



**East Africa Drought And Forecasting
Workshop**

**Assessing Meteorological drought in the Upper
Blue Nile basin**

**By
Group 2**

October, 10th 2019.

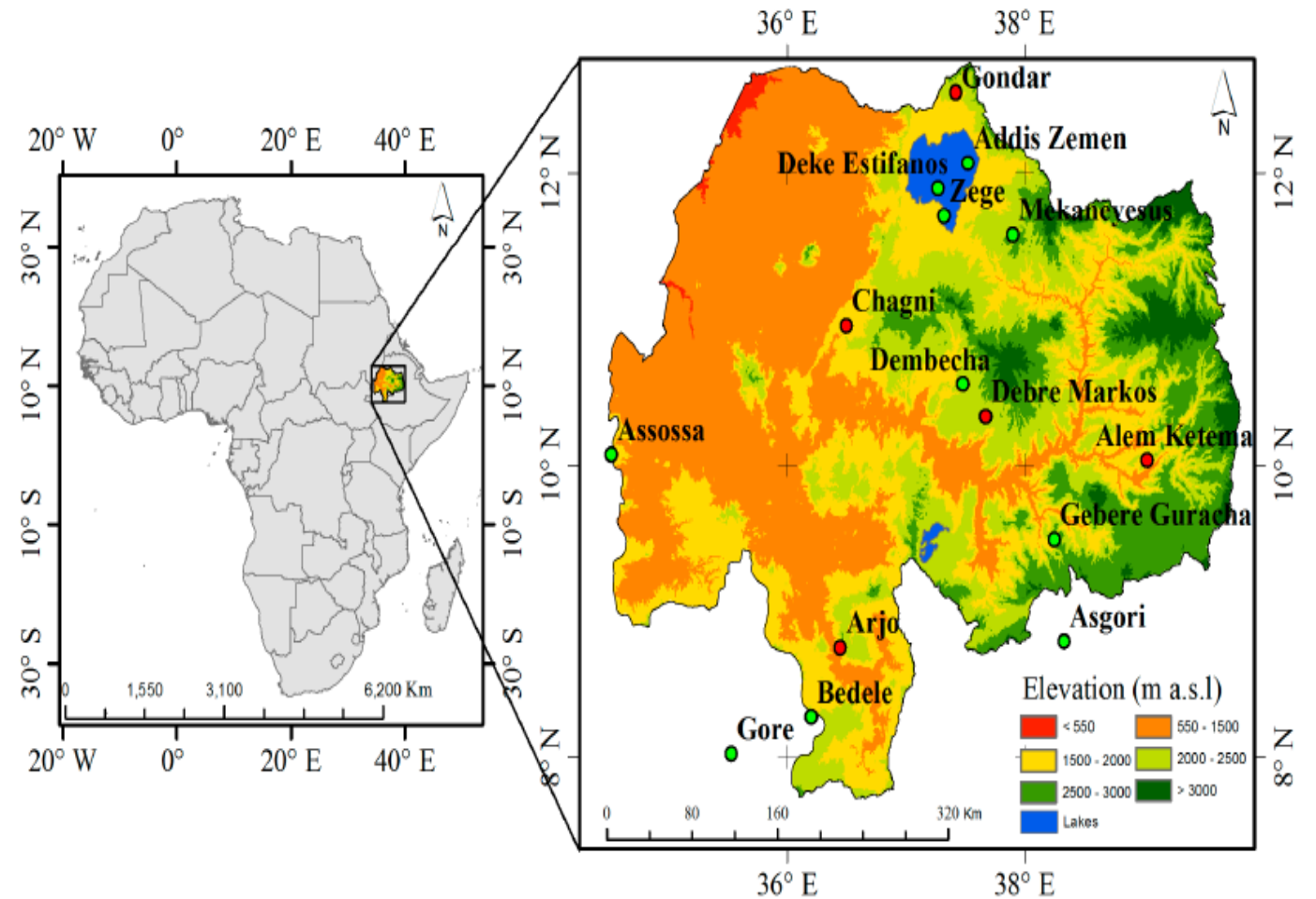
UNECA, Addis Ababa, Ethiopia

Outline of the Presentation

- Introduction
- Objectives
- Methodology
- Findings and Discussion
- Conclusion
- Recommendation

Location of the study area

- Located in north western Ethiopia
- Annual precipitation range (787 - 2200).
- The area is experiencing Climate variability. Teshome, M and Bay, A(2018).
- Dry spell were in 2002 and 2008.



Objectives

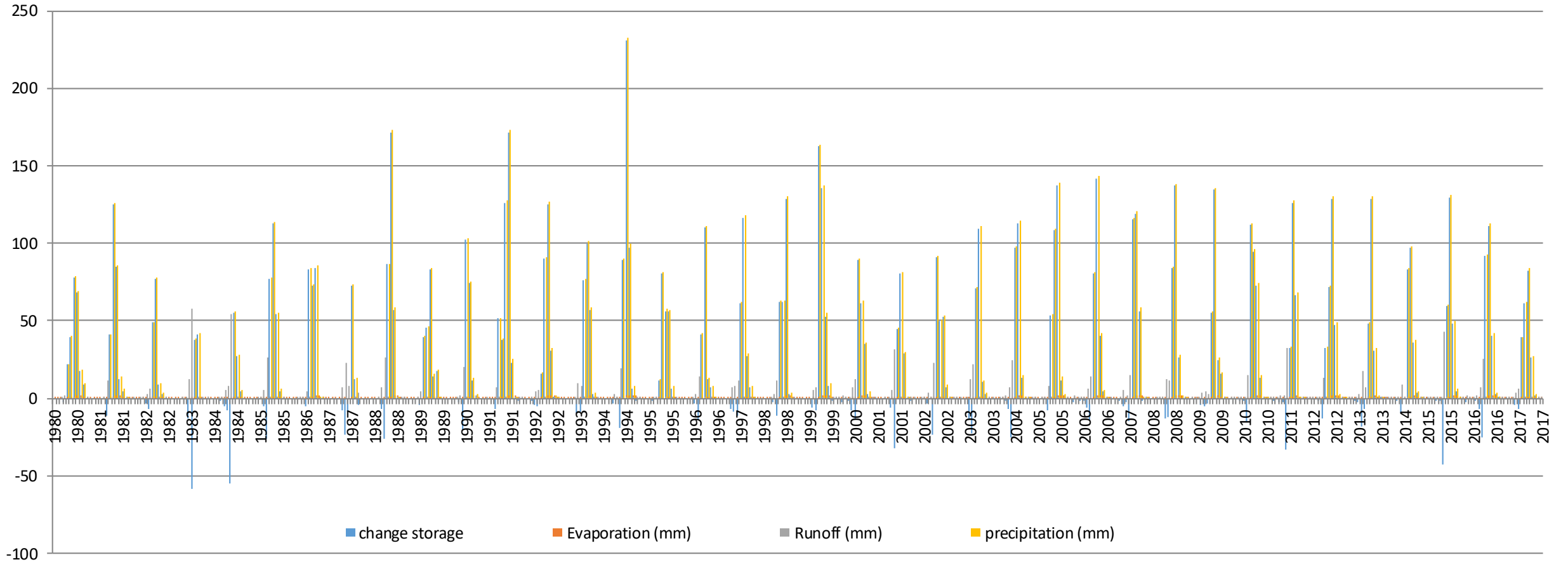
- Assessing the Meteorological Drought in the study area.
- Assessing risks associated with agricultural drought.
- Analyzing the impact of the Meteorological drought based on Water balance and Soil moisture

Methodology

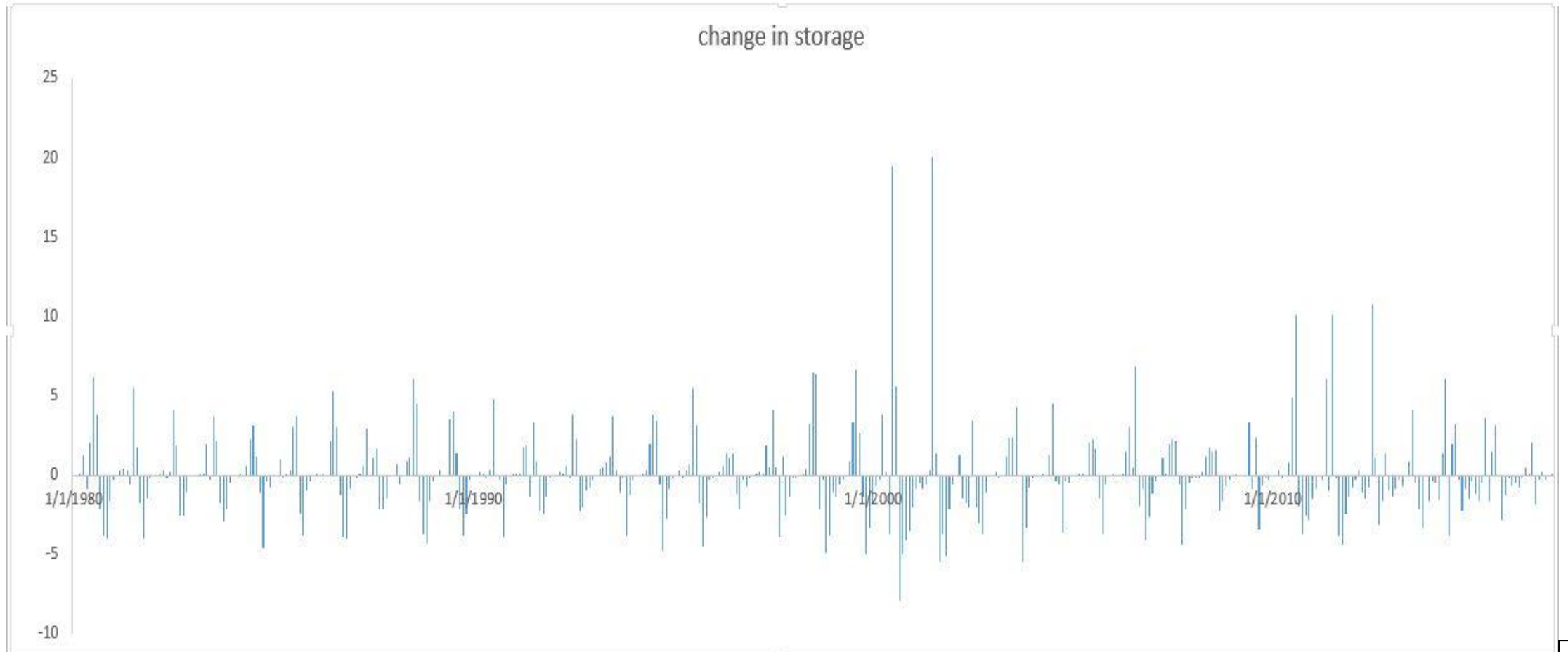
Data were taken from

- AFDM:
 - ✓ Soil moisture spots
 - ✓ Water balance
- Historical data's from the pervious studies
 - ✓ SPI Map for years 2006(baseline),2009 & 2015

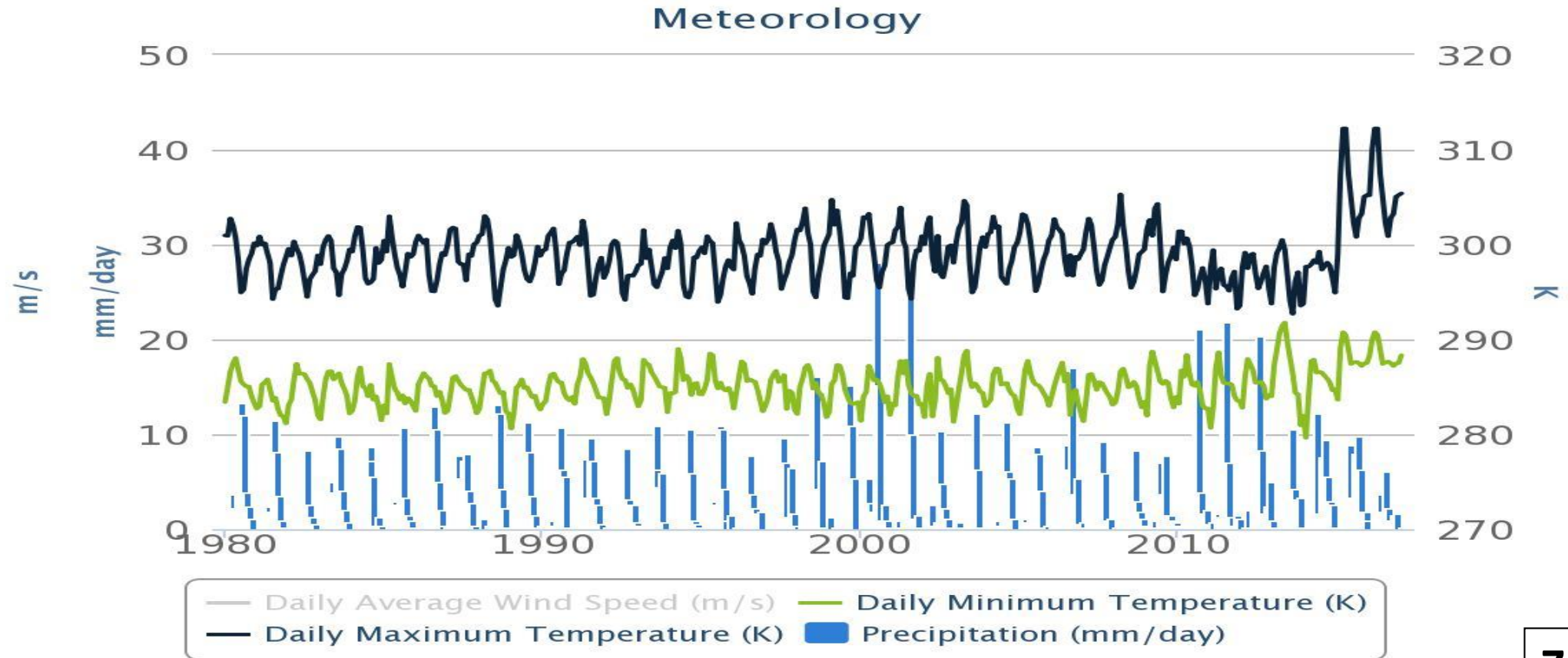
Water balance



Water Storage

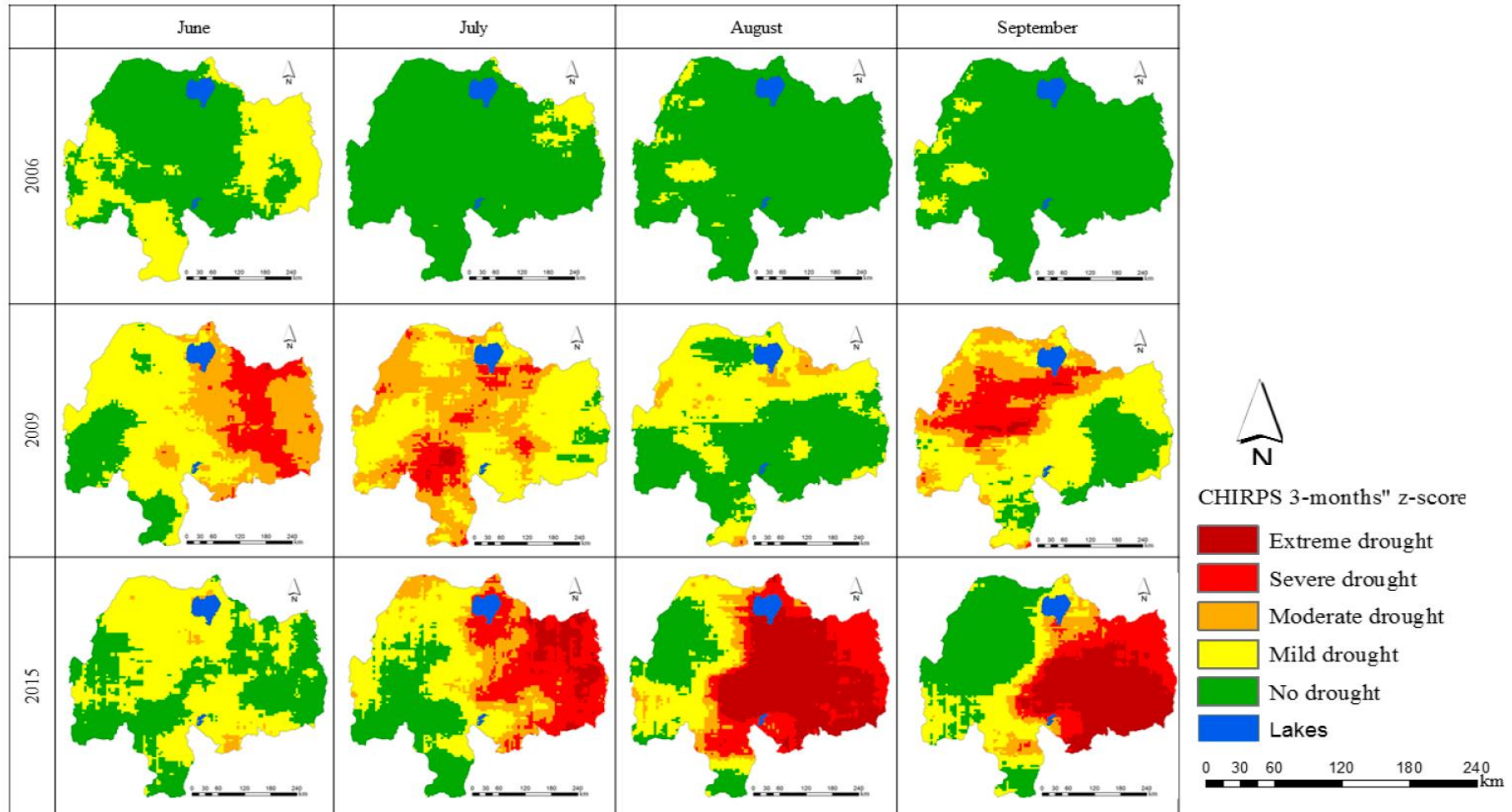


Meteorology AFDM



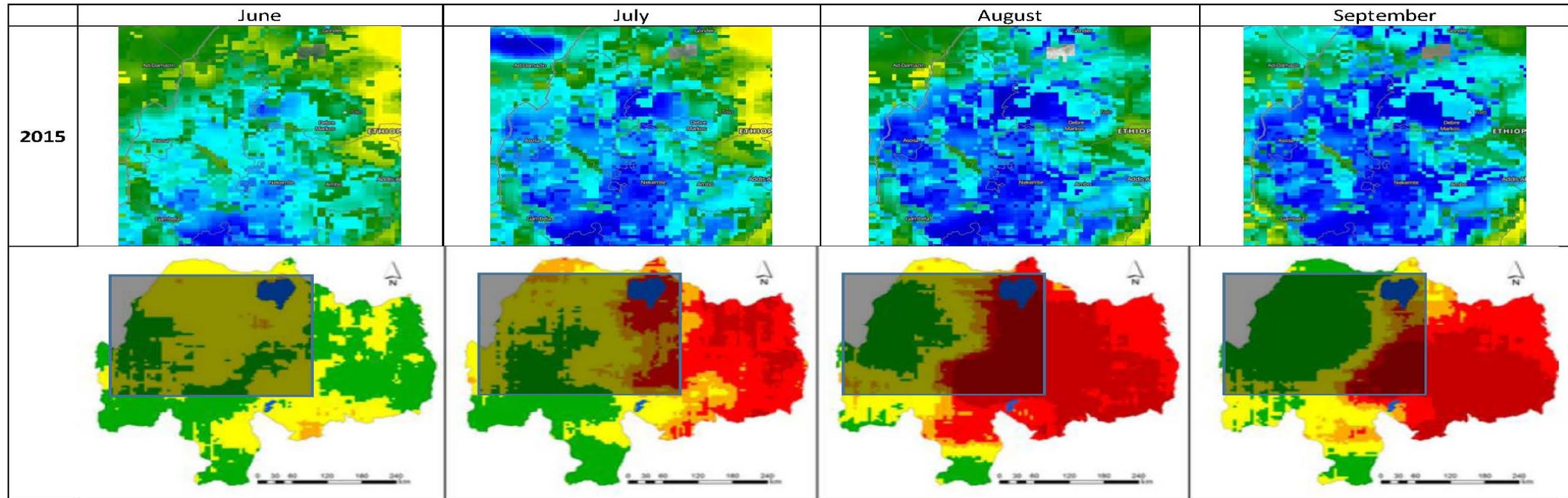
Highcharts

Meteorological drought (SPI-1)

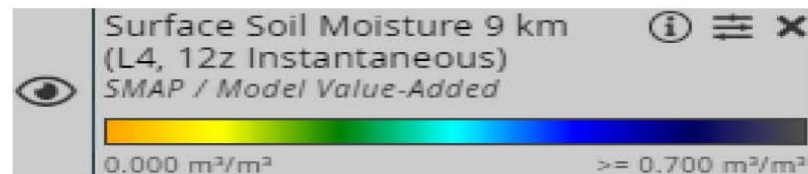


- Bayissa et al(2015)

Soil moisture



CHIRPS 3-months" z-score



Findings and Conclusions

- Historical Events of drought occurred in the study area.
- Risks are: Soil erosion, nutrient lost leading to poor agricultural productivity, loss of Biodiversity.
- Challenges
 1. No available data for soil moisture for 1984, 2006 & 2009.

Way Forward

- Developing Agro-climatic Advisory
- Adoption of rain water harvesting techniques for Agriculture
- Climate Smart Agriculture

**THANK YOU
FOR LISTENING**

**QUESTIONS
AND
COMMENTS**

