



## Pankaj R. Kaushik

MS Environment Science (Maj: Water Resources),  
M.Tech in Applied Geology (Maj: Hydrogeology).

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### Summary

The Great Artesian Basin (GAB) is the world's largest artesian aquifer system and is an important water source sustaining agriculture and communities in inland Australia. Groundwater discharges from the GAB also sustain numerous spring wetlands which have great ecological, scientific, socio-economic significance. However, development of the GAB over the past century by production of coal-seam gas, mineral exploration and human activities has seen an overall decline in groundwater levels and caused a reduction in the flows that sustain springs in many parts of the GAB.

The aim of my PhD is to improve our understanding of the hydrodynamics of the GAB and how changes in surface-ground water connectivity influence critical ecological processes in spring wetlands. I will achieve this using remote sensing methods combined with GRACE-Tellus satellite (NASA) and targeted field studies.

### Research Expertise

- Hydrogeology/Hydrology
- Surface-ground water interaction
- Biogeochemistry
- Remote Sensing/GIS