Forecasting agropastoral water deficits in West Africa to support food insecurity early warning

Shrad Shukla[1], Kathryn Grace[2], Abdou Ali[3], Daniel McEvoy[4], William Turner[1], Adoum Alkhalil[3,6], Seydou Tinni[3], Issaka Lona[3], Ibrah Sanda[3], Emil A. Cherrington[5], Rebekke Muench[5], and Greg Husak[1]

[1]University of California, Santa Barbara, [2]University of Minnesota, Twin Cities, [3]AGRHYMET Regional Centre, Niamey, Niger, USA. [4]Desert Research Institute , Western Regional Climate Center, Reno, Nevada, USA. [5]University of Alabama in Huntsville, Huntsville, AL

[6]Famine Early Warning Systems Network Team, Washington D.C., USA

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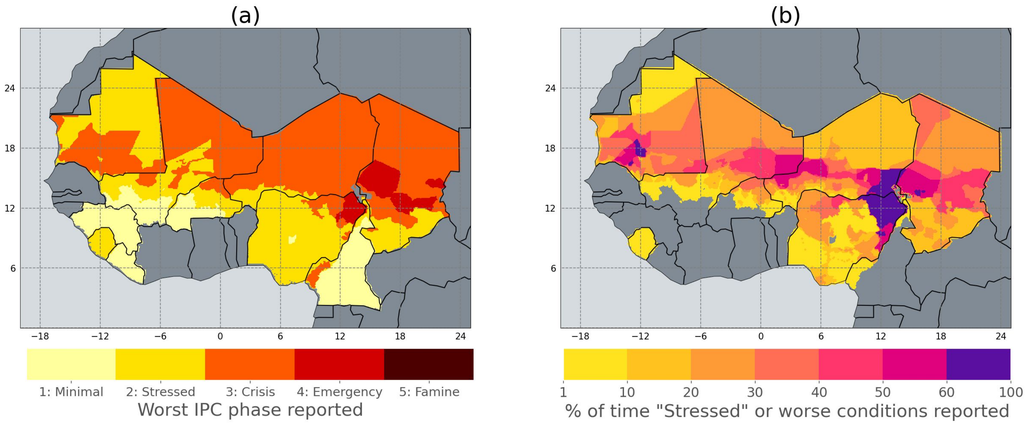
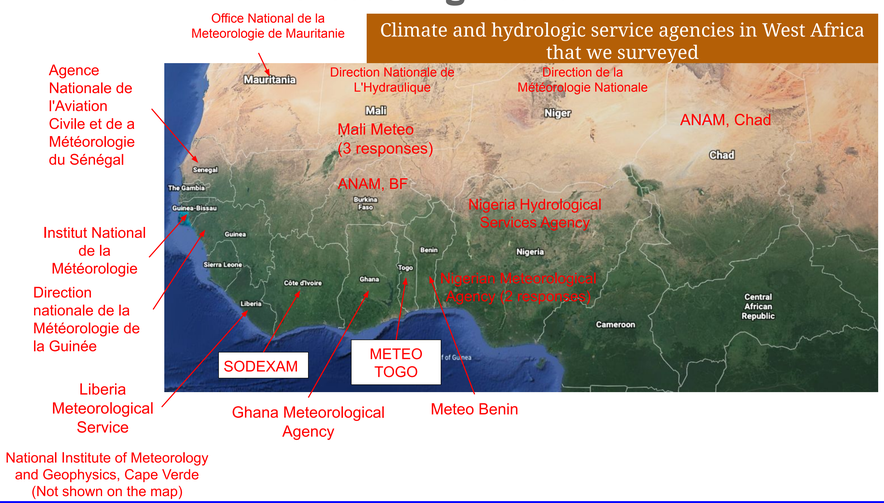
1. Understanding the needs

Context: Acute food insecurity (AFI) in West Africa



- Several West Africa countries have reported “Crisis” phase of food insecurity at least once since 2011. (*Crisis phase triggers emergency food assistance response)
- Parts of Mauritania, Mali, Burkina Faso, Niger, Nigeria, and Chad often reported “Stressed” phase (IPC-2).

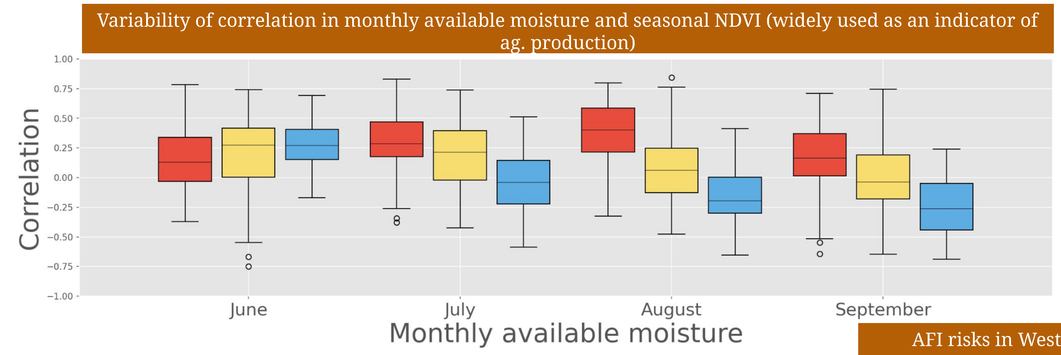
Forecasting needs



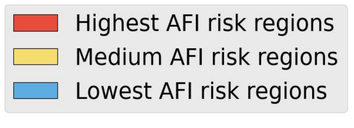
- Representatives from National Metreological and Hydrologic Services (NMHSs) of West African countries surveyed to identify key forecasting needs and gaps.
- Clear need to go beyond the coarse spatial and temporal scale seasonal forecasts to finer spatial and temporal subseasonal scale forecasts.

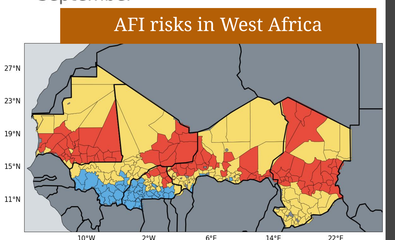
2. Responding to the needs

Understanding links in subseasonal water deficit and food insecurity

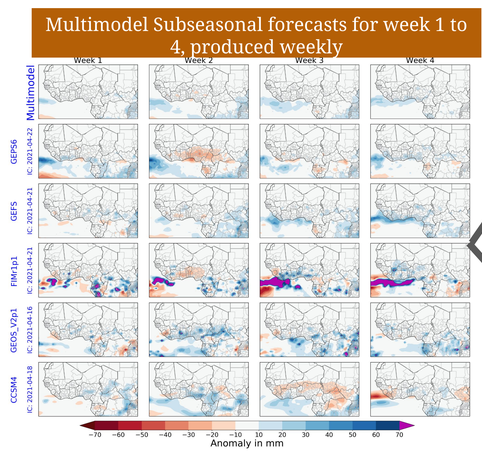


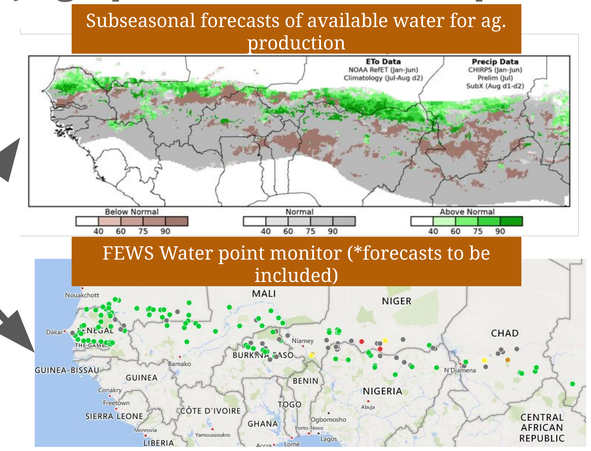
- Correlation between monthly available water (P-ETo) and seasonal NDVI strongest in the admin unit-2 with the highest risk of AFI



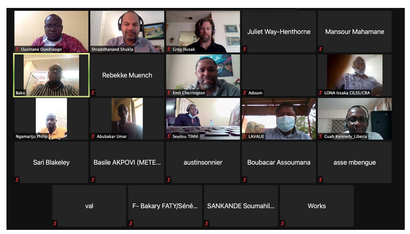


Co-developing (with AGRHYMET) agropastoral water deficit products





Building capacity to facilitate application of water deficit products



- Phase-1 of capacity building training completed in February 2021 (~50 participants from NMHSs).
- Multiple phases of capacity building planned for Year-2 and -3.
- Ongoing collaboration with AGRHYMET to include forecasting products to bi-weekly bulletins.

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