



# The Murray-Darling Freshwater Research Centre

The Murray-Darling Freshwater Research Centre (MDFRC) is a Joint Venture between CSIRO and La Trobe University. MDFRC purpose is to provide high quality scientific research and capability that is highly valued and utilised by water policy and management.

## Introduction

The Murray-Darling Freshwater Research Centre (MDFRC) is a Joint Venture between CSIRO and La Trobe University with uniquely located research laboratories at Albury/Wodonga and Mildura along the Murray River. The Centre has been in continuous operation since 1986.

Our mission is to undertake world-class research that increases our understanding of catchment, rivers and floodplains to apply this understanding to support the sustainable management and conservation of these ecosystems.



## Research

MDFRC has roughly 25 academic and technical research staff, with expertise across a number of inter-related themes

- Chemistry and biogeochemistry
- Fish and fisheries ecology
- Invertebrate community ecology
- Floodplain and wetland vegetation ecology
- Ecosystem Monitoring and assessment
- Restoration and ecosystem management (including environmental water management)

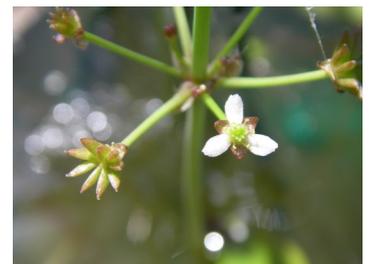


## Policy & Management Impact

Our science supports resource managers across multiple tiers of government, including federal (MDBA, DoE), state (DELWP [VIC], OEH [NSW]) and local agencies (CMAs, LLSs). We also provide technical capability to industry and work closely with the public and private sectors and the community to support informed decisions about the management of natural resources.

MDFRC has played an important role in delivering knowledge to support both short- and long-term planning in the Murray-Darling Basin, especially in relation to hydro-climatic variability, and the attendant benefits and risks from floods and droughts, including understanding critical events such as blackwater, acid-sulfate soils, and algal blooms, as well as management of critical refuges and ecosystem resilience.

In striving to deliver world leading research the Centre is also playing a growing role outside of the Basin, through research in Northern Australia and a growing number of countries in Asia.



## Policy & Management Impact

Recent examples of high impact science include:

- Enhanced understanding of floodplain ecology at key 'icon' sites along the Murray through The Living Murray Program
- Working with MDBA on management of black-water events and acid-sulfate soils
- Review and development of the Murray-Darling Basin Plan (with CSIRO)
- Coordination of the CEWOs Basin-wide Long-term Intervention Monitoring (LTIM) Program to establish the outcomes of Environmental Water Delivery
- Conservation biology of the alpine stonefly (*Thaumatoperla*) within Falls Creek and Buller-Stirling Alpine Resorts

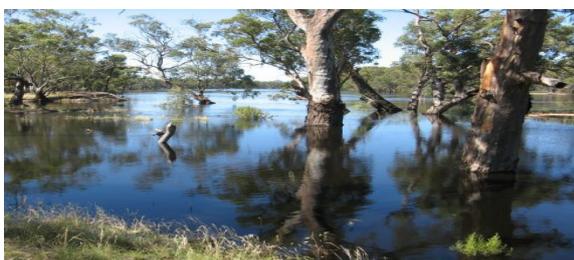
## Education

Through our education program MDFRC plays a key role in training the next generation of research scientists and managers. The Centre has houses more than 15 HDR and honours students supervised by CSIRO and La Trobe University staff. We also provide other forms of outreach through collaborations with CMAs to support programs such as WaterWatch.

## Research Facilities

Our research staff are supported in their work with access to equipment and laboratory capabilities unique within the regional, including:

- Capacity to undertake sampling across a broad range of habitats and biota
- NATA accredited Analytical Chemistry lab for water quality and nutrient testing.
- NATA accredited Macroinvertebrate lab providing sampling and taxonomic skills.
- Microbiology lab for biogeochemical analysis in aquatic ecosystems and waste treatment plants.
- Aquarium rooms and eco-physiology lab for studying fish and invertebrate behavior and ecophysiology
- Genetics lab to support population genetic analysis



## Strategic Partnerships and Collaborations

The MDFRC is a partnership between CSIRO and La Trobe University, with additional collaboration agreements with the Murray-Darling Basin Joint Governments and University of Canberra.



## More Information

To find out more about our capabilities, including individual research staff, research outputs, current and recent projects please visit our website at [www.mdfrc.org.au](http://www.mdfrc.org.au)

## Contacts

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