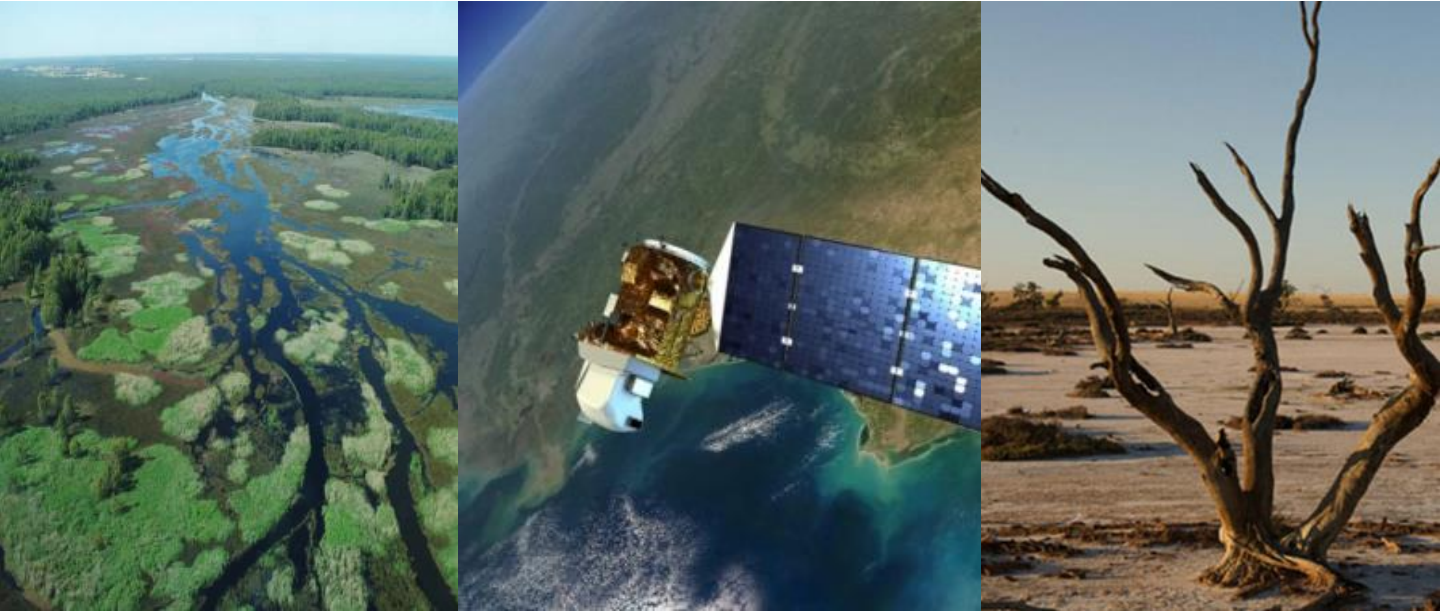


Summer Vacation Research Project



Saving a Salty River System from Space

Supervisors: Dr Mirela Tulbure, Dr Mark Broich, Valentin Heimhuber

Contamination of water resources resulting from human activities is a major concern for the ecological health of many river systems across the world. In Australia's Murray-Darling Basin land-clearing and agricultural intensification have led to alarming levels of salinity and pollution of fresh water resources, which caused widespread degradation of aquatic ecosystems. To address this problem, the Australian Government is currently undertaking large investments in improving water quality across the river system, but monitoring improvements is currently limited to point measurements in different locations along the rivers.

In this exciting project, we will address this limitation by combining a time series of satellite-based surface water maps with ground data from river gauges to analyze the impact of large floods on water quality across the Murray-Darling Basin. You will learn and employ a variety of GIS and spatial analysis techniques to generate and analyze the data and create a variety of maps from your results. You will work closely with a PhD student in our lab and learn cutting-edge technical and research skills that will set you up for a career in earth science, quantitative research and water resources management, ALL in high demand for future jobs.

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