Merging Weather-based Radar and Rain Gauges to Improve Spatial Resolution of Rainfall Measurements

Peter Weir

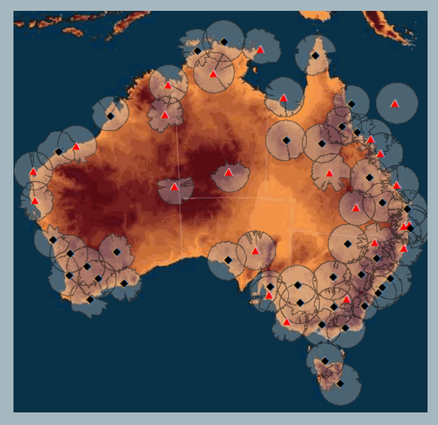
Supervisors: Assoc Prof Peter Dahlhaus, Dr Nathan Robinson, and Assoc Prof Peter Vamplew

Background

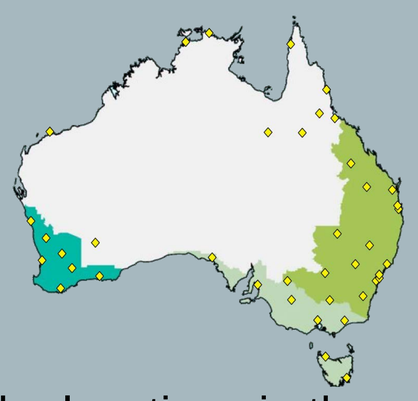
- High spatial and temporal variability of rainfall is one of the most challenging meteorological variables to model accurately.
- Weather radar is a remote sensing instrument that is being increasingly used to estimate rainfall.
- Rainfall events at fine spatial and temporal resolutions are difficult to obtain using conventional rain gauge networks.
- Merging radar data with rain gauge data provides improved resolution of the spatial variability of rainfall - resulting in a significantly improved data source for water management and hydrological modelling.

Methodology

Watheroo weather radar

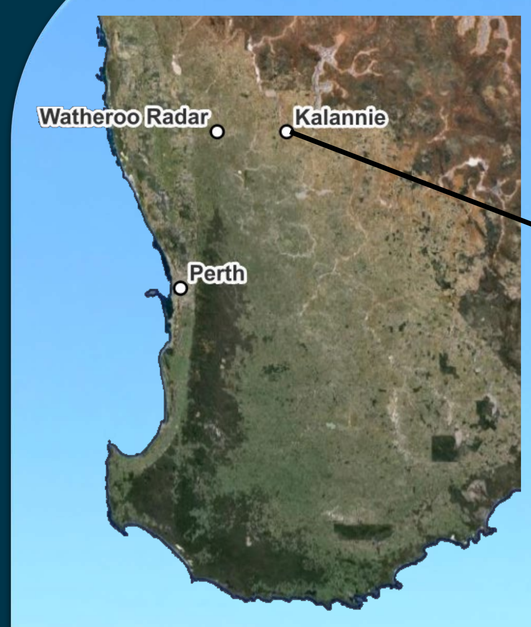


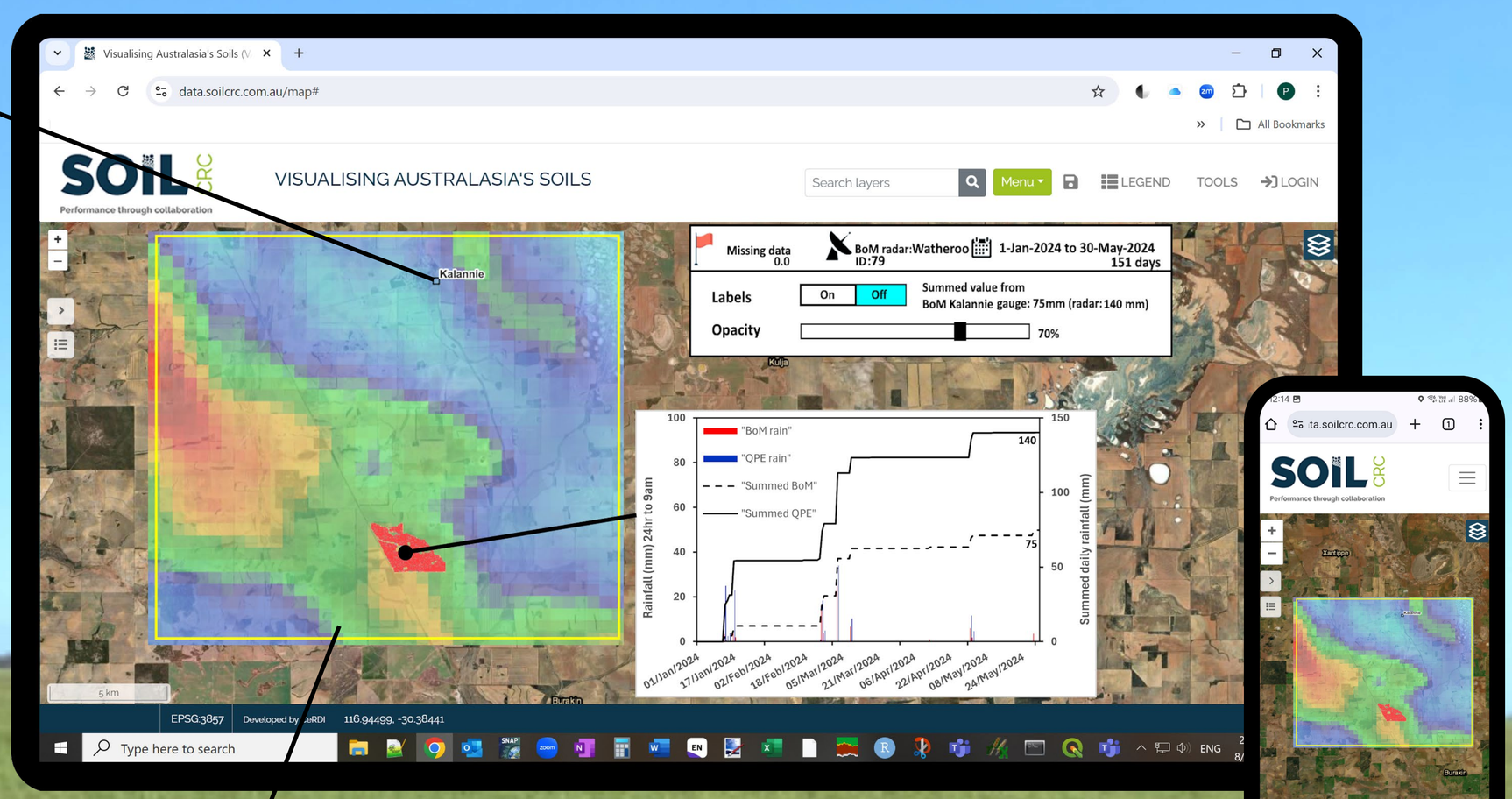
National radar network coverage



Radar locations in the rain-fed cropping regions

Dashboard App





Tile – 500 m x 500 m – summed rainfall for selected time-period

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