

TAMSAT-ALERT for Impact-Based Forecasting



Session 6: Course review

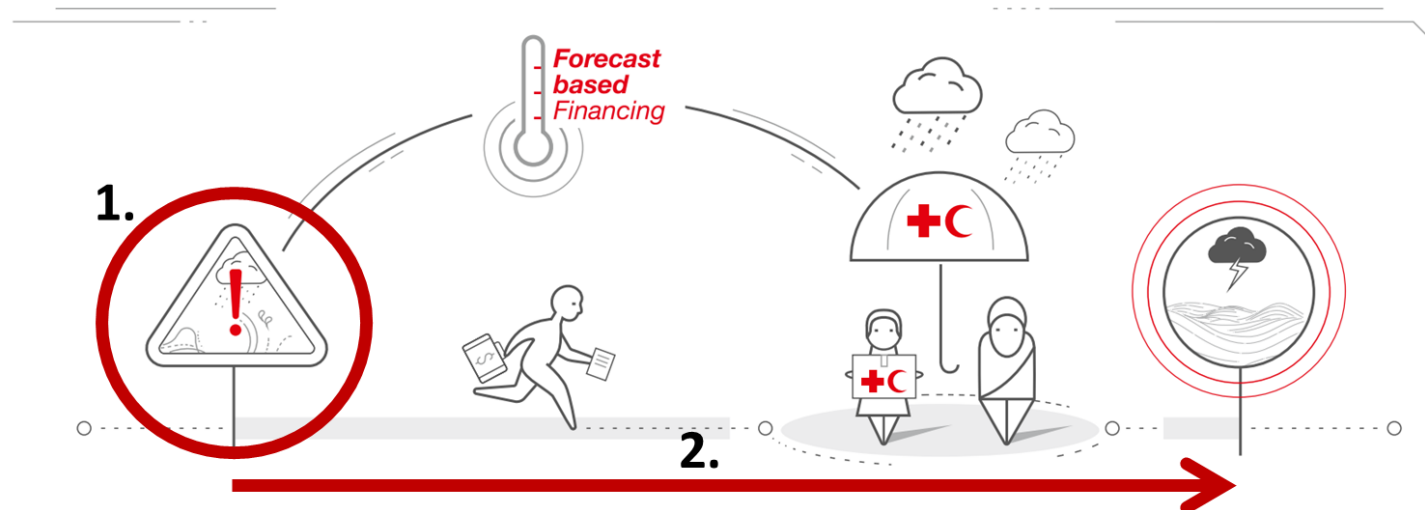
Learning objectives

1. Explain TAMSAT-ALERT soil moisture and WRSI as a drought impact-relevant metric
2. Understand modelling of soil moisture and WRSI
3. Understanding TAMSAT-ALERT approach to forecasting
4. Ability to interpret TAMSAT-ALERT soil moisture and WRSI forecasts
5. Ability to produce TAMSAT-ALERT forecast plots and/or bulletins

Session 2: Validation of TAMSAT-ALERT

1. Explain TAMSAT-ALERT soil moisture and WRSI as a drought impact-relevant metric

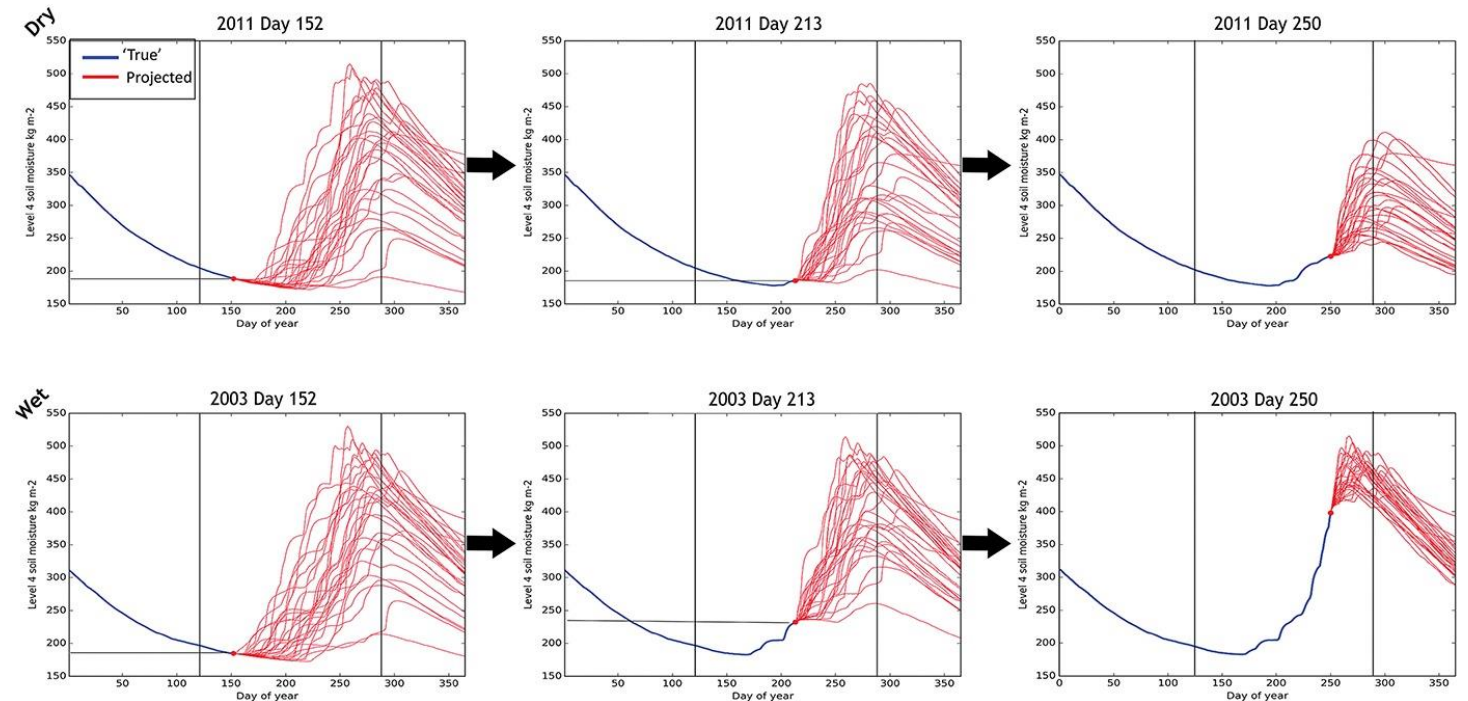
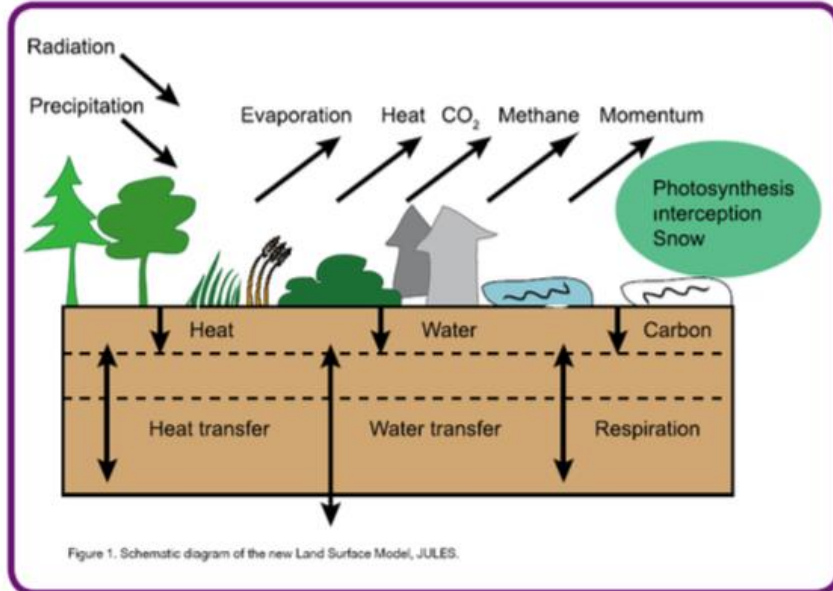
- TAMSAT-ALERT soil moisture metrics relate to the impacts of drought
- TAMSAT-ALERT forecasts provide sufficient lead-time for early action
- There are caveats associated with the use of TAMSAT-ALERT soil moisture forecasts



Session 3: TAMSAT-ALERT methodology

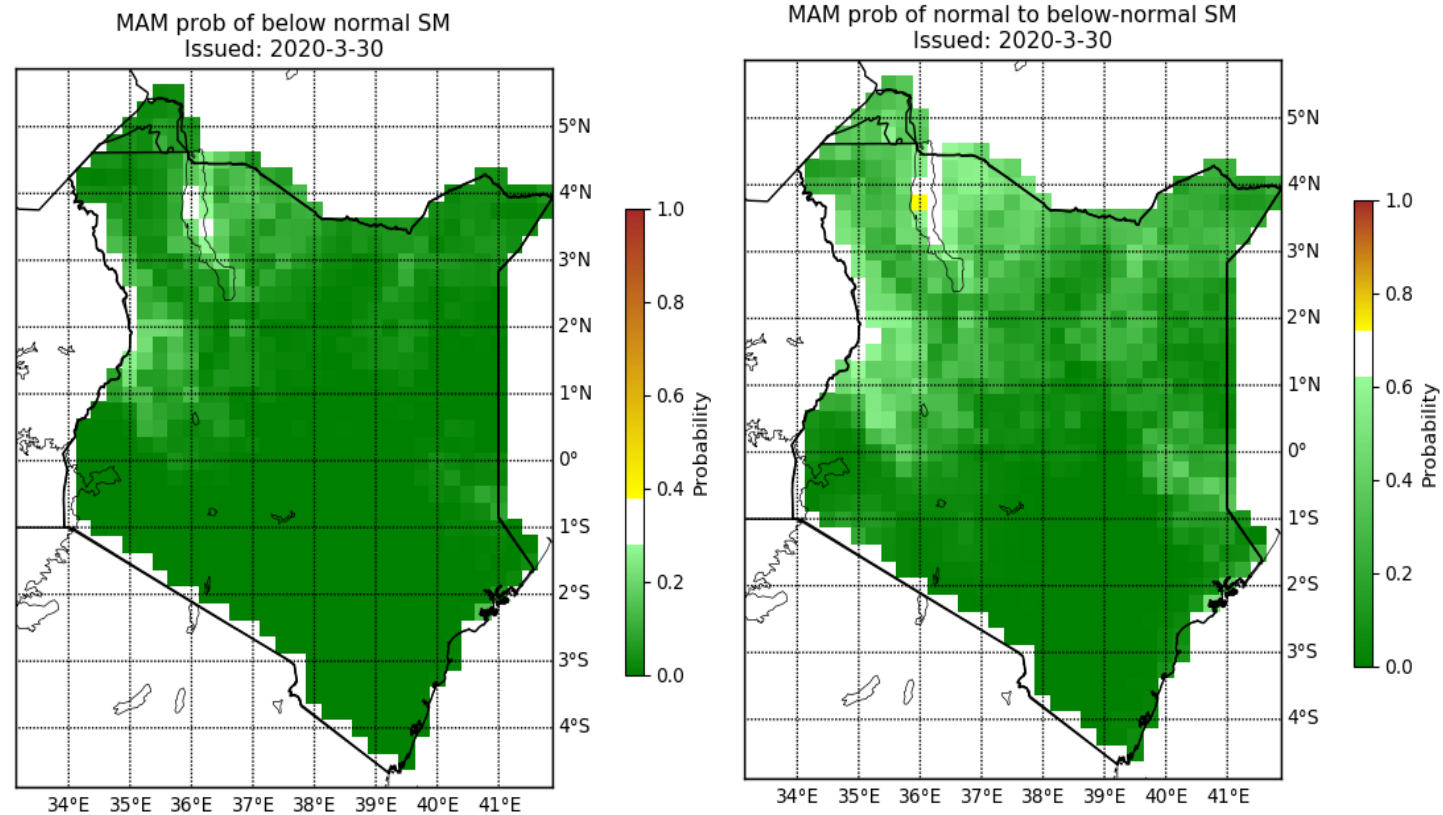
2. Understand modelling of soil moisture and WRSI
3. Understanding TAMSAT-ALERT approach to forecasting

Schematic of JULES model (Blyth et al.; 2006)



Session 4: Interpreting TAMSAT-ALERT forecasts

4. Ability to interpret TAMSAT-ALERT soil moisture and WRSI forecasts



Session 5: Producing TAMSAT-ALERT forecasts

5. Ability to produce TAMSAT-ALERT forecast plots and/or bulletins

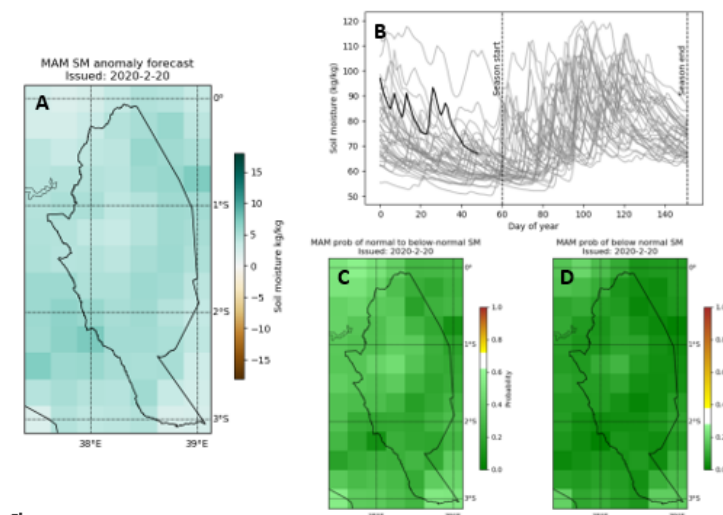
TAMSAT-ALERT Soil Moisture Forecast for Kitui MAM 2020

Date issued: 22nd February 2020

Meteorological tercile forecast: B0.30, N0.35, A0.35 (GHACOF 54)

Soil moisture tercile forecast: B0.07, N0.25, A0.68

- At this early stage in the season, the MAM forecast for Kitui County is for above average (enhanced) soil moisture conditions.
- The soil moisture forecast reflects 1) the GHACOF 54 statement forecasting slightly above normal rainfall conditions for the MAM season, and 2) the current state of the land surface, which remains wetter than usual after heavy OND rains and continuing rainfall throughout the short dry season.
- Given the early stage in the season, there remains much uncertainty in the forecast. Whilst the probability of normal (<67th percentile) or below normal (<33rd percentile) soil moisture conditions are low at this [stage](#), it is too early to tell whether Kitui will experience drought conditions this MAM season.



Figures:

- A) Forecast MAM soil moisture anomaly.
B) 2020 soil moisture (black line) compared to historic years 1983-2019 (grey lines).
C) Probability of normal or below normal (<67th percentile) MAM soil moisture.
D) Probability of below normal (<33rd percentile) MAM soil moisture.

Summary

- From TAMSAT-ALERT methodology to producing your own TAMSAT-ALERT forecasts
- Consider possible applications in your own work
- Thanks for taking part! We hope you enjoyed it!
- Please fill in the feedback form that will be distributed to you