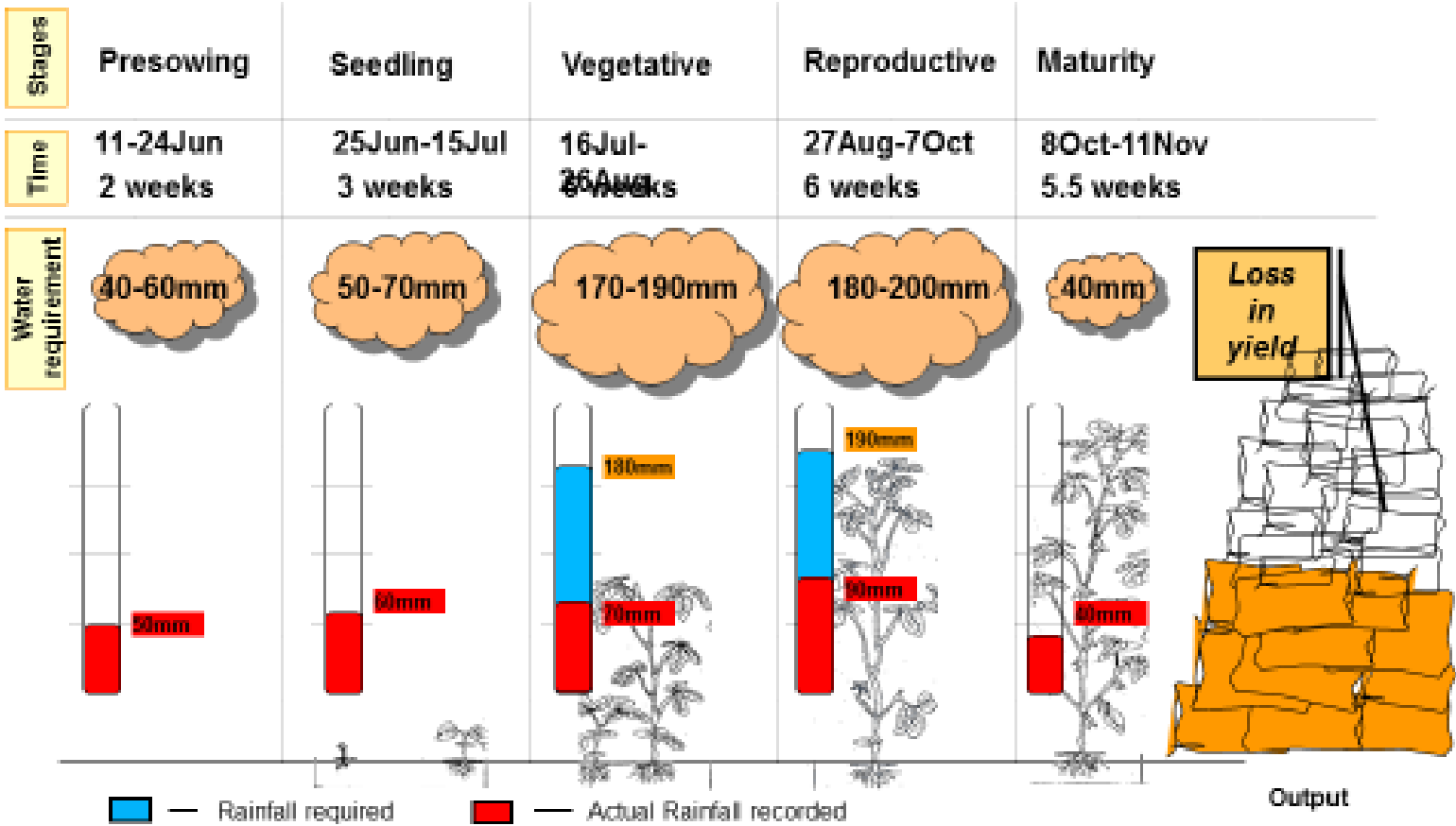


Needs & Weather forecast

# Deviation in Rainfall and Impact on Yield



» weather



Mountain View, CA

Use my location

Choose a location ▾



64°F | °C

65° 48°

Partly Cloudy

Humidity: 41%

Wind: 4 mph

0%

1pm

4pm

7pm

10pm

1am

Tue



69° 48°

Wed



70° 50°

Thu



68° 47°

Fri



66° 43°

[National and Local Weather Forecast, Hurricane Radar and Report](#)

# The Weather

English Vocabulary



## RAIN

drizzle  
showers  
rain  
downpour  
flood



## CLOUDS

cloudy  
gloomy  
foggy  
overcast  
clear

## COLD

hail  
sleet  
snow  
snowflake  
blizzard



## WIND

breeze  
blustery  
windy  
gale  
hurricane

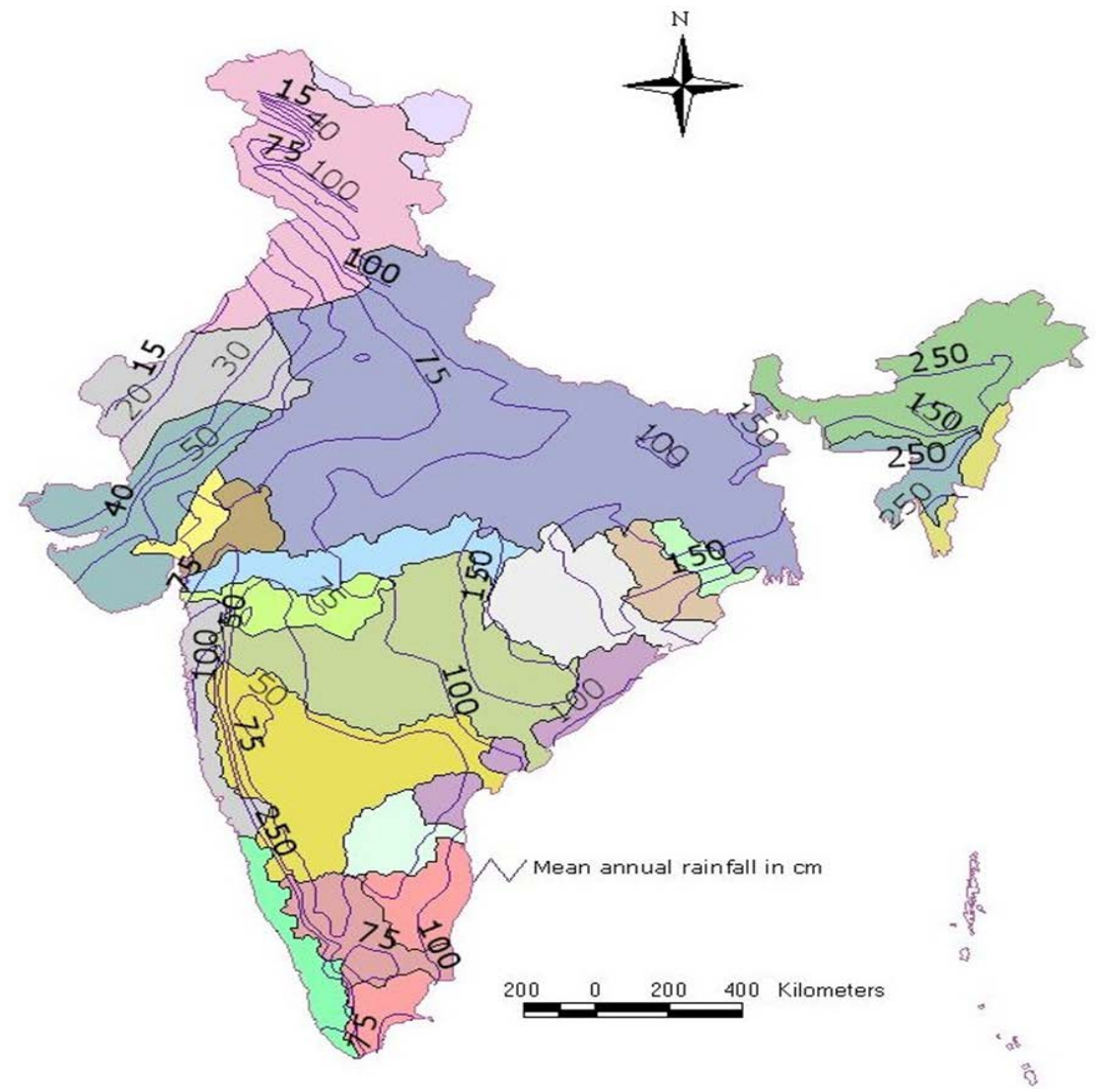
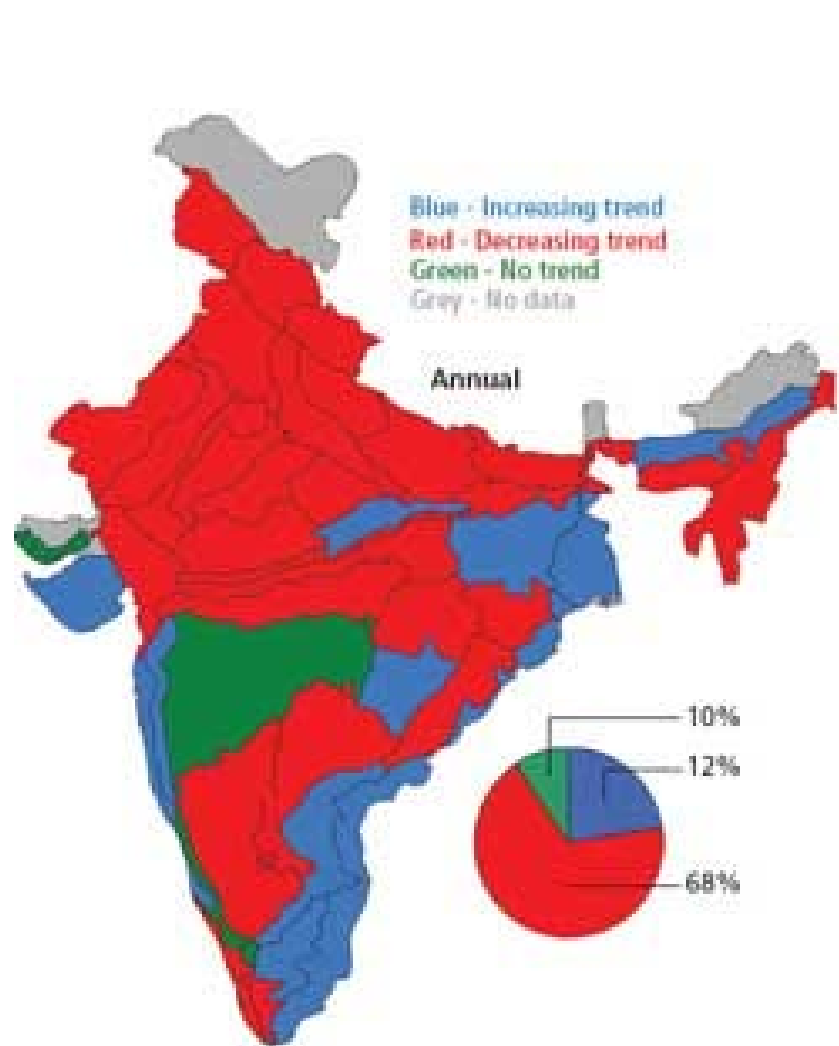
## TEMPERATURE

hot  
warm  
cool  
cold

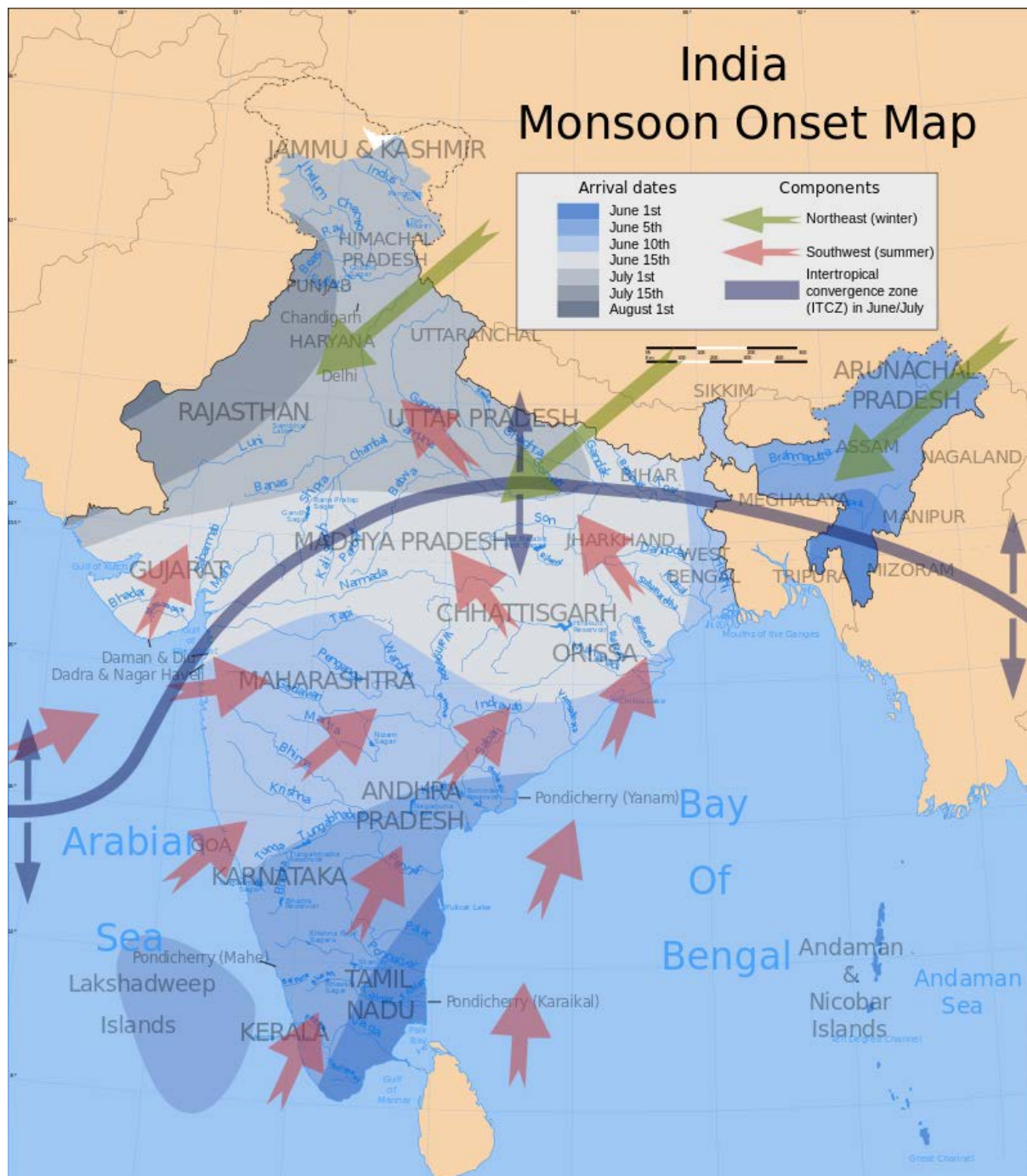


## OTHER VOCAB

forecast  
drought  
lightning  
thunder



Dry <750 mm  
Medium 750-1150mm  
1150-2000mm  
Assured >2000mm



**Convective rainfall** - warm moist air by heating from the ground surface. As a result of heating of the surface air, the air expands and forced to rise to great height. it cools and becomes saturated and dew point temperature is attained and then clouds will form. By further cooling, precipitation takes place

**Cyclonic/Frontal rainfall** - associated with a cyclonic activity and occurs along the frontal zone dividing two air masses of differing temperature and humidity characteristics. masses of convergence particularly at the ITCZ (inter tropical convergent zone) and at the polar fronts.

**Orographic/Relief rainfall** - large mass of air is forced to rise across landform barriers, such as high mountain ranges, plateau, escarpment, or over high hills. the leeward side of such mountain barrier where the air is ascending and warming are characteristically drier are called rain shadow region.

**Monsoon** is now used to describe seasonal changes in atmospheric circulation and precipitation associated with the asymmetric heating of land and sea. Usually, monsoon is used to refer to the rainy phase of a seasonally changing pattern. The major monsoon systems of the world are West African and Asia, Australian monsoons





## First monsoon rainfall dates

Year	Akkalkot	Barshi	Tuljapur	North Solapur	South Solapur
1990	-	-	5 June	-	-
1991	-	-	3 June	-	-
1992	-	-	7 June	-	-
1993	-	-	28 May	-	-
1994	-	-	30 May	-	-
1995	-	-	26 May	-	-
1996	-	-	5 July	-	-
1997	-	-	9 June	-	-
1998	6 June	-	18 June	-	-
1999	17 June	15 June	21 May	12 June	-
2000	8 June	31 May	1 June	26 May	-
2001	7 June	8 June	8 June	14 June	-
2002	9 June	3 June	14 June	15 May	-
2003	16 July	24 June	23 June	-	-
2004	5 June	1 June	2 June	5 September	-
2005	11 June	11 June	26 June	29 May	14 June
2006	4 June	28 May	10 June	31 May	31 May
2007	-	3 June	4 June	22 June	20 June

## **Weather forecast –**

IMD, NCMWRF, Farmers weather bulletin, Agrometeorological Advisory Bulletin

**Short range forecast** – 24- 48 hrs for operational decisions. Farm operations with optimal costs & reduced expenditure related to planting, watering, pest control, harvesting, storage & marketing.

Information content Expected cloudiness, probability of rain & rainfall, dew duration & intensity and range of high & low temperature

**Medium range forecast** – 3 to 10 days for planning agriculture operations.

(National Center for Medium Range Weather Forecasting)

**Long range forecast** – 11 days to season

Information content - Seasonal rainfall in advance in deciding cropping pattern, food & fodder storage, reservoir regulations etc.

Operational models uses power regression methods using parameters such as - Arabian Sea surface temperature, Eurasian snow cover, Northwest Europe Mean temperature, Nino 3 SST, South Indian Ocean SST Index, East Asia pressure, Europe pressure Gradient & 50 hpa wind pattern

Probabilistic models estimates rainfall in categories –

Deficient (<90% of LPA);

Below normal (90-98% of LPA); Near normal (98-102% LPA);

Above normal (102-110% of LPA); Excess (>110% of LPA)



Will it be a cloudy day and probability of rainfall ?

What are the kinds of clouds?

Will there be sufficient rainfall to saturate root zone?

Am I to start my pumps?

Thank you