



Thursday, August 18, 2022

Drought hardens in Amboseli and across southern Kenya

By David Western, Victor N. Mose, David Maitumo, Immaculate Ombongi, Sakimba Kimiti, Winfridah Kemunto, Samson Leikanaya, Paul Kasaine, Sunte Kimiti and Julius Muruiki.

jonahwestern@gmail.com | vnmose@gmail.com | victor.mose@acc.or.ke

The impact of the drought

The drought in Amboseli and across southern Kenya has intensified according to all Amboseli Conservation Program (ACP) measures. The pasture available has fallen deeper into the red zone (Figure 1), milk yields have dried up, and livestock body condition is falling to the levels of the 2009 drought (Figure 2). The pressure

gauge comparing the intensity of grazing for 2022 with the catastrophic drought of 2009 when well over half the livestock died is now as deep in the red zone (Figure 3).

Cattle deaths are rising sharply and sale prices are falling steeply. The average price of a steer has fallen from Ksh 65,000 in January to Ksh 25,000 in August, making families reluctant to sell. To keep their animals alive, herders are buying hay and feeding their animals maize meal. The price of hay has risen from Ksh 250 a bale to Ksh 350 in the past few months and will rise steeply as supplies run short. Maize meal is set to rise from Ksh 100 a 2kg package to Ksh 200 with the removal of subsidies. With schools due to open after the half-term, families are struggling to keep their animals alive, feed their children and send them to class. Many herders who left Amboseli with their cattle to find better forage in the southern rift and as far off as Narok and Ngorongoro in Tanzania are returning home because they need family and neighbors to split their herds and manage them more intensively, including cutting browse from trees and bushes.

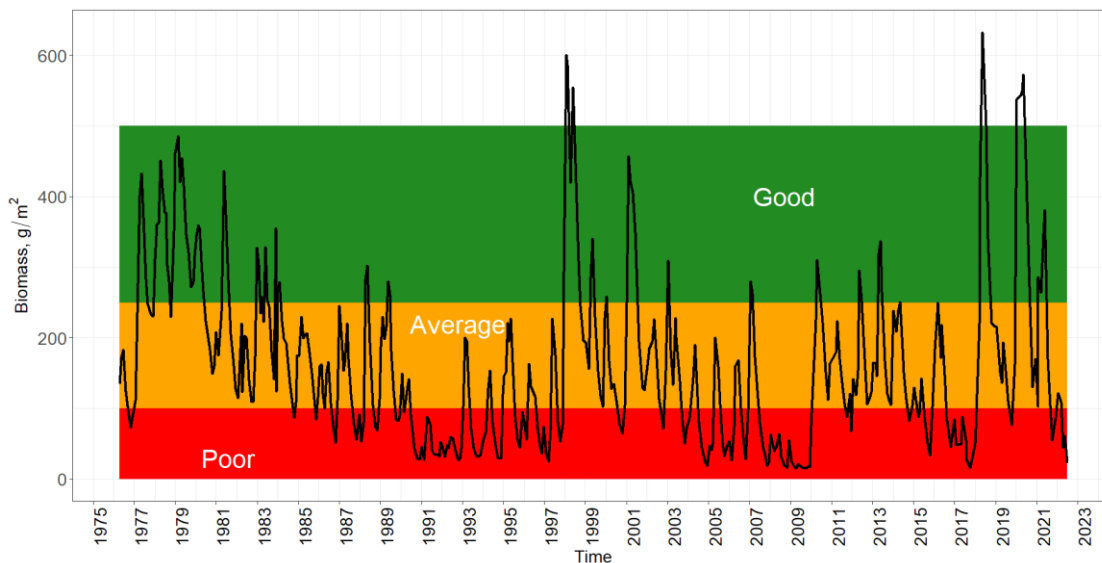


Figure 1: Amboseli long-term pasture barometer measuring vegetation biomass in the ecosystem. The barometer remains deep in the red zone.

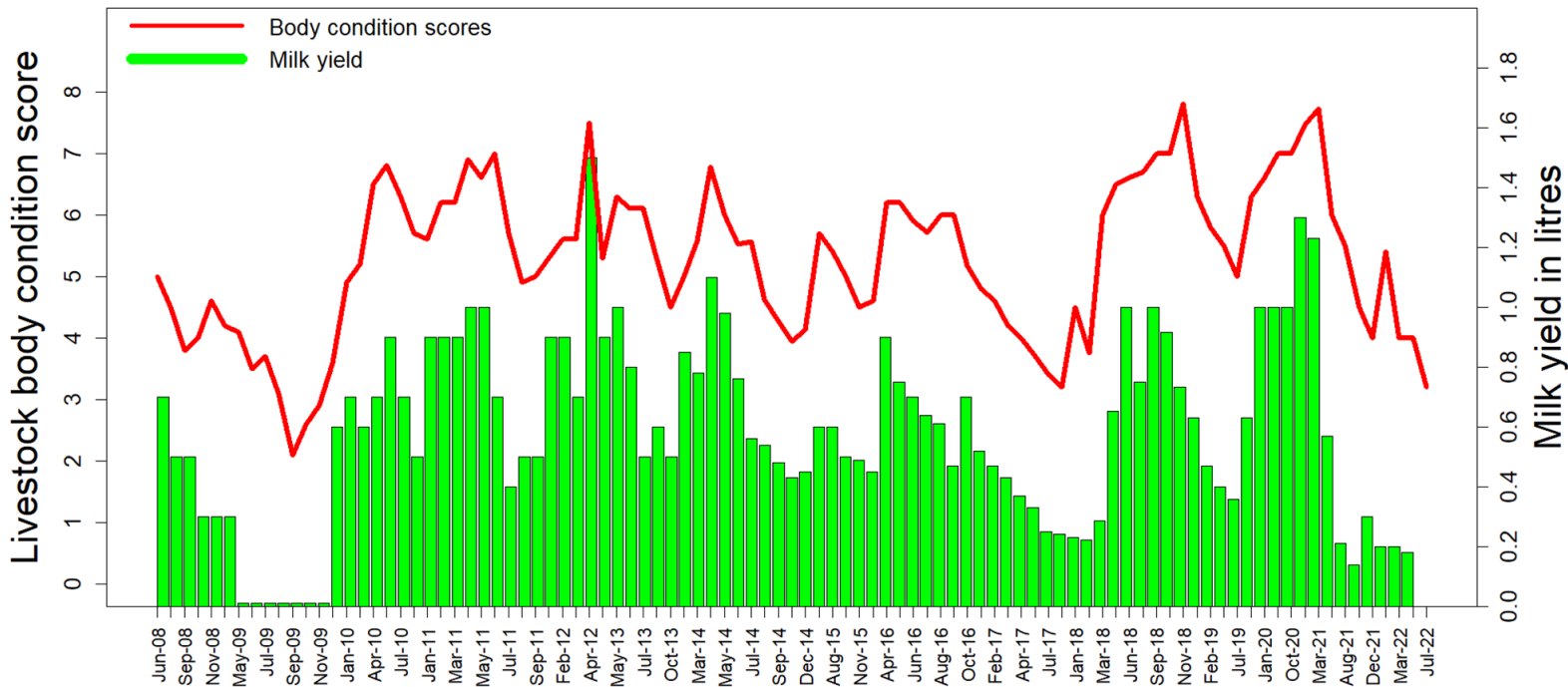


Figure 2 Livestock body condition scores and milk yield in the Amboseli ecosystem as monitored by the Amboseli Conservation Program.

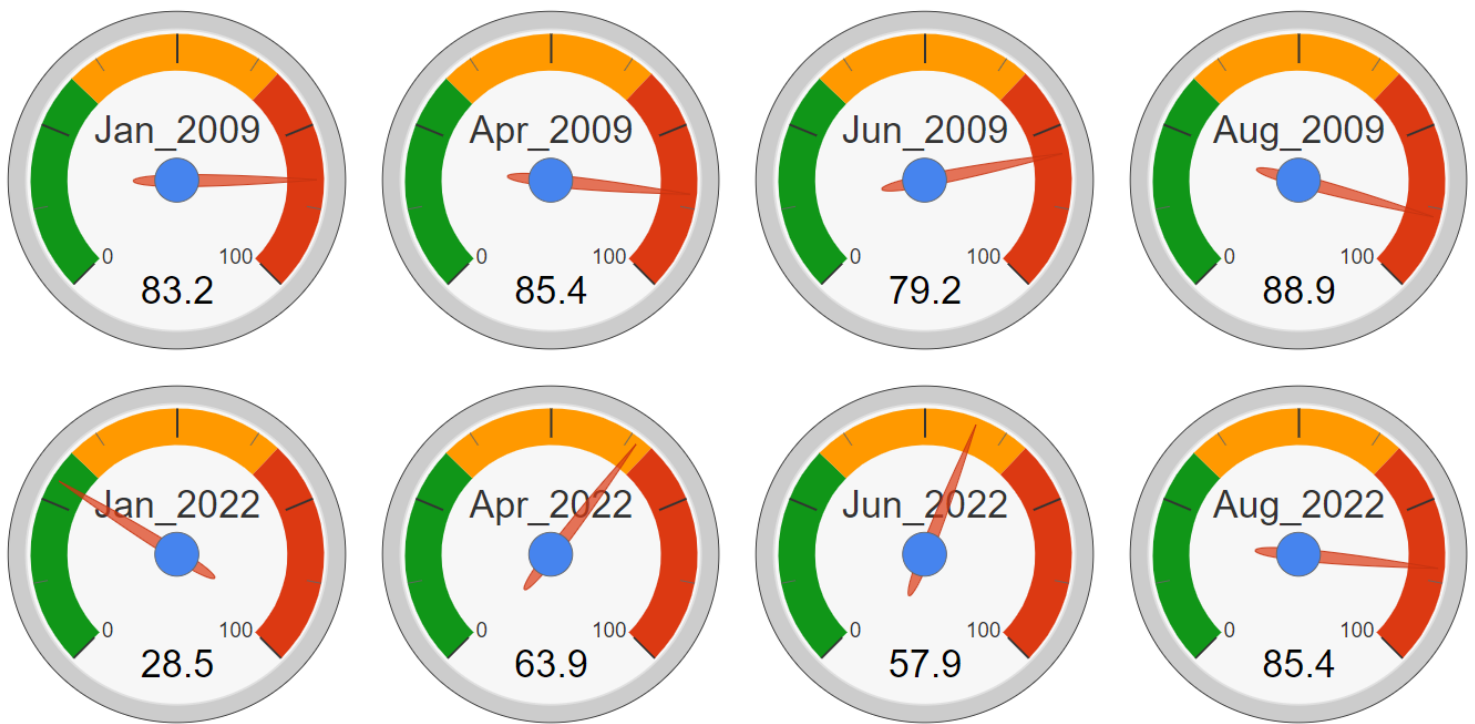


Figure 3: Grazing pressure gauges for selected months in 2009 and 2022 for the Amboseli basin.

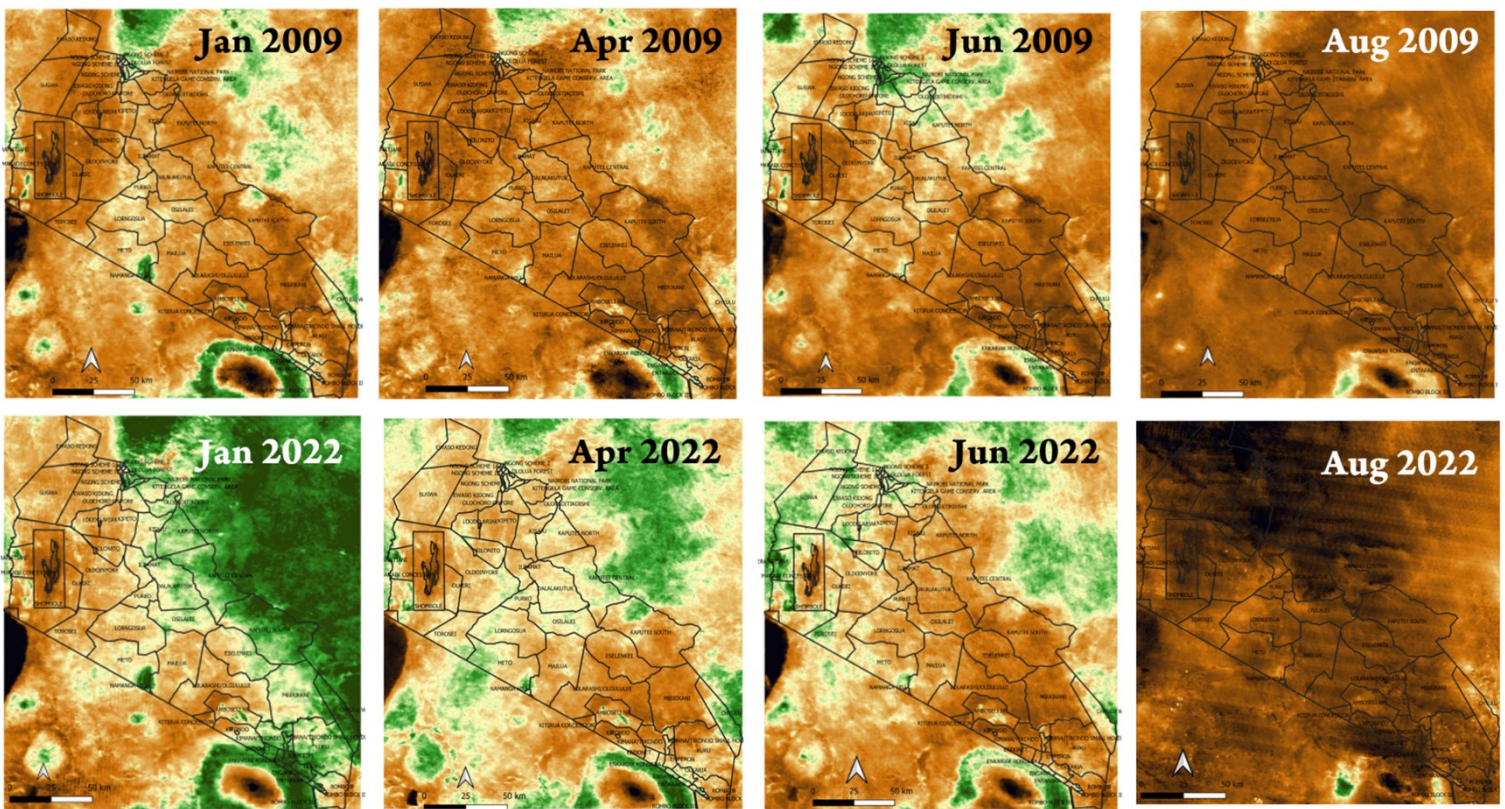


Figure 4: Enhanced Vegetation Index (EVI) from satellite data shows pasture stress (brown shade) in southern Kenya for selected months comparing 2009 and 2022.

With rains unlikely for several weeks, the drought will intensify further. Satellite images comparing the Enhanced Vegetation Index across southern Kenya and northern Tanzania for the same months as the 2009 drought show the state of pasture by August to be far worse (Figure 4). The dire conditions in Amboseli were not expected at the start of the year when conditions were far more favorable than 2009.



Cattle too weak to walk are dying in growing numbers around settlement in Amboseli.

The mass immigration of an estimated 150,000 cattle into the Amboseli region from as far away as Narok and Tanzania changed the outlook by using up the flush of pasture produced by unseasonal rains in January and February 2022. The failure of the long rains saw the immigrating herds move west in search of grazing, followed by over half the Amboseli herds. The movements back and forth across southern Kenya since January have been on a scale not seen by living herders (see www.amboseliconservation.org).

The outlook in the coming months

The drought will worsen in the coming weeks as the remaining pastures are grazed down, the cost of supplementing cattle feed with hay and maize rises with commodity prices, and weakened animals die. Large numbers of cattle are already dying around many settlements. Unexpected at the beginning of the years was a heavy toll on wildlife. We anticipated after the ACP aerial count in February that there was going to be sufficient reserve grazing in the swamps to see the herds through to the long rains. This is no longer the case.

The large influx of cattle early in the year quickly used up the surplus grazing. The resident Maasai have, as a result, had to rely heavily on the Amboseli swamps to save their herds. Over 10,000 cattle were using the swamps by July, hardening the outlook for wildlife.



The swamps in Amboseli National Park have been so heavily grazed down that wildebeest and zebra are having to wade deep into water to find forage.

The swamps pastures are now so depleted that on 16th of August 2022, ACP counted only 175 of a total of 2,000 elephants known to use Amboseli, the lowest in decades. The herds are scattered widely outside the park, raising the risks of conflict with people. The zebra and wildebeest populations which have recovered fully from the 2009 drought and are the highest recorded in Amboseli in a half-century of ACP counts, are also facing severe losses. Large numbers of zebra are dying and grazing deep in the swamp to find grazing. Barring early rains, the coming weeks will take a heavy toll on livestock and wildlife herds.



David Maitumo and Sakimba Kamiti inspecting one of the many zebras and wildebeest dying in Amboseli National Park.

The incoming Kajiado and Narok County Governments and the new National Government elected to office on August 9th must take emergency drought measures to relieve the distress. We estimated the loss of 100,000 cattle in the 2009 drought, together with the time to recovery, to have incurred Ksh 3 billion in economic losses to families in the Amboseli ecosystem. The losses in 2022 may not be as great but, coupled with the cost of feeding animals to get them through the drought, will be a severe burden on family income and health. The damage done by the recurring and intensifying droughts to the county and national governments must be urgently addressed and remedied, given the impact on the livestock industry, wildlife and tourism revenues.



The swamps seen in the background have been so grazed down to the point where hippos have begun dying. The first dead elephants have also been recorded in Amboseli.

The Amboseli Ecosystem Trust (AET), ACP and African Conservation Centre (ACC) will shortly be holding a partner's meeting aimed at integrating data collection and dissemination to plan and manage the ecosystem more effectively through the Nongotiak Centre. The Southern Rangelands Coalition (SRC), hosted by AET, will follow-on with a two-day meeting to discuss the future of the open rangelands, livestock and wildlife in the face of land subdivision, fragmentation and degradation.