

KIPD POLICY PAPER

Financing Resilience

Climate Adaptation and the Finance Gap in Somalia

*A policy paper on Somalia's climate vulnerability, national response, and the case for
locally anchored climate governance*

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Executive Summary

Somalia is one of the most climate-vulnerable countries in the world and one of the least prepared to respond to that vulnerability. It ranks among the seven most vulnerable countries on the Notre Dame Global Adaptation Initiative (ND-GAIN) Index, with a readiness score that places it 118th, despite contributing less than 0.09 percent of global greenhouse gas emissions. Between 2020 and 2023 the country went through five consecutive failed rainy seasons, the driest stretch in over forty years and the third major drought in a little over a decade after 2010–2011 and 2016–17, each in turn described at the time as among the worst on record. Barely months after that drought eased, El Niño-intensified floods in late 2023 displaced a further 1.2 million people, and Puntland's coast was separately struck in 2020 by Cyclone Gati, the strongest tropical cyclone on record to hit Somalia. The 2020–2023 drought alone displaced more than a million people, pushed 6.7 million into acute food insecurity, and is estimated to have caused 71,100 excess deaths between January 2022 and June 2024, close to forty percent of them children under five. Without sustained adaptation investment, the World Bank projects that climate change could shrink Somalia's economy by up to 13.5 percent by 2060.

The adaptation component of Somalia's Nationally Determined Contribution is estimated to cost USD 5.55 billion a year through 2030. Against that, Somalia received just USD 321 million in international climate finance in 2019 and 2020 combined, and barely one percent of it came through the multilateral funds built specifically for this purpose. This paper sets out that evidence: Somalia's climate vulnerability, its long-term climate trends, the toll of the 2021–2024 drought, the country's national policy response, and the reasons climate finance is not reaching the institutions and communities that need it. It argues that closing Somalia's adaptation gap requires investment in locally anchored research capacity as much as it requires new financing, because much of the finance already committed is being allocated with an incomplete picture of where the country's climate risk actually falls. The paper closes with recommendations for government, donors, and Somali civil society.

1. Introduction

Somalia's exposure to climate change is not a future risk. It is the condition the country is already living with. Recurrent drought, increasingly erratic rainfall, and flash flooding intersect with a fragile state, a livestock-and-rain-dependent economy, and a young, fast-urbanising population to produce a level of vulnerability matched by few countries anywhere. The 2020–2023 drought is the most severe episode in a cycle of major droughts that has also included the 2011 famine and the 2016–17 near-famine, and it pushed Somalia to the edge of another catastrophic food crisis within a single generation.

Somalia's climate story is not only one of vulnerability, however. Over the past four years the Federal Government, through the Ministry of Environment and Climate Change, has built the outline of a functioning climate policy: an updated Nationally Determined Contribution, a National Adaptation Plan framework, and, as of October 2025, the country's first National Climate Change Action Plan. What is still missing is the financing to carry that plan out, and, just as important, the subnational capacity to turn

national plans into decisions in regions such as Puntland that international climate data collection has historically covered only thinly.

This paper sets out the evidence for both problems. Section 2 profiles Somalia's climate vulnerability. Section 3 traces the country's longer-term climate trends: its recurring drought cycle, more destructive flooding, and intensifying coastal storms. Section 4 documents the human and economic cost of the 2021–2024 drought specifically. Section 5 reviews the national policy response. Section 6 examines the gap between what Somalia needs in climate finance and what it receives, and why. Section 7 argues that closing that gap also requires investment in local, evidence-based research institutions. Section 8 sets out recommendations.

2. Somalia's Climate Vulnerability Profile

Somalia scores 0.611 on the ND-GAIN Vulnerability Index, the seventh-highest score of any country assessed, while its Readiness score of 0.361 ranks 118th, reflecting weak institutional, economic, and social capacity to convert investment into adaptation outcomes.[1] That combination, high vulnerability paired with low readiness, puts Somalia among the countries the index identifies as facing the greatest urgency for action relative to their current capacity to absorb it.

This vulnerability is structural. An estimated 60 to 70 percent of Somalis depend on pastoralism and a further 15 percent on rain-fed agriculture, both livelihoods with direct exposure to rainfall failure.[2] Livestock contributes an estimated 50 percent of national GDP and over 60 percent of export earnings, so a single failed rainy season strikes the core of the economy, not its margins.[3] Barely 30 percent of the population has access to clean water, and some 11 million people have no electricity at all, limiting the basic infrastructure, boreholes, cold storage, irrigation, early-warning communication, that would otherwise buffer households against climate shocks.[2] Forest cover has fallen to just 10.5 percent of land area, with an estimated 35,000 hectares lost to deforestation each year, adding to land degradation and weakening the natural systems that regulate water and soil in drought-prone areas.[2]

Somalia's own contribution to the crisis is negligible: the country accounts for less than 0.09 percent of global greenhouse gas emissions, yet UNDP-supported modelling projects a temperature increase of 3 to 4 degrees Celsius by 2080 under current global emissions trajectories.[2] The World Bank's 2026 Country Climate and Development Report estimates that, absent urgent adaptation investment, climate change could reduce Somalia's GDP by up to 13.5 percent by 2060 relative to a no-climate-change baseline. Targeted investment in early warning systems, water management, and climate-smart agriculture, the report finds, could cut those projected losses roughly in half.[4] With 69 percent of Somalis already living below the poverty line, the cost of inaction falls overwhelmingly on households with the least capacity to absorb it.[2]

3. Somalia's Changing Climate: Recurrent Drought, Volatile Rainfall, and Intensifying Extremes

The 2020–2023 drought was severe, but it was not an isolated event. Since 2010, Somalia has moved through a sequence of major droughts with progressively less time to recover between them. The 2010–2011 drought, described at the time as the worst in sixty years, triggered a formal famine declaration and an estimated 260,000 deaths, about half of them children under five.[5] Poor rains following the 2015 El Niño gave way to what aid agencies again called one of the worst droughts in decades by 2017, affecting 6.7 million people and displacing more than a million.[5] Conditions worsened again in 2019, when Somalia was, in the UN humanitarian coordination office's own words, being pushed toward a major emergency for the second time in three years, and worsened further in 2020 and 2021, when desert locust swarms and the disruption of the COVID-19 pandemic compounded drought conditions across 66 districts.[5] The 2020–2023 drought that followed was the third crisis in roughly a decade to be described by aid agencies as among the worst on record, and by the summer of 2022 the humanitarian response to it was only 27 percent funded.[5]

Drought is not the only hazard on the rise. Barely months after the 2020–2023 drought eased, the October–December 2023 Deyr rains, intensified by El Niño, produced the worst flooding Somalia had experienced in years: 2.48 million people affected, more than 1.2 million displaced, and an estimated USD 193.4 million in damages and losses across sixteen districts.[6] Communities that had just lost their herds to drought lost homes, farmland, and remaining assets to flooding within the same year, a pattern of climate whiplash that leaves little time to recover between extremes, rather than a simple alternation between wet and dry.

Storm intensity on the Puntland coast has increased as well. In November 2020, Cyclone Gati made landfall near Ras Hafun in Puntland's Bari region with sustained winds of 170 kilometres an hour, the strongest tropical cyclone on record to strike Somalia since satellite monitoring began fifty years ago. Its winds intensified faster in the twelve hours before landfall than any tropical storm ever recorded in the Indian Ocean, and the port city of Bosaso received nearly five inches of rain in a single day, well over half of what northern Somalia typically receives across an entire year.[7] The storm killed at least nine people, displaced an estimated 42,000, directly affected around 120,000 more, and destroyed hundreds of homes across Bari region.[8]

Taken together, more frequent and severe drought, destructive flooding close behind it, and a strengthening cyclone hazard on the Puntland coast describe a climate system moving outside the range Somali communities and infrastructure were built to withstand. The 2020–2023 drought sits inside this wider pattern, but its scale and duration make it the clearest single illustration of what that pattern costs in human terms, set out in detail below.

4. The 2021–2024 Drought: Human and Economic Toll

Between late 2020 and early 2023, Somalia went through five consecutive below-average rainy seasons, the longest such run on record and, in aggregate, the driest conditions the country had faced in more than forty years. The consequences unfolded across three overlapping crises: displacement, hunger, and mortality.

By August 2022, drought had displaced more than one million people inside Somalia since the start of 2021, on top of the large number of Somalis already displaced by decades of conflict and recurring disaster.[9] The Integrated Food Security Phase Classification (IPC) projected in September 2022 that 6.7 million people, more than a third of the population, would face Crisis-level acute food insecurity or worse between October and December that year. That included 2.2 million people in Emergency conditions and at least 300,000 in Catastrophe, with famine specifically projected for rural communities in Baidoa and Burhakaba districts and for displaced people in Baidoa town.[10] A coordinated humanitarian response narrowly averted a formal famine declaration, but food insecurity stayed severe well after the rains partially recovered: by September 2024, 4.4 million people still faced crisis-level hunger and 1.6 million children faced acute malnutrition.[11]

The drought's toll on livestock hit rural livelihoods and the national economy directly. More than three million livestock died in Somalia between July 2021 and April 2022 alone, part of a regional loss of over seven million animals across Ethiopia, Kenya, and Somalia.[3] In parts of Puntland, herders reported travelling 40 to 50 kilometres to reach a functioning water point. Competition over the grazing land and water that remained fed an inter-clan conflict in the Saaxmaygaag area between 2021 and 2023 that killed 30 to 50 people and displaced entire communities, an illustration of how quickly climate shocks can turn into resource conflict where local capacity to manage land and water disputes is weak.[12]

The clearest measure of the drought's severity emerged only after it had passed. A 2024 study commissioned by UNICEF and the World Health Organization, carried out by the London School of Hygiene and Tropical Medicine, Imperial College London, and SIMAD University, estimated 71,100 excess deaths in Somalia between January 2022 and June 2024, close to 40 percent of them children under five.[11] Most of these deaths were concentrated in the south-central regions of Banadir, Bay, and Lower Shabelle. The same study found that the north-east regions, including Puntland, recorded comparatively low measured mortality despite comparably high levels of food insecurity, a pattern its authors attribute at least partly to weaker mortality surveillance capacity outside the country's famine hotspots rather than to genuinely lower risk.[11] For a region as dependent on pastoralism as Puntland, and with its own documented climate-conflict dynamics, that data gap is itself a policy finding: without stronger local monitoring capacity, national and international decision-makers are working from an incomplete picture of where the drought's real toll falls.

5. Somalia's Emerging Climate Policy Architecture

Somalia's institutional response has developed quickly, if from a low base. The Federal Ministry of Environment and Climate Change submitted an updated Nationally Determined Contribution (NDC) to the UNFCCC in 2021 and a further revision, NDC 3.0, in June 2025.[13] Alongside this, the Ministry advanced a National Adaptation Plan (NAP) framework, first published in February 2022, setting out the institutional and technical steps needed to bring adaptation into national planning.[14]

These frameworks reached a milestone on 21 October 2025, when Somalia validated its first National Climate Change Action Plan (NCCAP), covering 2025 to 2030 and aligned with the NDC, the NAP, and the government's National Transformation Plan.[14] The plan sets priorities across seven sectors: agriculture,

livestock, fisheries and food security; water resources management; forestry and biodiversity; health, sanitation and human settlements; municipalities and urban development; disaster risk management; and energy and transport. More than 40 participants from civil society organisations, academic institutions, development partners, the private sector, and youth networks took part in the validation workshop in Mogadishu, and several specifically raised the need to bring the perspectives of youth, women, and children into implementation and monitoring.[14]

This is real institutional progress, and it gives Somalia a coherent national framework against which climate investment can, for the first time, be planned and measured. The process so far, though, has been largely federal and Mogadishu-based. Building the subnational systems needed to carry a seven-sector plan across Somalia's federal member states, including the data, technical capacity, and community trust required to act on it in Puntland specifically, is the harder phase of the work that is still ahead.

6. The Climate Finance Gap

Somalia's adaptation ambitions are constrained less by planning capacity than by money. The adaptation component of the country's NDC is estimated to require USD 5.55 billion a year between 2021 and 2030, or roughly USD 55.5 billion over the decade.[2] Against that figure, Somalia received just USD 321 million in international climate finance across 2019 and 2020 combined, under one percent of what a decade of implementation would require.[15]

The composition of that finance compounds the shortfall. Only about one percent of the USD 321 million came through the dedicated multilateral “vertical” climate funds, the Green Climate Fund, the Adaptation Fund, and the Global Environment Facility, that exist specifically to finance adaptation in vulnerable countries. By January 2023, Somalia had accessed a cumulative total of just USD 51 million from these funds for national projects, and nothing at all from the Adaptation Fund.[15] The pattern holds regionally as well as nationally. Oxfam calculated in September 2023 that rich nations gave Ethiopia, Kenya, Somalia, and South Sudan a combined USD 2.4 billion in climate-related development finance in 2021, against an estimated regional need of USD 53 billion a year. Nearly half of what was given came as loans rather than grants, adding to the debt burden of countries already among the world's most indebted.[16]

Research by the Overseas Development Institute traces the structure behind this gap. On the demand side, conflict-affected states such as Somalia often lack the institutional capacity to design and absorb large climate finance flows, and adaptation policy remains poorly integrated with sectoral and development planning. On the supply side, the accreditation and project-design requirements of the major climate funds were built for stable-state contexts. They are complex and resource-intensive to meet, and they lead funders to treat fragile states as high risk while giving comparatively little weight to the cost of continued inaction.[15] The practical result is that Somalia depends heavily on multilateral agencies and international NGOs already accredited to these funds to act as intermediaries, a structure that adds cost and delay and can leave financed projects poorly matched to national and subnational priorities, including those of institutions and communities in Puntland.[15]

The Ministry of Environment and Climate Change reached a similar conclusion from government's side of the table. It made the point at its own national conference on climate finance, held on 5 June 2025 under the theme “Strengthening Climate Finance Pathways Amidst a Shifting Donor Landscape.” As traditional donor priorities shift, the Ministry argued, Somalia's ability to attract climate finance will depend on stronger institutional capacity, more reliable data systems, and better positioning to meet the eligibility requirements of global climate finance mechanisms directly.[17]

7. Why Local, Evidence-Based Institutions Matter

The evidence above points to two gaps that reinforce each other. The first is financial: Somalia receives a small fraction of the climate finance its own national strategy says it needs. The second is informational: even where finance and policy exist, the data needed to direct them well is thin outside a small number of famine hotspots. Consider the mortality study discussed in Section 4: investigators could not say with confidence whether the north-east's lower recorded death toll reflected genuinely lower risk or simply weaker surveillance.[11] For policymakers and donors deciding where to direct scarce adaptation finance, that is not a minor caveat. It is a real risk of misallocating resources away from regions, including Puntland, whose vulnerability is real but under-measured.

Closing that informational gap is not primarily a task for agencies headquartered outside the country, and a Mogadishu-based federal process cannot complete it alone, however well designed. It requires research and policy institutions rooted in the regions concerned, with the local knowledge, relationships, and continuity of presence to collect data between crises, not only during them. That means tracking how national frameworks such as the NCCAP are actually implemented at state and district level. It also means connecting climate risk to the sectoral and conflict dynamics, land tenure, clan-based resource competition, urban migration, that determine whether a drought stays a manageable shock or becomes a humanitarian emergency, as the Saaxmaygaag case shows.[12]

The Kenadid Institute for Policy & Development (KIPD) is an independent Somali policy research institute, and it has already worked on related ground. Its analysis of the drivers of social cohesion and resource-related conflict in Puntland, its Galkayo conflict analysis, and its work on the financing of Somali resilience all touch the same intersection of climate, conflict, and governance set out in this paper.[18] Extending that work into sustained, regionally disaggregated climate-risk monitoring in Puntland would help close the data gap identified above. It would also give national policymakers, donors, and regional platforms such as the Pan African Climate Justice Alliance a source of current, grounded evidence from a part of the country that existing climate data systems cover only thinly.

8. Recommendations

The following recommendations are addressed to the four sets of actors whose decisions will determine whether Somalia's adaptation gap closes or continues to widen: the federal government, international donors and climate funds, Somali civil society and research institutions, and the regional and continental platforms that connect them.

For the Federal Government and the Ministry of Environment and Climate Change

- Attach a funded, time-bound target to the National Climate Change Action Plan's monitoring provisions: a specific budget line for subnational data collection, phased in across all federal member states within the plan's current cycle, replacing the ad hoc humanitarian reporting that regions such as Puntland currently rely on.
- Pursue direct accreditation to the Green Climate Fund and the Adaptation Fund as a standing priority of the current NDC implementation period, not a longer-term aspiration, so that Somalia stops depending almost entirely on intermediary agencies to access the finance its own strategy identifies as necessary.

For international donors and climate funds

- Simplify accreditation and project-design requirements for fragile-state applicants now: the barriers the Overseas Development Institute documented in 2023 remain largely unchanged, and every additional year of delay is a year of finance that does not reach the country it is meant for.
- Commit to a grant share of at least two-thirds for climate finance to Somalia and other conflict-affected states, correcting the near-even grant-loan split Oxfam documented in 2023 and that is compounding the debt burden of countries least able to carry it.
- Open direct-access financing windows, with due-diligence and reporting requirements scaled to institutional size rather than copied from processes built for large multilateral agencies, so that credible Somali national and subnational institutions can apply without needing an international intermediary.

For Somali civil society and research institutions

- Establish standing, regionally disaggregated monitoring of climate impacts, covering displacement, food security, livestock loss, and conflict, reporting on a fixed quarterly cycle rather than only when a crisis is already under way, to close the surveillance gap the 2022–2024 mortality study exposed.
- Formalise, in writing, data-sharing and advisory arrangements with the Ministry of Environment and Climate Change and with regional platforms such as the Somali Climate Action Platform, so subnational evidence is built into national planning cycles as a matter of process, not supplied informally or after decisions are already made.

For regional and continental climate justice platforms

- Treat strengthening the domestic institutional base that can absorb, account for, and monitor climate finance as a precondition for closing Somalia's finance gap, not as a secondary objective to advocacy and awareness work.
- Back that position with dedicated capacity-building funding, not only conference access and network membership, for national and subnational member organisations operating outside capital cities, where climate risk is often highest and institutional capacity thinnest.

9. Conclusion

Somalia's climate crisis is not a distant projection. It has already killed tens of thousands of people, displaced over a million more, and put the national economy on a path that could shrink it by more than a tenth within a generation. The pattern behind it, drought following drought with less time to recover in between, punctuated by increasingly destructive floods and, on the Puntland coast, by the country's first recorded hurricane-strength cyclone, shows a climate that has already moved past what Somalia's institutions and infrastructure were built to handle. In four years, the country has still built a credible national climate policy architecture: an updated NDC, a NAP framework, and a first National Climate Change Action Plan that few observers of Somalia's fragility would have predicted a decade ago. What stands between that architecture and the resilience it is meant to build is twofold: a financing gap measured in billions of dollars, and an information gap that leaves policymakers unable to see clearly into some of the country's most climate-exposed regions. Both point to the same conclusion. Somalia's adaptation to climate change will depend not only on what is decided in Mogadishu or Geneva, but on whether institutions with real presence on the ground, in places like Puntland, are equipped to supply the evidence that decision depends on.

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