Climate Prediction Center's Central Asia Hazards Outlook
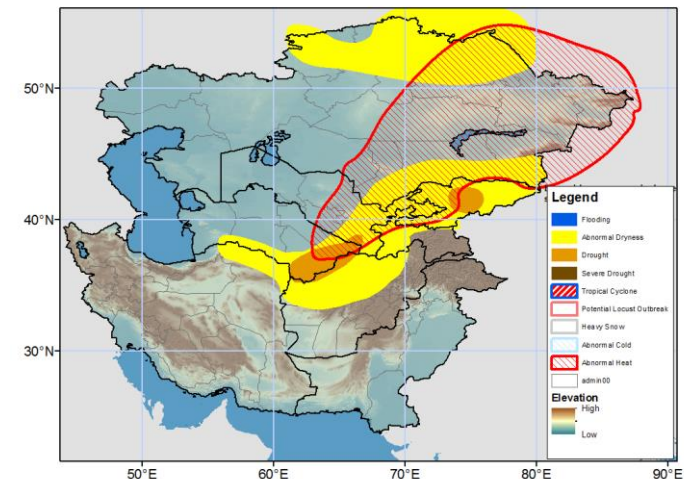# For USAID / FEWS-NET
8 – 14 June, 2023

Temperature:

Weekly average minimum temperatures were primarily 2-8°C warmer than normal over western and north-central Kazakhstan, western Turkmenistan, western, central, and southeastern Uzbekistan, and northern Iran between 30 May – 05 June 2023. The most anomalous minimum temperatures were observed in northwestern and north-central Kazakhstan, where parts of the northern Kostanay region reached up to 12 °C above normal. Conversely, parts of eastern Kazakhstan, central Kyrgyzstan, eastern Tajikistan, parts of northeastern/eastern Afghanistan, and northern and central Pakistan experienced cooler than normal minimum temperatures (2-8 °C colder than normal). Furthermore, minimum temperatures were 0-5°C below freezing in eastern Tajikistan, eastern and central Kyrgyzstan, and northeastern Afghanistan. Likewise, maximum temperatures in Kazakhstan, Uzbekistan, Turkmenistan, western Kyrgyzstan, western Tajikistan, northern Afghanistan, and northern and central Iran were primarily 2-8 °C warmer than normal. Kazakhstan's Kostanay, Akmola, eastern and central Aktobe, parts of Karaganda and Ulytau, northern Pavlodar, western Kyzylorda, and North Kazakhstan regions observed maximum temperatures that were up to 12 °C above normal, and northern parts of Kostanay and North Kazakhstan may have observed maximum temperatures up to 15 °C above normal. Parts of eastern Tajikistan and eastern/northeastern Afghanistan observed maximum temperatures that were 2-6 °C colder than normal. Much of central and northern Pakistan observed maximum temperatures that were 6-12 °C colder than normal. Most of Turkmenistan, western and central Uzbekistan, southwestern and parts of northwestern Kazakhstan, southern and northern Afghanistan, eastern, central, and southern Iran, and western Pakistan recorded mean maximum temperatures above 35°C (and above 40 °C in southwestern Afghanistan, eastern and central Iran, and parts of western Pakistan) from 30 May – 05 June 2023.

The GEFS model predicts mean minimum temperatures that are 2-6°C warmer than average primarily over central, eastern, and northwestern Kazakhstan, eastern Uzbekistan, parts of northern Turkmenistan, Kyrgyzstan, Tajikistan, much of western and northern Afghanistan, parts of western and northern Pakistan, and western, southern, and eastern Iran. Likewise, mean maximum temperatures are predicted to be 2-8°C warmer than average over most of Kazakhstan, central and eastern Uzbekistan, eastern Turkmenistan, Kyrgyzstan, western and central Tajikistan, and northern Afghanistan. Conversely, eastern and southern Pakistan could experience cooler than average maximum temperatures. Eastern Tajikistan will likely record below freezing nighttime temperatures. The GEFS model forecasts also indicate mean maximum temperatures will exceed 40°C in southern Afghanistan, northeastern Turkmenistan, parts of southeastern and northeastern Uzbekistan, and southern portions of the Turkistan region of Kazakhstan. Temperatures are expected to be more anomalous (6-12 °C above normal) earlier in the forecast period, particularly in northeastern Turkmenistan, eastern Uzbekistan, eastern and south-central Kazakhstan, northwestern Tajikistan, and parts of western Kyrgyzstan. An abnormal heat polygon has been placed over these regions due to the magnitude of these anomalies.

Precipitation:

Much of Central Asia remained largely dry. According to the CPC Unified Gauge Analysis, northwestern and northeastern Kazakhstan, eastern Kyrgyzstan, eastern Tajikistan, eastern Afghanistan, and northwestern Iran observed light to moderate precipitation up to 50 mm from 30 May – 05 June 2023. In addition, according to the CMORPH satellite estimates, the Paktika province of eastern Afghanistan received moderate to heavy (50-75 mm) precipitation. Parts of central and northern Pakistan received even larger precipitation accumulations – up to 150 mm. Based on USGS snow water equivalent (SWE) analysis, negative SWE anomalies persisted across eastern and northwestern Tajikistan, most of northeastern and central Afghanistan, and western and eastern Kyrgyzstan. Because of the continuing large 30-day and 90-day precipitation deficits, an abnormal dryness polygon covers western and northern Afghanistan, southern Turkmenistan, southern Uzbekistan, western and northern Tajikistan, Kyrgyzstan, and northern and southeastern Kazakhstan. The abnormal dryness polygon in northern Kazakhstan has been extended west and east to include parts of the Kostanay and Pavlodar regions. All of southern Kyrgyzstan has now been included within an abnormal dryness polygon as well.

During the next week, most of northern and eastern Kazakhstan, Kyrgyzstan, eastern and northern Tajikistan, northeastern and the central highlands of Afghanistan, northern Pakistan, and northern and central Iran are expected to receive light to moderate (10-50 mm) precipitation. In addition, the GFS model predicts snowfall accumulation of around 20 cm at a few higher elevation areas across eastern Kyrgyzstan and eastern Tajikistan. Below normal precipitation is expected to fall across much of northern and eastern Kazakhstan, most of Kyrgyzstan, and northern Pakistan (parts of Kashmir).