



Climate Services in Support of Climate Smart Agriculture and Food Security

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Some Definitions



1. Agriculture - inclusive of **crops, livestock**, forestry, fisheries and aquaculture (FAO).
2. Climate Smart Agriculture (FAO, 2010; the Davis Statement, 2013)
 - a) A crucial approach to responding to climate variability and change - providing wins in food security, climate change adaptation and mitigation
 - b) CSA entails improving and adapting practices, management, innovation, technology & financing to:



Some Definitions



- a) Increase productivity
- b) Enhance food and nutrition security
- c) Strengthen adaptive capacity and resilience of people, food production systems and ecosystems in agricultural landscapes
- d) CSA also seeks to reduce GHG emissions and increasing carbon storage in agricultural systems



Climate Services Required - Two Types of Information (Mungai & Stigter, 1995)



1. Long-term climate forecasts for agriculture – useful for strategic agricultural management decisions designed to:
 - Avoid, mitigate or exploit predictable/probable weather or weather induced conditions
2. Short-term forecasts – for tactical use (to address seasonal production factors – avoidance, protection and improvement)



Services Required



1. Rainfall (especially the balance between R and ET) is a key factor in agriculture
2. When are the rains coming? Where? Lead time very important for decision making by various stakeholders
3. What kind of rains are expected? Above or below normal?
4. The duration of the rains?
5. The distribution of the rains within the season?



Examples of Climate Smart Responses to a Weather Forecast



1. Soil & water management
2. Selection of appropriate crop varieties
3. Manipulate planting dates
4. Manipulate spacing
5. Mulching
6. Cover cropping



Examples of Climate Smart Responses to a Weather Forecast



8. Alteration in cropping patterns
9. Crop diversification
10. Nutrient management/change fertilizer application
11. Agro-forestry
12. Decrease number of livestock
13. Diversify/change/supplement
14. Insurance
15. Others?



Health Break



Thanks for Your Attention