UNITED REPUBLIC OF TANZANIA

MINISTRY OF TRANSPORT

TANZANIA METEOROLOGICAL AUTHORITY

EXTREME WEATHER REPORT FOR JANUARY AND FEBRUARY, 2024

1.0 PREAMBLE

During the period of January and February, 2024 most areas of the country continued to receive rainfall activities. However, most areas of the country received above normal to normal rains compared to the long-term mean for January and February. Additionally, some areas of the country observed periods of heavy rains during the month. This condition resulted in flooding, and an increase in soil moisture, water levels and pasture in some areas. Nevertheless, strong winds were reported in a few areas along the coastal belt and northeastern highlands. The observed climate conditions and associated impacts aligned with the *Msimu*, 2023/2024 rainfall season outlook.

1.1 Heavy rains in January, 2024

During the month of January, 2024 rainfall activities accompanied by thunderstorms were observed in most areas of the country. However, most parts of the country experienced above normal to normal rains compared to the long term mean for January. Additionally, some areas reported periods of heavy rains during the month, leading to floods, damage to infrastructure and properties, and disruptions to some economic activities. On 15th January, 2024 Kilwa station (Lindi region) recorded the highest daily rainfall of 186.5 mm, followed by 113.3 mm in Naliendele (Mtwara region) and 112.2 mm in Tumbi (Tabora region) on the 3rd and 26th January, 2024 respectively. Table 1 below provides a detailed breakdown of the number of days a station recorded heavy rain of 50 mm or more.

Table 1. Number of days a station records heavy rain of 50 mm or more.

Zone	Station Name	Number of Days	Heavy rain (mm)
Northern Coast	Zanzibar	1	≥ 50
	JNIA (Dar es Salaam)	2	≥ 50
	Kibaha	1	≥ 50
	Morogoro	5	≥ 50
	Kizimbani	1	≥ 50
	Mlingano	1	≥ 50
	Ilonga	1	≥ 50
	Mahenge	4	≥ 50
Northeastern Highlands	Arusha	1	≥ 50
	Lyamungu	1	≥ 50
Lake Victoria Basin	Bukoba	1	≥ 50
	Ibadakuli	1	≥ 50
	Mwanza	1	≥ 50
	Ukiriguru	1	≥ 50

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	Mwanza Marine	1	≥ 50
Central	Hombolo	1	≥ 50
	Singida	1	≥ 50
West	Tabora	2	≥ 50
Southwestern Highlands	Mbozi	1	≥ 50
	Iringa	1	≥ 50
	Songwe	2	≥ 50
	Igeri	1	≥ 50
Southern Coast	Kilwa	1	≥ 50
	Mtwara	5	≥ 50
	Naliendele	5	≥ 50
Southern Region	Songea	3	≥ 50

During the month of January 2024, the coastal areas experienced a significantly higher frequency of heavy rainfall. Specifically, Mtwara and Morogoro regions received heavy rains amounting to 50 mm or more for a total of five days. The stations that recorded daily rainfall amounts equal to or exceeding 70 mm during the month are highlighted in Figure 1.

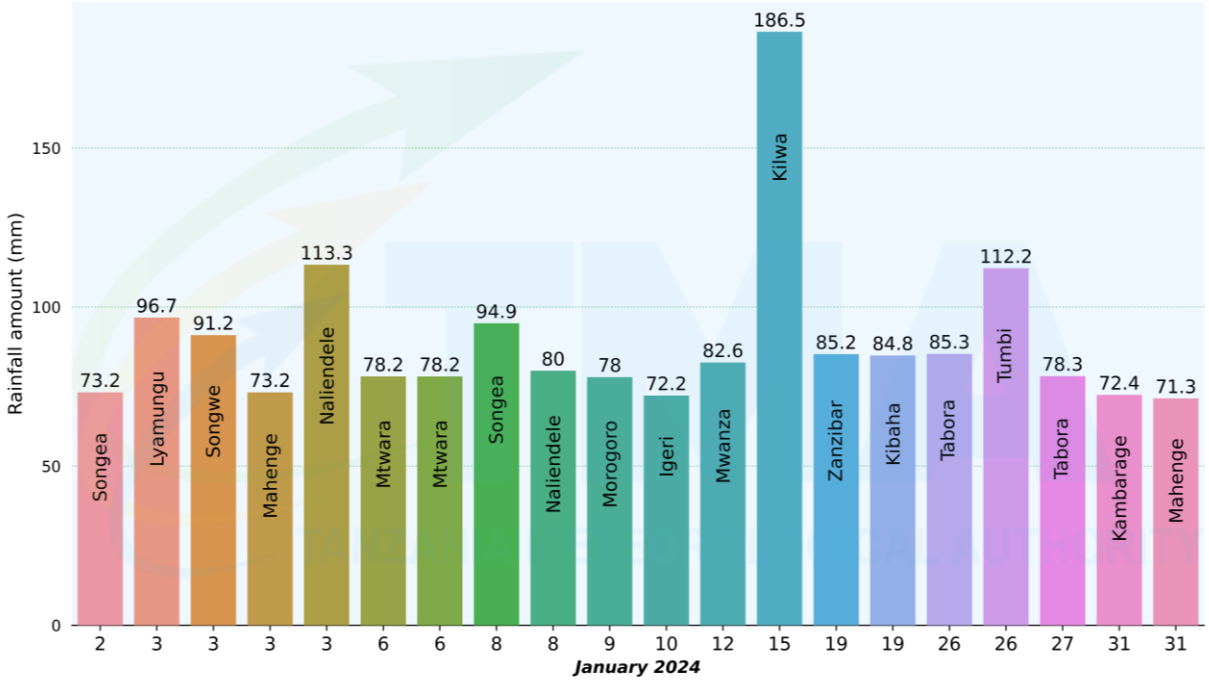

Figure 1: Stations recorded daily rainfall amount of 70 mm or above during January, 2024.

Media reports have confirmed potential impacts in several regions, including Dar es Salaam, Tanga, Pwani, Morogoro, Lindi, and Mtwara, where heavy rains resulted in flooding, causing damage to properties and infrastructures, and disrupting some economic activities. On the night of January 19th to 20th, 2024, heavy rains accompanied by strong winds caused destruction of properties and infrastructures in Dar es Salaam region.

Figure 2: The bridge connecting Kunduchi and Bahari beach being damaged and broken after heavy rains (*Source: Mwananchi newspaper*).

1.2 Extreme Temperatures in January, 2024

During the month of January, 2024, some areas of the country continued to experience warm to hot temperatures. Extreme maximum temperatures were recorded in a few areas, especially over the coastal belt. The highest maximum temperature of 36.6 °C was recorded at Zanzibar station followed by 35.8 which was recorded in Dar es Salaam on 19th January, 2024.

1.3 Strong Wind in January, 2024

During the month of January, 2024, periods of strong winds, with speeds reaching 40 km/hr were observed across various regions including the northern coast (Dar es Salaam, and the islands of Unguja and Pemba). The strength of the winds had several adverse impacts on the affected areas including dust and flying debris as a result reduced visibility and potentially impacting air quality. Coastal regions experienced rough sea conditions, which disrupted marine activities at times, and posed risks to navigation and coastal communities.

1.4 Heavy rains in February, 2024

During the month of February, 2024 rainfall activities were observed in some areas, particularly in unimodal areas. Additionally, a few instances of heavy rainfall events were recorded across the country throughout the month. On the 11th of February 2024, Mahenge station in the Morogoro region reported the highest recorded amount of

rainfall, measuring 128.4 mm within 24 hours. Stations that reported heavy rains of 50 mm or more are depicted in Figure 3.

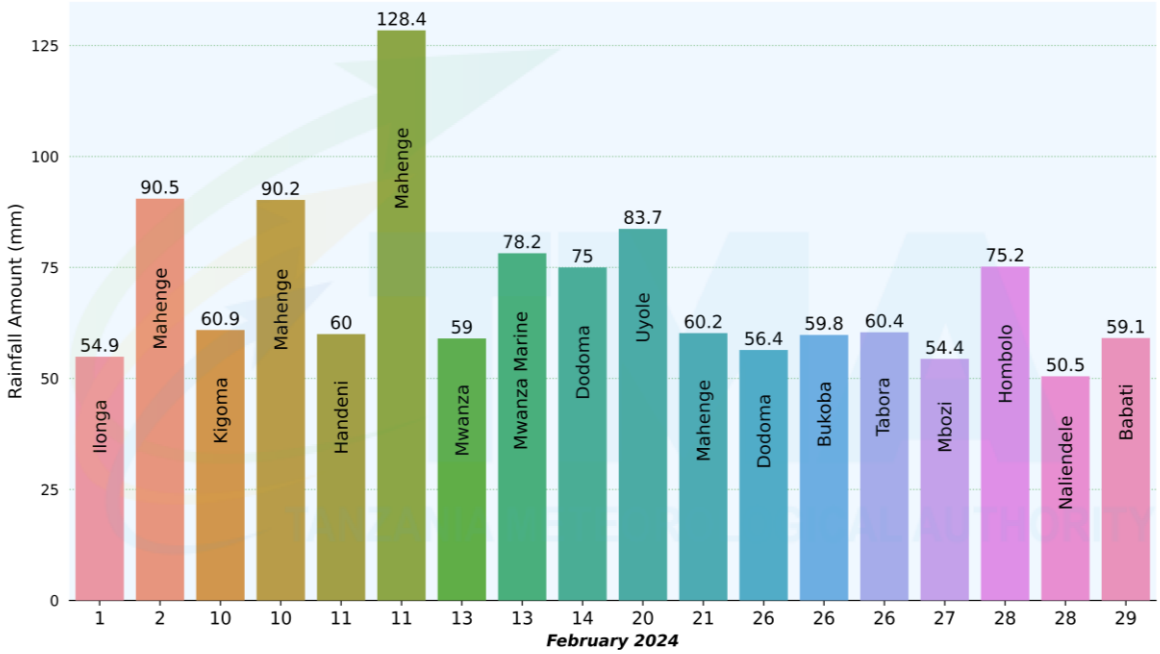

Figure 3: The temporal distribution of heavy rainfall events during February, 2024.

1.5 Extreme Temperatures in February, 2024

During the month of February 2024, most areas of the country experienced warm to hot temperatures, particularly in coastal regions and the northeastern highlands. The highest maximum temperature of 37.1 °C was recorded at Kilimanjaro International Airport (Kilimanjaro region) on the 18th of February, 2024. This temperature represents an increase of 3.4 °C compared to the long-term average temperature for the month of February. Furthermore, the Kilimanjaro region encountered significant hot conditions, with the maximum temperature rising above or equal to 35°C for 5 days during the month.

Table 2. Number of days with high values of Maximum temperature recorded in February, 2024

Zone	Station name	Number of Days	Maximum Temperature (^{0}C)
Northeastern Highlands	Kilimanjaro	5	≥ 35 °C
	Moshi	3	≥ 35 °C
	Same	2	≥ 35 °C
Northern Coast	Tanga	4	≥ 35 °C
	Zanzibar	3	≥ 35 °C
	Dar	1	≥ 35 °C

1.6 Strong Wind in February, 2024

In February 2024, periods of strong winds, with speeds ranging from 40 to 50 km/hr, were observed across various regions of the country, including areas along the coastal belt (Tanga, Dar es Salaam, Lindi, Mtwara, and the islands of Unguja and Pemba). Additionally, the northeastern highlands (Kilimanjaro and Same) were also affected. The intensity of the winds had several adverse impacts on the affected areas.

These extreme weather events highlight the increasing challenges posed by climate change and the importance of implementing robust adaptation and mitigation strategies to protect communities and the environment.

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By Tanzania Meteorological Authority