4(c). Simple methods of verification of weather forecast with real event
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Verification is necessary:

- To improve the methodology adopted

- To develop confidence in the forecast developed and delivered

Verification of Weather Forecast- Tool 1

Forecast Accuracy(ACC) or Ratio score or Hit score

ACC = YY+NN/YY+NN+YN+NY

First letter in the pair: forecasted one

Second letter in the pair: Events occurred

Y: Yes; N: No

Verification of Weather Forecast- Tool 2

Heidke Skill Score(HSS)

HSS= ZH-FM/[(Z+M)(M+H)+(Z+F)(F+H)] /2

Z: No. of correct predictions of no rain(neither predicted nor observed);

F: No. of false alarms(predicted but not observed);

M: No. of misses(observed but not predicted);

H: No. of hits(predicted and observed)

Verification of Weather Forecast- Tool 3

Correlation and observed coefficients

- Between predicted and observed
- Minimum 30 pairs must be used for statistical analysis
- Correlation value falls between 0.1 to 1.0

Verification of Weather Forecast- Tool 4

Root Mean Square Error(RMSE)

$$RMSE = \{1/n\sum(f_1-O_1)^2\}^{1/2}$$

F_1 : Forecast value

O_1: observed value

N: Total number of observations