



HOA DRIVE, IBLT PAYOUT SUMMARY REPORT - SOMALIA

MARCH – JUNE 2023 SEASON (PHASE 1 & 2)

1. BACKGROUND

DRIVE is a Horn of Africa project funded by the World Bank and implemented by governments with an aim of enhancing pastoralists' access to financial services for drought risk mitigation, include them in the value chains, and facilitate the livestock trade in the Horn of Africa. DRIVE was launched on 31 August 2022 and has two components:

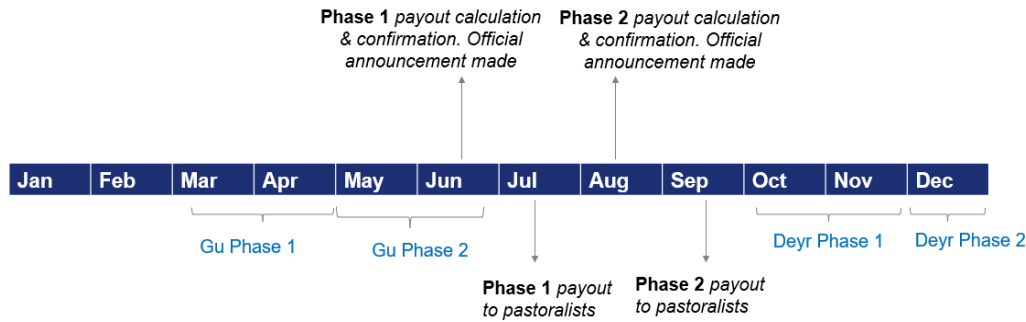
- Component I: Package of financial services for climate resilience
- Component II: Livestock Value Chains and Trade Facilitation.

ZEP-RE (PTA Reinsurance Company) oversees Component I implementation in four countries (Kenya, Somalia, Ethiopia, and Djibouti). This component has insurance, savings, digital accounts, and platform coordination. Component II is implemented by the Ministry of Finance and Ministry of Livestock, Forestry and Range. In Somalia, the government is targeting the implementation of the DRIVE Project in all arid and semi-arid lands (ASAL) with an aim of reaching pastoralists with resilience building tools against drought as well as develop capacity for the livestock value chain development. The IBLT product was developed to be used to back pastoralists' savings in the case of severe drought. It is designed to keep animals alive in an affordable way and to rapidly trigger and distribute payouts without the need for evidence of livestock dying. The IBLT product is designed based on a forage scarcity index developed using anomalies in the Normalized Difference Vegetation Index (NDVI) based on eVIIRS data from 2002 to 2021. Table 1 below summarizes the product features that has been distributed in Somalia for the 2022 – 2023 season.

This report covers the first payouts of the Long Rains season, covering the months of March 2023 – April 2023 for the Puntland Region, April 2023 – May 2023 for the Gedo Region, and the second payouts covering May 2023 – June 2023 for the Puntland Region and June 2023 for the Gedo Region. For this season, all 9 UAIs in Puntland were covered i.e., Bossaso, Burtinle, Gaalkacyo, Garoowe, Iskushuban, Lascaanod, Qardho, Sanaag, Taleex and 2 out of 3 UAIs covered in the Gedo region i.e., Dawo & Gogol and Gowraar.

The calendar timeline for payouts is as shown below:

Figure 1: Calendar timeline for payouts



The payout calculations have been done by ACRE Africa, in their role as the payout calculation agent and have been reviewed by ZEP RE. Further, the Z-Scores¹ have been validated² by data service providers and validation agent, Planet.

2. UNDERWRITING AND CLAIM DETAILS

UNDERWRITING DETAILS

Insured:	Pastoralists in the Puntland and Gedo regions of Somalia against prolonged forage scarcity ONLY because of drought.
Product description:	The product’s main aim is to provide cover against prolonged forage scarcity ONLY because of a drought. It triggers payment to pastoralists to help maintain their livestock in the face of severe forage scarcity. The payment amount depends on the value derived from an the NDVI index. The pricing and payouts are the same within each UAI ³ level.
Coverage Period:	Cover 1: 1 st October 2022 to 30 th September 2023 (annual cover purchased in September 2022). Cover 2: 1 st March 2023 to 28 th February 2024 (annual coverage purchased in February 2023).
Calculation period:	1 st March 2023 to 30 th April 2023 for Puntland region and 1 st April 2023 to 31 st May 2023 for Gedo region. (Long rains, Phase 1) 1 st May 2023 to 30 th June 2023 for Puntland region and 30 th June 2023 for Gedo region. (Long rains, Phase 2)
Type of Cover:	Index based livestock takaful based on Normalized Difference Vegetative Index, NDVI
Scope of Cover (Perils):	Forage scarcity because of drought.

¹ The z-score describes the variation in the NDVI relative to the historical time series by subtracting the average and dividing by the standard deviation of the historical NDVI readings.

² See Final Data Report for more details.

³ UAI – Unit Area of Insurance per region as is determined based on the homogeneity of vegetation conditions and pastoral migration extents. Also, rangeland dominance, forage availability, seasonality and drought history are also considered.

Areas of Cover:	Somalia (Puntland and Gedo regions)
No. of covered farmers:	44, 408 (Cover 1 - 1,787, Cover 2 - 42,621)
Sum Covered:	USD 30,537,287 (Cover 1 - USD 1,023,990 ; Cover 2 – USD 29,513,297)
Premium:	USD 5,878,878 (Cover 1 - USD 185,213; Cover 2 – USD 5,693,665)

CLAIM DETAILS

Following the concluded Long Rains season and the finalization of the payout calculations for both Phase 1 and Phase 2, **the total payout for the Long Rains season for the 44,408 pastoralists covered in both Puntland and Gedo is nil.**

Table 1: Summary of the region's coverage statistics
October 2022

Unit Area of Coverage	Pastoralists	Total Animals Covered	Total TLUs ⁴	Pastoralists payment	Additional Subsidy (USD) ⁵	Total Premiums (USD)	Total Sum Covered (USD)	Total Claims Payout (USD)
Burtinle	60	2,920	2,864	776	63	7,821	45,000	0
Garoowe	817	33,619	33,202	10,564	3,144	108,782	612,750	0
Iskushuban	540	6,442	648	1,675	867	17,617	97,200	0
Qardho	260	8,257	1,244	3,215	2,622	34,769	186,540	0
Sanaag	110	5,500	550	1,422	2,006	16,224	82,500	0
Total	1,787	56,738	38,508	17,651	8,702	185,213	1,023,990	0

March 2023

Unit Area of Coverage	Pastoralists	Total Animals Covered	Total TLUs	Pastoralists payment	Total Premiums (USD)	Total Sum Covered (USD)	Total Claims Payout (USD)
Gedo	13,527	413,007	56,422	171,894	1,718,931	8,445,568	0
Dawo_&_Gogol	9,197	286,582	39,879	121,598	1,217,322	5,967,266	0
Gowraar	4,330	126,425	16,543	50,296	501,608	2,478,302	0
Puntland	29,094	1,241,843	140,133	393,146	3,974,734	21,067,730	0
Bossaso	3,521	161,105	17,605	45,245	452,685	2,640,750	0
Burtinle	4,255	194,096	21,304	57,506	575,184	3,191,250	0
Gaalkacyo	7,773	330,087	38,865	113,097	1,151,318	5,829,760	0
Garoowe	6,735	279,098	32,224	92,496	935,294	4,820,893	0
Iskushuban	1,785	64,852	6,541	18,286	182,928	1,047,615	0
Lascaanod	608	20,261	3,040	7,934	79,344	456,094	0
Qardho	1,893	73,128	7,924	22,228	227,481	1,188,669	0
Sanaag	1,870	93,480	9,348	26,131	268,277	1,402,200	0
Taleex	654	25,736	3,282	10,222	102,224	490,500	0
Total	42,621	1,654,850	196,555	565,040	5,693,665	29,513,297	0

⁴ TLU - Tropical Livestock Unit, is a unit for measuring monetary value of covered livestock, 1 TLU = 1 cow or 10 goats/sheep or 0.7 camel.

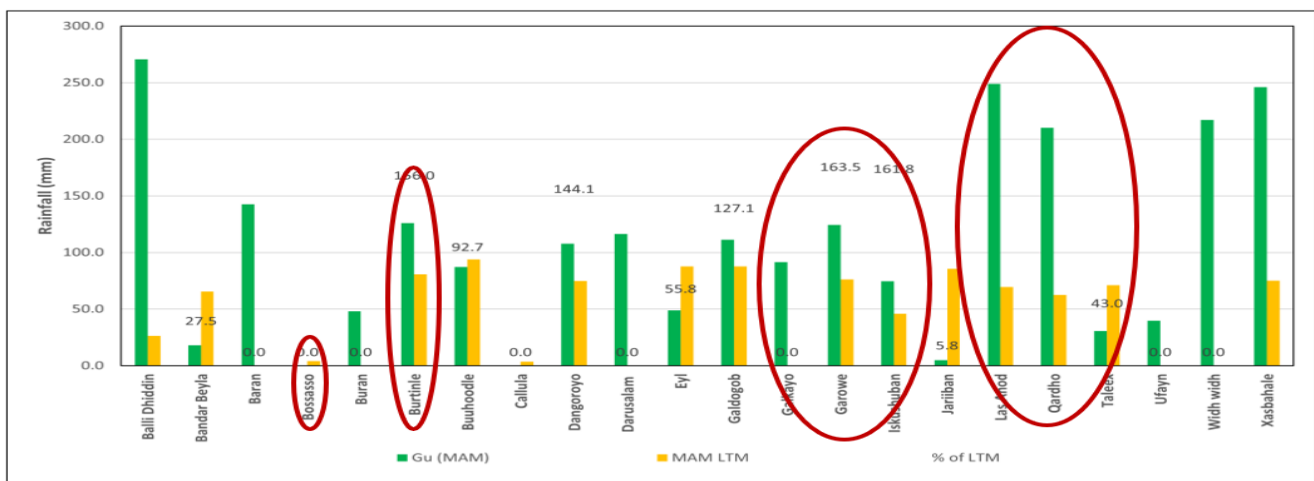
⁵ The product was originally priced using data from the eMODIS satellite which was decommissioned by NASA. This necessitated a repricing to be done using eVIIRS data, which is the same data set used to calculate the payouts. Following the repricing, the total subsidy increased to 95% from 90% since the pastoralists had already paid for insurance. This necessitated an additional payment from the government of USD 8,702.

3. DROUGHT SITUATION

Both **field information** and **remote sensing data** showed that the onset and early performance of the April-June 2023 gu seasonal rains varied across Somalia⁶. Between mid-March and mid-April, an early to timely onset of the gu characterized by moderate to heavy rainfall was reported in many southern areas (including in Bay, Bakool, Lower Juba, and Middle Juba regions) and northwestern areas (Awdal, Woqooyi Galbeed, and parts of Togdheer, Sool, and **Sanaag** regions). In other parts of the country, including the Lower and Middle Shabelle regions, the Hiraan region, and central and **northeastern** parts of the country, rains were either on time or poorly established, with localized light to moderate rainfall received. **Northeastern** areas, where most of the UAIs in Puntland are covered, were the driest, receiving only 10-25 mm of cumulative rainfall, though this was near the long-term average. Since the onset of the gu seasonal rains in mid-March, localized flooding was reported in parts of **Gedo** and Juba regions, resulting in loss of life, population displacement, and moderate to severe damage to standing crops, roads, markets, and houses, as well as some livestock losses. Review of the 2023 March-April-May (MAM) seasonal rainfall has demonstrated three key points: First, there was an early transition into the Gu (April-May-June) long rains season in Somalia this year⁷. Secondly, above Long-Term Mean (LTM) rainfall was received over Puntland and Somaliland and below LTM over South and Central Somalia. The early onset of the generally above-LTM MAM rainfall led to substantial recharge of water sources, replenished water catchment levels, improved soil moisture conditions, **creating favorable conditions for pasture regeneration, and offering first line fodder for the livestock**. Cumulative rainfall greater than 200 mm was observed over most parts of **Gedo**, Bakool, and Bay regions, northern parts of Afmadow district in Lower Juba region, Buáale and Saakow districts in Middle Juba region, and over Sablaale and Wanla Weyne in Lower Shabelle region. In the north, such cumulative rains were observed in Woqooyi Galbeed region, Borama district and the southern parts of Awdal region, Sheikh district and the northern parts of Togdheer region and isolated areas in Sool, **Sanaag**, Nugaal (**Garowe & Burtinle**) and Bari (**Qardho & Iskushuban**) regions.

The figure below shows the level of rainfall against the long-term average for the Puntland region, showing relatively good rainfall performance over this period.

Figure 2: Spatial variation of cumulative rainfall during the March-April-May (Gu) 2023 season against LTM over Puntland⁸



The IBLT product has been distributed in the circled areas.

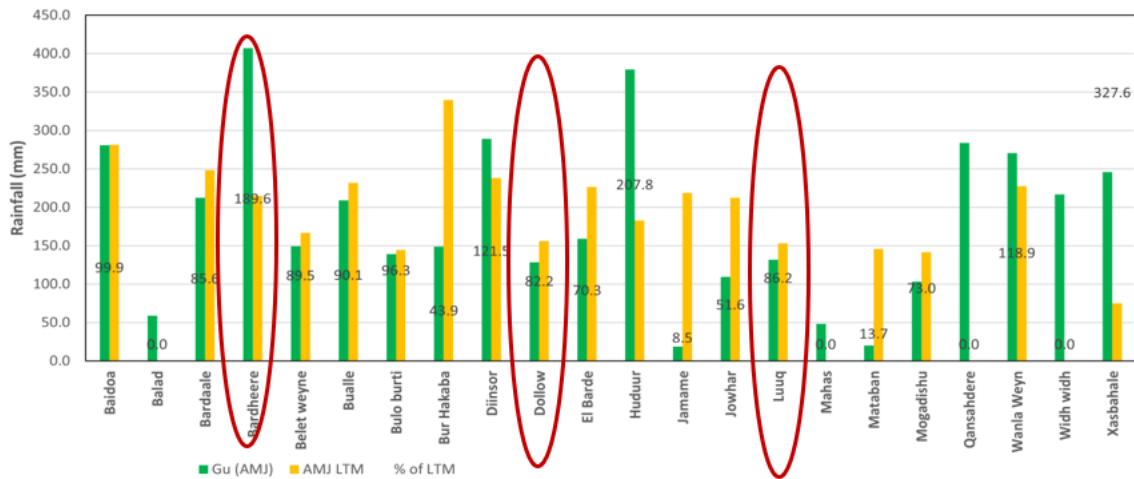
⁶ [Normal light-to-moderate rainfall in early June continues to support drought recovery across much of Somalia | FEWS NET](#)

⁷ [Somalia: 2023 Gu Rainfall Performance, Haggaa Outlook and Implications on Livelihoods over Somalia \(30 July 2023\) - Somalia | ReliefWeb](#)

⁸ [Somalia: 2023 Gu Rainfall Performance, Haggaa Outlook and Implications on Livelihoods over Somalia \(30 July 2023\) - Somalia | ReliefWeb](#)

Further below, we see the level of rainfall against the long-term average for South and Central Somalia, with the circled sections falling in some of the Gedo UAIs, where the product was distributed.

Figure 3: Spatial variation of cumulative rainfall during the March-April-May (Gu) 2023 season against LTM over South and Central Somalia.



4. DATA AND MAPS

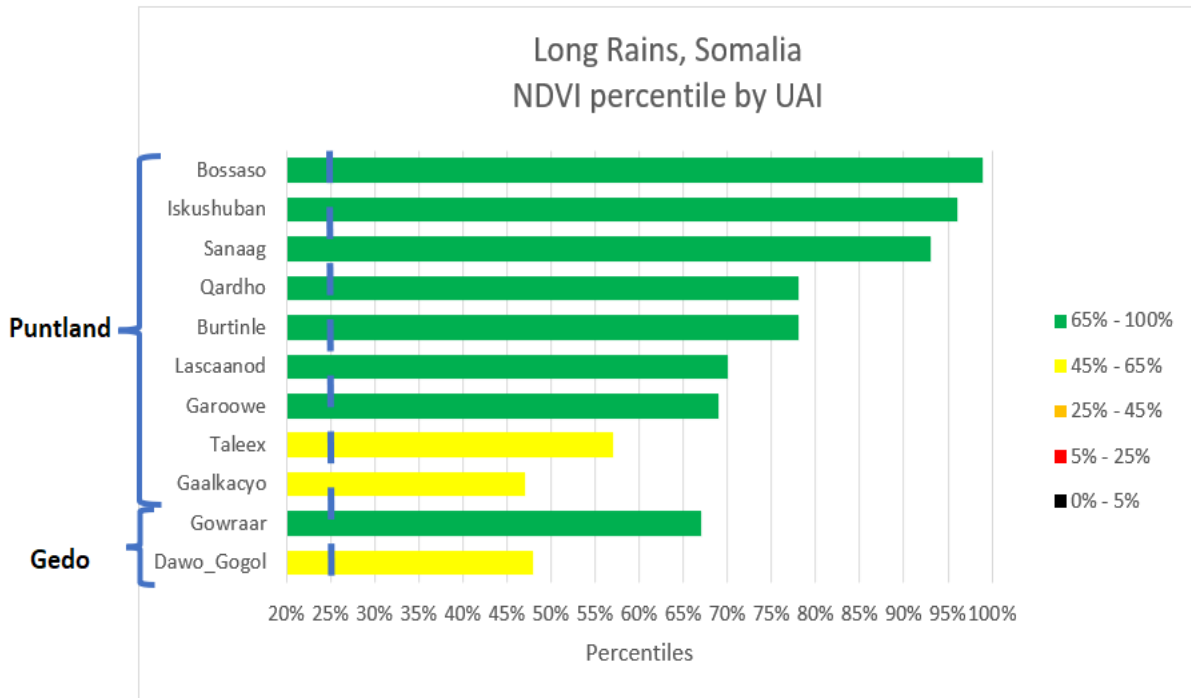
The table below shows a brief description of the data set used.

Table 2: Summary of the data characteristics

Data Source & Data Characteristic	
ITEM	Description
Data Source	eVIIRS
Characteristics	Visible and infrared imagery along with global observations of Earth’s land, atmosphere, cryosphere, and ocean.
Historical time series length	10 years actual data (2012 – 2022) and 10 years of backwards normalized data (2002 – 2011)
Spatial Resolution	375 m X 375 m
Temporal Resolution	7- or 10-day data composited data sets updated every 5 days
Data Availability (free or premium)	Free
Instruments	Suomi National Polar-orbiting Partnership (Suomi NPP) and NOAA-20 satellites

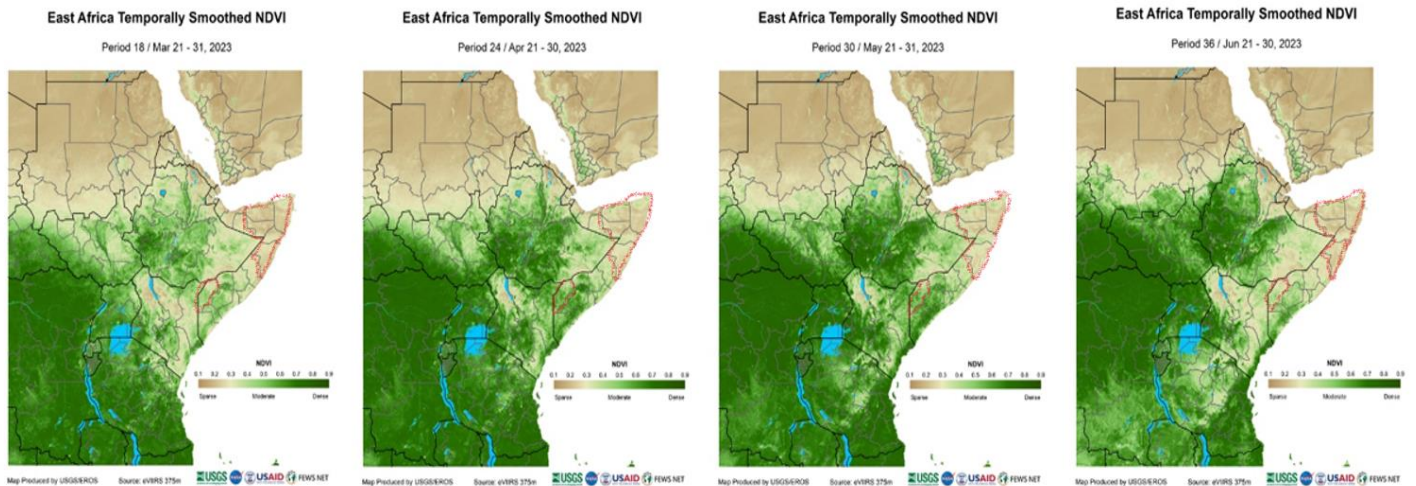
The graph below shows the percentiles per UAI for historical data (2002 – 2021) and for the period under review. From the graph, there was no expectation of trigger based on the NDVI levels. Key to note that is that the percentiles are representative of the levels of the NDVI during the period under observation. This has been done cumulatively for the period and compared with the long-term distribution. This percentile confirms that none of the UAIs covered in Somalia triggered a payout, as they all show figures above 25%.

Figure 4: NDVI Data by UAIs for the Long Rains season



Additionally, the map below shows the vegetation progression, within the East African Region, from the month of March 2023 to June 2023, with the level of greenness increasing in the outlined areas under coverage.

Figure 5: Horn of Africa NDVI Maps (March - June 2023) highlighting Puntland and Gedo.

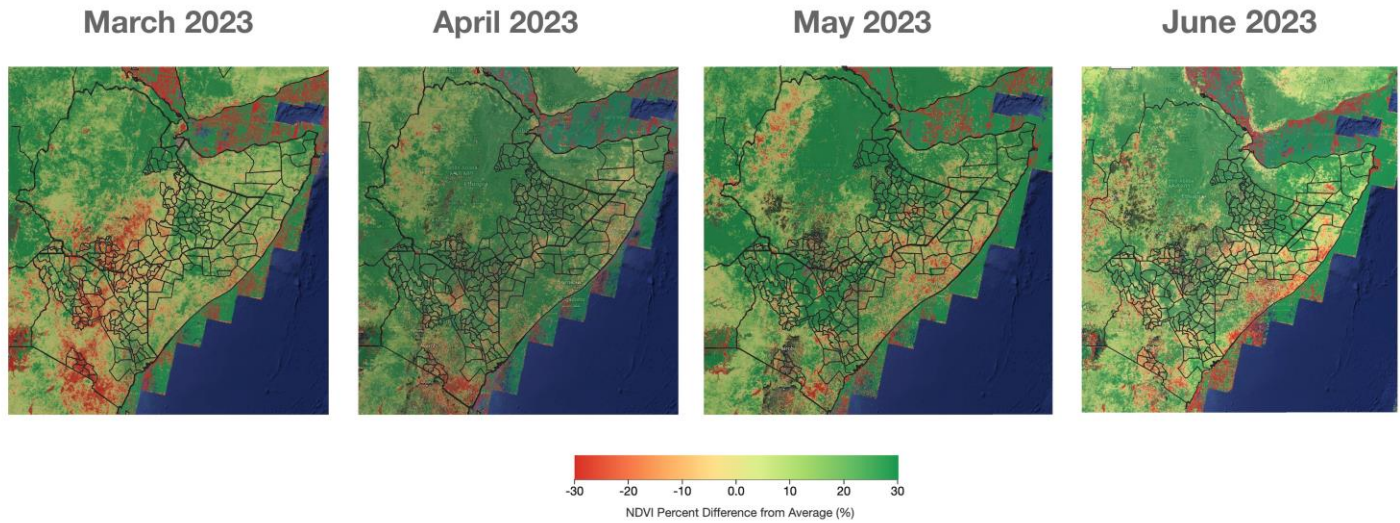


While reports show that there was significant drought in Somalia, the NDVI data and the graph above shows that the drought was not significant enough to trigger a payout in the covered areas. While June looks to be drier than May, the payouts are based on cumulative NDVI deviating from the set threshold and data shows that none of the trigger levels in the covered areas were breached. A separate graphic is attached to this report showing the progression of the drought from March 2023 – June 2023.

Progression of drought for both phases of the long rains season in East Africa, is consistent with the payout results indicated in this report.

Further below, the graphic shows how the NDVI differs from the long-term average, for the areas under cover within the Horn Of Africa from March 2023 to June 2023.

Figure 6: Horn of Africa NDVI Anomaly Maps (March - June 2023) for all the delineated areas.



ANNEX TO THIS REPORT

1. Term sheet with the index
2. Graphic showing the progression of the drought from **March 2023 to June 2023** in the Horn of Africa
3. Final Data Report from independent calculation agent, Planet.