Established in 1995, the Water Forum consists of the five Cooperative Research Centres (CRCs) who address water issues of national importance, such as the urgent problems facing Australia's rivers. The Water Forum identifies opportunities for collaboration in research, education and training, technology transfer, communications and international activities.

The strength of Cooperative Research Centres (CRCs) comes from joint problem solving across disciplines and organisations. For example, engineers, ecologists and chemists may collaborate on a project about toxic blue-green algal blooms and the effects on instream ecology, water treatment and public health.

The national Cooperative Research Centres Program captures the benefits of applied research by bringing together industry, researchers, government and stakeholders. The CRCs' goal is to bridge the gap between science, the community, and policy-making organisations.

Issues that the Water Forum CRCs work on include:

- River ecology,
- Catchment management,
- Wastewater management,
- Drinking water quality,
- River restoration,
- Impacts of agricultural waste,
- Soil and land management,
- Landfill,
- Urban stormwater quality, and
- Land use impacts

Photos

Front cover

1. Bacteria
2. Researcher measuring how fast the river is flowing, Acheron River, Victoria
3. Hill Inlet, Whitsunday Islands. Photo: Queensland Government
4. Great Egret, *Egretta alba*, in a Darling River billabong. Photo: A. Tatnell

Inside pages

1. Lota Creek, Queensland. Photo: R. Ashdown
2. Water-holding frog, *Cyclorana platycephala*, in Cooper Creek. Photo: R. Ashdown
3. Landfill Bioreactor
4. Myponga Reservoir, South Australia
5. Satellite image of the Central Coast of Queensland. Photo: CRC for Coastal Zone, E &WM
6. Pristine stream in the upper Mary River catchment, Queensland

The CRC for *Water Quality & Treatment*

The CRC for Water Quality and Treatment assists the water industry to produce high quality water supplies for Australian communities at an affordable price. An important aspect of this assistance is its research into the relationship between drinking water quality and public health.

Its research programs focus on:

- Potential risks to public health from water supplies
- Better ways to manage catchments and other water sources to improve water quality
- New and improved water treatment technologies
- Better ways to maintain water quality as it flows through the system of mains and pipes

Further information

The CRC for Water Quality and Treatment
Ph: 08 8259 0211
Email: crc@sawater.sa.gov.au
Website: http://www.waterquality.crc.org.au

The CRC for *Coastal Zone, Estuaries & Waterway Management*

The Coastal CRC's mission is to provide decision-making tools and knowledge necessary for the effective management and ecosystem health of coastal zone, estuaries and waterways. The Coastal CRC will carry out quality science within five interlinked themes in management study areas using participatory approaches with stakeholders. The science will be applied in management study areas, initially:

- a major agricultural catchment at the Fitzroy River
- a major industrial catchment at Port Curtis
- a major urban catchment at Brisbane River and Moreton Bay

The Centre is also carrying out a National Estuary Audit involving an assessment on the condition of more than 900 estuaries around Australia.

Research themes are:

- Integrated Decision-Making Frameworks
- Citizen Science, Education and Participation
- Planning and Management
- Coastal Ecosystem Processes
- Development of Health Indicators and Ecosystem Monitoring

Further information

The CRC for Coastal Zone, Estuaries and Waterway Management
Ph: 07 3362 9399
Website: http://www.coastal.crc.org.au

The CRC for *Freshwater Ecology*

The CRC for Freshwater Ecology improves the health of Australia's rivers through research and education in river ecology. The Centre produces innovative research much needed by the water industry for the sustainable management of Australia's water. It addresses environmental issues of concern such as blue-green algal blooms, native fish decline, environmental flows and river rehabilitation through four multi-disciplinary research programs:

- Ecological Effects of Flows – effects of flow regulation on aquatic animals and plants, how lowland rivers function, environmental flow allocation
- Restoration Ecology – recovery of disturbed rivers and streams, cost-effective rehabilitation case studies
- Conservation Ecology – biological diversity in fresh water systems, conservation of threatened fish species
- Water Quality and Ecological Assessment – impacts of land use on water quality, AUSRIVAS model for assessing river health

The Centre offers high-quality education at the postgraduate, undergraduate and community levels.

Further information

The CRC for Freshwater Ecology
Ph: 02 6201 5168
Email: pa@lake.canberra.edu.au
Website: http://freshwater.canberra.edu.au

The CRC for *Waste Management & Pollution Control Limited*

The CRC's research covers new liquid and solid waste treatment processes, contaminated sites and waste minimisation:

- Biological wastewater treatment – bacterial processes, novel instrumentation and control systems, dewatering of biosolids, and reuse of water using membrane systems
- Contaminated site monitoring & remediation – new detectors for monitoring and remediation
- Waste management systems – enhanced solid waste disposal with faster stabilisation of landfills
- Cleaner production and waste minimisation – life cycle assessment and impact analysis

The CRC is commercialising many of its technologies. It has an active industry development program for small and medium enterprises through EIDN.

The International Winter Environment School (IWES)

An international training school for advanced environmental management held over one week for senior and graduate scientists and engineers. Over 1500 students have attended the school since 1994.

Further information

The CRC for Waste Management & Pollution Control Limited
Ph: 02 9385 4886
Email: crcwmpc@unsw.edu.au
Website: http://www.crcwmpc.com.au

The CRC for *Catchment Hydrology*

The CRC for Catchment Hydrology exists to improve the understanding of catchment hydrology and its application to land and water management. The CRC aims to deliver to resource managers the capability to assess the hydrologic impact of land-use and water-management decisions at the whole-of-catchment scale through six research programs:

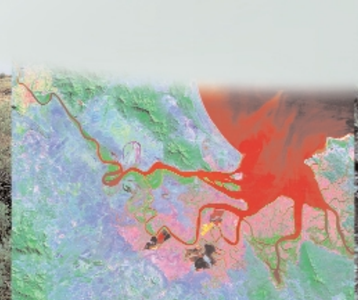
- Predicting Catchment Behaviour
- Land-use Impacts on Rivers
- Water Allocation
- Urban Stormwater Quality
- Climate Variability
- River Restoration

Further information

The CRC for Catchment Hydrology
Ph: 03 9905 2704
Email: virginia.verrelli@eng.monash.edu.au
Website: http://www.catchment.crc.org.au

The Young Water Scientist of the Year Award

The Water Forum sponsors this national award to promote communication, good science and its application, and to recognise the excellence of students' research in CRCs. Each year, finalists are chosen from among the students in the water based CRCs. Winners include Dr Margaret Hellard, Dr Fiona Dyer and Dr Helen Locher.



Issues Addressed by the Water Forum

1 Climate variability
2 Rainfall
3 Soil erosion
4 Catchment run-off
5 Reservoir
6 Environmental flows
7 Water allocation
8 Irrigation
9 Billabong
10 Filtration plant for drinking water
11 Constructed wetland
12 Urban run-off
13 Wastewater treatment
14 Industrial use
15 Industrial re-use
16 Bore
17 Water table
18 River sediments
19 Mangroves
20 Estuary
21 Recreational use

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The Cooperative Research Centres'

Water Forum

CRC for Catchment Hydrology

CRC for Waste Management and Pollution Control Limited

CRC for Freshwater Ecology

CRC for Water Quality and Treatment

CRC for Coastal Zone, Estuaries and Waterway Management