According to the July forecast of IRI[1] and the Climate Prediction Centre (CPC), ENSO[2] conditions are still neutral, and likely to continue so through July-August 2020. However, there is a 50-55% chance of La Niña* to develop during September-November 2020 and last through December-February 2020-21, resulting in the ENSO Alert System Status being upgraded to **La Niña Watch**. This should also meet the activation threshold of the IASC[3] Global ENSO SOPs/Cell.

The current forecast, a 50-55% chance of La Niña indicates a significant increase in the probability from 30% in May to the current 50-55% probability of la Niña to develop during the September-February 2020-21 period, suggesting that La Niña conditions are the most plausible assumption during the last 3 months of 2020. Although 50-55% is not a very-strong probability, it indicates that most of La Niña precursors are in fact in place and their impacts on global weather patterns are likely in the coming months. The AEW[4] Unit will be closely monitoring ENSO forecasts status and potential impacts.
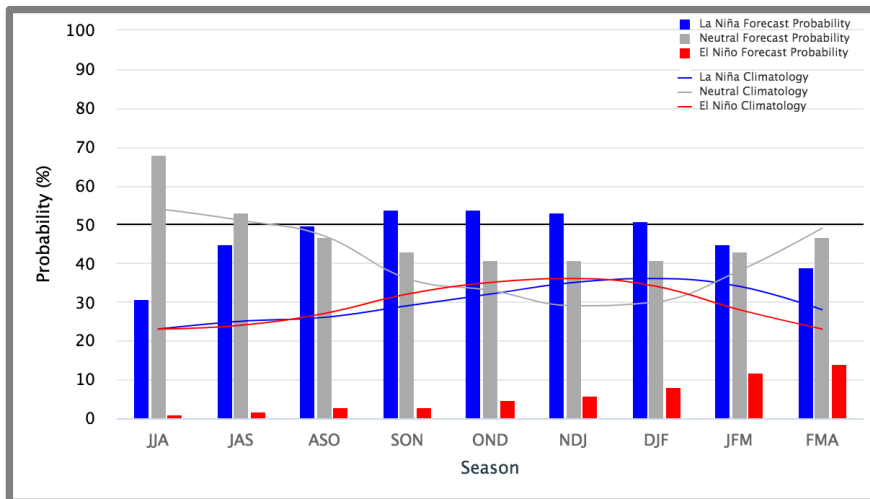

Figure 1. Official IRI/CPC ENSO forecast issued 09 July 2020

As of early-July, the probability of La Niña conditions predicted for the Aug-Oct 2020 is about 50%. From September onwards, the probability of La Niña will continue to increase while the probability of neutral conditions decreases of about 10% until Dec-Feb 2020-21 (Fig. 1).

> **Regions and areas where la Niña may have impacts between September and February 2020-21 due to changes in rainfall patterns:**

The impacts of a potential La Niña on weather through the July-September season are limited as ENSO-neutral conditions are expected to continue through end of August 2020.
If La Niña does materialize, impacts on rainfall levels as well as tropical cyclone activity will likely be manifested from September 2020 onwards. Additionally, other climate drivers such as a negative Indian Ocean Dipole (IOD) can enhance La Niña impacts, especially in eastern Africa, and southeast Asia.

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[1] International Research Institute for Climate and Society
[2] El-Niño Southern Oscillation
[3] Inter-Agency Standing Committee
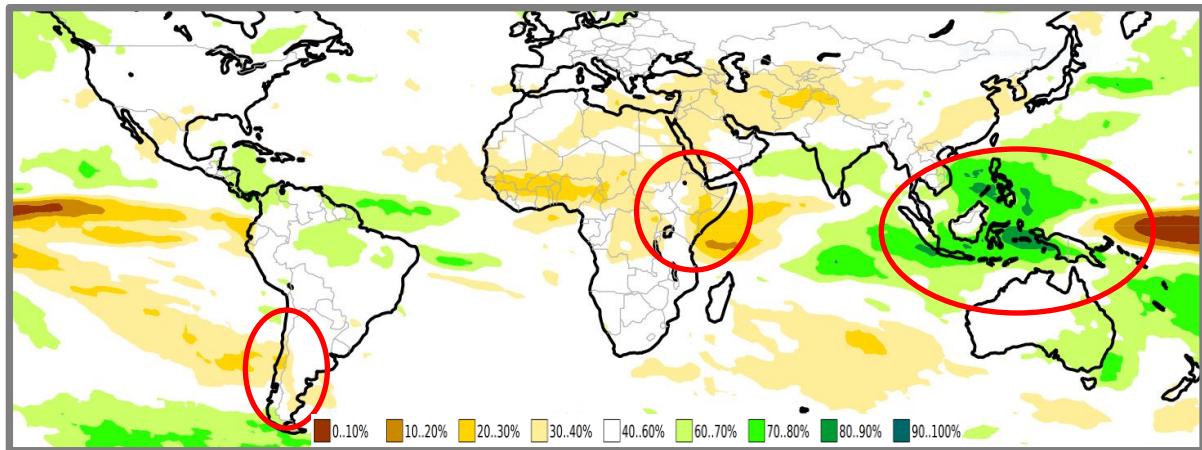[4] Analysis and Early Warning Unit

Figure 2. Copernicus Multi-system Rainfall forecast[5] for October, November, December issued July 2020. Yellow colours & green colours for below and above-average rainfall respectively.

Seasonal forecasts:

Currently, seasonal forecasts for September onwards are predicting some characteristics of La Niña like impacts in Eastern Africa and Southeast Asia during their respective rainfall seasons (fig. 2). In other regions such as southern Africa, the Pacific and southern America, rainfall patterns remain weakly correlated to that of typical La Niña impacts given the long lead time of the forecast (Fig. 3.)

- The 2020 secondary growing season in **Central America** (mid-Aug – Nov) will, with a moderate probability be average to slightly above-average while Haiti and Dominican Republic are likely to see continued average to slightly below-average rainfall. Potential erratic rainfall distribution is also expected in some areas, resulting in a likelihood of dry spells and localized areas of continued dryness.

- The 2020 Short Rains Season (Oct – Dec) in **eastern Africa** will be more prone to below-average rainfall and potential drought conditions, with current forecasts predicting a 60-70% chance of moderately below-average rainfall.

- Recent seasonal forecasts for **southern Africa** are likely for slightly below-average rainfall during the early stages of the season over western **Angola** while average rainfall is expected elsewhere in southern African countries until November before transitioning to slightly above-average rainfall from December onwards but still with low likelihood as of now.

- In **Southeast Asia** and the **South Pacific,** the forecast is likely for above-average rainfall during the northeast monsoon season (Nov- April) leading to good crop prospects while increasing the risk of flooding in **Indonesia**, **Papua New Guinea**, **Sri Lanka** and **Timor-Leste**.

Typical La Niña impacts

A typical la Niña conditions in the tropical Pacific are known to **shift rainfall patterns** across the world Although these vary somewhat from one La Niña to the next, the strongest shifts remain fairly consistent in the regions and seasons shown on the map below.

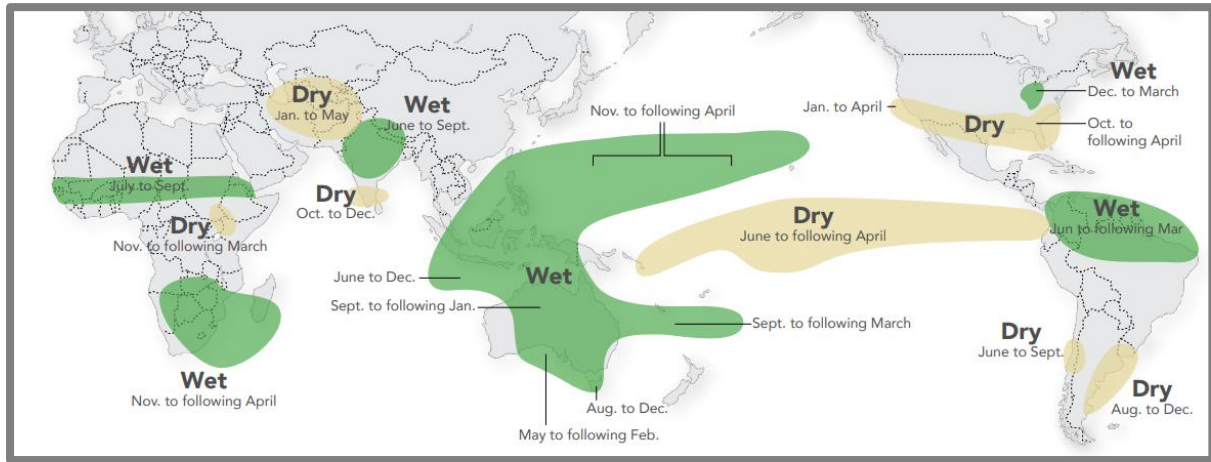[5] Probability of exceeding the median

Figure 3. Typical global impacts from La Niña according to the International Research Institute for Climate and Society (IRI).

In **Africa,** La Niña usually results in:
* wetter than normal conditions in southern Africa from November to March which coincides with most parts of agricultural season (October to April) and
* drier than normal conditions over western **Kenya**, northern **Tanzania**, **Burundi**, **Rwanda**, north and eastern **Uganda** and eastern **DRC**[6] on the same period. This also coincides with most parts of short rains season in bimodal regions in Eastern Africa, running from mid-September to November.

In **Asia and South Pacific regions**, La Niña usually results in:
* above-average rains over the **Philippines**, **Indonesia, Papua New Guinea** and **Sri Lanka** from November to April (North-East Monsoon) likely leading to good prospects for cropping but also increase the risk of flooding.
* The formation of tropical cyclones is also expected to shift westward across the western Pacific Ocean, **increasing typhoon landfall threat in China**

In **south America**, la Niña usually results in:
* drier than average conditions in coastal regions of **Peru** and **Chile**
* while above-average rains are expected in **Bolivia** and northern **Colombia**, **increasing the risk of flooding** in some areas.
* In terms of tropical cyclone activity, La Niña-like conditions usually favour development of very intense hurricanes in the Atlantic and a fewer in the Pacific. This will be of high concerns for Central America and the Caribbean given the above-average 2020 hurricane season forecast in the north Atlantic basin with a 60% chance and peak of cyclone activity in August – October.

For helpful links and sources on La Niña see the below, for more information please contact wfp.early.warning@wfp.org

Sources: International Research Institute (IRI), National Oceanic Atmospheric Administration (NOAA), European Centre for Medium Range Weather Forecasts (ECMWF); Climate Prediction Centre (CPC), Australia Bureau of Meteorology (BOM)

La Niña is the cold phase of the ENSO. It is associated with cooler-than-average Sea Surface Temperatures in the central and eastern tropical Pacific Ocean, which have impacts on rainfall patters and cyclone activity across many regions in the world.

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[6] Democratic Republic of Congo