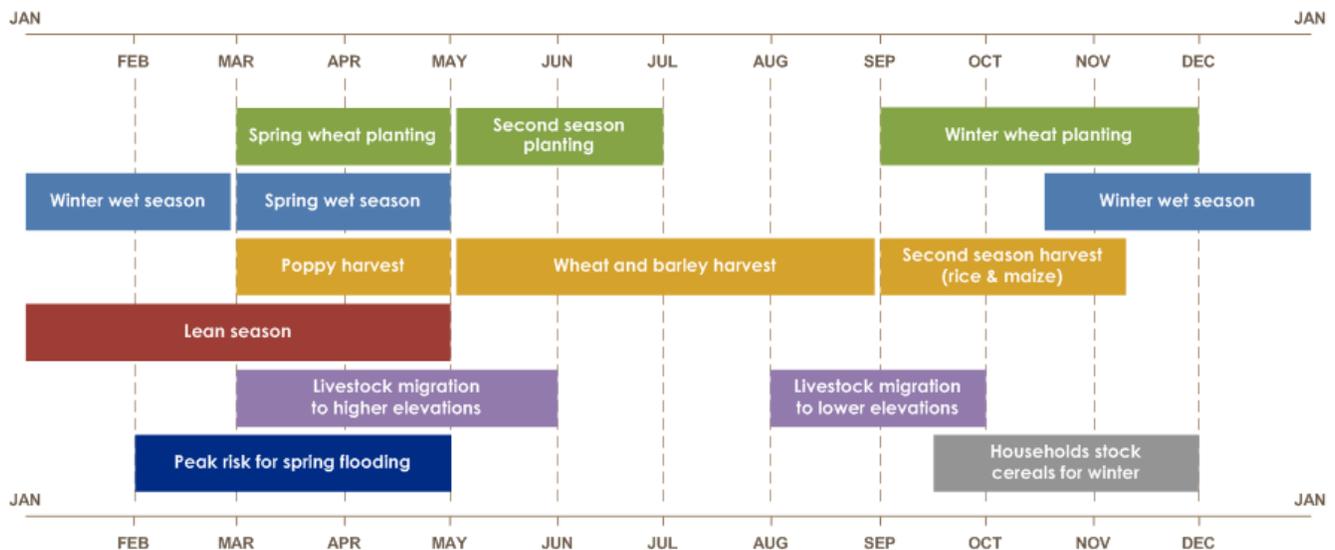


Low seasonal precipitation in Afghanistan may hamper crop production in 2018

KEY MESSAGES

- Moderate (10-25 mm) to locally heavy (25-50 mm) precipitation occurred over central, northern, northeastern, eastern, and southeastern parts of the country during the first two weeks of March. Although this precipitation helps ease the seasonal precipitation deficit, cumulative deficits remain quite large throughout the country, with likely adverse impacts on spring wheat planting.
- Water storage in the winter snowpack continues to be well below average in most basins. Since snow water volume is typically at its annual peak in mid-March in many basins, current deficits are of concern.
- The average daily temperature has been above both the long-term and short-term average since the beginning of the season in most areas, and is expected to be above average in the coming week. With high temperatures, snowpack is expected to deplete sooner than normal, resulting in possible irrigation water shortages in April and May.
- Precipitation forecasts are calling for below-average conditions entering the spring wet season, creating increased risk of adverse impacts on spring wheat planting.

SEASONAL CALENDAR IN A TYPICAL YEAR



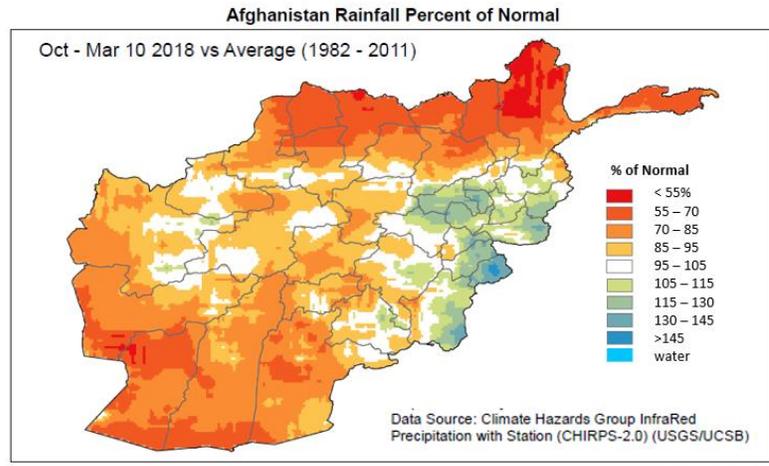
Source: FEWS NET

UPDATE ON SEASONAL PROGRESS

Precipitation anomalies:

Precipitation deficits have continuously accumulated throughout the October 2017 – May 2018 wet season through mid-March. For the season thus far, the only precipitation events of note brought episodes of moderate localized precipitation during February and early March, leading to a potential delay in spring wheat planting. For October 1, 2017 – March 10, 2018, precipitation was less than 85 percent of normal throughout northern and western Afghanistan, with some northern areas having less than 55 percent of normal (**Figure 1**). Only a few provinces in the east received normal to slightly above normal precipitation. Both rainfed and irrigated crop lands in the water-deficit areas are likely to be adversely impacted in the coming spring planting season.

Figure 1. Cumulative precipitation (percent of the long-term average), October 1 2017 - March 10, 2018.



Map created by USGS/EROS

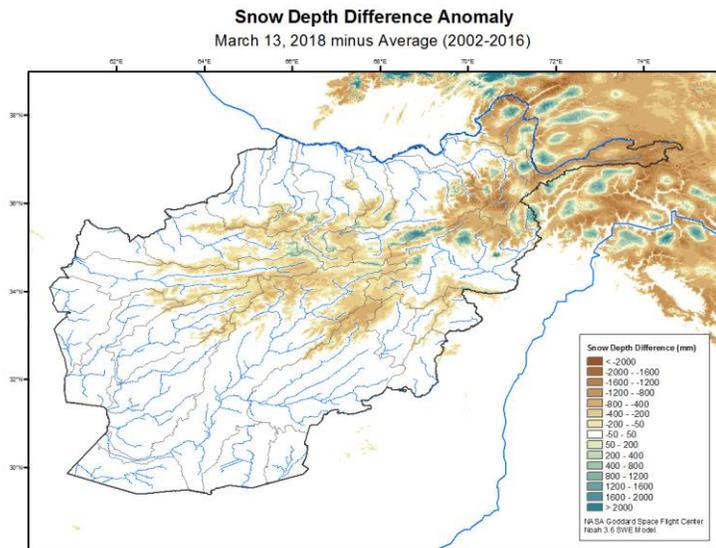
USGS USAID EROS

Source: USGS/UCSB

Snowpack and snow water storage:

Since mid-January, snow water volume continues to hover near record lows throughout the country, with data since 2002. Since the beginning of the winter wet season, snow depths are nearly 1000 mm less than the long-term average over the central mountains (**Figure 2**). While recent snowfall events increased storage over the eastern basins, snow water volume is still well below the average. Seasonally, the recession period for snow accumulation begins in the first half of March. With below-average spring precipitation expected, often occurring as rain rather than snow, it is highly unlikely that basins will have near-normal water storage in the form of snow (**Figure 3 and 4**). Shallow snowpack and low snow water availability may provide insufficient water for main season (April-May) irrigation.

Figure 2. Snow depth difference from the long-term average in mm on March 13, 2018



Map created by USGS/EROS

USGS USAID EROS

Source: USGS/NASA

Figure 3. Daily progression of snow water volume in a northern basin of Afghanistan.

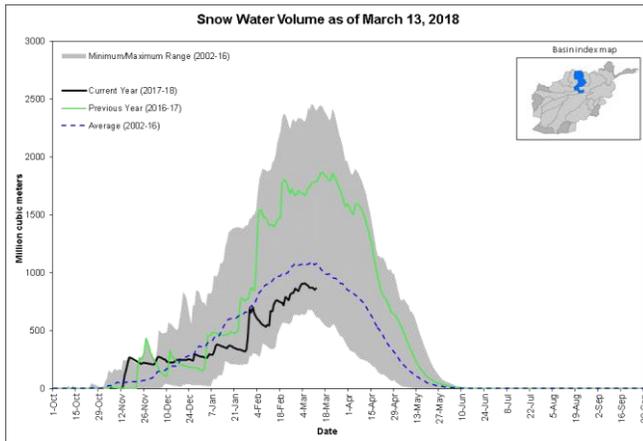
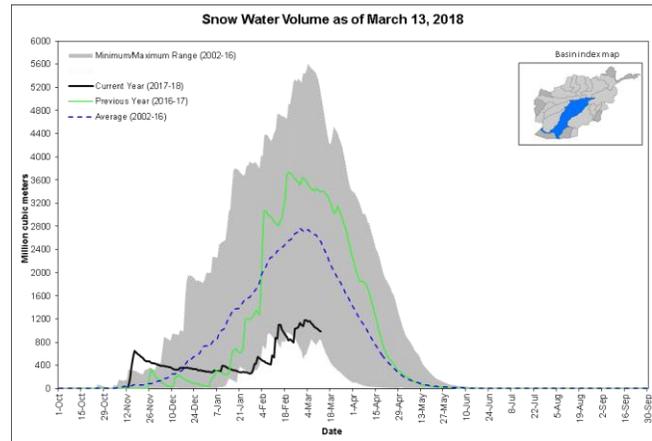


Figure 4. Daily progression of snow water volume in a western basin of Afghanistan.

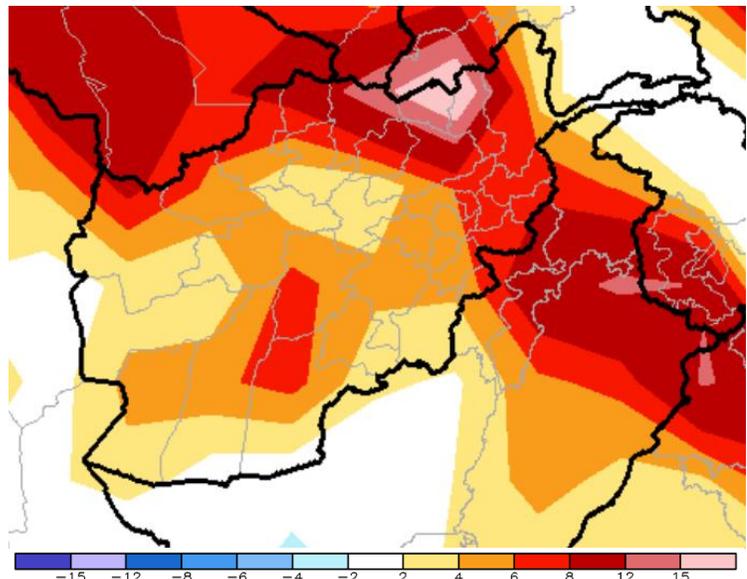


Source: USGS/NASA

Temperatures:

Temperatures were seasonably cold at the beginning of the winter season over Afghanistan; however, warmer than average temperatures have persisted since late February. In the coming week, temperatures are expected to be well above average (+6°C or more in many areas) (Figure 5). Above-average temperatures could have an adverse impact on snow accumulation in mid and high-elevation areas. Although above-average temperatures during the recession period are always a concern for spring flooding, widespread spring flooding is less likely because of shallow isolated snowpack and low snow water storage. It is important to note that flash flooding is possible as a result of heavy spring rain episodes.

Figure 5. Maximum temperature difference from the long-term average (°C), forecast March 14 - 21, 2018.



Source: NOAA CPC

FORECASTS

Cumulative precipitation forecasts call for below average conditions over the next three months (April-June), with increased risk for extended periods of dryness (Figure 6). The rainfed wheat planting and early crop development, especially in the north and northeast, may experience unfavourable conditions over the spring wet season. Similarly, with the persistent deficit snow water storage conditions, water availability may not be sufficient for the normal development of the irrigated crops, especially in the north and western parts of the country.

Figure 6. Spring (April - June) precipitation forecast over Afghanistan.

