



TASMANIAN RETROSPECTIVE STUDY PROJECT 4



WHAT

Project 4 will provide knowledge to Regional NRM agencies to improve assumptions about how rivers & estuaries respond to environmental management by:

- Measuring the impact of historic change in land use and land management on water quality and flows
- Identifying links between physical and chemical changes in water quality and the health of our rivers and estuaries.

HOW

- Data from catchments across Tasmania will be used to determine the range of water quality and flow responses associated with different landscape types and land use patterns.
- The predictive power of these responses will then be tested in a small number of catchments with more complex land use patterns and land management history.
- Water quality and flow data will be related to key environmental functions for both riverine and estuarine systems, taking into account the differences between river and estuary types. Historic data will be verified with new data collected during this project.
- The impacts of past riparian management on river and estuary health will be investigated because NRM regions have invested in this intervention for several years and additional investments are likely.
- Physical processes involved in nutrient flows through landscapes will be investigated at a range of scales.

WHO

- Activity 1: Documenting links between land management, land use and water quality and flows (Tasmanian Institute of Agricultural Research, Dr Bill Cotching)
- Activity 2: Links between river condition and water quality (UTAS School of Zoology, Freshwater Systems P/L and Forestry Tasmania, Dr Peter Davies)
- Activity 3: Links between estuarine condition and changes in land use and management (Tasmanian Aquaculture and Fisheries Institute, Dr Christine Crawford)
- Activity 4: The impacts of riparian vegetation on water quality (Ensis, Dr Philip Smethurst)

BRINGING IT ALL TOGETHER

- All four activities will contribute to an overall understanding of the relationships between land management, water quality, water flow and aquatic ecosystem health.
- Increased understanding will be provided by closely aligned work in other Landscape Logic projects, such as Social research (Project 2) and Catchment and Sediment Management (Project 5).
- The components of this understanding will be included in the Decision Networks being developed in Project 6 for use by Regional NRM agencies.

