AGRICULTURE HOTSPOTS 2022

BULLETIN NO. 2

AUGUST 2022

IGAD

ICPAC

OVERVIEW

Agricultural monitoring is vital in detecting short-term deficits in crop productivity in response to a range of drivers especially in areas frequently impacted by high cases of food insecurity. This bulletin provides timely monthly warnings of agricultural production deficits (hotspots) in rain fed systems, for the month of August 2022, as part of an operational early warning systems for food security crises prevention and response planning anticipation in Eastern Africa region.

Automatic Warnings at the sub-national level are issued for negative crop growth conditions when more than 25% of the active area experienced a large negative anomaly for one or more of the key indicators that include the Water Satisfaction Index (WSI), Standardized Precipitation Index (SPI3), and cumulative Normalized Difference Vegetation Index (NDVI) from start of season. The automatic warnings are completed by a country level analysis of agricultural monitoring experts.

CONTENTS

KEY HIGHLIGHTS

- 6 countries in Eastern Africa region namely Ethiopia, Kenya, Somalia, South Sudan, Sudan, and Uganda were classified as agricultural productivity hotspots during the month of August 2022 (Fig. 1)
- Favorable rainfall in July and August in most parts of the northern areas helped most staple and cash crops to recover from the effects of localised dry spells which occurred in early in the season.
- However, some areas in the north were impacted by floods, waterlogging, and soil erosion incidences. For instance, Warap state in South Sudan, and in Haroon area of north Damazine locality, Sudan, where floods caused damage to more than 50% of crop farms (Source: IGAD Member State seasonal impact reports).
- In Somalia, Kenya, and Ethiopia, and most other parts of the equatorial sector, the impact of 4 consecutive failed seasons compounded with the high possibility of a fifth failed season in the coming short rainy season (OND 2022) will exacerbate the current dire situation. A side from the prolonged drought, conflict including in Ukraine and economic shocks has contributed to the dire food security situation in the region. Resulting increase in prices of food, fuel, farm inputs are pushing many households whose coping mechanism have been already eroded to the brink.
- Current data from FSNWG shows that 31 million people are in IPC 3+ in IGAD. A further 31 million people, are classified in stressed (IPC Phase 2) and are in need of continuous assistance to avoid them sliding to worse off food security Phases.
- Respective governments in the region and partners are urged to act early to avert worsening of food insecurity situation in the region.

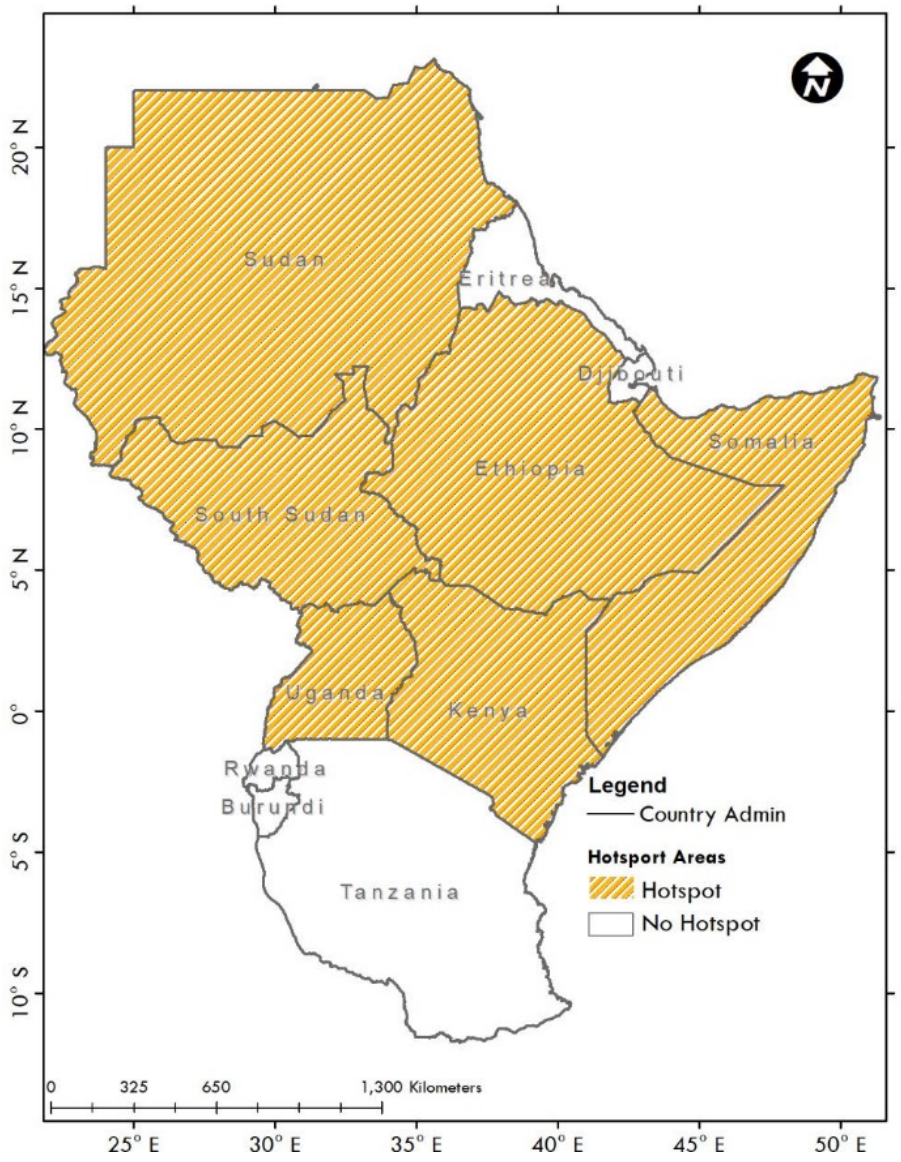


Figure 1: Countries classified as agricultural hotspots in August 2022

The hotspot classification is based on the combination of expert knowledge, automatic anomaly warnings at the province level and detailed analysis of agro-meteorological indicators. This means that the automatic warnings are only one of many signals used by agricultural experts to decide whether a country is in an agricultural hotspot situation or not. For example in May 2022, South Sudan did not experience any major problems from an agro-meteorological point of view (only a single level 1 warning in one province), but agricultural activities are expected to be negatively impacted by the prolonged conflict and insecurity situation.

3.0 Regional overview of hotspots and key indicators

Regional overview of warnings

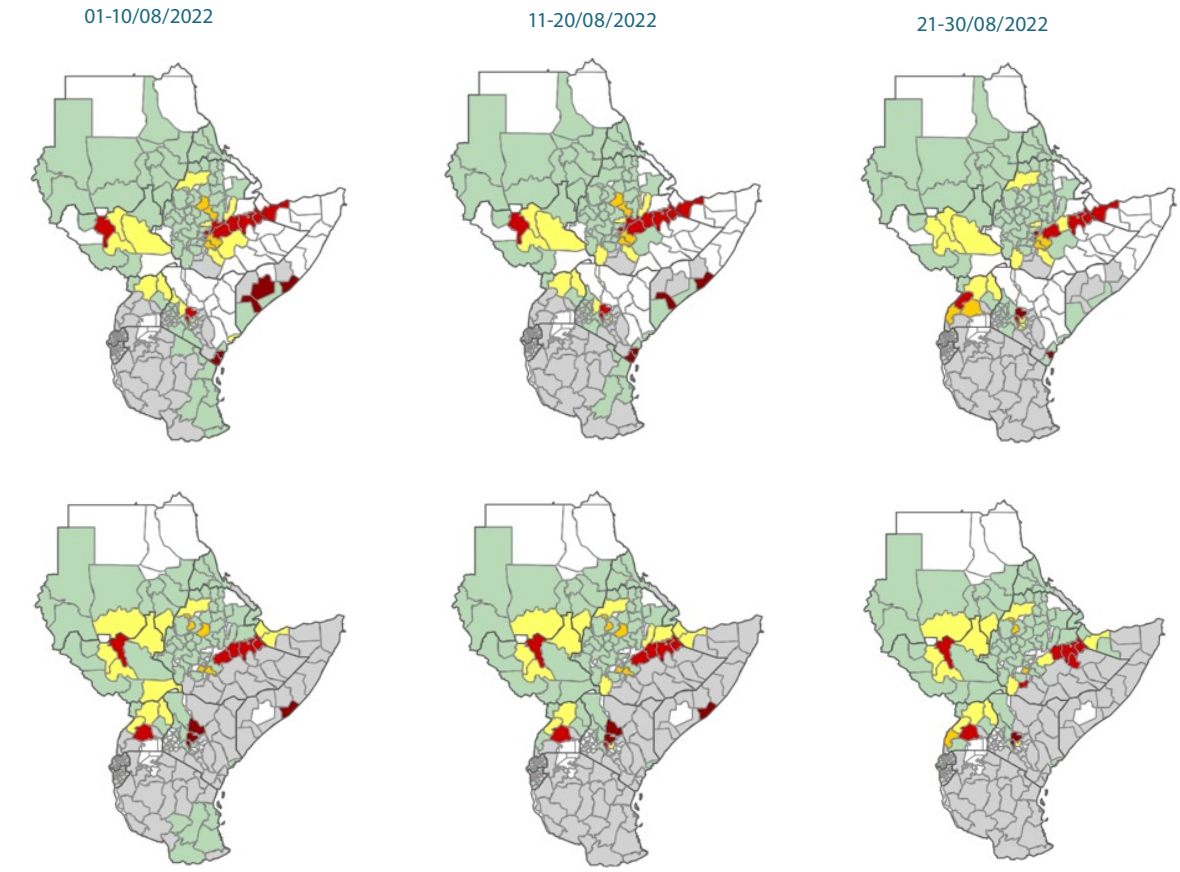


Figure 2: 10 day regional warnings for the cropland (top row) and rangelands (bottom row) for the month of August 2022

- Areas of concern were mainly over the central parts of Kenya, parts of Uganda, northern Somalia, parts of Kenya, central and eastern Ethiopia, and northern South Sudan, characterized by water balance, biomass and end of season warnings.

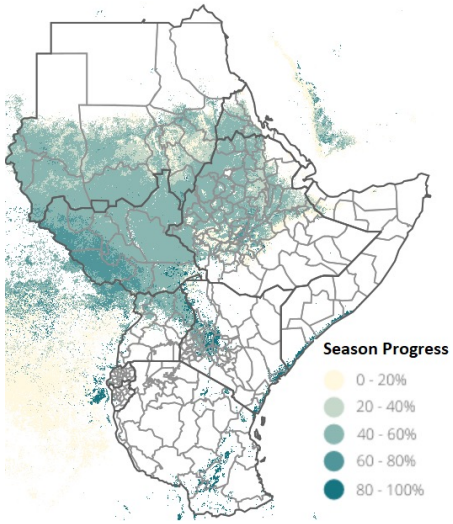
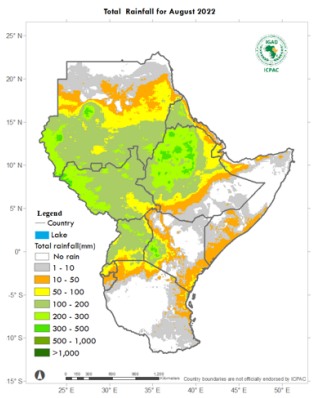


Figure 3: Mean progress of the season that started for each pixel for all vegetation as at end of August 2022

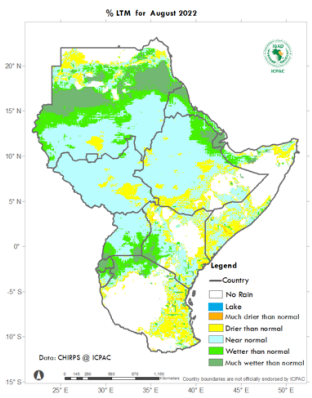
- Agricultural season has ended in the southern parts of the region (Tanzania) and in the bimodal areas of the equatorial sector (most parts of Kenya, Somalia, Uganda, and southern Ethiopia). Most parts of unimodal areas within the equatorial sector are at 60-100% progress with fewer areas at 40-60%. The northern sector (much of Sudan, Ethiopia,

Rainfall based indicators for August 2022

Total rainfall



Percent of Normal



SPI

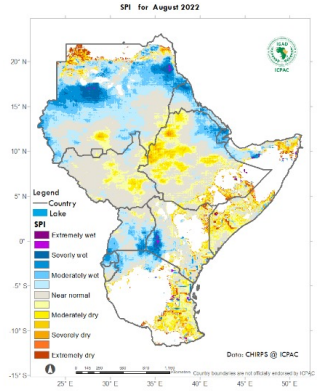
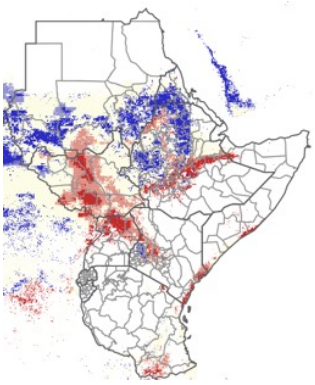


Figure 4: Rainfall conditions (total, percent of normal, and Standardized Precipitation Index) in the month of August 2022 (ICPAC)

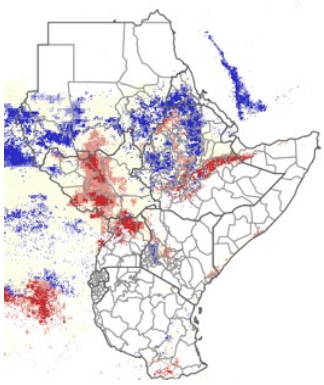
- Most areas of western Kenya, southern Uganda, much of Rwanda, northern Burundi, and Djibouti and northern Sudan received wetter than normal rainfall in August. Few patches received drier than normal while most areas of northern states including South Sudan, Ethiopia and southern Sudan receiving normal rains.

Water Satisfaction Index (WSI)

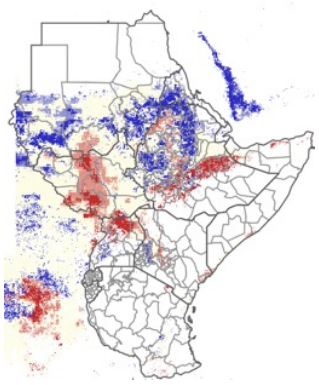
01-10/08/2022



11-20/08/2022



21-28/08/2022

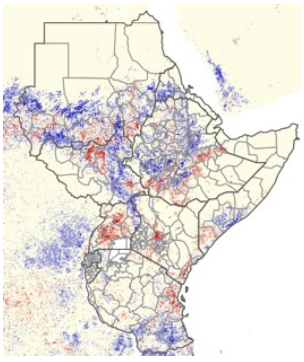


Legend

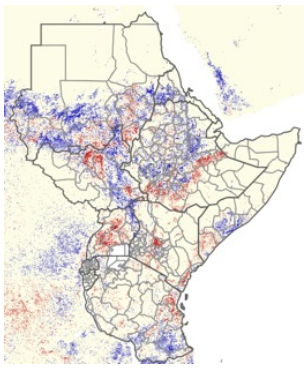
Figure 5: Dekadal crop Water Satisfaction Index (WSIc) for the month of August 2022

- Water stress is observed over some parts of central and northern South Sudan, central Ethiopia, few parts of western Kenya, and northern Uganda. which might impact negatively on crop growth. All the other parts in the northern sector have normal to wet conditions.
- If the observed negative anomalies persist, it will impact negatively on the crop development.

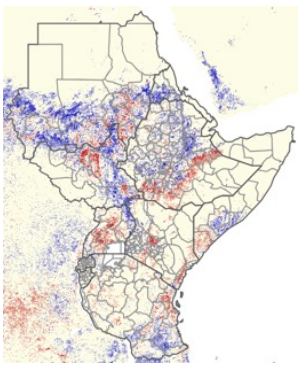
01-10/08/2022



11-20/08/2022



21-31/08/2022



Legend

Figure 6: Vegetation Conditions (Anomaly] NDVI difference with historical average at the selected date (NDVId)

- A general improvement of Vegetation conditions was observed in northern parts of the region as compared to the situation in July.
- Good biomass conditions observed over most parts of Ethiopia, South Sudan, and Sudan. There are few areas with negative anomalies particularly in central Kenya, Uganda, southern Ethiopia, and northern South Sudan. The rest of areas had normal conditions.

4.0 Country assessments and classification

4.1 Ethiopia

Hotspot

- According to the ministry of agriculture, the main crop season known as Meher (JJAS), grain crop production contributes about 93.32% of the annual crop production total. Favorable rainfall in July and August in most parts of the northern areas helped most staple and cash crops to recover from the effects of localised dry spells which occurred in early in the season. However, Belg season (MAM) was largely characterized by below average rains resulting to below average crop production. This is the fourth consecutive failed season in the Belg growing areas.

4.2 Kenya

Hotspot

- Apart from a few counties in Western, parts of Nyanza (Siaya, Migori, Kisii), parts of North Rift Counties (Trans Nzoia, Uasin Gishu, Elgeyo Marakwet) and parts of the Coastal strip (Kwale, Kilifi), the rest of the counties received below average l long rains (MAM 2022) with early cessation. Due to the above factors, the 2022 MAM crop forecast production is low compared to 2021 by about 8-11% (MoA) with some parts of the Country especially N.E, parts of Central and Lower Eastern (Ukambani region) recording complete crop failure.
- FSNWG latest IPC numbers shows that around 3.5 million people are in IPC phase 3+ (2.8 million in phase 3 and 785k in phase 4).

4.3 Somalia

Hotspot

- Gu (April- June) is an important agricultural season and the widespread drought that has ravaged the region led to below average crop production. ICPAC forecast for the Deyr season (OND 2022) shows a high likelihood of below average rains over most parts of Somalia.
- According to FSNWG, IPC Current Food Security Outcomes as of September shows that around 7 million people are in IPC 3+ with another 4 million in stressed (IPC 2).

4.4 Uganda

Hotspot

- Poor and erratic rainfall since March has resulted in below-average first season crop production. In many northern, central, southwestern, and eastern areas, maize has wilted and dried up more extensively in June and July, leading to estimated losses of at least 30 percent (MoA).
- As of mid-July, significantly below-average vegetation conditions persist over most districts of the cattle corridor in the southwest, central, and northern parts of Uganda and the same is evident in ICPAC agriculture watch.
- FSNWG latest IPC numbers shows that around 314k people are in IPC phase 3+ (276k in phase 3, and 38k in phase 4).

4.5 South Sudan

Hotspot

- Although there were good rains in July and August that helped most staple and cash crops to recover from the effects of localized dry spells which occurred in the first to second week of June, there were widespread incidences of flooding in some areas including in Twic and Gogrial East counties of Warap state. MAM season crop was negatively affected by a combination of intercommunal conflict and also flooding.
- FSNWG latest IPC numbers shows that around 7.7 million people are in IPC phase 3+ (4.8 million in phase 3, 2.9 in phase 4 and 87k in phase 5) and mainly attributed to insecurity and displacement, climatic extremes, and high commodity prices.

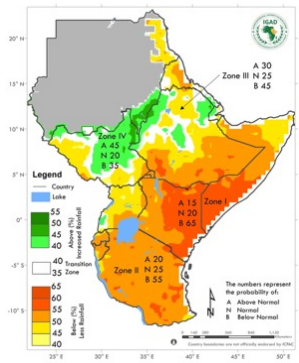
4.6 Sudan

Hotspot

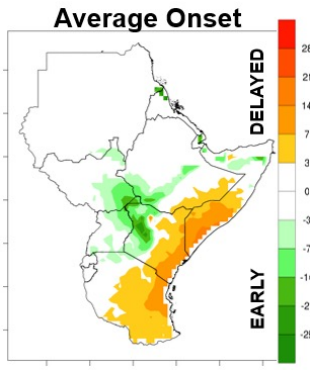
- Heavy rains in August caused flash flooding in some districts (in Haroon area of north Damazine locality alone, it caused damage to more than 50% of crop farms. There is also the impacts of a prolonged political crisis and high inflation, high food prices, and high levels of insecurity.
- FSNWG latest IPC numbers shows that around 11.7 million people are in IPC phase 3+ (8.5 million in phase 3, and 3.1 in phase 4).

5.0 Rainfall forecast for October-December 2022 and its implication to production areas

OND 2022 rainfall forecast



OND season onset



Probability of exceeding 300 mm in OND season

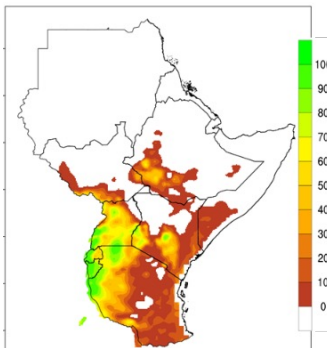


Figure 7: Probabilistic rainfall forecast, onset, and probability of exceeding 300 mm in OND 2022 short rains

- Generally, below average rains, late onset, low probabilities of exceeding 300 mm, and the contribution of other non-climatic drivers in the region present poor prospects for agricultural performance across the region.
- Already, households coping mechanism have been eroded due to 4 consecutive failed seasons that started in OND 2020. Respective governments in the region and partners are urged to act early to avert worsening of food insecurity situation in the region.

Annex

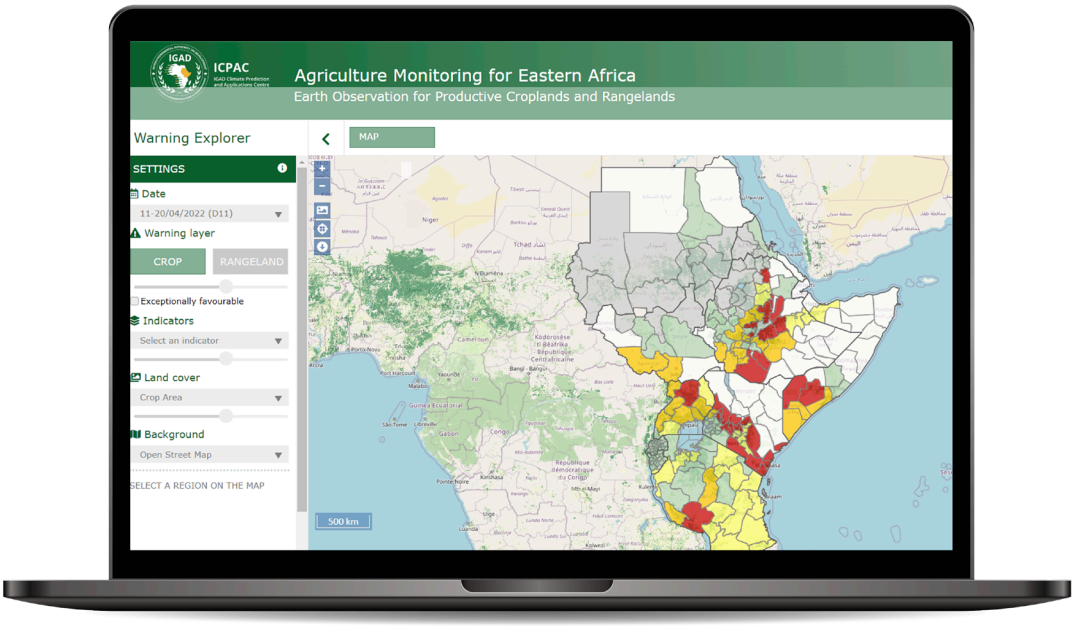
Technical and Organizational Notes

- This bulletin has been produced with the support of Intra-ACP Climate services and related Applications (ClimSA) and technical assistance from EU-JRC. ClimSA's overall objective is to support the climate information services value chain with technical and financial assistance, infrastructure and capacity building to improve wide access and use of climate information, to enable and encourage the generation and use of climate services and applications for decision making processes at all levels.
- A dekad is defined as the (roughly) 10-day period extending from day 1-10 of the month, 11-20 of the month, and 21-end of the month. Note that the dekad of the year is a circular variable, i.e. dekad 36 is followed by dekad 1 of the

- Water balance: water deficit possibly evolving in poor growth (triggered only in water limited units).
- Biomass: evidence of poor growth.
- Water balance + biomass: poor growth and negative prospects (triggered only in water limited units).
- End of the season biomass: poor season growth (triggered only toward the end of the season).
- Not analyzed: units not assessed because with very limited or no crop/rangeland area.
- No warning units: areas with no critical conditions.
- Not active units: where agricultural area is not active at the moment of the analysis.

More information can be obtained at:

- ICPAC Agriculture Hotspots https://agriculturehotspots.icpac.net/
- More detailed information on methodology https://mars.jrc.ec.europa.eu/asap/documentation.php
- For global conditions visit https://mars.jrc.ec.europa.eu/asap/wexplorer/



Cover and back photos by FAO

ICPAC

About ICPAC

ICPAC is a Regional Climate Centre (RCC) accredited by the World Meteorological Organization. It provides climate Services to 11 East African countries and aims at creating resilience in a region deeply affected by climate change and extreme weather.