 38% stated that environmental factors directly threatened their survival (vs. 22% in both Somalia and Kenya).
- Residents of Kenya more often cited environmental factors interacting with conflict to drive mobility (28% compared to 14% in Somalia and 18% in Ethiopia).
- Women and men reported nearly identical rates cross all categories of environmental influences of cross-border mobility. Furthermore, the overall impact of environmental factors on movement did not vary whether someone was a household head or by type of employment, with the exception of domestic workers who appeared more impacted at 87%, **demonstrating the widespread impacts of climate-related factors on livelihoods**. While it is not immediately clear why domestic workers more often reported impacts, it could signify the vulnerability of their professions to economic fluctuations. When employer households are economically impacted by environmental factors, their initial cost-saving strategies might be to dismiss their domestic workers.

## Frequency of pendular movements

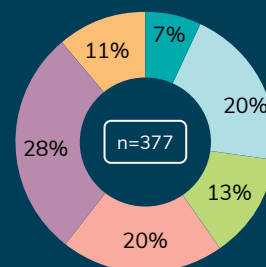
### Ethiopia-Kenya Border



### Ethiopia-Somalia Border

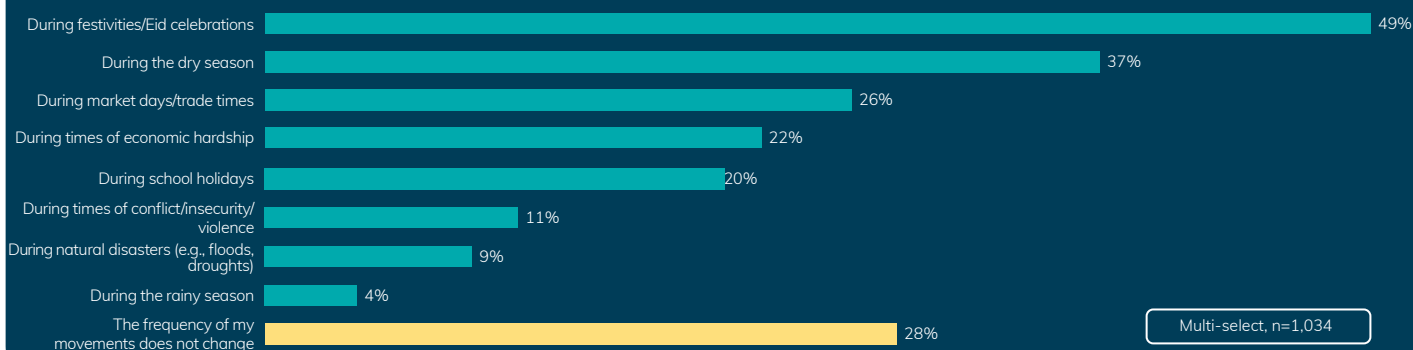


### Kenya-Somalia Border

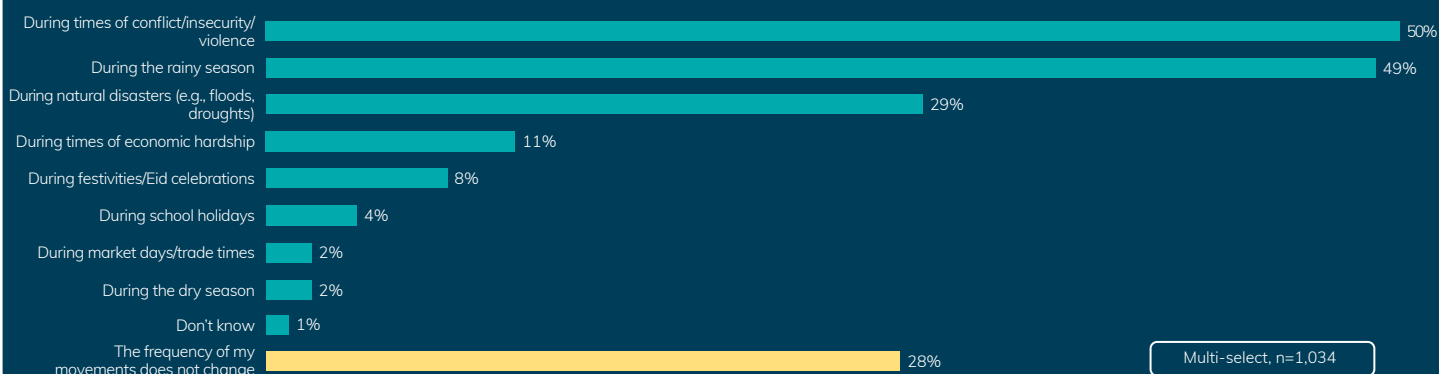


■ Daily
 ■ Once a week
 ■ Two or more times a week
 ■ Once a month
 ■ Every few months
 ■ Once a year

## At what times do your cross-border movements become more frequent?



## At what times do your cross-border movements become less frequent?

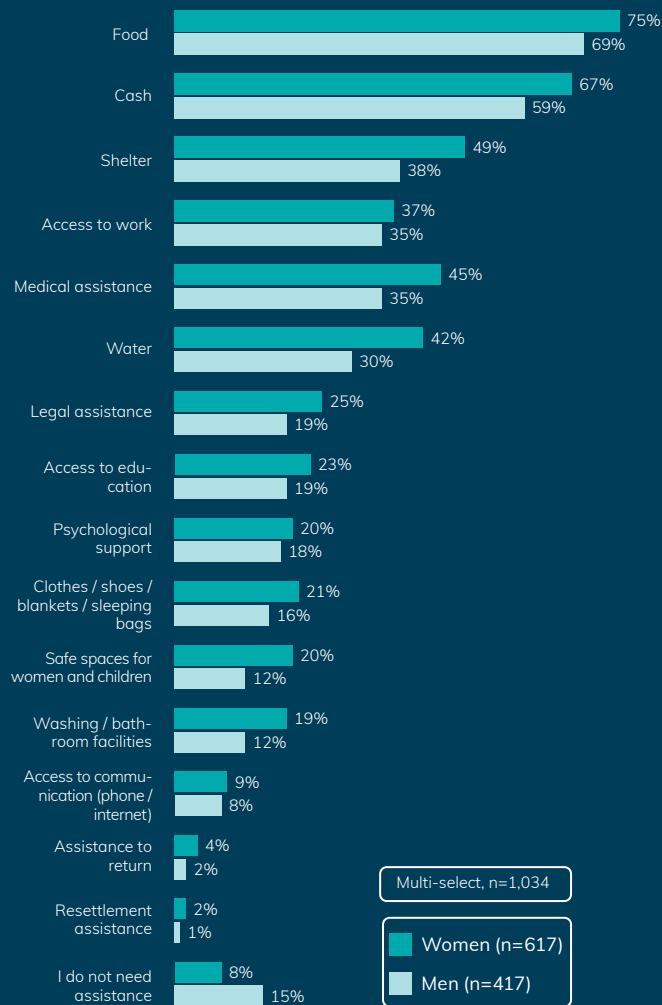


## Key findings

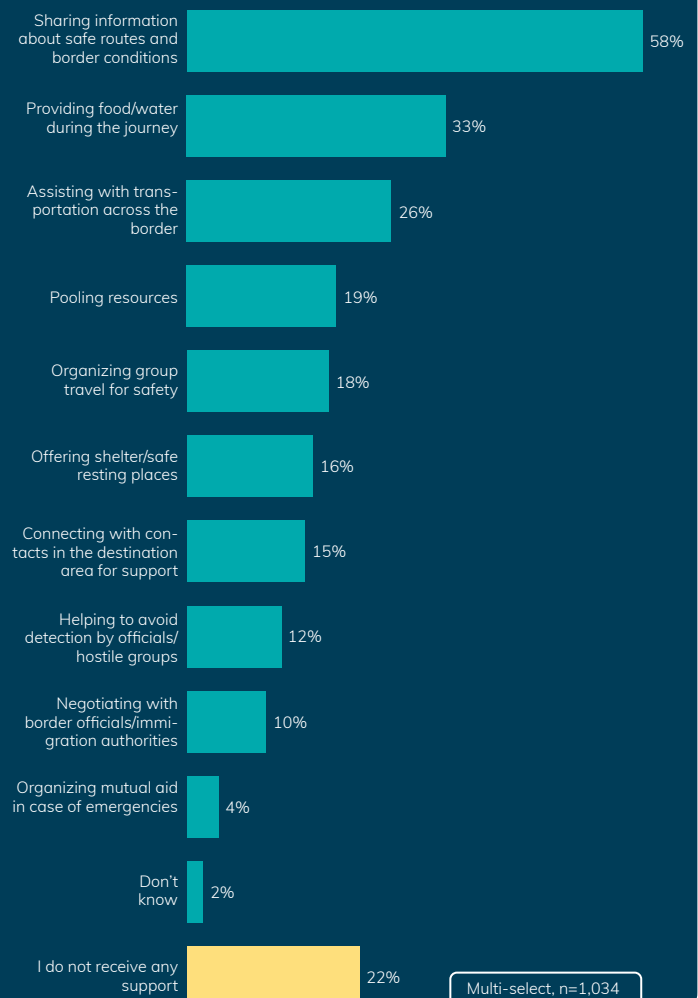
- **Movements across the Ethiopia-Somalia border were characterised by higher frequency daily and weekly movements**, as compared to those across the Ethiopia-Kenya and Kenya-Somalia borders, which were more often monthly and yearly.
- Cross-border movement **once a month is more common** among those engaged in **small businesses** (28%) compared to those engaged in other livelihood activities (14%) along the Kenya-Somalia border, while **daily cross-border movement is more prevalent in domestic work and cleaning** (29%) compared to those engaged in other livelihood activities (10%) along the Ethiopia-Somalia border, highlighting **variations in movement frequencies based on livelihood activities**.
- Respondents said their cross-border movements became more frequent during festive periods and/or for cultural celebrations (49%), dry seasons (37%), and market days/trading times (26%), implying that **pendular movements are increased by a mix of social, environmental, and economic time-dependent factors or events, which are in addition to their more regular drivers of pendular movements**.
- **Cross-border movement became less frequent during periods of conflict (50%) or adverse environmental conditions**, with 49% reducing travel during rainy seasons and 29% during natural disasters (droughts and floods), highlighting the vulnerability of border communities to conflict and climate-related disruptions in trade, livelihoods, and access to essential services. These findings also underscore the fact that **mobility takes resources, and shocks which deplete resources in turn reduce people's mobility. This implies that rather than mobility solely being a response to shocks, it should also be seen as livelihood strategy that gets impeded by shocks**.

# Community support structures and persisting assistance needs

## What kinds of assistance do you or any member of your household need now?



## What kinds of support have you received from community or neighbourhood groups during cross-border movements?



## Key findings

- **89% of the respondents were in need of assistance**, mainly food (73%), cash (64%), and shelter (45%).
- **Overall, women reported slightly higher levels of need across all types of assistance compared to men**, emphasising the heightened vulnerability of women in cross-border contexts.
- Cash assistance was the greatest need among residents of Kenya (79%), while food was the highest priority across all three country residents. Overall, **residents of Ethiopia reported the highest rate of assistance needs**, particularly for medical assistance (81%) and psychological support (54%).
- **Household heads reported higher needs than other household members for essential assistance** like shelter (52% vs. 46%), water (43% vs. 39%), and psychological support (25% vs. 16%), while **non-household heads prioritised work opportunities (48% vs 36%) and access to education (48% vs 36%)**, reflecting their differing responsibilities and priorities.
- **41% of respondents had received assistance in the past 12 months**, with friends and family being the primary source of support (62%), followed by NGOs (51%), UN agencies (21%), and governments (17%).
- **Most (77%) respondents reported that they and other members of their community or neighbourhood worked together to support each other when facing challenges during cross-border movements**, highlighting the crucial role of social networks in facilitating pendular movements. The most common form of support was information-sharing about safe routes and border conditions (58%).
- **Given the prominent role of local communities in providing assistance and supporting cross-border mobility**, they should be directly targeted by programming actors as key stakeholders when developing support programmes.



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## 4Mi data collection

4Mi is the Mixed Migration Centre's flagship primary data collection system, an innovative approach that helps fill knowledge gaps and inform policy and response regarding the nature of mixed migration and the protection risks for migrants on the move. 4Mi field enumerators are currently collecting data through direct interviews with migrants in Asia and the Pacific, Eastern and Southern Africa, Europe, Latin America and the Caribbean, North Africa, and West Africa.

Note that the sampling approach means that the findings derived from the surveyed sample provide rich insights, but the figures cannot be used to make inferences about the total population. See more 4Mi analysis and details on methodology at: [www.mixedmigration.org/4mi](http://www.mixedmigration.org/4mi)



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