



Seasonality in the Lower Omo, 2022-2024

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About this Research

In recent years, Ethiopia's Lower Omo has experienced environmental changes which have affected community food production. The Gibe III dam has reduced access to water and made flood-retreat farming more difficult, while the Kuraz Sugar Development Project restricts access to farmland and pasture, exacerbating the effects of other negative events (Slinkman et al., 2021; Stevenson and Buffavand 2018; Tebbs et al., 2019; Hodbod et al., 2019). This briefing note uses data from the Biodiversity and Community Resilience in the Omo Valley (BIOM) project (University of Leeds, 2022) to document seasonal weather patterns between 2022-2024 as experienced by three politico-territorial groups residing in the newly formed Tama Community Conservation Area - Mursi, Bodi, and Bacha (exonyms for people who call themselves Mun, Me'en and Kwegu (Clack and Brittain, 2018)). It also describes changes in communities' cultivation and grazing patterns, including their use of fire to maintain these production patterns. These insights show how unpredictable seasonality has affected communities' cultivation, grazing, and food security.

Three rounds of focus group interviews were carried out with 22 communities: the first in March 2023, the second in August 2023 (see O'Mahony et al. 2025), and the third in August 2024. Communities were asked to retroactively summarise the monthly weather patterns of the preceding 12 months, as well as the weather patterns of a "normal" year, described as a typical year before the end of the annual flood of the Omo in 2016 (before the construction of the Gibe III dam). Communities were also asked about their seasonal cultivation, grazing, and fire use habits. Calendars were then constructed from these interviews and consolidated into one general calendar for each politico-territorial group.

Key Findings

Consolidated Calendars

A "typical" year for all communities in the Lower Omo Valley consists of a long dry season, a long wet season, a short dry season, then a short wet season. The duration, timing, and names of these seasons differed between Mursi, Bodi, and Bacha, and between each community, and are expanded on in Box 1.

Box 1. Season names

Mursi and Bodi communities generally use the following names for their wet/dry seasons. These names can also be used to describe the land cultivated and the crop harvested during each respective season.

Season	Mursi	Bodi
Long wet season	Oyo	Oyo
Short wet season	Luru	Loguru
Long dry season	Basu	Kuis
Short dry season	Telera	Biyayo

*Notes: *Bacha generally use the season names of nearby Mursi/Bodi communities.*

Table 1 shows the consolidated "normal" year calendar for Mursi, Bodi, and Bacha. The long dry season is centred around January and February, with March a transitional month of rain. The long rainy season is expected from April to June, after which local conditions vary, though October is generally wet for Bodi (further north in the region) and November generally wet for Mursi (further south) and Bacha.

Table 1. Consolidated "normal" calendar for each politico-territorial group (blue = rain, yellow = mixed, pink = dry).

	Mursi	Bodi	Bacha
April	Blue	Blue	Blue
May	Blue	Blue	Blue
June	Blue	Yellow	Blue
July	Yellow	Pink	Yellow
August	Yellow	Yellow	Yellow
September	Yellow	Yellow	Yellow
October	Yellow	Blue	Yellow
November	Blue	Yellow	Blue
December	Yellow	Pink	Yellow
January	Pink	Pink	Pink
February	Pink	Pink	Pink
March	Yellow	Yellow	Yellow

The calendar of actual reported conditions from April 2022 to August 2024 (Table 2) show that seasons have differed from expected (demarcated with *).

Table 2. Actual weather calendar for each politico-territorial group with notes for clarity (blue = rain, yellow = mixed, pink = dry; * indicates weather different from consolidated calendar).

	Mursi	Bodi	Bacha
Apr-22	Small	*	
May-22			
Jun-22			
Jul-22			
Aug-22		*	
Sep-22	*	*	*
Oct-22	*	*	*
Nov-22	*	*	*
Dec-22	*		*
Jan-23			
Feb-23			
Mar-23	*		
Apr-23			
May-23			
Jun-23			
Jul-23	*		
Aug-23		*	*
Sep-23	Patchy	*	
Oct-23	Patchy	*	
Nov-23	Patchy	*	
Dec-23			
Jan-24			
Feb-24			
Mar-24	*Heavy or patchy	*Heavy	
Apr-24	Heavy or patchy	Heavy	
May-24	Heavy or patchy	Heavy	
Jun-24	Heavy or patchy	Heavy	
Jul-24			
Aug-24		*	

Abnormal Dry Seasons

The first notable difference occurred in September-December 2022 for Mursi and Bacha, and in October-December for Bodi, when an unusually long dry season occurred. This created an almost six-month dry season

when combined with the typically dry months of January and February 2023.

“Before, the dry season was two or three months. Now it’s become four or five because of this unbalancing of the seasons.” (03/2023\\Bodi - Giyomarsio)

“Last year was different... from month one we had no rain, then now we have had a dry season for the last five months.” (03/2023\\Mursi - Hailwuha)

Later in the year, communities complained of the general unpredictability of the rainy season. This has consequences for cultivation and burning, as burns must be carefully timed with the onset of rainy season:

“You need to be very careful when you burn it, because you need to... predict when the rain is coming... probably a month, or less than a month away, then you start burning.” (03/2023\\Mursi - Hailwuha)

Heavy Wet Seasons

Later that year, in August-November 2023, Bodi communities experienced an abnormally long rainy season. Mursi also reported some patchy rains. Following this in March-June 2024, the expected rainy season was again unexpectedly heavy in Bodi and mixed between heavy and patchy in Mursi with implications for the harvest:

“There were two types of luru [short dry season]. One was deep in the south, there was too much rain... but in the middle of the Tama [Community Conservation Area] there was no rain at all, so the crop dried out.” (08/2024\\Mursi - Bongozo)

Flooding in 2024

In contrast to previous rounds of focus groups, a common theme in the August 2024 round of interviews was an unusually wet dry season (Jan - Feb 2024) and a deluge of heavy rain in March-June 2024. A representative from one Bodi community described too much rain in the long rainy season, leading to serious flooding, while a Mursi representative described the year as “only rain” replacing the expected three-to-four-month dry season.

“The whole year was rain, we didn’t have basu [long dry season] this year.” [08/2024\\Mursi - Hailwuha]

Impacts on subsistence activities

Farming and grazing activities were more difficult to chart on a calendar due to variation in traditional practices across groups as well as climate-induced variability, but one notable trend is the disappearance of flood-retreat farming activities (generally known as

dhar/war). Communities from all three politico-territorial groups reported practising *dhar/war* pre-Gibe III. Some reported trying to continue cultivation along the Omo riverbanks after the loss of the flood. For example, four communities reported trying *dhar/war* from September 2022 to January 2023 but that they had no more yield from flood-retreat farming, due to dry weather and lack of the flood. These communities did not report trying *dhar/war* in the same period in the subsequent year.

“For three years ... when we want to grow in a wet place, a dry place, no sorghum gives yield. And the dhar [flood], there is not enough dhar [harvest from flood-retreat farming], the crops that come out from the riverbanks.” (08/2023\\Bacha - Gura)

Although there were differences in burning patterns among communities, burning occurred across all three groups in February 2023 – towards the end of the long dry season – with the goal of revitalising grazing areas and clearing land for cultivation in the upcoming rainy season.

All three politico-territorial groups spoke of impacts on the outputs from their agricultural activities in March 2023 given the prolonged dry season, exemplified by this quote from Mursi:

“For three years now... there’s no oyo [long rainy season] -- like, you can cultivate, you can plant, you can do whatever you want, but ... it will dry out.” (03/2023\\Mursi - Moyzo)

Tellingly, one Bacha community described the past three years as a “starvation time”. These changes had food security implications beyond agriculture. One Mursi community reported that if cattle died due to excessively dry weather, “then you eat meat from them”. Meanwhile a Bacha community mentioned that wild greens – an important component of the local diet – were disappearing from the bush as the longer dry season occurred (See OTuRN Briefing Note #9 for more details (O’Mahony et al., 2025)).

The August 2023 round of focus groups also mentioned many of these trends, with added context on how reported yields from rain-fed farming during the wet seasons differed across communities. Two villages (both in Mursi, and on the Mago River with a slightly different sub-climate) reported a “good” yield from the previous rainy season – the expected long rainy season. One (Mursi) lacked consensus on whether the season was good or bad; while four (three in Bodi, one in Bacha) reported little to no yields. The Bacha reported that, at its worst, villagers went hungry for seven days:

“Here we are suffering, there’s no grain. For the last few years there have been long dry seasons: no rain, and no flood.” (08/2023\\Bacha - Omo-Hana)

“We never get good rain, and the weather has changed completely. It’s a danger for us... if we have no rain and no help with anything, we are at risk.” (08/2023\\Bodi - Omo-Hana)

Two communities mentioned that the longer dry seasons had caused a decrease in the availability of honey — a source of nutrition and income for communities, particularly in Bacha.

Our data collection was limited in August 2024 due to local conflict. However, interviews in Mursi and Bodi indicated that the unusually wet dry season, followed by heavy flooding in some areas, led to reduced food production and thus food insecurity. The excessive rainfall disrupted seasonal burning, forcing communities to clear overgrown vegetation manually, which restricted field preparation to a much smaller scale. Additionally, flooding submerged fields, resulting in significant crop losses, particularly for the Bodi.

Concluding Remarks

This briefing note documents the changes in seasonality experienced by communities in the Lower Omo Valley in 2022-2024, identifying proximate causes of food security emergencies which have occurred since the construction of the Gibe III dam (e.g. Oakland Institute 2023; Stevenson & Buffavand 2018). The perceptions of communities align with the broader hydrological patterns associated with the El Niño-Southern Oscillation and amplified by climate change:

“Across Ethiopia, Kenya and Somalia, the 2020-2022 La Niña event was the most severe in 70 years due to its high intensity and its three-year duration, leading to at least four consecutive failed rainfall seasons. The region experienced extreme rains in 2019-20, followed by widespread and devastating floods, then a drought from 2020 to 2023, and severe flooding in 2023-2024.” (UNDRR, 2024, p.26)

While communities in the Lower Omo have always been vulnerable to ENSO patterns, vulnerabilities were buffered by flood retreat agriculture. The loss of a predictable Omo flood caused by the Gibe III dam has meant communities are entirely dependent on rainfed agriculture with no reliable alternatives in times of drought or flood.

Policy Recommendations

It is hoped that documenting these trends will assist the Mursi, Bodi, and Bacha communities in receiving support for immediate aid during times of unusual weather events, as well as helping to increase their resilience in the long-term, perhaps through irrigation projects, the development of weather forecasting, or diversification of food production and income. Future studies and partnerships should investigate the possible ways for communities to reduce or hedge against these uncertainties.

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