



Puntland  
Development &  
Research Center

# CLIMATE DISLOCATION IN SOMALIA: **PRELIMINARY FINDINGS FROM PUNTLAND**



***CLIMATE DISLOCATION IN SOMALIA:  
PRELIMINARY FINDINGS FROM  
PUNTLAND***

By  
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## PREFACE

Puntland Development & Research Center (PDRC) is a Somali non-governmental, non-profit organization based in Garowe, Puntland State of Somalia. PDRC is a successor of War-torn Societies Project, a Swiss organization, and was founded in 1999 as a research institution committed to peace and development research and reconciliation among conflict-devastated communities. It has actively been in operation since then, spearheading several peace, democratization and development initiatives.

Operating in Puntland but strategically positioned to work across Somalia, PDRC intends to conduct a nationwide study on the effects of ongoing shocks of climate change, including drought, floods, deforestation, and the consequent humanitarian crisis. The survey also explores the potential mitigation measures and long-term resiliency strategies at the grassroots, state, and federal levels.

The severity of the conditions on the ground and imperatives of emergency assistance cannot wait for weeks or months that the full, nationwide study requires. PDRC is, thus, releasing preliminary findings of its pilot study in Puntland in order to offer a window into the dire conditions of urban and rural residents. By doing that, PDRC hopes to draw attention to the situation and amplify the calls for immediate humanitarian relief and long-term remedies, including resilience strategies against climate change shocks.

With the support of the University of Sussex (UoS) and its dedicated research team, PDRC deployed its mobile audiovisual unit (MAVU) to document the dire humanitarian situation following the prolonged droughts in the region in order to catalyze immediate and long-term policy changes. Horrific scenes of weak and dying animals, destitute communities, and displaced families were commonplace. Floods and droughts interchangeably visited the region, causing a severe water shortage. As a result, women are compelled to walk longer distances to fetch drinkable water, exposing themselves to hardship and insecurity. Nomadic families are, similarly, driven to roam greater distances in search of water and pasture, often in vain and raising the specter of resource-based territorial and clan conflicts.

PDRC Research Team  
December 2022.

## **Climate Dislocation in Somalia: Preliminary Findings from Puntland**

### **EXECUTIVE SUMMARY**

Climate change has created a cascading environmental crisis across the Horn of Africa. In Somalia, it manifested itself in prolonged and recurrent droughts that demand robust policy responses.

The increased frequency of droughts and reduced rainfalls (when they come) denied rangelands the time and moisture to recover or regenerate, leaving large swaths of land bare. The desiccated soil has become susceptible to erosion (by winds and water) and flooding even during limited rains.

Areas with relatively better rainfall have attracted a high concentration of human and livestock populations, worsening the land degradation due to overgrazing. The longer these populations remained in an area, the more severe their impact on the grazing lands.

Such vulnerability to climate change shocks in Somalia, in general, and Puntland, in particular, followed increasing deforestation, pasture and farmland degradation, and desertification as important drivers. Cutting trees for firewood and charcoal contributed to environmental degradation and reduced land resilience to climate change, causing runoffs and unwanted gullies.

In addition to the environmental deterioration, dependence on a single source of livelihood worsened the vulnerability of communities to droughts. Most Puntland communities depend either on livestock husbandry, fisheries, frankincense cultivation, or farming, the decimation of which leaves them with no alternatives to carry them through the difficult days.

The lack of adaptive capacity to climate change and consequent droughts results from poor livelihood assets. These weak institutions cannot expeditiously respond to looming crises, fragile markets, non-existent or rudimentary physical infrastructure, and eroding social support systems.

## RECOMMENDATIONS

Overall conservation of rangeland, protection of grazing lands during the rainfalls, restricting and regulating charcoal production, and increasing the production of fodder and other animal feed are essential for raising resilience against climate change shocks.

Management of gully erosions through terracing and rainwater check dams would increase water availability for pastoralists during the wet and early months of dry seasons while minimizing soil erosion and its impact.

Devise strategies to rein in the spiraling food insecurity of Somali households. The prolonged and recurrent droughts have drastically worsened the already dire conditions of food security. Unless immediately overcome, any further deterioration would plunge the communities into deeper crisis.

Puntland, and Somalia as a whole, need an integrated and robust set of socio-economic policies to protect and enhance the livelihoods of pastoralist, farming, fishing and business communities. Targeted and appropriate economic development, social protection and relief strategies are needed. Value-adding, diversification and marketing support for livestock, fishery and frankincense production and trade would be transformative.

Organize all the relevant governmental and non-governmental agencies and their foreign partners into a consortium, for purposes of easier coordination, capable of expeditiously and effectively responding to climate change needs of affected communities.

Infrastructure development is an essential component of communities' resilience against climate shocks and improved livelihoods conditions. These must include the rehabilitation of existing boreholes and drilling of new ones in a sustainable way, construction of dams, incentivizing livelihood diversification, and improving the network of road and overall transport services. Improved transportation furnishes communities access to markets, and for humanitarian organizations to have easy access to the affected areas.

## **Climate Dislocation in Somalia: Preliminary Findings from Puntland**

*I have lived through many droughts. But I have never seen anything like this one. Past droughts caused shortage of grazing. But this one is extreme and it came with hunger, inflation, shortage of money for almost everyone.*

80-year-old resident of Dhaxan village, Qardho.

Somalia has two rainy seasons: *Gu'* (April–June) and *Deyr* (September–November). For four consecutive seasons since *Deyr* 2020, rains failed in vast swaths of the country; and the fifth rainy season, *Deyr* 2022, saw uneven and unpredictable rains across most of the country. There are extreme changes of both frequency and amount of rainfall throughout the country. With no manufacturing, and limited export sector, Somalia's economy mainly depends on livestock, agriculture and fishing – for subsistence and export. As a result, the nomadic, farming, agropastoral and fishing communities have been vulnerable to climate change shocks and are severely affected by its current upswing.

Beyond being prolonged in duration, the current droughts have recurred in short intervals (less than four years after the previous drought). Such a short interval and prolonged dry spells have depleted the land's liveliness and fertility and disrupted its regenerative process. When the rains come, they are increasingly unpredictable in pattern, amount, and duration. It is a combination of these detrimental patterns and processes that the 2022 *Deyr* rains have failed to restore the rangelands and sustain animal and plant life. On the contrary, once lush and fecund grazing lands became sights of devastating flash floods as was the case in the town of Qardho in October 2022.

The following brief emerges out of a pilot study that the Puntland Development Research Center (PDRC) has conducted on the impact of climate change in Nugaal, Bari and Karkaar regions in Somalia's Puntland State. The research included consultations with Puntland officials, interviews with and surveys among nomadic, fishing and farming communities and large, Somalia-wide data. Three quantitative research tools were prepared, and data collected through KOBO tool. The three sets of questionnaires were devised for urban residents, internally displaced persons (IDPs) living in camps, and rural agropastoral and fishing communities. The report is accordingly structured, but first the overall socioeconomic context is in order. A total of 350 randomly selected respondents answered survey questions with PDRC enumerators feeding their answers into the KOBO tool. Almost equally divided between men (51%) and women (49%) respondents, these were 121 urban residents, 124 IDPs in camps, and 115 rural residents (nomads, farmers, traders...etc).

### **I. The Socioeconomic and Security Environment**

COVID19 caused global economic downturn and the Ukraine war in Europe have worsened the hardship of the prolonged drought across Somalia to a crisis point. The price index that the Puntland Ministry of Planning, International and Economic Development (MOPIED) compiled show a dramatic rise of basic consumer goods from mid-2019 through the end of 2020. 2021 saw some reprieve with a steady, low single digit increases before it jumped back to its earlier rate,

reaching double digits between April and June, when the last data is collected. This was worsened due to sizeable decrease in livestock export, which meant shrunken economy because that sector is one of the main sources of revenue in the region. With just under 1.3 million live animals exported in 2021, that year saw a twenty-nine percent (29%) decrease from 2020. That total is expected to decrease even further in 2022 according to MOPIED. That double whammy explains why nearly all of the urban residents consulted for this report listed inflation as their topmost challenge with drought a close second even though the latter significantly contributed to the former. By contrast, rural residents and nomads have listed drought as the primary cause of their hardship.

Droughts have often complicated the already intractable landscape of local conflicts. PDRC has been tracking and reporting on conflicts in Puntland that have not yet been resolved. These conflicts are classified as political, tribal/clan-based, and resource conflicts. Accordingly, more than half of the conflicts in Puntland are either resource-based or initially arose as disputes over resources before they degenerated into full-blown, active, clan and territorial conflicts back by rival political actors.

There are active clan conflicts that the current droughts helped trigger due to attendant pervasive scarcity of natural resources. Communities are compelled to trespass into territories of other clan groups in desperate search for water and grazing. Previously, feuding clans and sub-clans stayed in their respective regions for safety if not for anything else. But the drought has so pushed the communities to the limits that they are increasingly ignoring past practices and security precautions to cross into the feuding clan's territory. That has touched off new conflicts or reignited latent ones.

In other cases, host communities where rains have fallen grew more upset and intolerant of their guests leading to new clashes and intensification of old ones. Issa Mahmoud and Dulbahante conflict started in 2020 between two communities that had peaceably lived next to each other for decades. The conflict is difficult to resolve not least because Somaliland and Puntland are believed to be backing their respective sides. The fight between the two communities has stalemated and the two political sides are in a standoff in a region that has long seen tensions and conflicts between Puntland and Somaliland. Three consecutive third-party mediation failed to resolve the conflict. And the last few weeks of 2022 saw the tensions between the two regions rise again with the two militaries taking turns to visit the contested territories and their commanders exchanging incendiary remarks.

## **II. Rural Communities**

A significant decrease in Puntland's export of livestock coupled with the record-high inflation rates have had micro-level implications. The region-wide macro-level shrinkage have had negative trickledown effects on local, small-scale businesses, and individual traders and herders. Villagers and nomads who previously sold livestock to buy other necessities are facing the challenge of either not finding a buyer at all or having to sell their animals for significantly less than they used to. In the town of Qardho, for example, a goat used to fetch some \$70, but nowadays sellers struggle to get \$20 for it. On the other side of the equation, prices of

consumer goods have skyrocketed: a sack of 50kg maize used to cost \$13 before the current crisis; it now costs \$30. A 25kg sack of sugar is now \$22, nearly doubling from 2020/2021. As a result, the cost of living across the region became exorbitant, worsening the lot of the ordinary people and leaving them dependent on aid or relatives in towns and overseas – discussed below.

But rural respondents, the majority of whom were active in livestock rearing and farming (78%) felt the pressure of drought more than that of inflation. All 115 rural respondents said that drought was the main source of their woes with inflation a distant secondary challenge (at only 26%). 2% of them said that their yield remained unchanged, whereas the rest said that their yield decreased with 86% saying that their yields decreased dramatically. 66% of rural respondents said that they experienced such drop in their yield more than once. And 67% said that the severity of their conditions during the current drought were worse than previous times. With the exception of only two, who said they do not receive social services of any kind, rural respondents listed the different services that they receive with nearly 70% of the respondents (80 respondents) saying that they receive water.

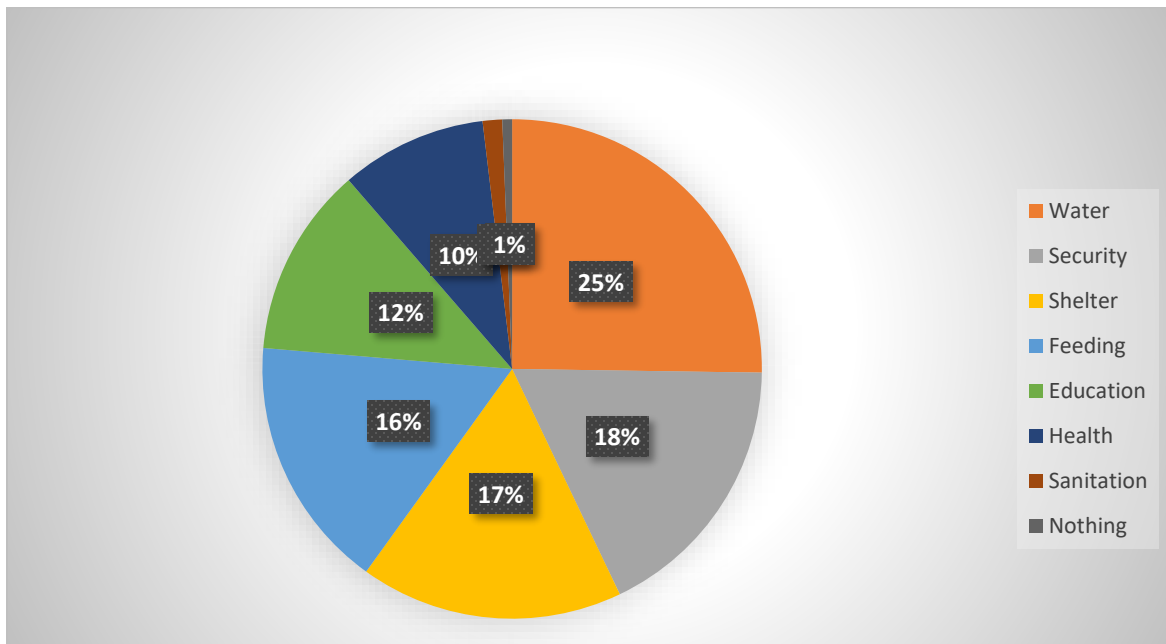


FIGURE I: Social services that rural respondents said they had access to

The drought exacerbated the separation of families among the poorer nomadic communities as herders roam wider spaces or chase the rainfall, leaving women and children behind for extended periods. With the decimation of animals that meet household needs for milk and meat (goats and camels), the female-headed families depend either on the support of extended family relations in their remote villages and hamlets or on humanitarian assistance in IDP camps.

Advanced communication and motorized transportation have changed the pace and movement patterns of the relatively well-off nomadic communities with detrimental effect on the environment especially during the current prolonged droughts and intermittent rains. In the olden days, nomads would gradually herd



their livestock to where rains had fallen and spend several days or weeks to reach their destination, by which time plants will have germinated and grass grown sufficiently for animals to graze. Nowadays, however, residents of an area that receive rain alert their relatives in drier, far-off areas using mobile phones. Those relatives then load their families and livestock on trucks and arrive at the rained area within a day or two. By the time they arrive, not only will they have incurred transportation cost of up to US\$1,500, but they will have arrived at their destination before plants germinate and grazing areas grow sufficient grass. Germinating grass is immediately plucked by the hungry livestock. The famished animals pluck the grass as they break ground or nip plant leaves as they bud, undermining both the land's regenerative capacity and the plants' long-term sustainability.

When Sanaag and Bari regions saw light Deyr rains in September 2021, residents of other regions of Puntland flocked to those regions and shuttled between them, but rains did not continue. Failed Gu' rains in 2022, also saw nomadic communities concentrate in Ufeyn (Bari) and Qardho (Karkaar), shuttling between their mountainous and plain regions. Light rains in Deyr 2022 across several parts of Puntland triggered similar movement of people and their livestock. Local communities in those districts contributed tankers of water for the upkeep of the displaced rural and nomadic communities, but without mechanism of sustained assistance, that remains short-term and inadequate. In the process, some of the livestock die for lack of adequate water and feed, and others are kept alive with purchased feed.

Likewise, lacking sufficient grazing, many nomads and businesses active in livestock and livestock products are compelled to rely on animal feed from the market. Given the sharp decrease of the livestock export trade and cascading economic consequences of the prolonged drought and other regional and global economic woes, ordinary nomads and agropastoralists are hard pressed to find animal fodder notwithstanding their shortage of cash and significantly diminished purchasing power.

Businesses, especially the burgeoning camel milk producing animal farms called *barqamaal*, around cities and urban centers are proving to be double-edged sword on the communities and the environment. Consisting of at least a hundred camels, these *barqamaal* require large quantities of maize that is boiled in wood-fired open pits before they are fed to the animals, leading to the cutting of trees for firewood and for fencing. *Barqamaal* is a new phenomenon and provide much needed fresh, bottled camel milk to major urban where it is in high demand. Unlike traditional nomadism that involves traveling a lot, these camels are settled and, during the dry season, mainly feed on locally available commercial fodder. Even though these two factors limit their impact on the environment at this early stage of the phenomenon, the few times that the camels are left to graze surrounding areas, they are notable for leaving barren lands in their wake.

The majority of the rain-fed agriculture in Puntland is inadequate for local subsistence. Lacking reliable irrigable waters, Puntland farmer supplement their limited rain-fed farming with irrigation from boreholes that only the financially well-off farmers can afford. Nevertheless, experts in the Puntland Ministry of Agriculture fear the unsustainable ways that such boreholes are dug so close to

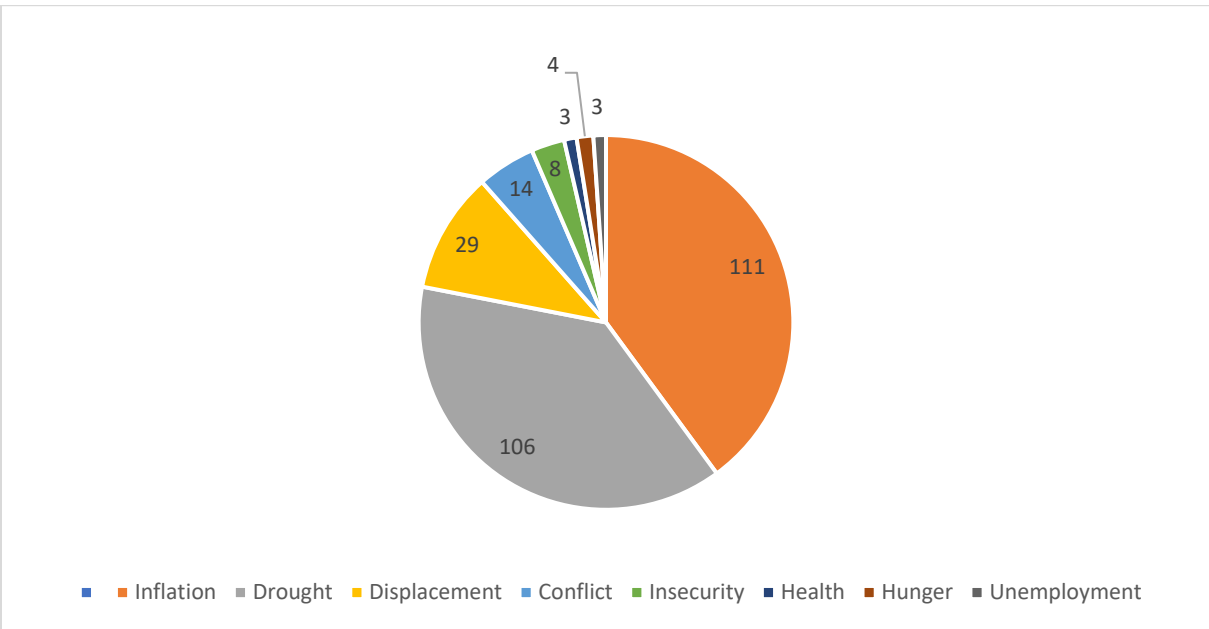
each other. Moreover, when water levels drop during the dry seasons or due to insufficient rains as the case has been in the past four rainy seasons, the shallow wells desiccate, leaving those dependent on them vulnerable. The limited cash crop farming that consisted of fruits and vegetables from Bari, Nugaal and Mudug have all been decimated in the current prolonged drought. When the rains come after such prolonged drought, as they did during 2022 Deyr, they cause more damages in the form of floods.

Finally, naturally occurring wildfires were almost unheard of in Somalia until 2022 when the extreme heat and dryness combined to cause fires in one of the thick forests in the northeast. Besides the environmental damages, these fires endanger the region's major sources of revenue, incense that is historic cash crop and grazing of livestock, both of which are already severely strained. This is exacerbated by tree cutting for charcoal and other purposes that has had a devastating impact in accelerating deforestation and worsened by drought, making the environment incapable of sustaining grazing.

### **III. Urban Residents**

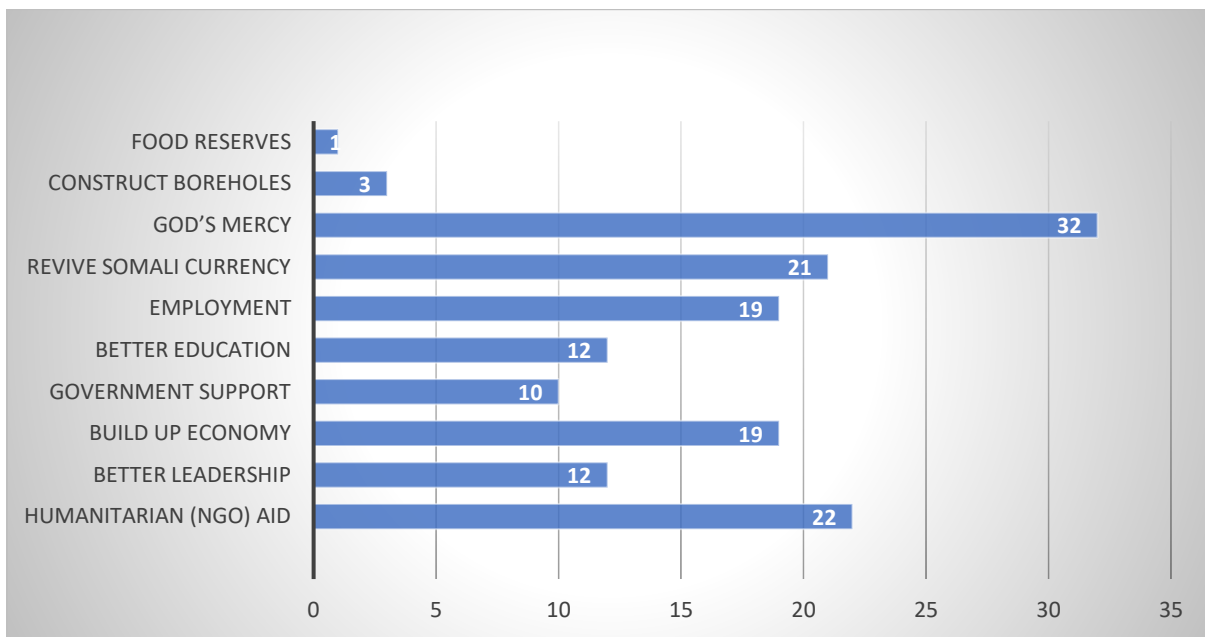
With 68% of the 121 urban residents surveyed saying that they had not been able to make ends meet before the drought and another 14% saying that their income was barely sufficient, urban residents especially suffered the economic consequences of the drought. Even though regional and global crises have had compounding effect, the economic downward spiral has been worsened by the complete withdrawal/suspension of Somali currency from the economy, and the unaffordability for many to transact in US dollars, which is also in short supply.

The drought so worsened the inflation that Somalis feel the pressure of the latter more than the former. Accordingly, inflation ranks as the number one challenge with 92% of the urban respondents (111 of them) saying it was, with drought as close second at 88% (106). The price for a liter of milk, for example, tripled in a span of less than two years from \$.40 per liter to \$1.2 per liter. Debt increased and local lenders said they could not sustain giving out loans or let households to continue borrowing. Small businesses, most of whom are women-run, have gone out of business. By contrast, conflict and insecurity rank as distant fourth and fifth concerns, respectively with a total of 18% (22 respondents) listing them as challenges.



**FIGURE II: Challenges urban residents identified during the survey**

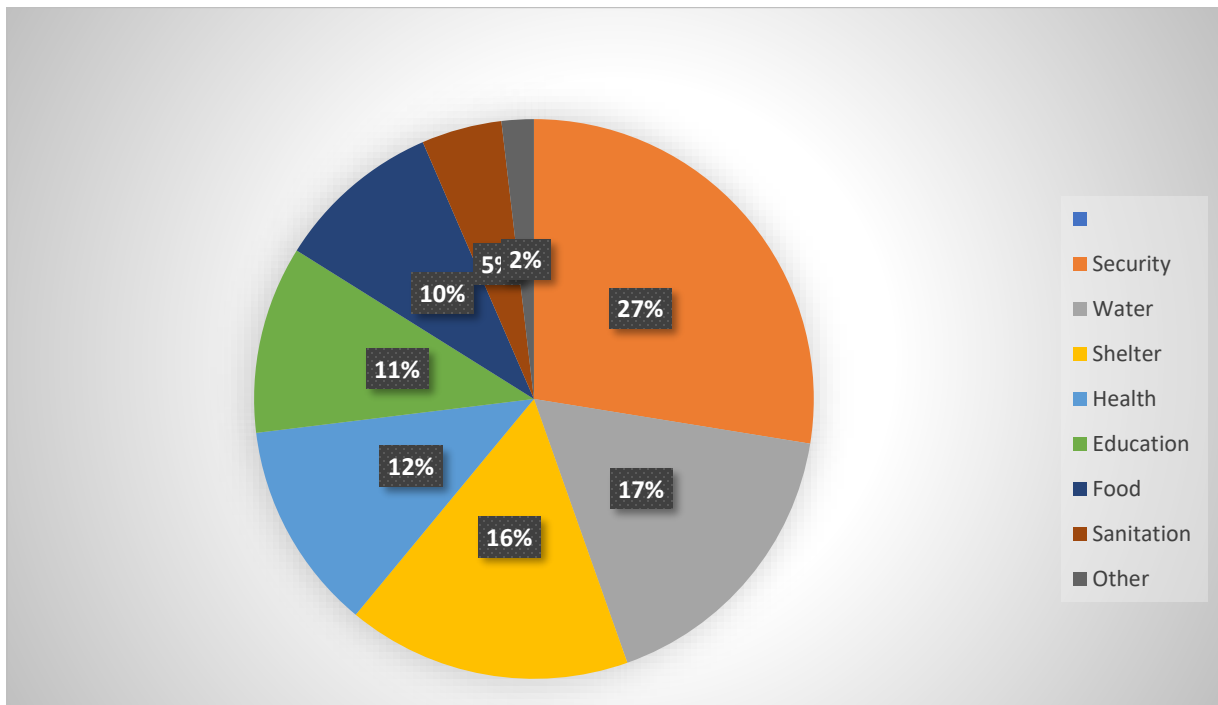
The imperative of supporting internally displaced and distressed relatives without necessarily receiving assistance themselves worsened the pressures of urban residents according to the survey conducted. 42% of the respondents said that they support relatives in distress by sending them money, food, medicines and paying for their transportation (as well as that of their herd). Only 35% of the surveyed urban residents said that they themselves received assistance from someone else. Moreover, urban infrastructure and network of services are not adequate to support the influx of internally displaced persons (IDPs) who either flock to urban centers on their own in difficult times such as the current prolonged drought or are housed in camps close to the towns. Even though “God’s mercy” is listed as single most important factor toward solution at 26% and humanitarian assistance at 18%, the surveyed urban residents listed several other factors that demand government change of policies and action by local governments and their partners: from the need of a better leadership to active government support, rebuilding the economy and reintroducing the Somali currency, better education, employment opportunities, digging boreholes, and building food reserves.



**FIGURE III: Possible solutions according to surveyed urban residents**

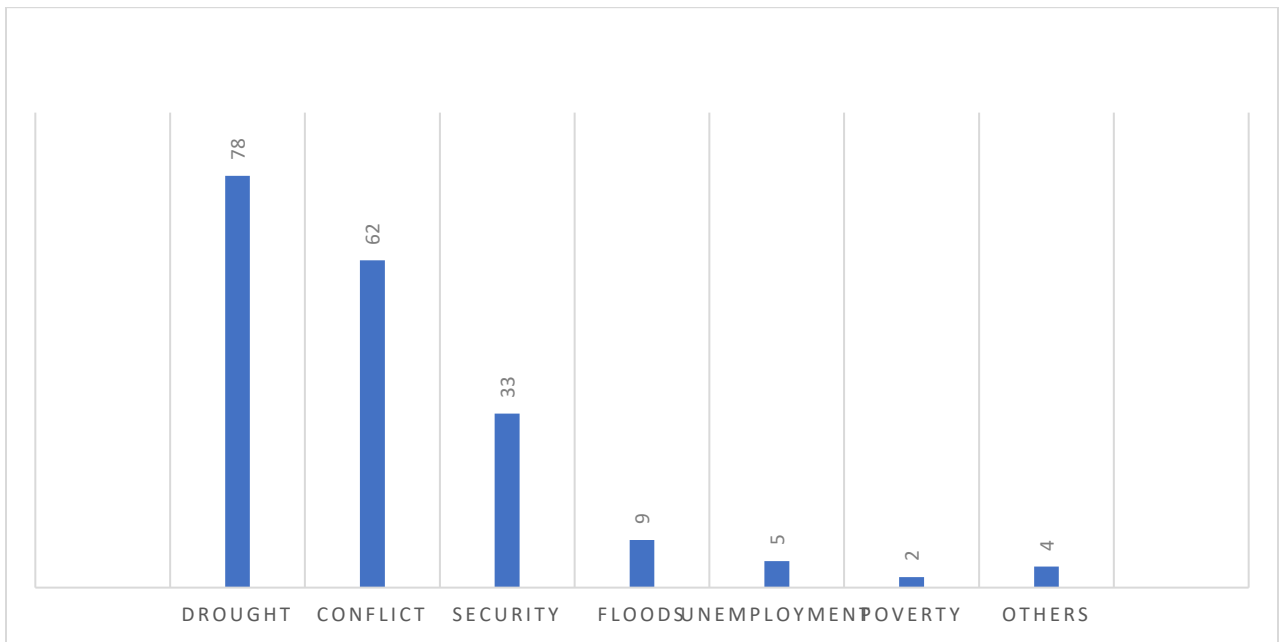
#### **IV. Internally Displaced Communities**

The communities that have been worst hit by climate change and attendant challenges (from drought to conflicts, insecurity, and socioeconomic deprivation) are the nomadic and rural farming and business communities that have been displaced from their home (IDPs) and now reside in camps. Even though 81% of 124 respondents said they were first time IDPs, 65% of the total have lived in such camps for more than a year, and the remaining 35% lived there for less than a year. PDRC researcher witnessed firsthand climate-change IDPs and their animals in Nugaal, Bari and Karkaar regions. In Nugaal, for example, ‘El Buh is home to some 150 such households, whereas Haj Kheyir is hosting some 200-300 households (and rising) – all of them displaced from Nugaal and Mudug regions. Even though not a long-term solution, once in camps, IDPs have access to much needed services.



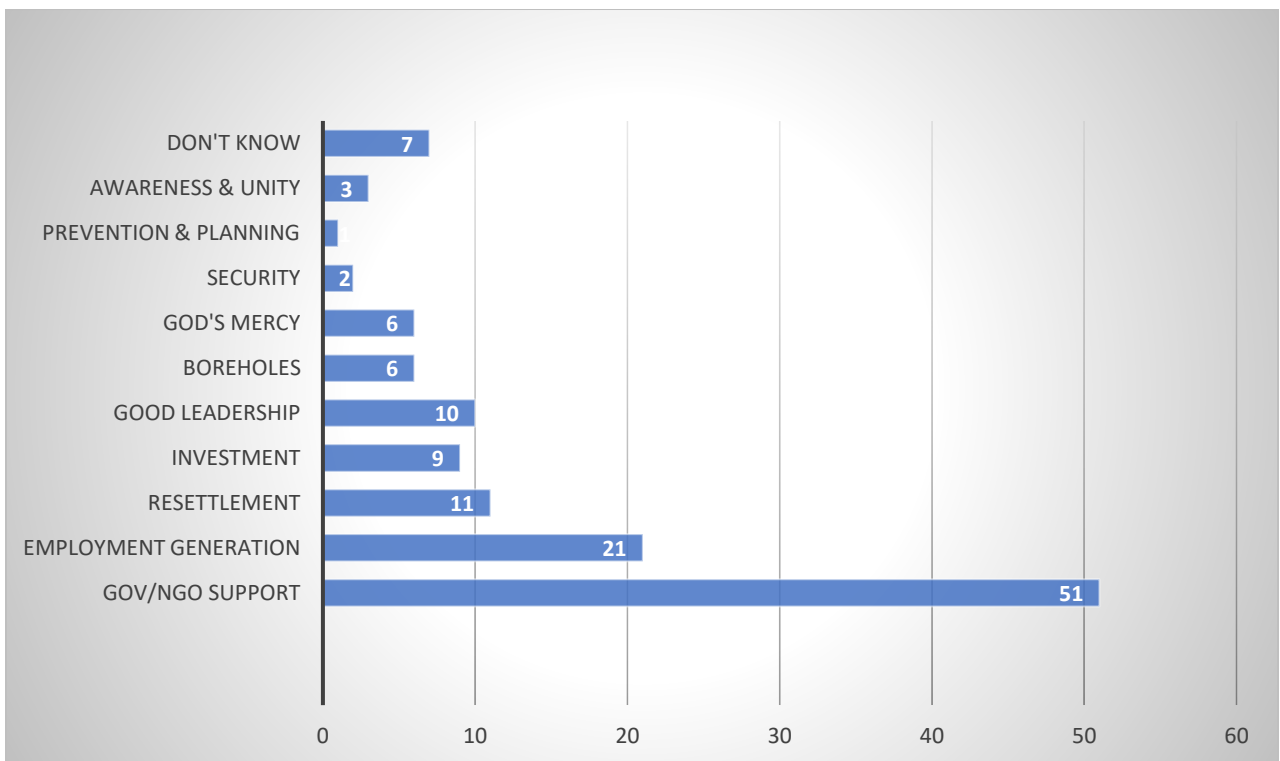
**FIGURE IV: The services that IDPs receive in the camps per the survey**

When asked why they left their homes, drought emerges as a top reason (with 63%) with conflict (50%) as second and insecurity (27%) as third. Floods, unemployment, overall poverty and others are mentioned lower in the list of causes. 28% (35) of the respondents said that they lost a close family member during their displacement. Moreover, climate-change displacement caused further deterioration of the host environment and pressure on the neighboring communities without necessarily resolving the needs of the displaced individuals and communities. On top of sustaining existing communities, the limited resources are stretched to a breaking point when IDPs are concentrated around them.



**FIGURE V: Causes of displacement per surveyed IDPs**

Like the urban residents, the majority of those living in IDP camps expect solutions to come from the governments and partners in various forms.



**FIGURE VI: Possible solutions according to surveyed IDPs in camps**

## V. CONCLUSION

Climate change and attendant droughts have devastated Puntland communities. The devastation is more severe on some communities and sectors more than others, with nomadic, pastoral and farming communities suffering the direct effects. Fishing communities, urban residents, residents of IDP camps suffered secondary consequences of the crisis. Even though the weakness of the overall economy and rudimentary infrastructure across Puntland and Somalia made the impact widespread, its severity is felt more among the poorer members of the communities, living in marginal environments and dependent on natural resource-based activities. The already worrisome conditions of food insecurity have gotten even worse as a result.

Given that climate change and climate change shocks are the new reality, no community or sector will be spared from its long-term prevalence unless meaningful and sustained novel mechanisms are in place to cope with it. Traditional coping mechanisms had been deteriorating long before the onset of current droughts and they have practically broken down now. In the past, when some communities lose their livestock to such natural calamities, the less affected communities (or members thereof) helped them recover by restocking their livestock. That has not been possible under the current circumstances due to the pervasive negative impact of the drought and attendant economic shocks. But a less talked about aspect that has been exerting extreme pressure has also been the demographic pressures and group size increases in communities of nomads and their livestock.

Deyr 2022 has been better in bringing some rain to parts of Somalia, including Puntland. Even though the situation appears better with improved rains, the question of their distribution, sufficiency and sustainability persists. The prolonged drought continues to have severe effect. Whereas vast areas did not yet receive any rain in 2022, the areas that did have not been grazable. Nomads believe that the extended drought has killed the land's fertility and the plants that would naturally germinate upon receiving rain. The livestock that have not died are physically weak, and they require several months to recover fully. In the meantime, their market value has been significantly diminished.

The Federal Government of Somalia has been very proactive, especially with the coming to office of President Hassan Sheikh Mahmoud, who appointed a Special Envoy on drought. Even though the envoy, Abdirahman Abdishakur has been actively working to keep the unfolding disaster on international spotlight and on the constant attention of the vast Somali diaspora, Mogadishu has not been forthcoming with any meaningful assistance to federal member states like Puntland.

Puntland itself has proven utterly unprepared and incapable of adequately responding to the challenge. The former disaster management agency for the region (HADMA) has been upgraded to the Ministry of Humanitarian and Disaster Management. But that ministry is new, understaffed and underequipped to address the gravity of the crisis that climate change has so far proven to be to

Puntland. The ministry spearheads a consortium of relevant ministries (mainly livestock, agriculture and environment). But neither have the financial wherewithal to address climate change.

The Puntland Ministry of Agriculture, for example, has not budgetary allocation dedicated to the environment, leaving it and the other ministries to depend on international partners, among them the United Nations Development Program (UNDP). It carries out awareness raising programs to help mitigate community practices with detrimental environmental impact, such as tree cutting and borehole digging.

Somalis themselves have been the biggest, most reliable source of relief to their communities in distress. Not only do the diaspora continue to support their relatives through regular flow of remittances, but in times of crisis like the current one, Somalis raise generous amounts for relief. Somalis in Somalia too house the displaced and/or financially support them to move around or purchase necessary supplies from the market. But all these are woefully inadequate and fall far short from long-term solutions and strategic resiliency of the communities in the face of lasting climate change challenges.