CASE STUDY: Global Warming - the forest from the trees

11. Average temperature anomaly trends in Vic, NSW, QLD.

In the graphs below, the results of the Thiessen Polygons method (see Appendix 8 in the separate Appendices) applied to the mean temperature anomalies of 12 rural stations distributed through the states of Victoria, NSW and Queensland are compared with the Bureau of Meteorology’s published regional averages based on the Barnes gridded method applied to the whole High Quality land-based dataset (BOM, 2009 c).

- **‘Thiessen Polygon’ procedure**
  - VIC - 4 contributing stations (A,C,F,G)
  - NSW - 6 contributing stations (D,F,G, K,L,N)
  - QLD – 7 contributing stations (K,L,N,O,P,Q,R)

- **BOM’s ‘Grid-point Averaging’ procedure**
  - VIC - a minimum of 12 contributing stations
  - NSW - a minimum of 18 contributing stations
  - QLD - a minimum of 28 contributing stations

Annual mean temperature anomalies are all calculated relative to the 1961-1990 average for each state. For the BOM data these are 14.1°C for Victoria, 17.3 for NSW and 23.2 for Queensland. The 11-year running averages for each time-series shown by black curves.
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QUESTION:
In your opinion, how sensitive is the trend in temperatures over the past century to observational errors at individual meteorological stations and to the particular objective methods used to compile the observations into regional trends? What does this suggest to you about the general trend in temperatures over the Australian landscape over the past century?