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*Abstract:*

Rainfall forecast are difficult in West Africa at subseasonal scales because of multiple drivers acting at various timescales that are not always properly represented in forecast systems. This presentation will show current work at Météo-France to rely on different forecast systems, from weather scale to subseasonal scale based not only on precipitation forecast but also on the atmospheric drivers of precipitation in the region. There is for example a strong link between precipitable water and precipitation with a threshold value of precipitable water when passing from weak to heavy precipitation. Here we explore the potential use of precipitable water among other parameters as a proxy for precipitation over West Africa.

As an example, MISVA – Monitoring and Forecast of Intra-Seasonal Variability over Africa – is a joint research / - will be presented as a platform where researchers and forecaster collaborate to analyse the daily to monthly weather situation. It will show that a fair predictability exists a few weeks ahead for precipitating events depending on the atmospheric configuration, called increased window of predictability, during which warning bulletins can be issued with a good accuracy. MISVA proposes a web platform with regular updates of subseasonal and synoptic products, a complete documentation of the products and the science behind. Weekly briefings are held with the different partners resulting in an expertised weekly bulletin. An example of operational use of this strategy based on tropical waves monitoring and precipitable water is shown on the anticipation of humid periods as well as beginning and end of the rainy season on the 2019-2022 period.