Food and Agriculture Organization of the United Nations

FOOD SECURITY & NUTRITION INFORMATION SYSTEM PROJECT (FSNIS)

AGROMETEOROLOGICAL EARLY WARNING BULLETIN

21-30 June 2023

EARLY WARNING: FLOOD RISK LINGERS AS TORRENTIAL RAINS ARE FORECASTED FOR HIGHLANDS

Climate change is having a profound impact on food security by altering agricultural production, leading to decreased crop yields and increased food scarcity in Yemen. Droughts, floods, and extreme weather events are becoming more frequent, thus further compromising the stability of food systems. This is particularly detrimental to vulnerable communities that rely heavily on agriculture for their livelihoods and food supply. By providing insights into weather patterns, agrometeorological information helps farmers make informed decisions about how to manage their agro activities. This bulletin acts as a decision-making support tool by providing early warning agrometeorological information and thus contributing, to the extent possible, to safeguarding Yemeni food security.

Floods: In the past week, heavy rainfall continued to affect much of western and southern Yemen, especially in Mudiyah District in Abyan Governorate where a total of 80 households were affected, leading to dire food and shelter shortages. In the coming week, flood risk is expected to linger as torrential rains are forecasted and likely to affect over 1,000 people in Tuban catchment (Lahj/ Aldhali/Ibb), over 600 in Banna (Abyan/Lahj/ Al Dhale'e), over 500 in Harad (Sadah/Hajjah), over 800 in Mour (Hajjah/ Al Hudaydah), over 400 in Sordud (Al Mahwit/ Sana'a), over 700 in Siham (Sana'a/ Raymah/ Al Hudaydah), over 300 in Rimah (Raimah/ Dhamar), and over 1500 in Zabid (AlHudaidah/Dhamar/ Ibb). Early action to serve as a foundation for building resilience against floods in these areas is strongly advised. As an example, the movement of livestock and people from flood-prone lowland areas is encouraged. Reinforcement of weak shelters, especially for internally displaced people, is also recommended.

High Temperature: Temperatures across much of the western and coastal areas of the country are forecasted to continue rising and are likely to range between 60 – 80% hotter than usual (Fig. 2). As temperatures rise, they tend to be detrimental to livestock, leading to decreased productivity and health issues. Shepherding livestock into sheds to avoid exposure to extremely high temperatures is, therefore, strongly encouraged. Further, prolonged exposure of crops to extremely high temperatures affect not only the quantity, but also their nutritional value. As such harvesting ready crops and watering vegetable gardens early in the morning is recommended. Furthermore, exposure to extremely high temperatures can have detrimental effects on human health. As temperatures rise, the body's natural cooling mechanism may not be able to function properly, leading to heat-related illnesses such as stroke and exhaustion. High temperatures can also exacerbate existing health conditions, especially for vulnerable populations such as the elderly, children, and those with chronic illnesses. It is, therefore, crucial for communities in eastern Hadramaut, Al Maharah, Aden, and the extended western coastal region including Tihama plain to take necessary precautions such as staying hydrated, seeking shade, and avoiding strenuous activities during peak hours, to minimize the potential health risks associated with extreme heat.

Dust: With high temperatures, an increase in dusty conditions is also forecasted (Fig. 3). The constant exposure of both humans and livestock to dust particles in the air can lead to respiratory issues, causing coughs, wheezing, and breathing struggles. This can be particularly problematic for humans and animals with pre-existing respiratory conditions. In addition, dust can settle on animals' coats, thus potentially leading to skin irritations and infections. Dusty conditions can also affect the quality of the animals' feed and water, as dust particles can contaminate these resources, leading to digestive problems and reduced nutrient intake. Therefore, considering the forecasted increase in dusty conditions, it is crucial for livestock owners to take measures to minimize dust in their animals' environment, such as providing proper ventilation and regularly cleaning their living areas.

Pests: Isolated immature and mature solitarious adult Desert Locusts (DL) were reported in the interior of Yemen near Al Hazm but no DL was seen elsewhere in the past weeks[1]. The forecast points toward possible solitarious breeding in parts of Marib, Al Ataq, and extending to Hadramaut (Fig. 4). Fall Armyworms are also likely to increase in number as rainfall activities persist across much of western Yemen. Vigilance is encouraged.

Fig. 1: Areas forecasted to be affected by floods

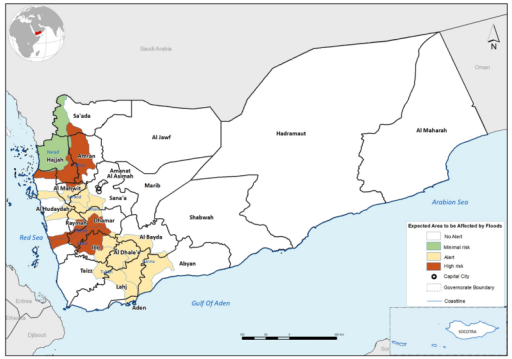


Fig. 2 Areas forecasted to be affected by extremely high temperatures

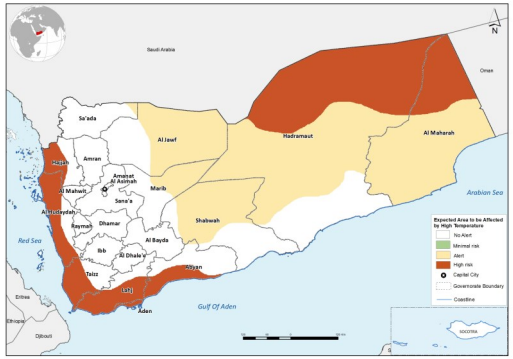


Fig. 3 Areas forecasted to be affected by dusty conditions

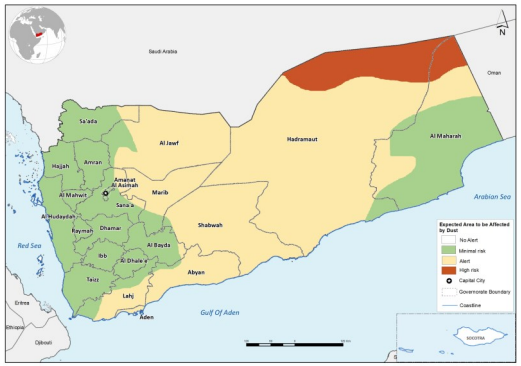
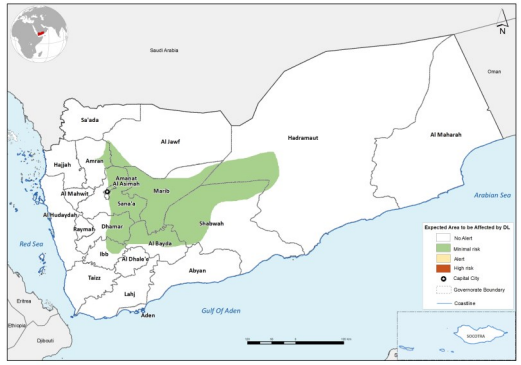


Fig. 4: Areas forecasted to be affected by Desert Locusts



No Alert	No Alert
Minimal Risk	Precaution is advised. Decision-making should kick-start contingency plans
Alert	Avoiding exposure to the hazard and implementation of contingency plans is advised
High Risk	Avoiding exposure to the hazard and implementation of contingency plans is *strongly* advised

Cyclones	Desert Locusts	Drought Intensity	Extremely High Temperatures	Floods	Frost/Low Temperature	Hail	Sand and dust	Thunderstorms	Fall Armyworms
No Alert	Minimal Risk	No Alert	High Risk	High Risk	No Alert	No Alert	High Risk	No Alert	No Alert

[1]https://www.fao.org/ag/locusts/common/ecg/1914/en/DL536e.pdf

Sources:

- Precipitation, dust, desert locusts, temperature, and wind forecasts were sourced from the Civil Aviation and Meteorology Authority (CAMA), WRF-Chem model (IERSD/NOA), FAO Locust Watch, and the Climate Prediction Centre respectively.
- Drought conditions were sourced from GIEWS.
- Flood impact estimate is based on the intersection of areas to be affected and local population.

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