



The Role of the Meteorological Services Department in Seasonal Forecasting

Linia Gopo – Climate Applications

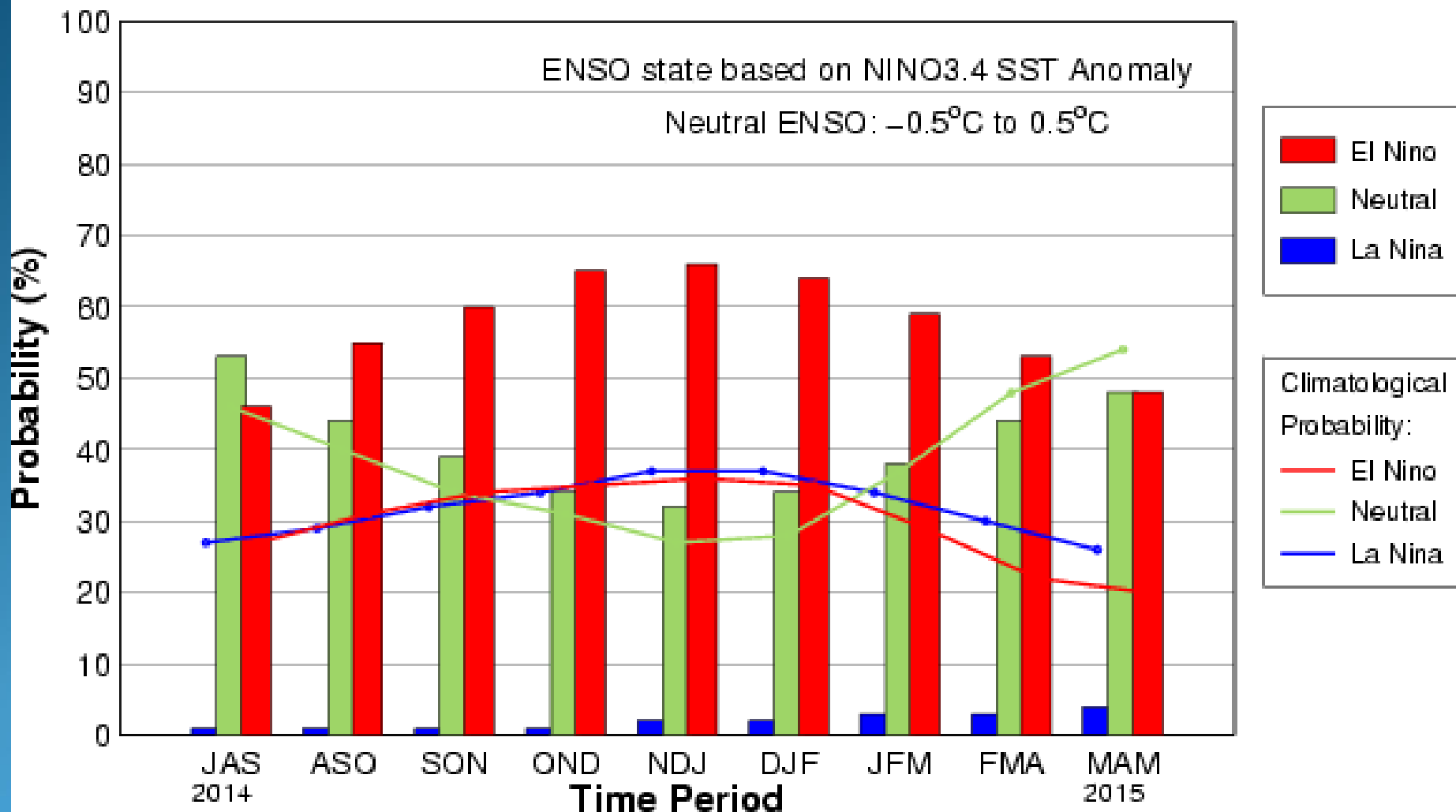


▶ SEASONAL CLIMATE FORECAST INDICATORS

- **Southern Oscillation Index (SOI)..(ENSO)**
- **SSTS**
- **PRIOR HEATING (e.g. A hot September and October is an indicator for a good summer rainfall season)**
- **WINDS**
- **WESTERLY CLOUD BANDS**
- **TELECONNECTIONS**
- **TRADITIONAL INDICATORS**

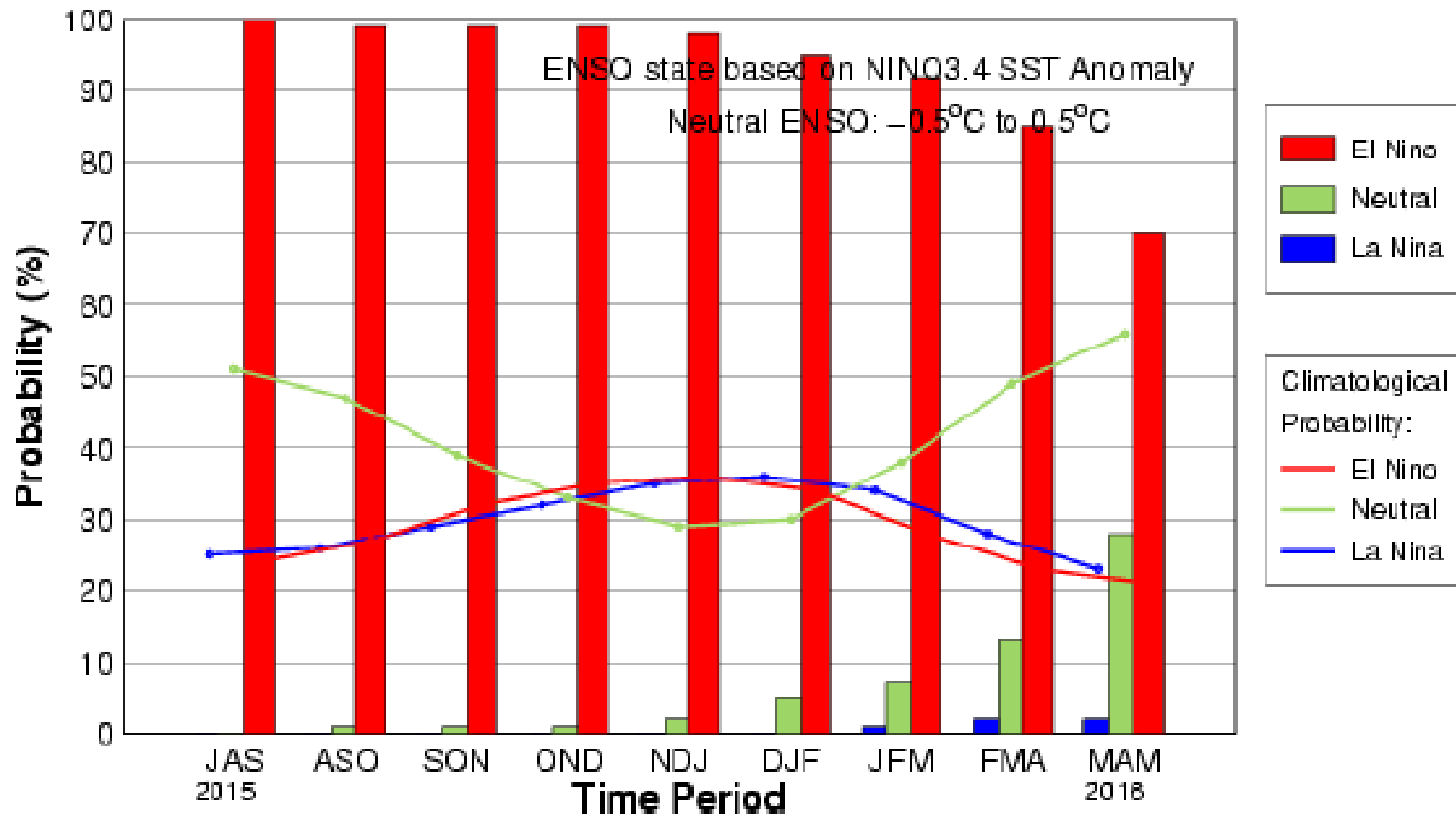
Probabilistic CPC ENSO Outlook for 2014/2015

Early-Aug CPC/IRI Consensus Probabilistic ENSO Forecast

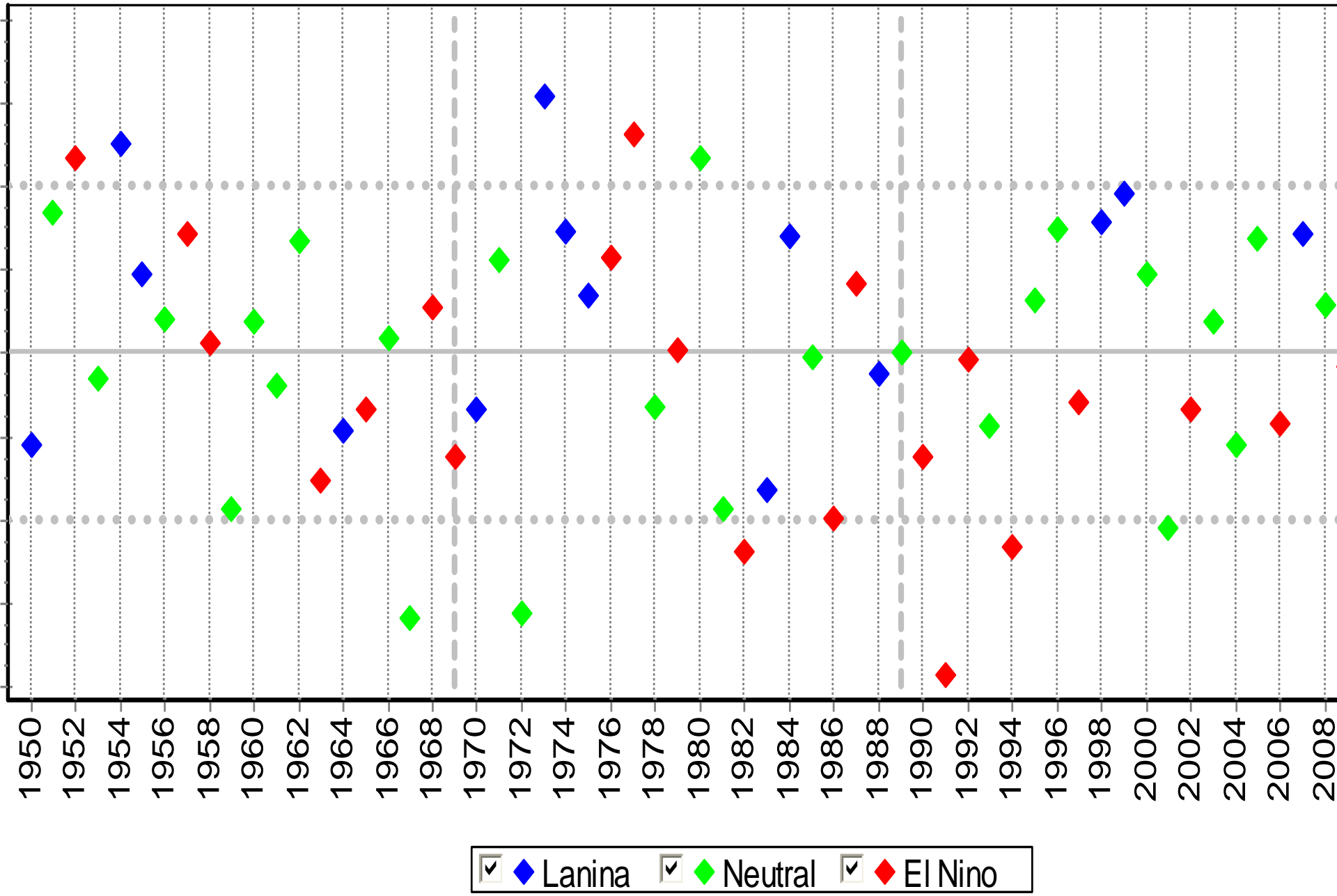


Probabilistic CPC ENSO Outlook for 2015/2016

Early-Aug CPC/IRI Consensus Probabilistic ENSO Forecast



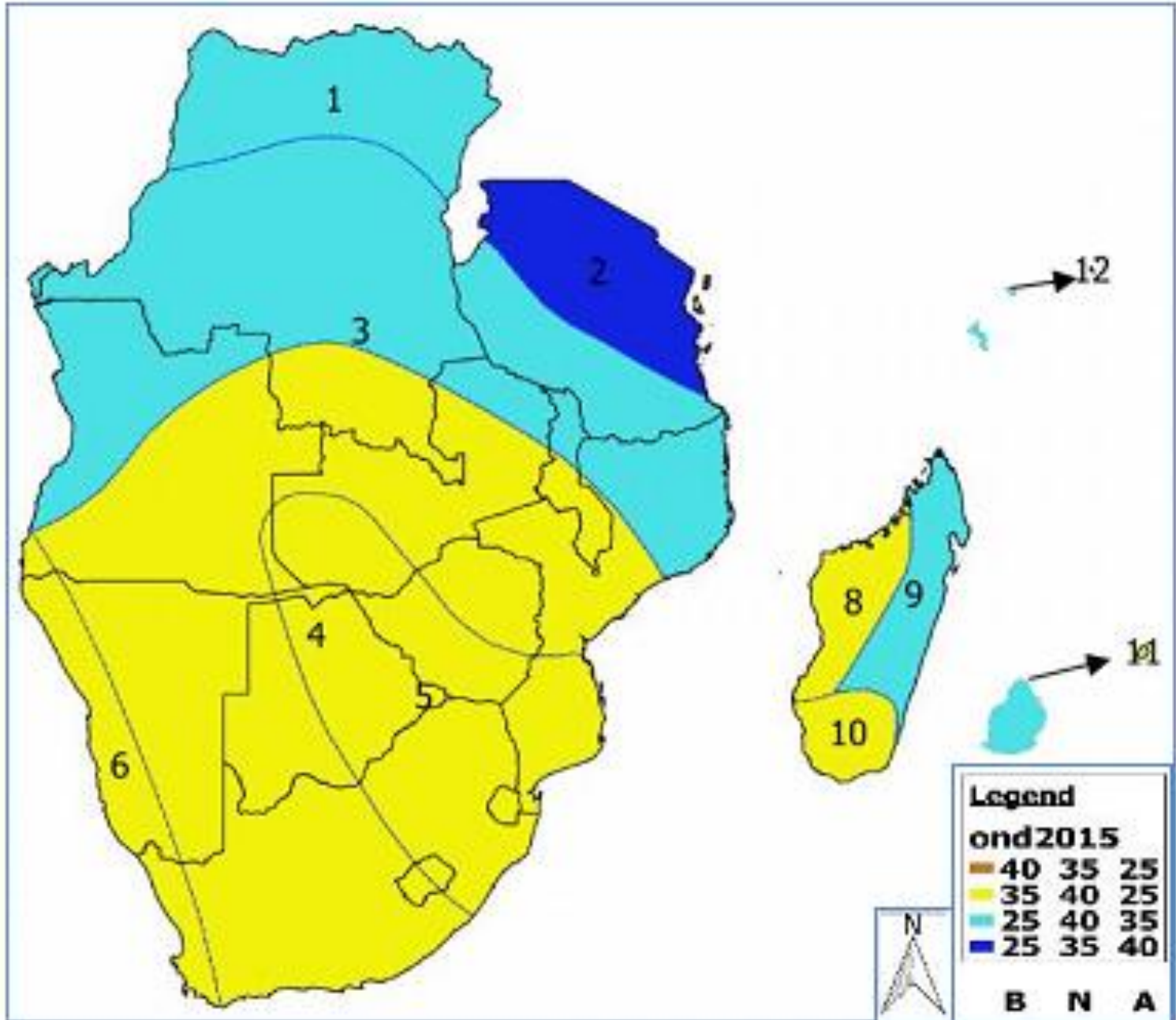
ENSO vs SPI Scatter plot for Seasons 1950/1951 to 2009/2010



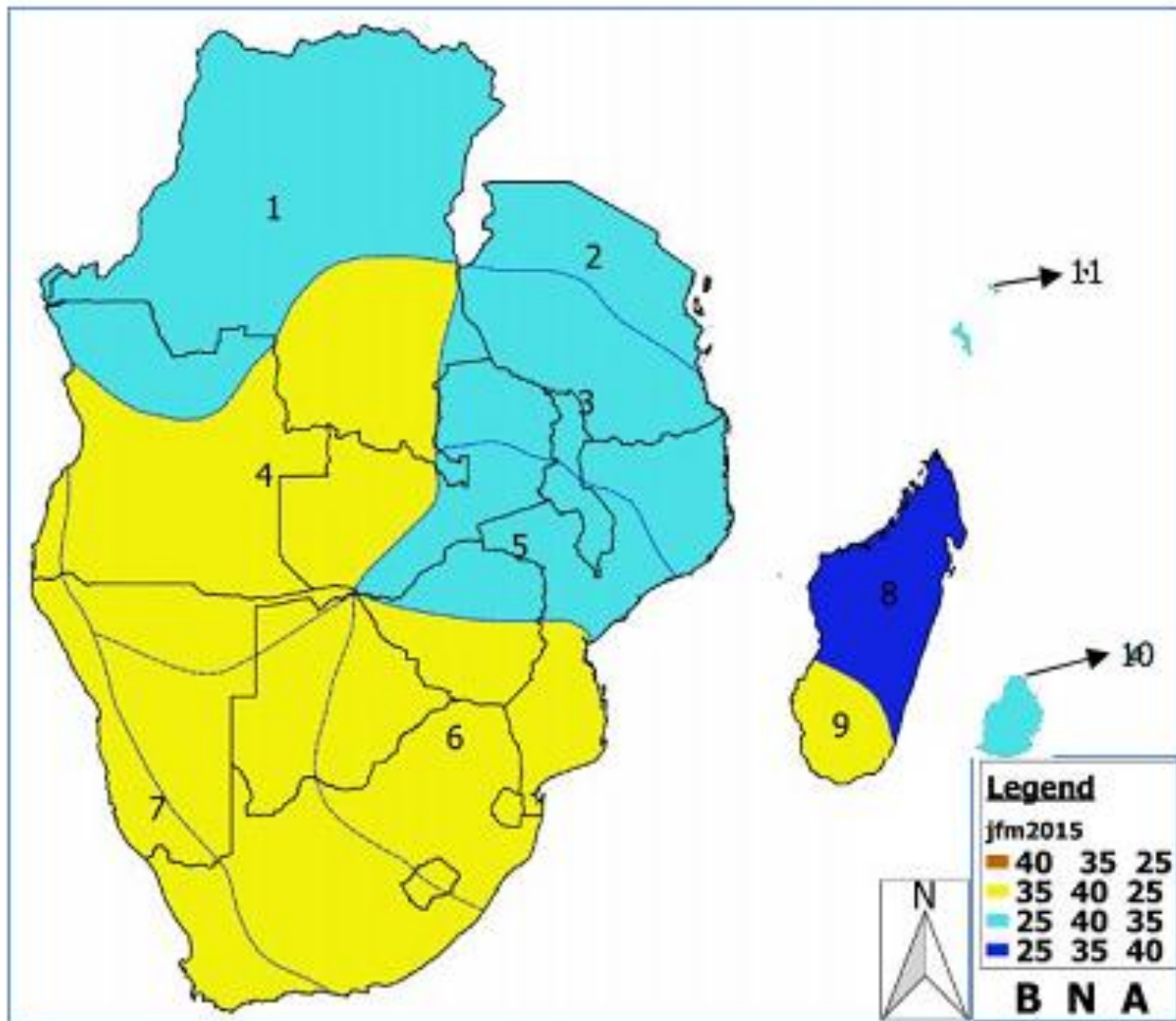
ENSO versus Zimbabwe rainfall

	Above Normal		Below Normal		Total
El Nino	8	38%	13	62%	21
La Nina	10	67%	5	33%	15
Neutral	13	54%	11	46%	24
					60

OCTOBER-NOVEMBER-DECEMBER 2015



JANUARY-FEBRUARY-MARCH 2016



Homogeneous Zones (Oct- December 2015)

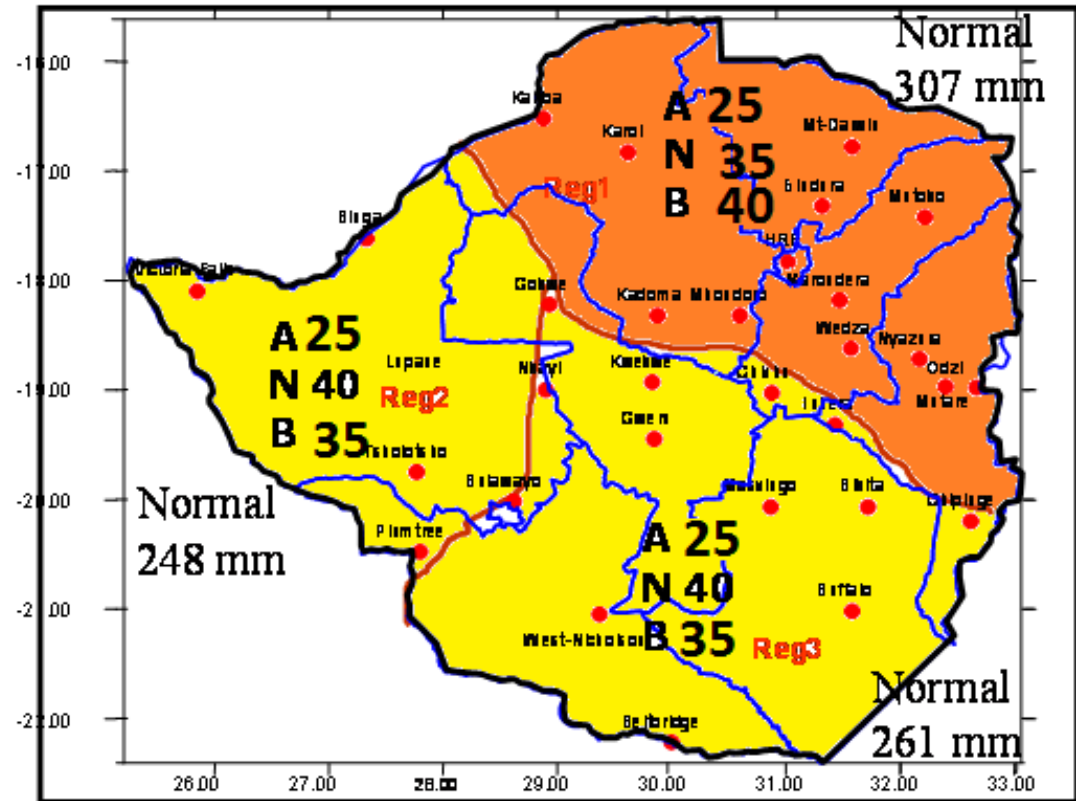
- **Region 1**
Harare, much of Mashonaland East, Mashonaland West, Mashonaland Central, northeastern parts of Midlands, parts Manicaland

Below normal rainfall expected

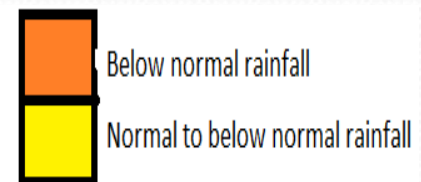
- **Region 2 & 3**
Region 2 The bulk of Matabeleland North, parts of Midlands and parts of Mashonaland West.

Region 3 Masvingo, the bulk of Midlands, the extreme southern parts of Manicaland and the bulk of Matabeleland South.

Normal rainfall with a bias towards below normal rainfall is expected



A: Probability of above normal rainfall
N: Probability of normal rainfall
B: Probability of below normal rainfall



Homogeneous Zones (Nov-Dec 2015-Jan 2016)

- Region 1 & 2**

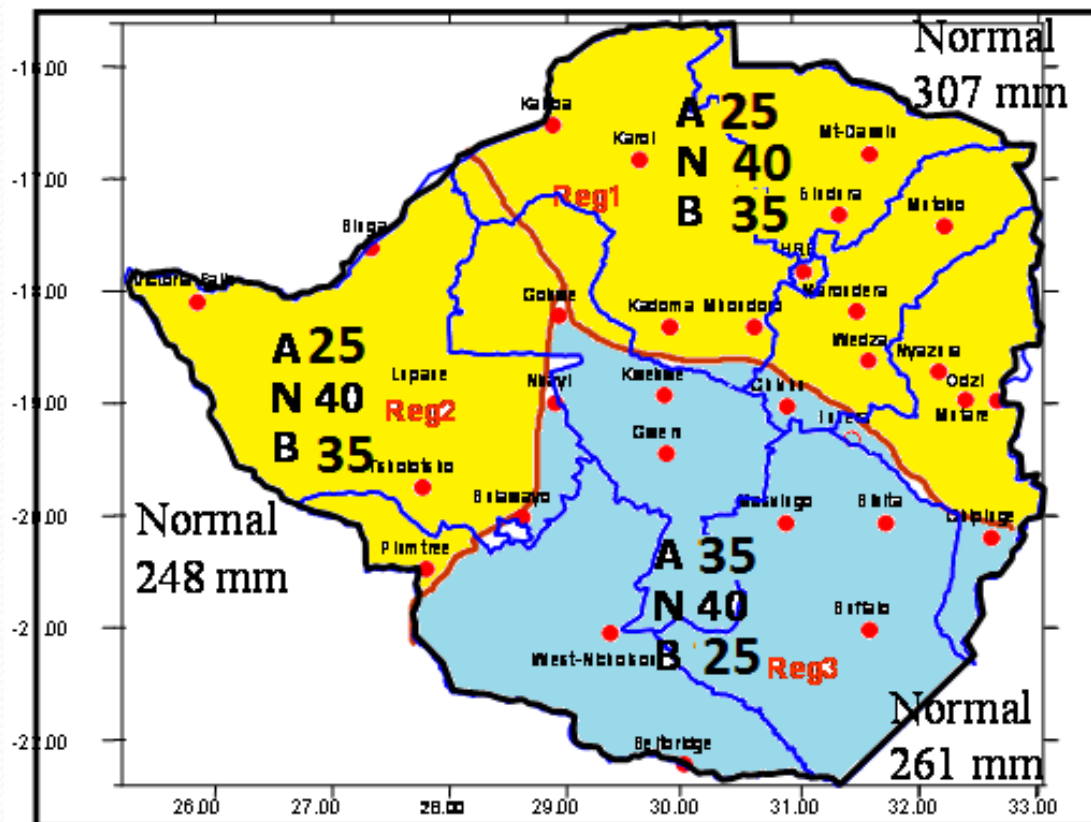
Region 1 Harare, much of Mashonaland East, Mashonaland West, Mashonaland Central, northeastern parts of Midlands, parts Manicaland

Region 2 The bulk of Matabeleland North, parts of Midlands and parts of Mashonaland West.

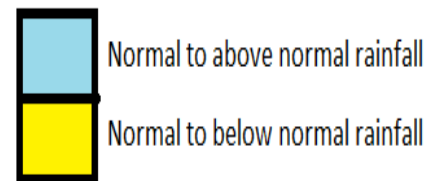
Normal rainfall with a bias towards below normal rainfall is expected

- Region 3** Masvingo, the bulk of Midlands, the extreme southern parts of Manicaland and the bulk of Matabeleland South.

Normal rainfall with a bias towards above normal rainfall expected



A: Probability of above normal rainfall
 N: Probability of normal rainfall
 B: Probability of below normal rainfall



Homogeneous Zones (Dec-Feb 2015-Jan 2016)

Region 2 The bulk of Matabeleland North, parts of Midlands and parts of Mashonaland West.

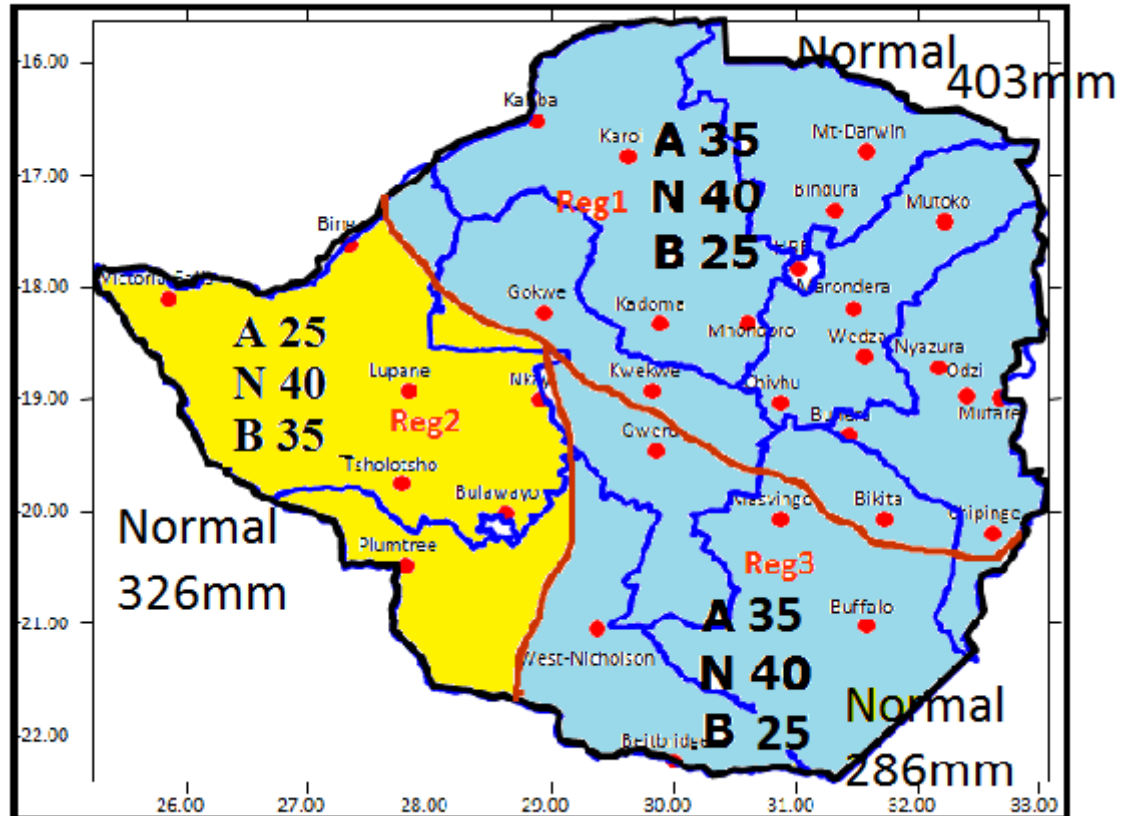
- **Normal rainfall with a bias towards below normal rainfall is expected**

- **Region 1 & 3**

Region 1 Harare, much of Mashonaland East, Mashonaland West, Mashonaland Central, northeastern parts of Midlands, parts Manicaland

- **Region 3** Masvingo, the bulk of Midlands, the extreme southern parts of Manicaland and the bulk of Matabeleland South.

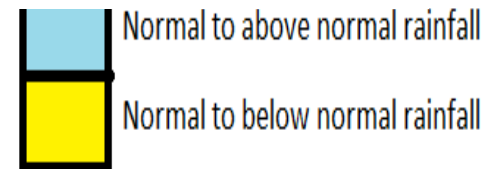
Normal rainfall with a bias towards above normal rainfall expected



A: Probability of above normal rainfall

N: Probability of normal rainfall

B: Probability of below normal rainfall



Homogeneous Zones (Jan- March 2016)

- **Region 1** Mashonaland Provinces, Harare, most of Manicaland, northern parts of Masvingo and northern parts of Midlands.

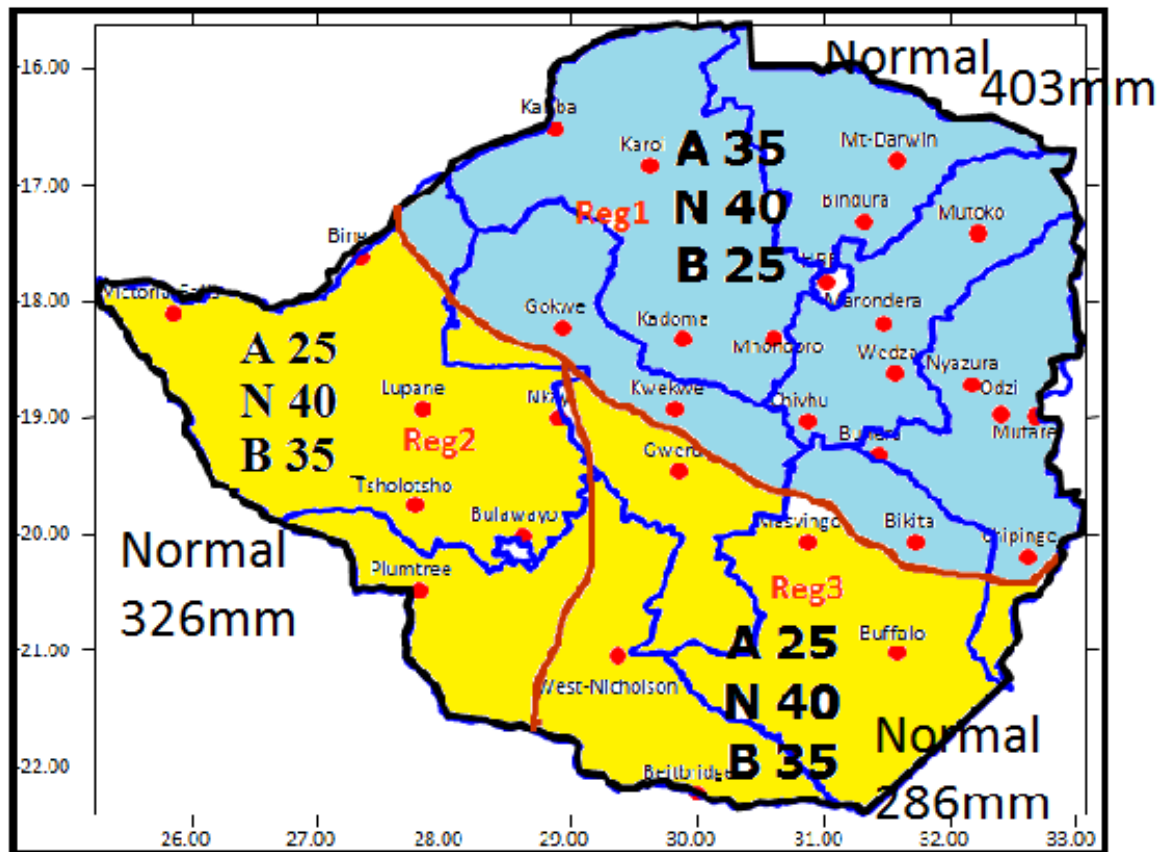
Normal rainfall with a bias towards above normal rainfall expected

- **Regions 2 and 3**

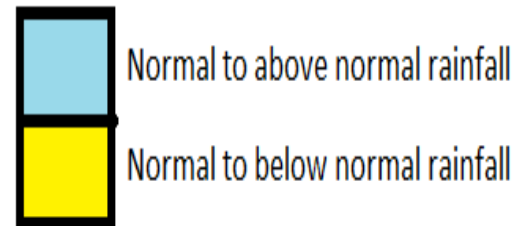
Region 2 Most of Matabeleland North, northwest Matabeleland South, Bulawayo.

Region 3 Most of Masvingo, the extreme southern parts of Manicaland, southeast Matabeleland South and the southern parts of Midlands

Normal rainfall with a bias towards below normal rainfall is expected



A: Probability of above normal rainfall
 N: Probability of normal rainfall
 B: Probability of below normal rainfall



Implications of the forecast for the 2015/16 rainfall season

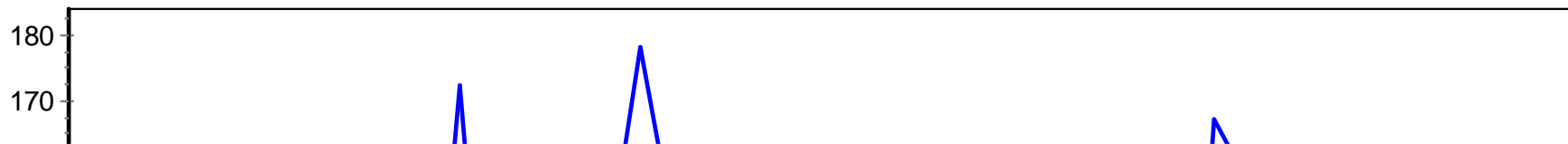
- There is a high likelihood of a **late start** to the season for the whole country.
- A **short summer rainfall season** (December to February) is expected especially over Region 1.
- Hence an option for small grains, short season variety and staggering plants would be encouraged (Agric)
- There is need to **enhance rainfall** this season as such the national cloud seeding programme is highly recommended.

Implications cont.....

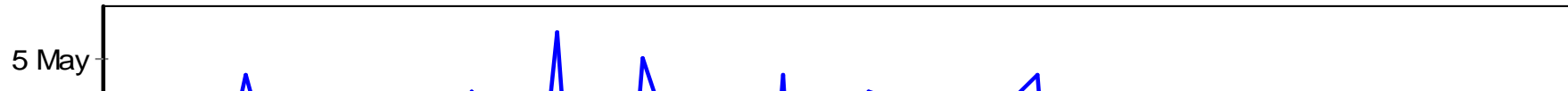
- For those with livestock
 - (a) water points should be preserved and protected and
 - (b) livestock destocking should be given more consideration and done timeously to avoid losses.
- It is still possible to harvest grass for fodder in those areas where forest fires have not And those with access to dams with water should compliment their farming with **irrigation**.
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Some Agrometeorological Products

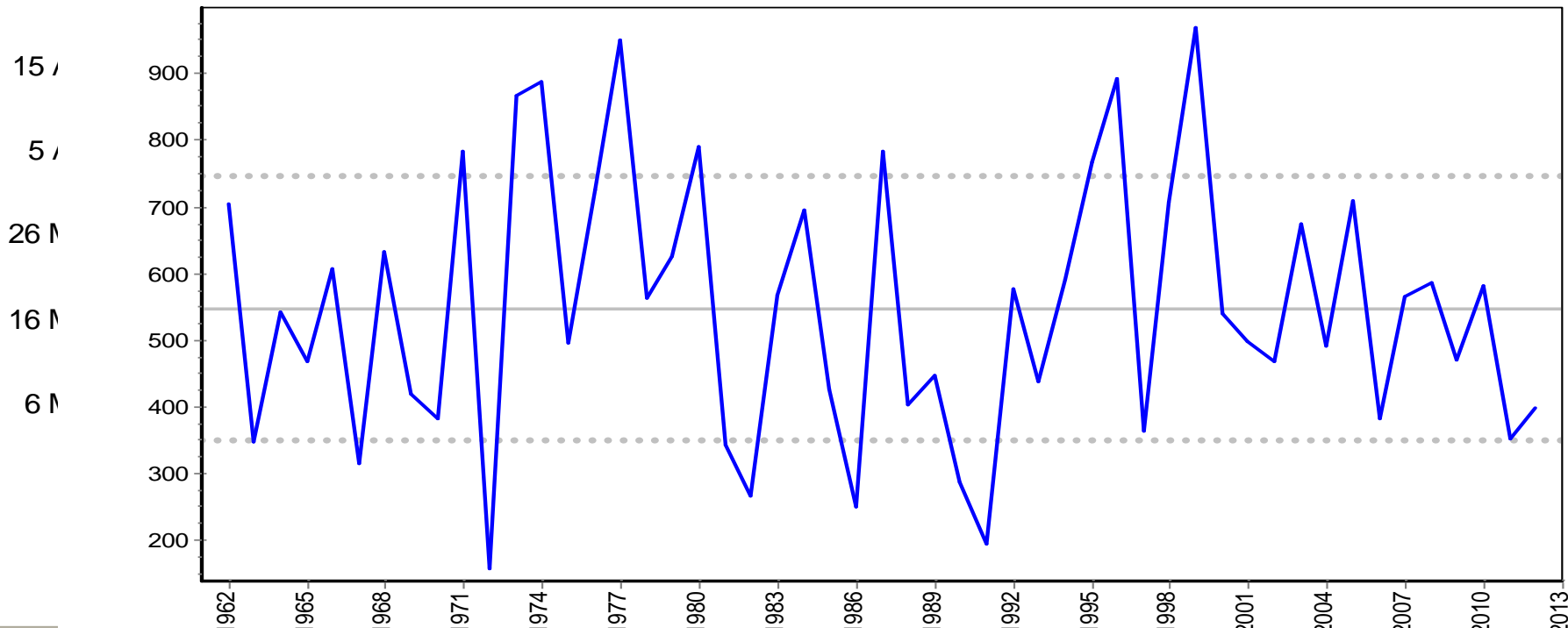
Season length for Zvishavane



End of Season for Zvishavane



Seasonal total for Zvishavane



THANK YOU!!

NDATENDA