

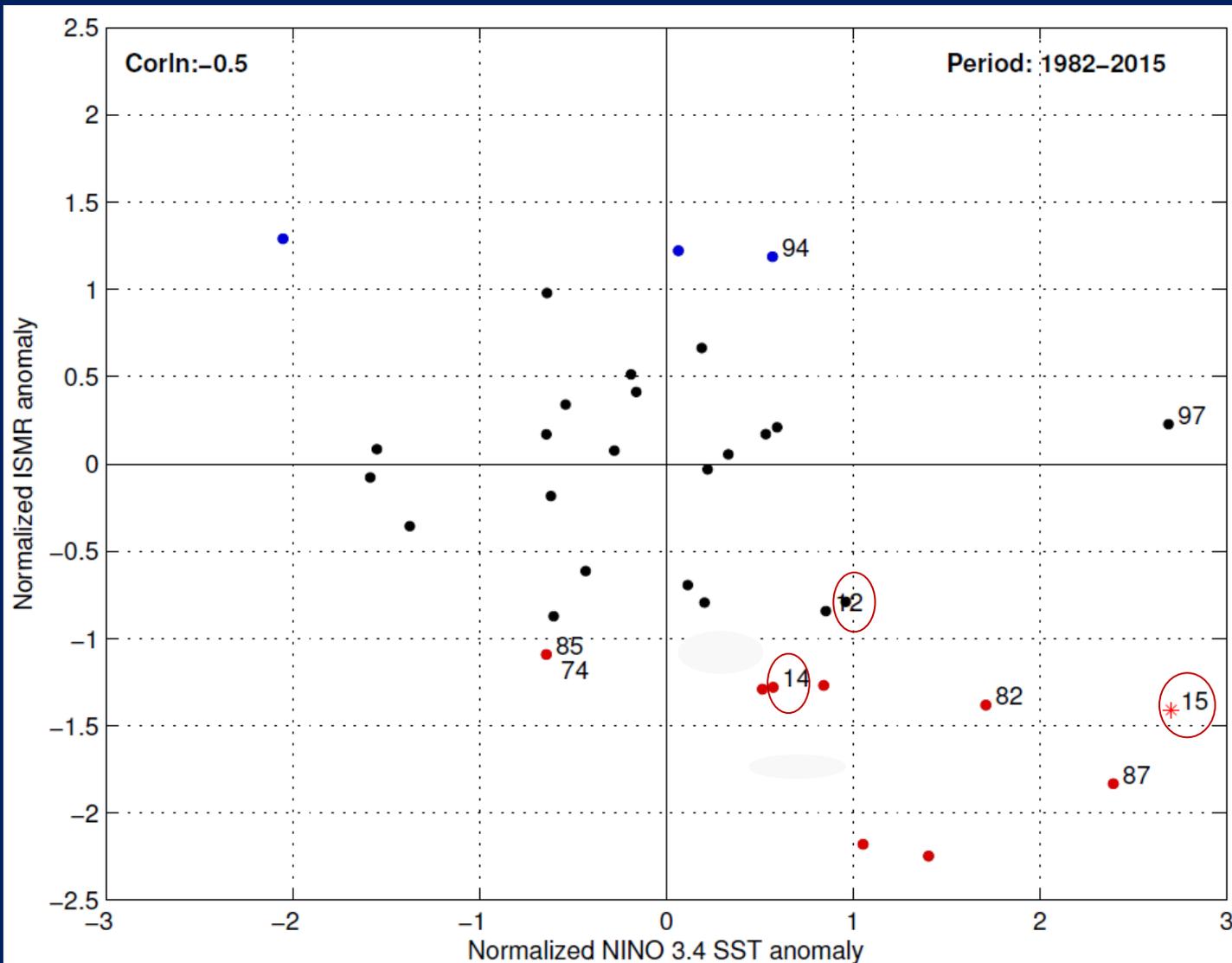
First WMO Workshop on Operational Climate Prediction

**Pune, India
9 to 11 November 2015**

Operational Climate predictions of ENSO and the Indian summer monsoon rainfall (ISMR)

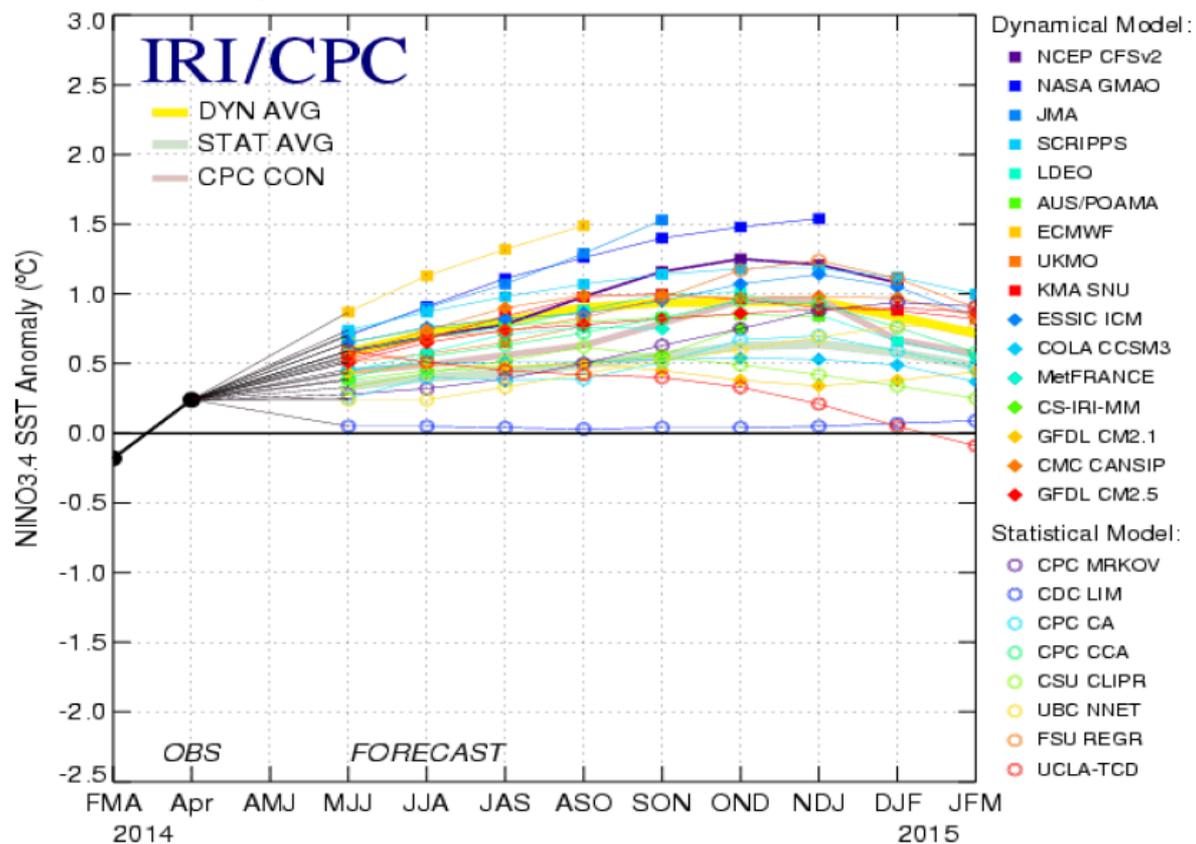
Some points to ponder

Critical factor-prediction of ENSO,



El Nino
predicted
in 2012,14
and 2015

Mid-May 2014 Plume of Model ENSO Predictions



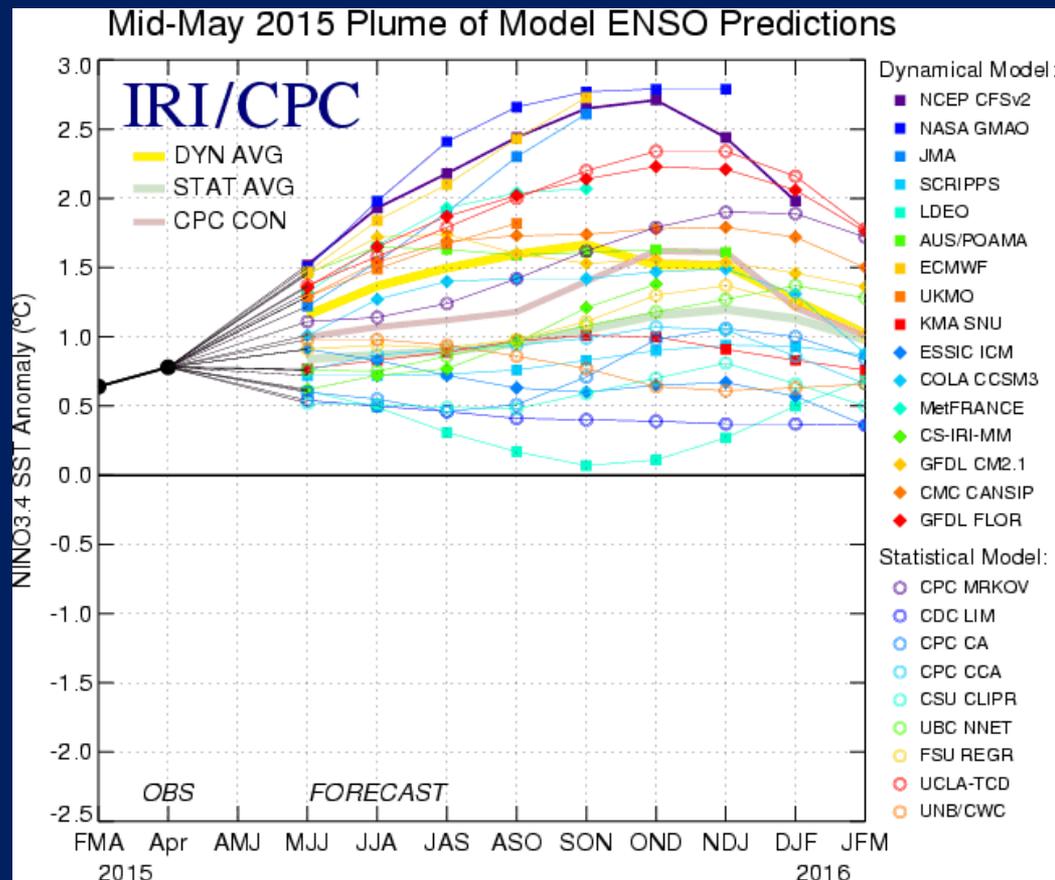
Experience of the last two El Nino forecasts

- In early 2014, forecasts of a possible major El Niño event were reported in the media based on information supplied by forecasters. Several El Niño watchers stated: “we are due for a major El Niño.”
- Followed by articles such as “El Niño: Is 2014 the new 1997?” NASA Science News 2014
- By early summer, forecasts of the onset of a major El Niño had all but disappeared from news headlines.

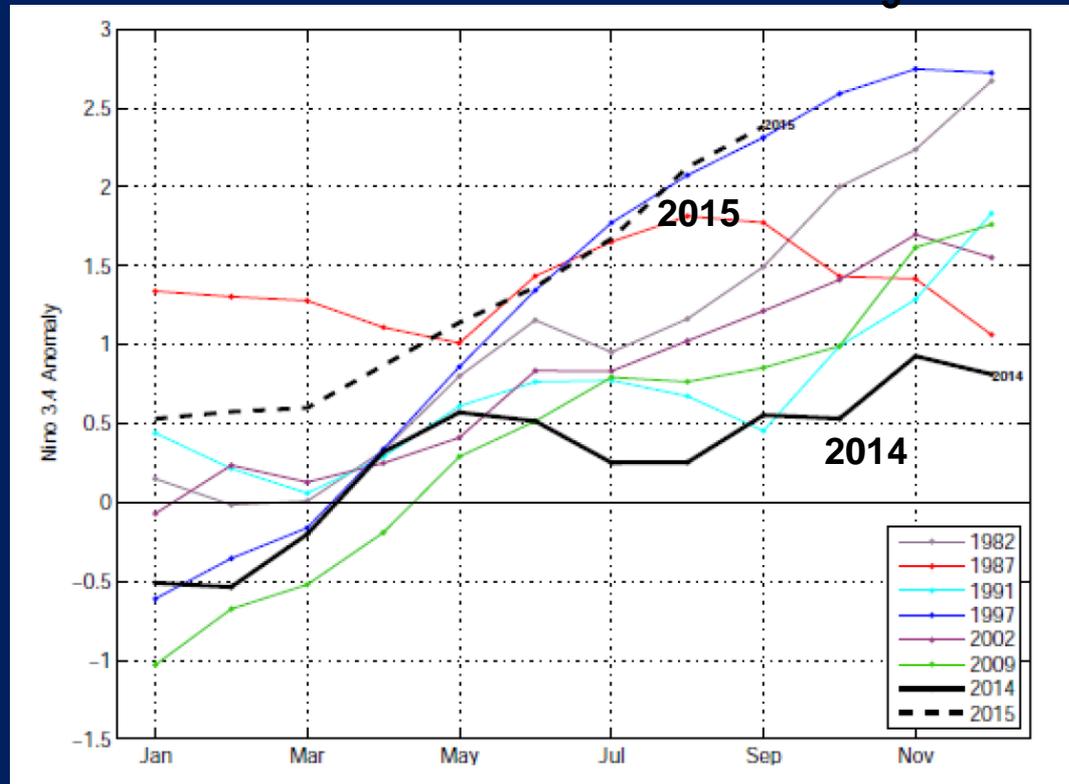
- For the first time, an early forecast of the onset of an El Niño with a high probability of being correct was later “downgraded” by major forecast centers-suggesting that if an event were to occur it would be a weak event.
- **As in 2012, the expected El Niño in 2014 also appeared to fizzle out. Comments made: ‘It can’t keep not happening,’ and ‘two fizzles in a row makes future forecasting decisions tougher’**
- There has been no attention grabbing, blockbuster event (media headlines notwithstanding) since 1997–1998, as measured in terms of major losses of life and property.

Glanz 2015

- Do the experts here know why none of the models could forecast the decrease in the Nino3.4 SST during the summer monsoon of 2014?
- Then came the predictions of an El Nino event of 2015.

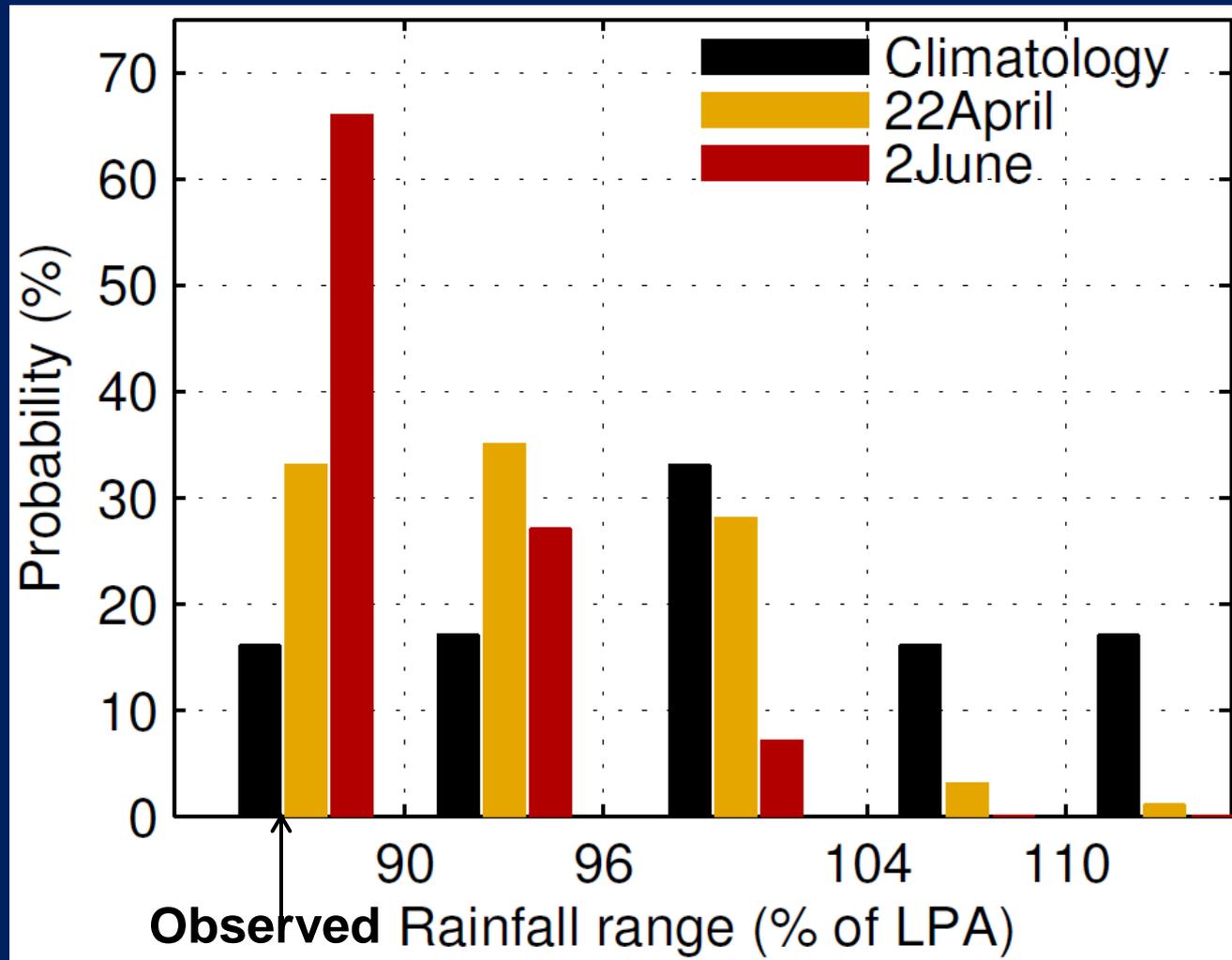


- However, given the experience of 2014 (and 2012), there were many skeptics.
- It has indeed turned out to be a strong El Nino event.



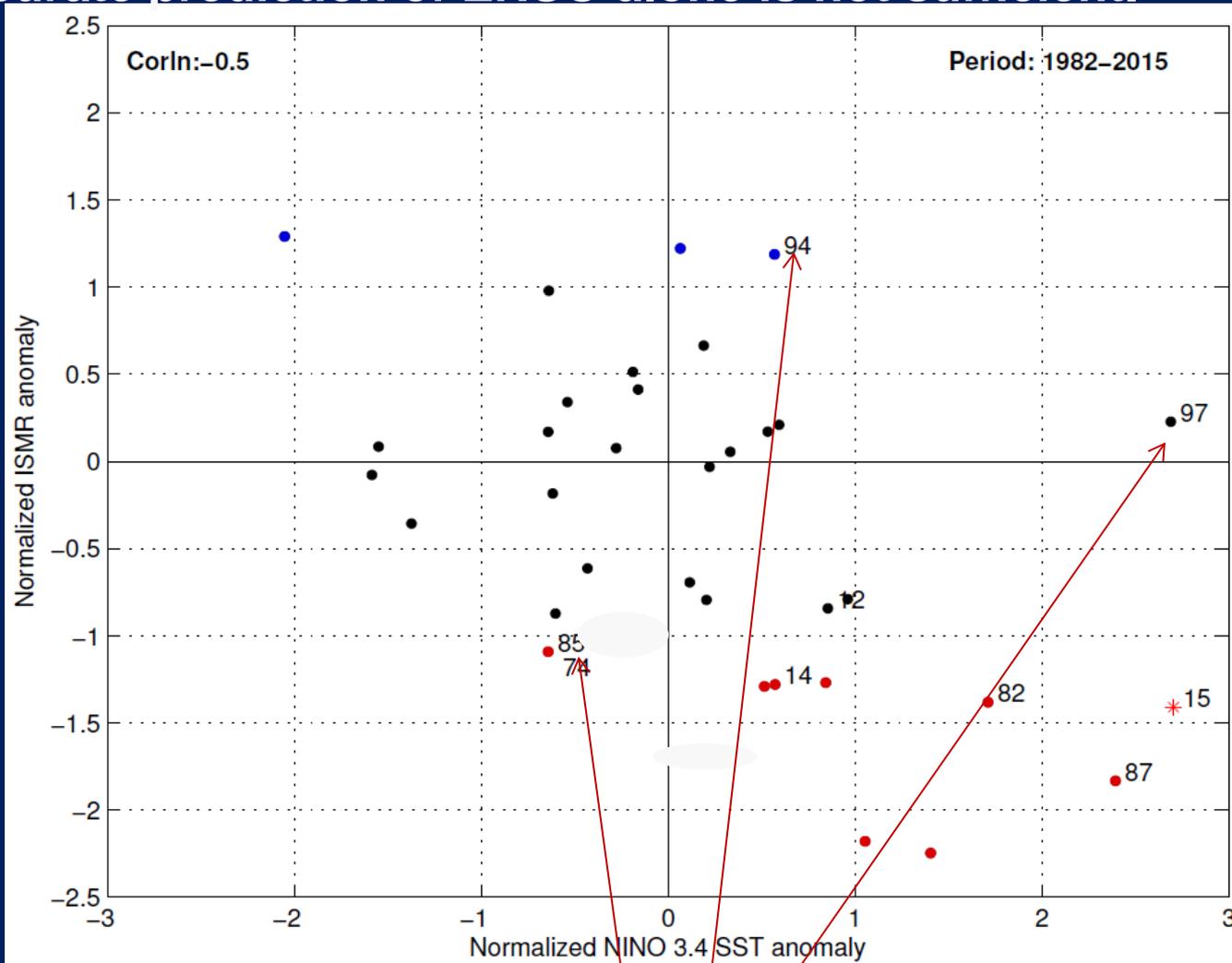
- Fortunately, IMD had reasons to believe the predictions and predicted a deficit monsoon

IMD predictions for ISMR in 2015



Clearly, we need a deeper understanding of the reliability of ENSO predictions.

Also, as far as the Indian summer monsoon rainfall is concerned accurate prediction of ENSO alone is not sufficient.



Role of Equatorial Indian Ocean Oscillation (EQUINOO). However, today, no model can predict EQUINOO