Famine Early Warning Systems Network Monthly Forecast Review for Food Security Analysis

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and many many more
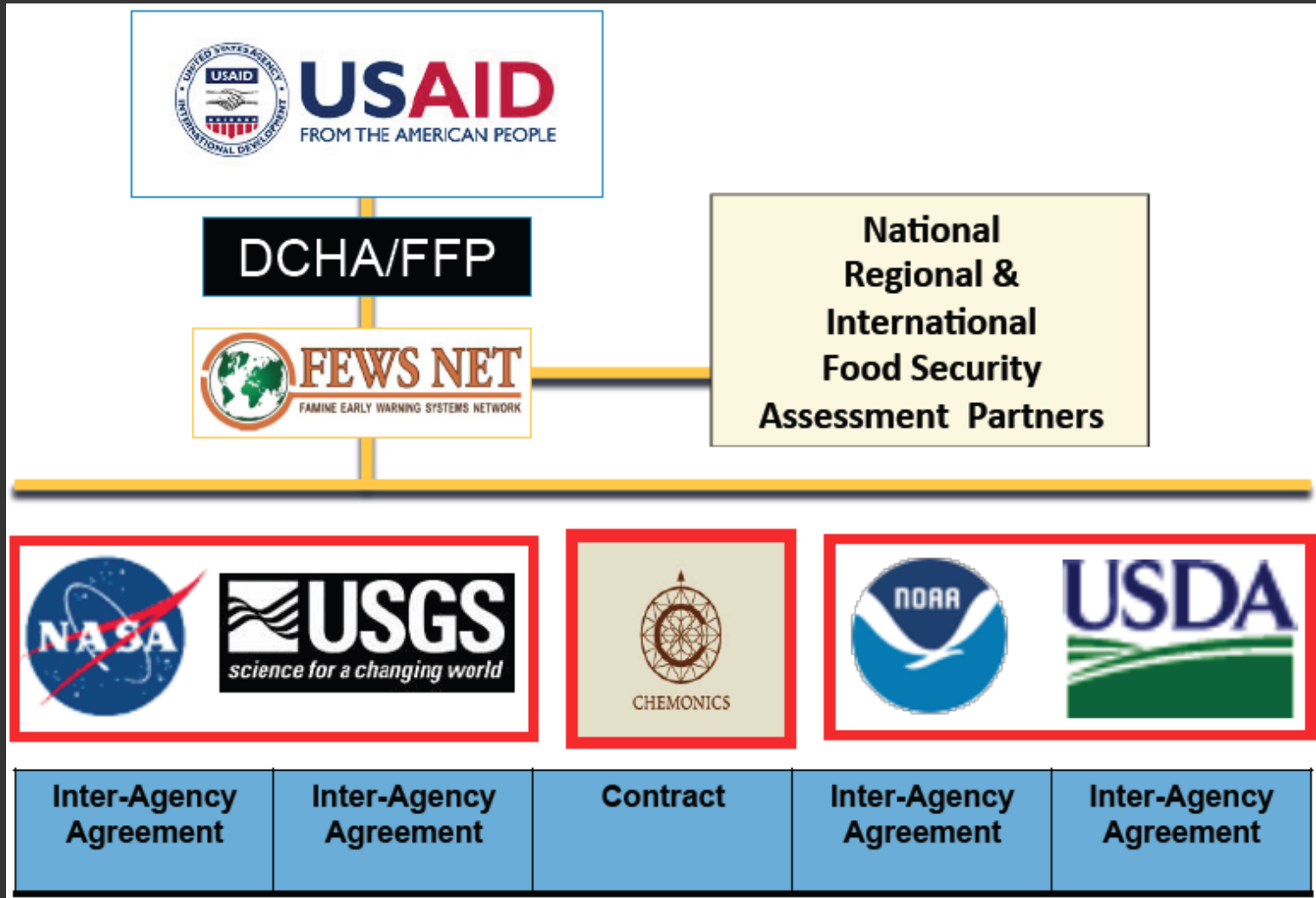
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The Famine Early Warning Systems Network
FEWS NET

FEWS NET Structure

FEWS NET Countries

4

FEWS NET Objectives

- **Real-time weather monitoring & early warning**
- **Agricultural assessments**
- **Livelihood adjustments & adaptations to climate trends**

Weather, climate and crop monitoring and assessment

Food markets and trade monitoring and assessment

- Market pricing
- Analyses of market structure, value-chains, commodity trade
- Cross-border trade

Food security decision support

- How households produce income & food
- How households consume food & income
- Coping strategies

Sub-national livelihood frameworks of food security

Health and nutrition

- Water & sanitation conditions
- Health care
- Morbidity

FEWS NET
Monthly Forecast Review

Forecast Review Overview

- **Purpose**
  - Aid the development of **agroclimatology assumptions** used by FEWS NET food security analysts
- **Regular Participants**
  - National Oceanographic and Atmospheric Administration
    - Climate Prediction Center
    - Earth System Research Laboratory
  - U.S. Geological Survey
  - University of California Santa Barbara
  - National Aeronautics and Space Administration
  - Caribbean Institute of Meteorology and Hydrology
- **Occasional Participants**
  - Princeton University

Concept of Agroclimatology Assumptions

- Used by food security analysts and national personnel to anticipate future climate conditions directly impacting crop conditions and yields

- Summarize the expected behavior of the climate in terms of temperature, precipitation, snowfall, soil moisture and runoff on various time scales
  - Temporal focus is typically for 3-6 month lead
  - Spatial focus is typically the country level

Assumption Development Process

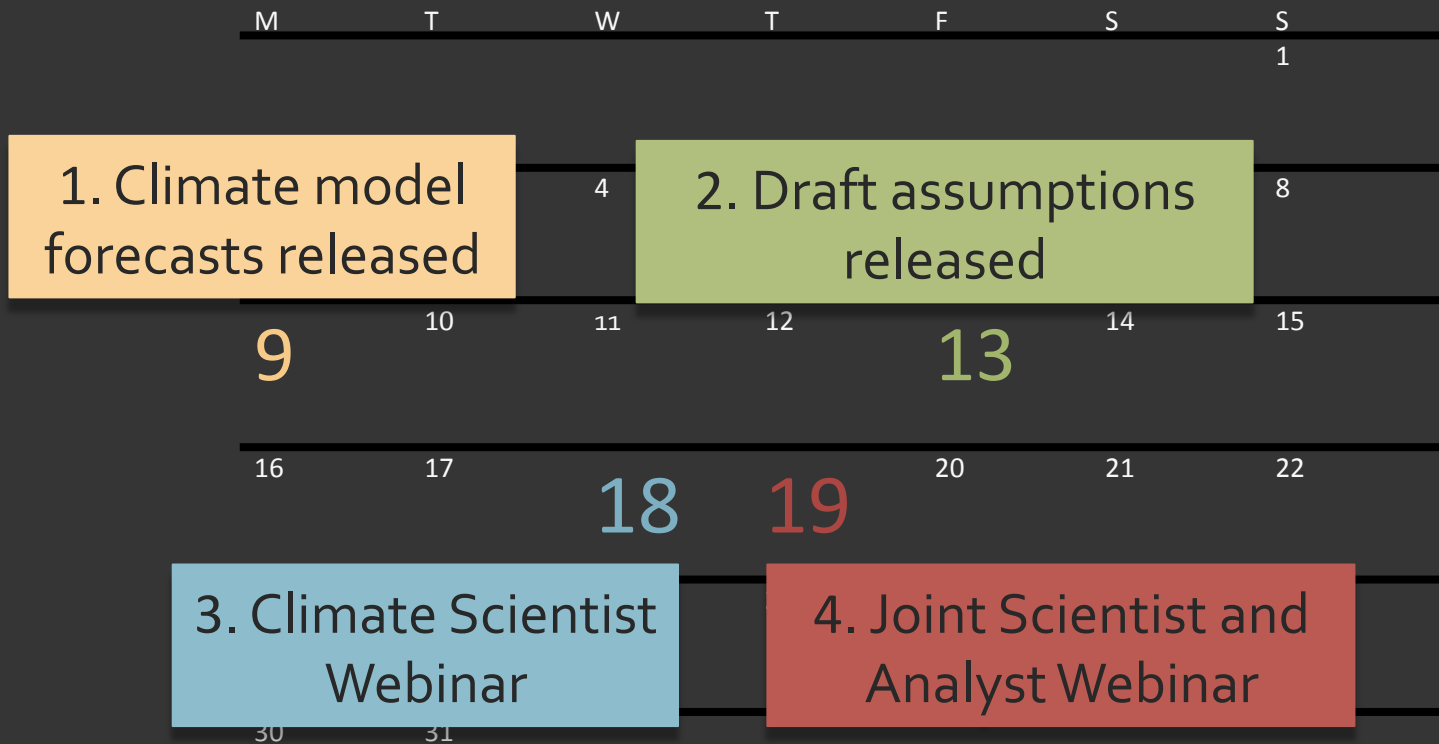| Step 1: Need	Step 2: Development	Step 3: Revision
National Personnel	Food Analysts	Scientists
Identify climate conditions necessary for specific crops and regions of interest 3-6 months in advance	Utilize seasonal climatology and climate modes	Complete assessment of climate variability and model output using scientific expertise

Assumption Example

Based on the recent Southern Africa Regional Climate Outlook Forum forecast, there is an enhanced probability of average to above average rainfall over the majority of the region during the October-March period. The exception is northern Democratic Republic of Congo (DRC) and northern Madagascar from October-December, DRC and northern Angola in November-January, and most of DRC and northern Angola in January-March, which are all likely to receive average to below average rainfall.

Forecast Review Example Calendar

November 2013

M	T	W	T	F	S	S
						1

1. Climate model forecasts released — **9**

2. Draft assumptions released — **13**

4						8
10	11	12	14	15		
16	17	**18**	**19**	20	21	22

3. Climate Scientist Webinar

4. Joint Scientist and Analyst Webinar

30	31

Scientist Webinar

- NOAA CPC presents the state of the global climate
- For each region, scientists present evidence supporting t confirmation or revision of the draft working assumptions
  - East Africa, Southern Africa, Central Asia, Central America and the Caribbean
- All participants comment and debate
- Consensus assumptions compiled

Analyst/Scientist Webinar

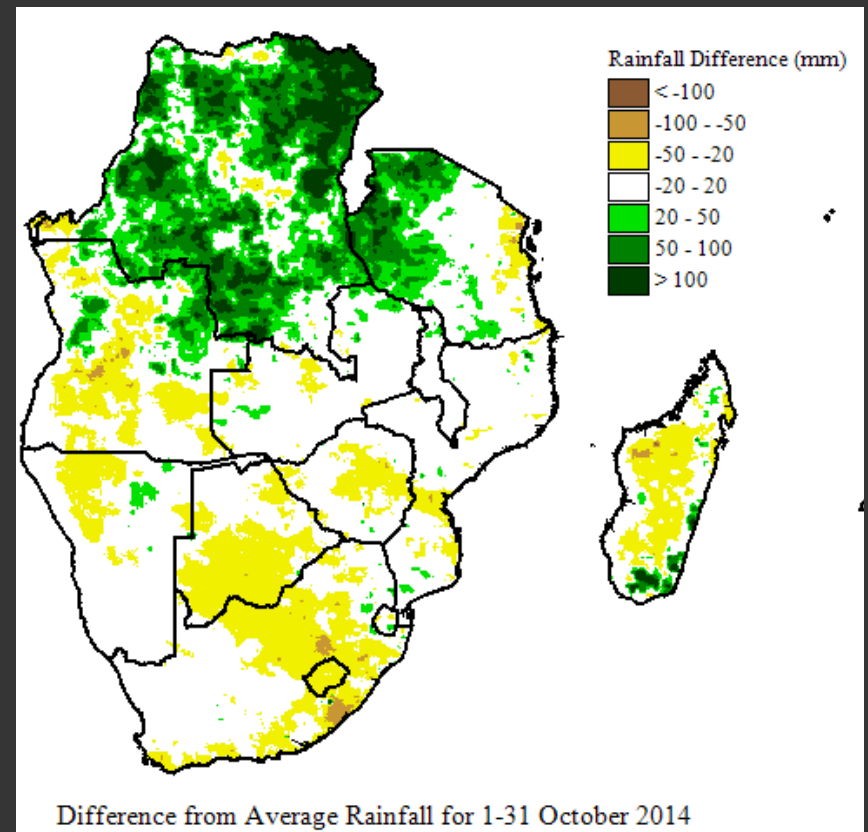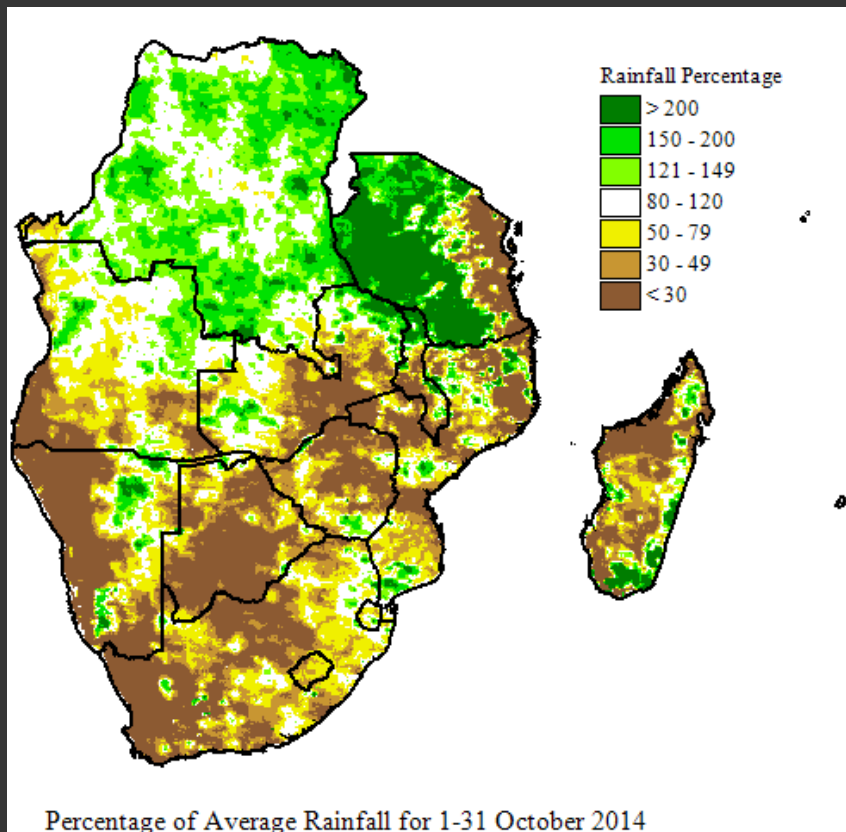Present revisions of the assumptions to food security analysts using likely climate scenarios as evidence

Example
Address an Agroclimatology Assumption for Southern Africa

Assumption Example

Based on the recent Southern Africa Regional Climate Outlook Forum forecast, there is an enhanced probability of average to above average rainfall over the majority of the region during the October-March period. The exception is northern Democratic Republic of Congo (DRC) and northern Madagascar from October-December, DRC and northern Angola in November-January, and most of DRC and northern Angola in January-March, which are all likely to receive average to below average rainfall.
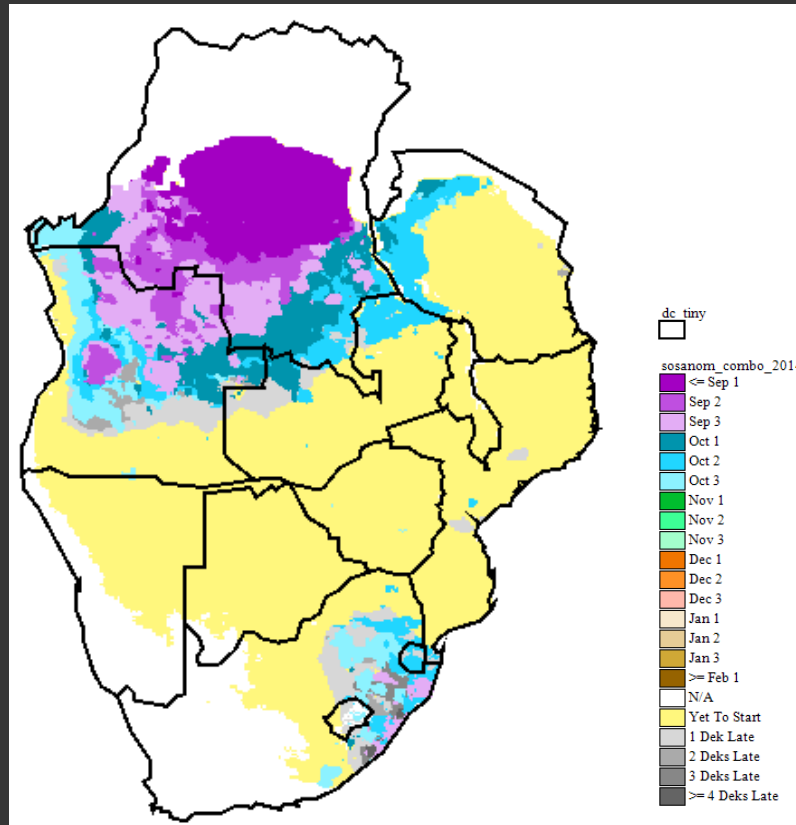
October Rainfall

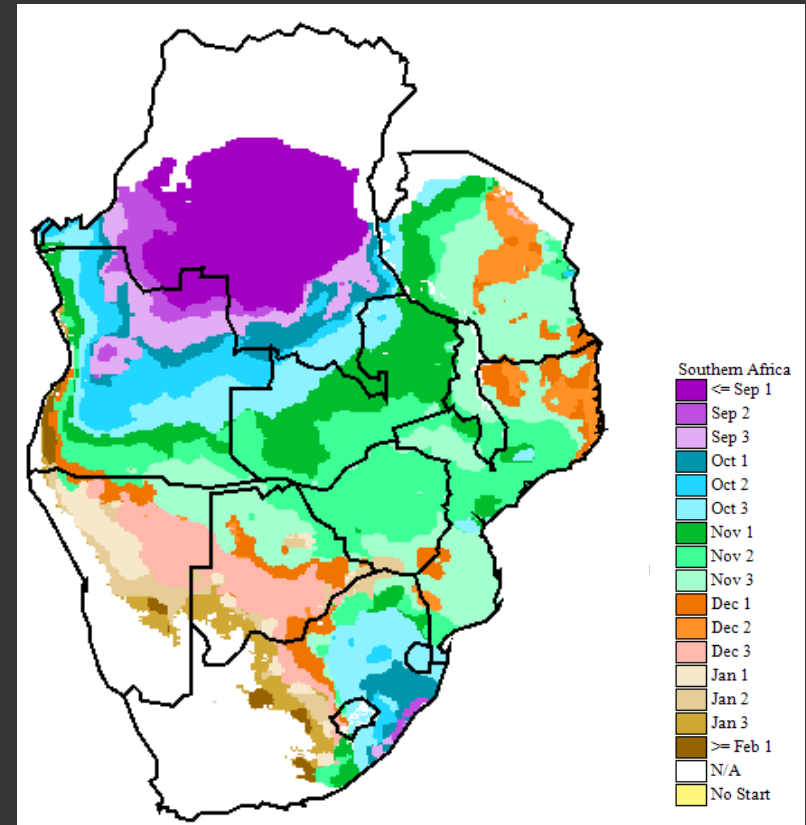## DRC/Tanzania = Good, Elsewhere = Not Good

Percentage of Average Rainfall for 1-31 October 2014

Rainfall Percentage
- > 200
- 150 - 200
- 121 - 149
- 80 - 120
- 50 - 79
- 30 - 49
- < 30

Difference from Average Rainfall for 1-31 October 2014

Rainfall Difference (mm)
- < -100
- -100 - -50
- -50 - -20
- -20 - 20
- 20 - 50
- 50 - 100
- > 100

Start of Season as of Nov. Dekad 1

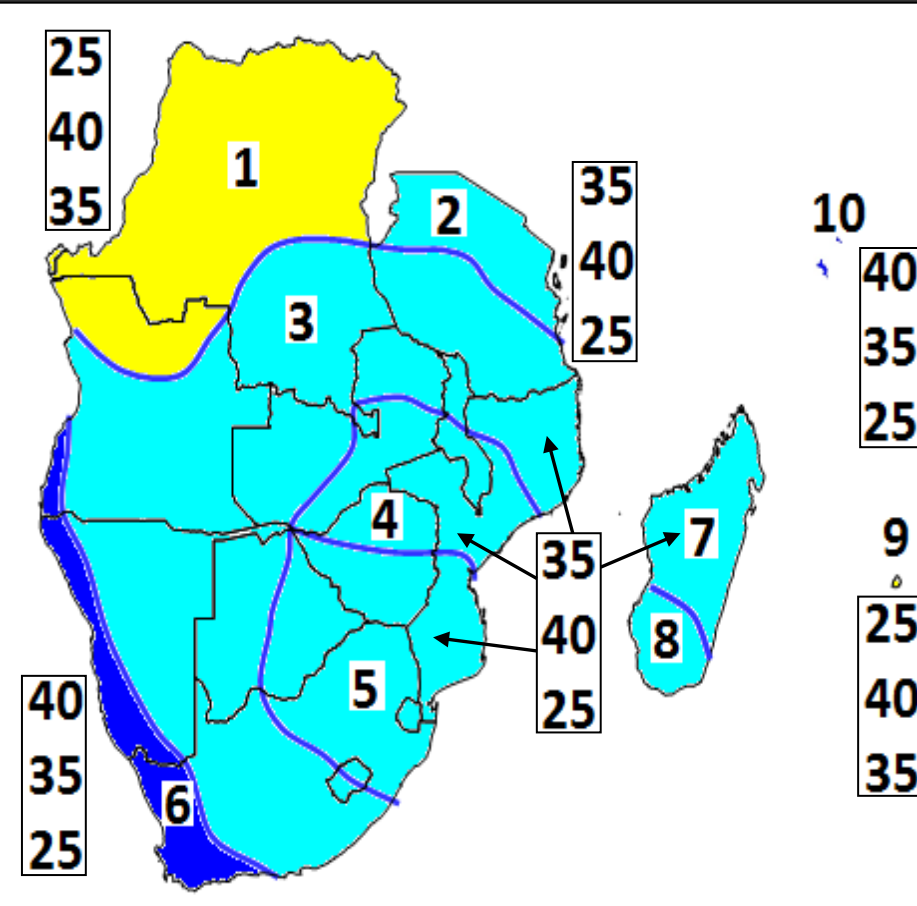## Season To Date

Average

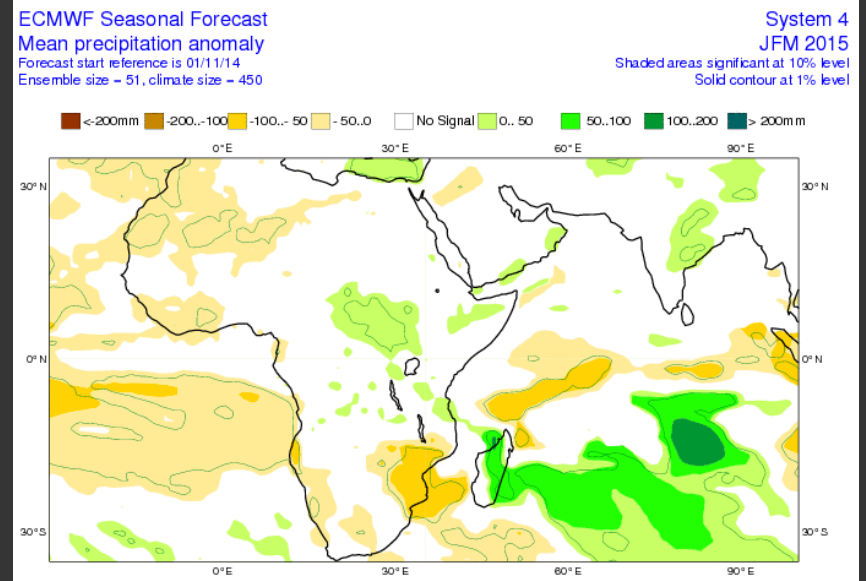# JFM Precipitation Forecast
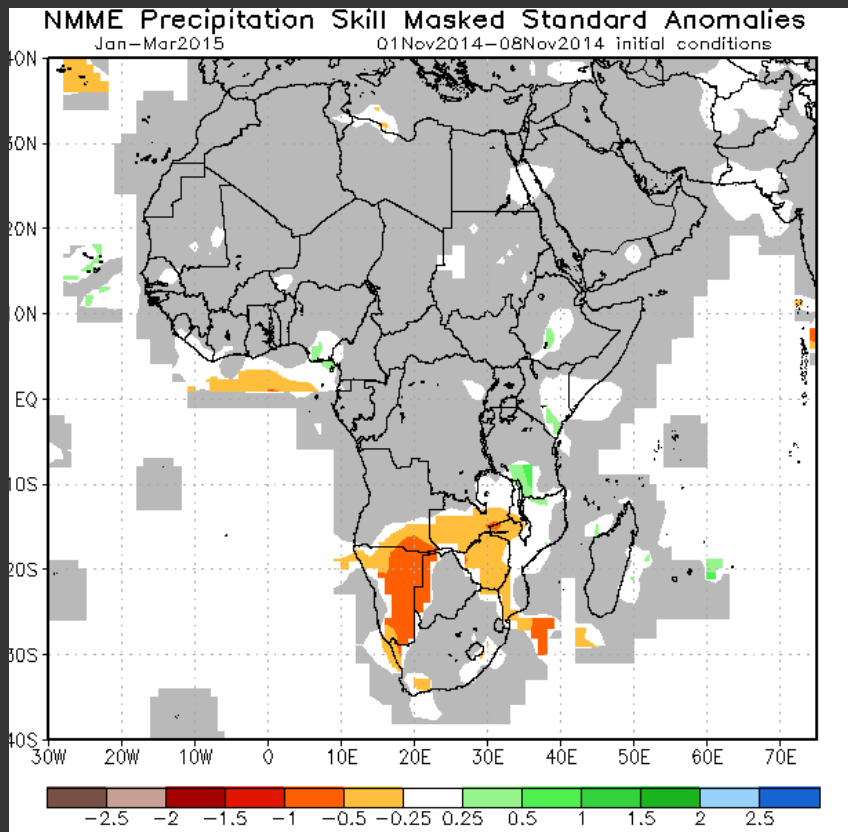
August SARCOF

November National
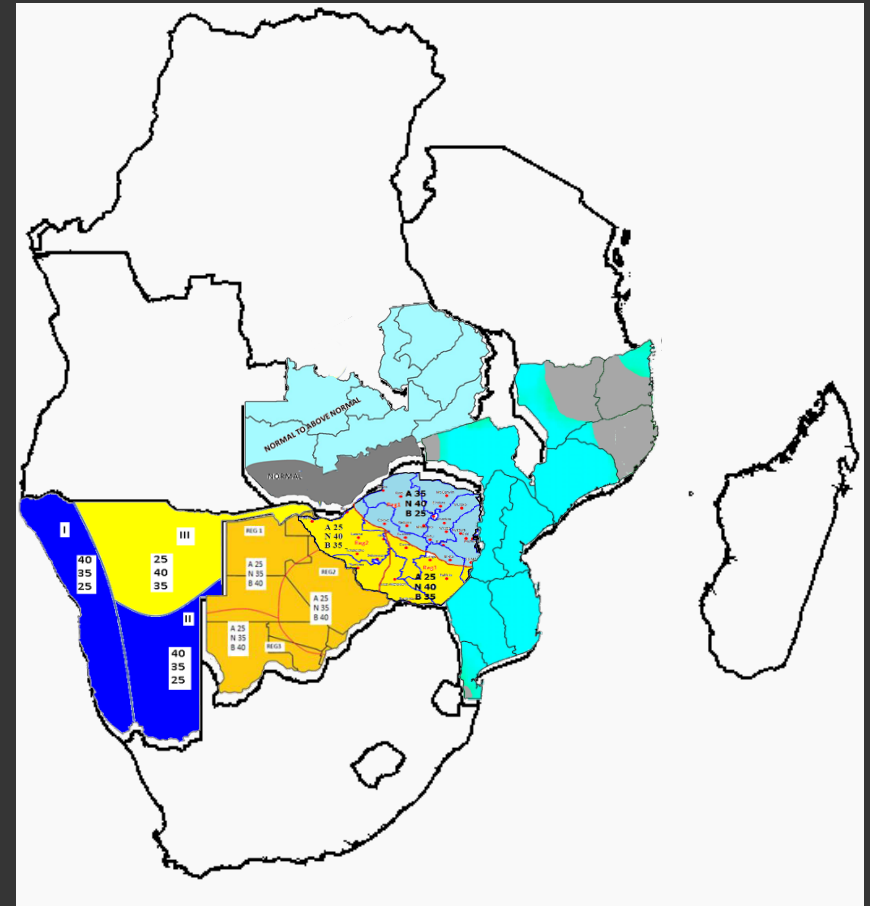
JFM Precipitation Forecast

NMME

ECMWF

Revised Assumption

Based on the recent ~~Southern Africa Regional Climate Outlook Forum forecast,~~ National forecasts and historically skillful model forecasts, there is an enhanced probability of average to ~~above~~ below average rainfall over the majority of the region during the October-March period. The exception is northern Democratic Republic of Congo (DRC) and northern Madagascar from October-December, DRC and northern Angola in November-January, and most of DRC and northern Angola in January-March, which are all likely to receive average to ~~below~~ above average rainfall.

FEWS NET
Monthly Forecast Review for Food Security Analysis

- Summarize expected climate in terms of temperature, precipitation, snowfall, soil moisture and runoff, and their impacts on crops over the next 3 to 6 months

- Used by food security analysts and national personnel to help construct scenarios of food insecurity over the next 3 to 6 months