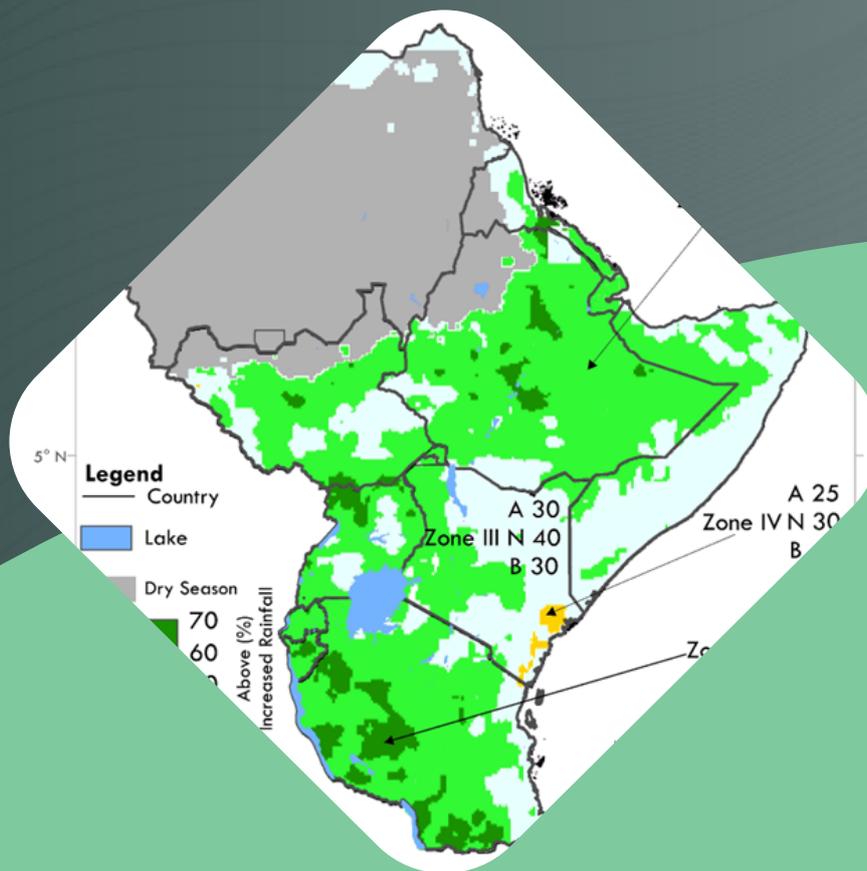




INSTITUTE OF
CLIMATE AND
ENVIRONMENT

Failed Rains and a Worsening Drought - Somalia's Preventable Crisis



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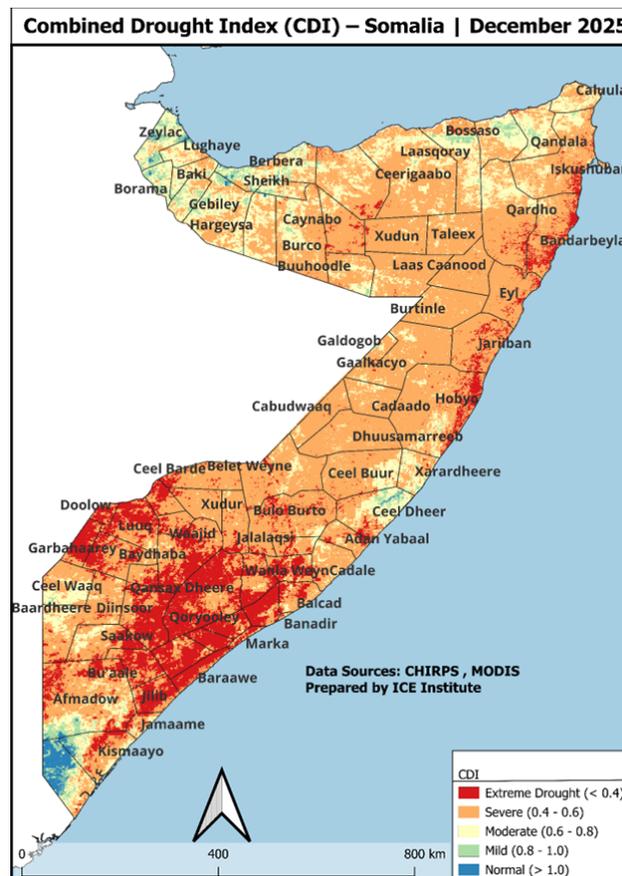
1. Executive Highlights

Somalia faces a brutal drought fueled by relentless rainfall failures that have ravaged pastures, withered crops, and triggered mass livestock losses. The Deyr season (October-December 2025) delivered below-average rains, barely enough to sustain weak recovery from prior dry spells averaging just 50-70% of normal in most southern zones. Then came the hammer: the April-June 2025 Gu rains fell short by 60-80% in northern pastoral regions, followed by a near-total collapse of the October-December 2025 Deyr the most critical short season for southern cropping with deficits exceeding 90% in Shabelle and Juba basins.

Rainfall deficits reached extreme levels, marking the Deyr as one of the driest on record, with near-zero precipitation (<10mm) across 70% of agropastoral livelihood zones. Combined Drought Index maps from November 2025 revealed severe to extreme conditions spanning all zones, from northern pastoral areas (affecting 2.1 million people) to southern riverine districts.

Northern areas entered crisis first in August 2025 [3], with 130+ boreholes failing, but the south ignited by October as Deyr collapse wiped out 85% of crop germination and halved river flows in Shabelle and Juba basins.

This drought outstrips predecessors in speed and scope. Diverging from the 2016/17 gradual onset, the 2025 event struck rapidly a northern drought flared in August, southern in October, converging nationwide by November for the widest coverage since 2021. It layers all five drought types simultaneously: meteorological (rainfall collapse), agricultural (soil moisture depletion), hydrological (river and groundwater exhaustion), socioeconomic (market disruptions and livelihood shocks), and ecological (long-term rangeland degradation). Lingering damage from 2021/22 unrecovered herds and eroded soils compounded the blow, amplified by La Niña patterns and temperatures soaring.

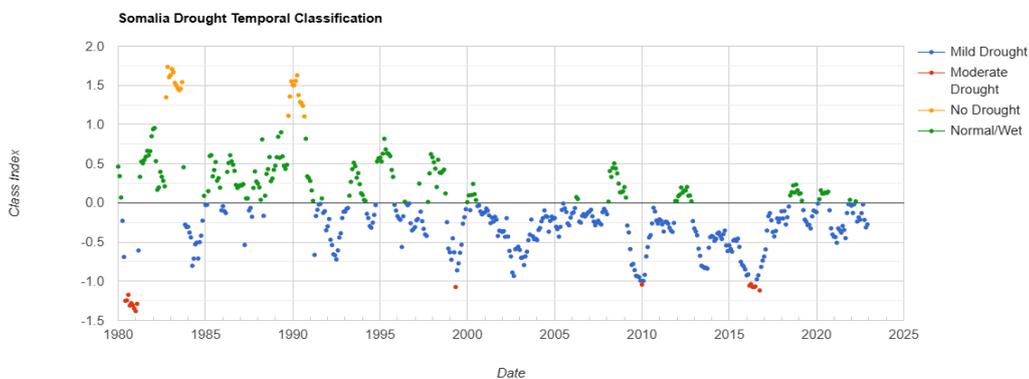


2. Background: Why Somalia is Always at Risk

The Horn of Africa, including Somalia, experiences extreme swings between droughts and floods due to shifting rain patterns influenced by events like El Niño & La Niña. These irregularities disrupt farming and herding across vast arid lands.

Somalia faces constant risk from environmental challenges that hit hard because of its geography and limited resources. These factors create a cycle of crisis without strong systems to break it. Harsh weather patterns and reliance on unpredictable rains leave communities vulnerable. Somalis chase rain-fed livelihoods pastoralists herding camels

and goats across arid plains, farmers scratching maize and sorghum from sandy soils in Bay and Shabelle. No irrigation buffers, no crop insurance. A rain shortfall means empty milk gourds, dead livestock, and kids going hungry. It's not farming; it's survival betting on the sky. Somalia's drought history reveals a pattern of recurrent crises driven by erratic monsoon rains, amplified by climate variability, weak institutions and conflict, from major events in the 1980s to the ongoing 2023-2026 emergency.



3. Historical Droughts

Somalia's drought history reads like a grim calendar of survival struggles, with cyclical crises striking every 3-5 years since the 1980s, each one locally named for the devastation it carved into pastoral memory. These events connect through a thread of failed monsoons and mounting vulnerability, building from rural collapses in the 1980s drought, when civil unrest left herders with no fallback as livestock died en masse across northern plains, to the 1990s era, where prolonged dry spells deepened war's chaos, wiping out grazing lands and displacing clans amid total state breakdown. The pattern escalated brutally in modern times with the 2010-2012 crisis, the worst in 60 years triggered by La Niña's rain blockade, culminating in famine declared July 2011 and ~260,000 deaths according to a UN report, as four failed seasons starved 4 million in the south[6]. Recovery barely held when 2015-2017

hit, fueled by El Niño and negative Indian Ocean Dipole (IOD), hammering Somalia northern with four poor seasons; early interventions averted full famine but still claimed ~1,100 lives amid mass livestock losses[7]. No breathing room followed: the 2018-2022 multi-year nightmare, worst in 40 years, layered locust swarms and freak floods atop relentless dry spells. This exhaustion set the stage for the current 2023-2026 emergency, where "third consecutive failures" by 2021 snowballed into catastrophe: poor 2024 Deyr rains eroded reserves, then 2025 Gu (April-June) faltered in the north while Deyr (Oct-Dec) The national emergency declaration on November 10, 2025, with Jilaal (Jan-Mar 2026) looming as the breaking point. Each drought feeds the next weaker rangelands, hotter baselines (+1.2°C), and shorter recovery windows turn predictable climate swings into predictable disasters

4. WHY DROUGHTS KEEP REOCCURRING?

Somalia is naturally arid to semi-arid with highly variable rainfall and long dry periods even without climate change – it's literally the baseline state. Somalia's droughts aren't random acts of nature, they're locked in a vicious cycle where natural forces meet human failures, each feeding the other that natural drivers set the stage, while systemic failures ensure impacts hit hardest and longest.

A. Natural Drivers

Climate change intensifies variability as Global warming (+1.2°C since 1980s) amps up ocean swings like La Niña and negative IOD, turning normal dry years into killers. Four poor seasons chained through 2025 match 2011's script/predictable, just hotter. Somalia's droughts cycle relentlessly because the country sits between two massive oceanic engines – the Pacific and Indian Ocean – that dictate its rains like clockwork. When these align against the Horn, dry skies turn deadly.

-La Niña (The Pacific Engine): Pacific cooling builds high pressure over East Africa, slamming down the lid on rising air. Clouds can't form; Gu and Deyr rains die. This fueled 2011 famine, 2021 peaks, and 2025's four poor seasons. NOAA SST anomalies show cooling spikes match drought years exactly.

-Indian Ocean Dipole (The Local Engine): Negative IOD cools waters off Somalia's coast, building a moisture wall. Rain clouds veer south to Tanzania; Deyr 2025 got 30-60% norms as east cooled 1°C below average. When La Niña and negative IOD sync (like now), catastrophe locks in 2011 redux.

5. WHAT ACTUALLY HAPPENED (2024–2025)

Somalia's rainy seasons drive agriculture and pastoralism: Gu (April-June), Deyr (October-December), with dry Jilaal (January-March) and Hagaa (July-September). The 2024-2025 drought stemmed from consecutive failures starting mid-2024.

Shifts in Monsoon Patterns as The ITCZ moisture highway now stalls offshore or shifts late. Gu starts 10 days later, Deyr ends early; CHIRPS map 2025 gaps stretching weeks beyond 1991-2020 norms. Rising Temperatures Increasing Evaporation +1.2°C baseline sucks soil moisture 25% faster. ERA5 data confirms Jilaal berked's empty in 2 weeks green patches from early rains. Dust by September.

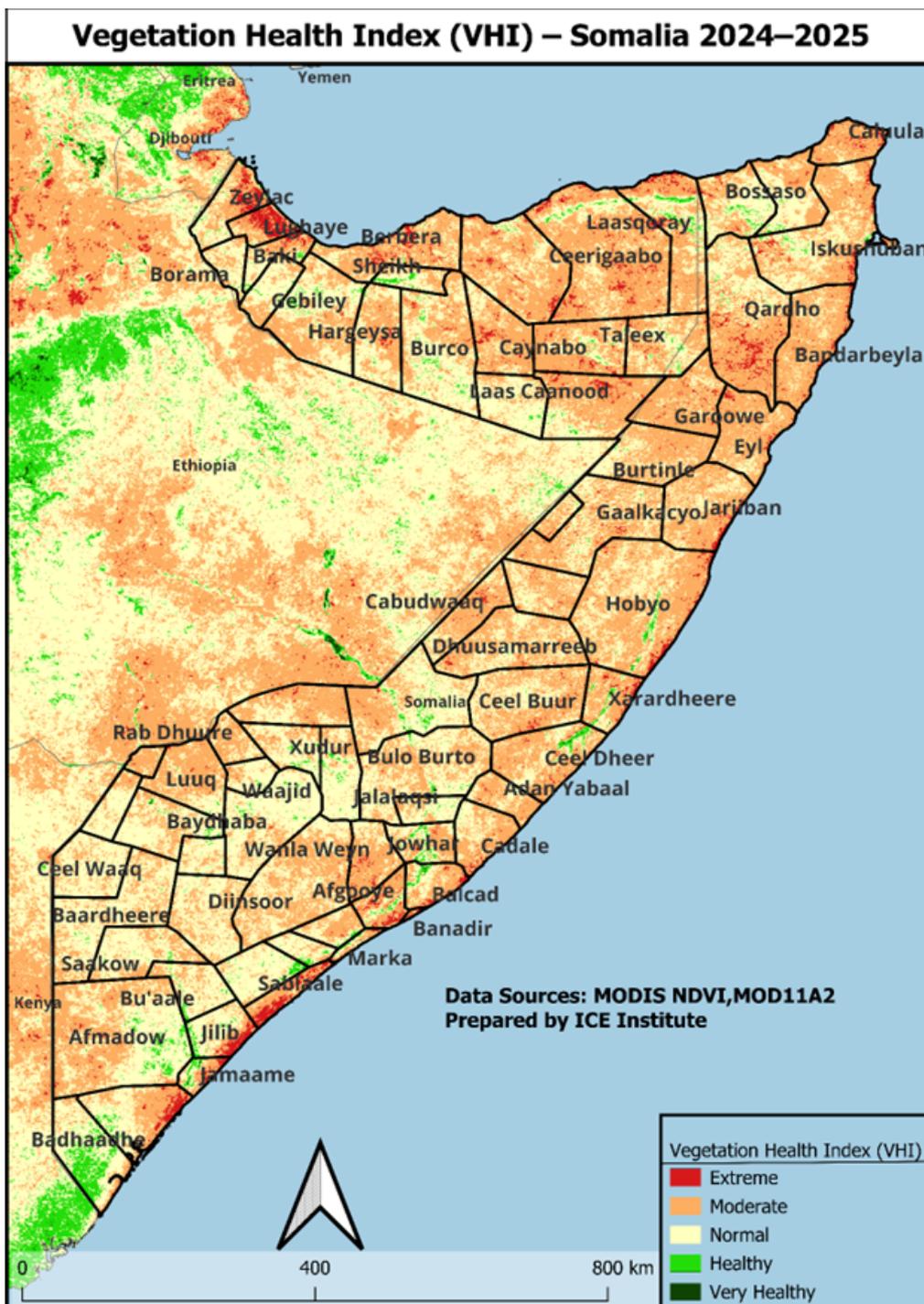
B. Human Environmental Degradation & Institutional Drivers

The current drought management framework in Somalia remains fundamentally reactive rather than preventative, characterized by a critical lack of pre-positioned feed reserves and established migration corridors. Early-action financing mechanisms are weak, with disbursements delayed until IPC Phase 4 despite credible pre-Deyr 2025 forecasts; rangeland conditions are severely degraded due to post-2022 overgrazing, and response efforts remain overly reliant on late-stage humanitarian assistance, which historically arrives after major livestock losses at several times the cost of prevention, repeating delays observed in 2011 despite evidence from 2017 that early action is more effective. Environmental Degradation (Amplifier of Drought) deforestation for charcoal strips woodland increases year after year, killing soil moisture traps bare earth bakes faster. Soil erosion from overgrazing washes topsoil and rangelands hold less water than 1990s, turning mild dry spells catastrophic.

- **Gu 2024 (March-May):** Rains started late with long dry spells over three weeks nationwide, exceeding two months in north and no intense early rains in south-central areas, causing moderate threats to crops despite some soil moisture benefits.

- **Deyr 2024 (October-December):** Extremely poor average rainfall in south-central Somalia, delayed onset, and few rainy days and cultivation halted in worst areas like Bay and Shabelle.
- **Jilaal 2025 (January-March):** Intense heat and aridity worsened water/pasture shortages in Bay, Gedo, Lower Shabelle; livestock deaths and displacement rose.
- **Hagaa 2025 (June-August):** Continued deficits compounded issues.

- **Deyr 2025 (October-December):** Fourth failed season confirmed; severe drought in southern cereal areas impacted Deyr crops harvesting January 2026.
- The Federal Government declared a national drought emergency on Nov 10, 2025. As of Jan 2026, Gu 2025 outlook predicted delayed onset (late Apr in south, May in north) and below-normal totals



6. HUMAN & LIVELIHOOD IMPACTS

Somalia's drought has inflicted profound human and livelihood losses, with millions facing acute hunger, displacement, and health crises. Consecutive failed rainy seasons caused massive livestock die-offs, crop failures, and disease spikes. Impacts persist into 2026, with projections of further displacement amid limited aid.

According to a joint study released on January 22, 2025, by the Somali Federal Ministry of Health, UNICEF, and WHO the devastating drought that began in 2022 has had a profound impact on mortality in Somalia. The report estimates that approximately 71,100 people lost their lives between January 2022 and June 2024 as a direct or indirect consequence of the drought's impact on food security and health systems of particular concern is the vulnerability of the younger population, with an estimated 40% of these deaths occurring among children under the age of five.

The severe drought has depleted the core assets of pastoralists and farmers, deepening poverty as **60,000 livestock perished** in the north and **120,000** remain in critical condition (Ministry of Health et al., 2025). On a national scale, over **2 million animals** are currently at risk, resulting in a total stagnation of local trade; this is evidenced by a **50% collapse in goat prices** dropping from \$70 to approximately \$30-\$35 as reported by OCHA.

Somalia's drought has severely impacted crop yields from 2024-2026, with the latest January 2026 updates confirming near-total 2025 Deyr failure and below-average harvests. Southern cereal production dropped sharply, exacerbating food insecurity for 4.61 million people. Projections for early 2026 harvests indicate 20-30% deficits FEWS NET and FSNAU assessments.

7. Somalia Outlook 2026 :Seasonal Gu' Rains likely to End the Ongoing Drought

The March-to-May (MAM) season ranks among the key rainy periods in the Greater Horn of Africa (GHA), particularly in equatorial zones. These rains often supply up to 60% of the yearly total, critically shaping water access and community livelihoods, as noted by ICAPC. Across the GHA, rising temperatures combine with erratic precipitation, shifting from persistent drought threats toward possible wetter spells.

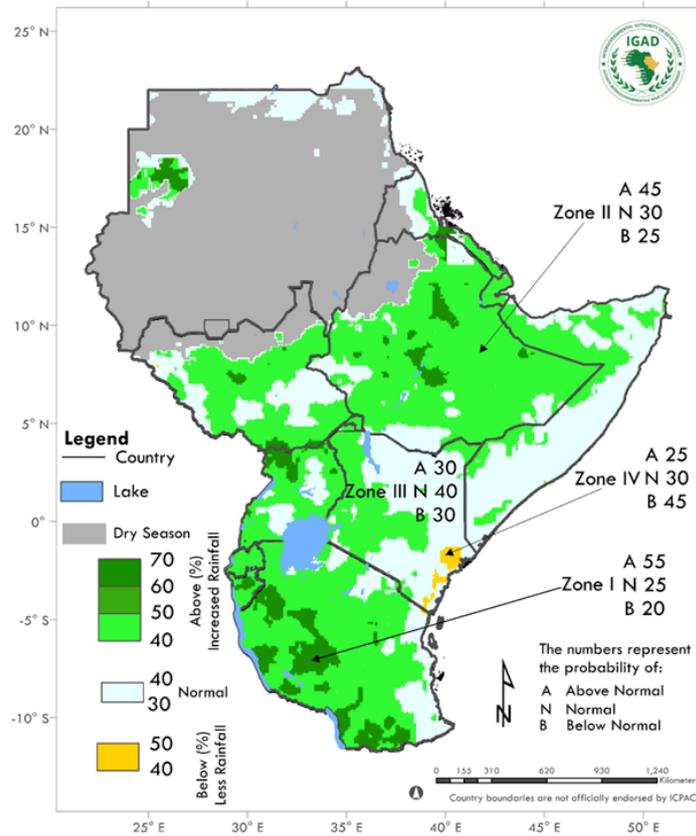
Analysis of global climate model predictions from nine Global ProducingCentres (GPCs) customised for the Greater Horn of Africa (GHA) region indicates slightly raised probabilities (40%) for near normal conditions over much of Somalia,

northern and eastern Kenya, coastal and parts of northern Tanzania, eastern and western South Sudan, a few regions in western Ethiopia and parts of Uganda. ICPAC's latest forecasts from GHACOF72 indicate warmer-than-usual temperatures across most of the region for February-April 2026, alongside wetter-than-normal rains in parts of Somalia, Ethiopia, Kenya, and others.

The MAM (Gu) season is vital for Somalia, powering socio-economic sectors reliant on rain-fed systems. Poor performance exacerbates drought risks, livestock losses, and food insecurity, as seen in past crises.

Temperatures during the MAM 2026 season are forecast to be above normal, with more than a 60% probability over central Somalia. Elevated temperatures are likely to intensify evapotranspiration, worsening water stress even if rainfall is near normal.

Overall, the MAM season remains less predictable than other rainfall seasons, and dry spells may still occur even under near-normal conditions. The outlook applies to seasonal and large-scale patterns, and significant local and month-to-month variations are expected.



8. Solutions

Short-term solutions focus on immediate survival through the Jilaal dry season (Jan-Mar 2026), while long-term strategies build resilience against recurring droughts

Short-Term Solutions

Short-term solutions include deploying awareness campaigns and mobile call emergency alert systems that utilize community radio, village meetings, and Early Warning System (EWS) ringtone alerts to deliver real-time SMS/USDD warnings on drought severity, water shortages, and migration risks while promoting critical water conservation practices

Water trucking and Berked rehabilitation efforts should deliver water directly to people and upgrade shallow ponds to retain residual moisture. Additionally, pre-position vulnerability-based food, cash, livestock, and mobile health assistance for over 2 million drought-affected pastoralists and IDPs to safeguard livelihoods, avert displacement, and

Long-Term Solutions

Climate-resilient crops such as drought-tolerant sorghum and maize hybrids should be introduced for Bay and Shabelle farmers, with micro-dosing fertilizers boosting yields by 30% on marginal lands.[13] Solar-powered boreholes must be developed across key pastoral corridors, tapping Somalia's deep fossil aquifers to secure year-round water access and reduce dependency on water (trucking Early warning system implementation

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requires operationalizing Somalia's National Meteorological and Climate Services Agency (SNMA) by integrating meteorological, hydrological, and food security data with World Meteorological Organization (WMO), IGAD regional platforms (ICPAC), and SWALIM, enabling faster, nationally owned, risk-informed drought and flood preparedness that translates forecasts into early action for pastoralists, farmers, and IDPs.



GET INVOLVED

Who we work with is just as important as the work we do. Collaborating with partners is critical to driving and delivering change. Through our partnerships, we develop local solutions that can work for lasting impact. *Want to contribute to our journey, Contact us.*



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