

National Environmental Science Programme – Tropical Water Quality Hub

About

The Australian Government's National Environmental Science Program (NESP) is a long-term commitment to support environmental and climate science research. The key objective of the NESP is to improve our understanding of Australia's environment through practical and applied research that informs decision making and on-ground action that will yield measurable improvements to the environment. NESP funding of \$145 million over six years from 2015 to 2021 supports six themed research hubs, along with projects to address emerging environmental research needs. The Hubs connect scientists, policy makers, industry, Indigenous people and communities.

The NESP Tropical Water Quality (TWQ) Hub supports research in coastal water quality and coastal management on the Great Barrier Reef, Torres Strait and other tropical waters with funding of \$31.8m. The NESP TWQ Hub is providing innovative research for practical solutions to maintain and improve tropical water quality from catchment to the marine environment with a particular focus on supporting the priorities of the Reef 2050 Long Term Sustainability Plan and the Reef Trust.

The NESP TWQ Hub provides innovative research for practical solutions to maintain and improve tropical water quality from catchment to coast under three research themes:

Theme 1 – Improved understanding of the impacts, including cumulative impacts, and pressures on priority freshwater, coastal and marine ecosystems and species

Theme 2 – Maximise the resilience of vulnerable species to the impacts of climate change and climate variability by reducing other pressures, including poor water quality

Theme 3 – Natural resource management improvements based on sound understanding of the status and long-term trends of priority species and systems

The NESP TWQ Hub engages research-users in a collaborative process to co-develop projects in current and emerging priority areas, including:

- Mitigation and management of crown-of-thorns starfish outbreaks
- Reduction of sediment and nutrient export from catchments
- Cumulative catchment, coastal and marine habitat repair
- Planning and managing interventions in the marine environment
- Indigenous co-management of cultural keystone species and habitats

The NESP TWQ Hub partners have collaborated for nearly two decades and have established an extensive network of research end-users across government, industry, non-government organisation (NGOs), Indigenous groups and other community groups. The dissemination of credible biophysical, social and economic information to policy makers, natural resource managers, industry, community and other scientists is one of the key success elements for the NESP TWQ Hub.

Research results are distributed to stakeholders via strategic and quality-controlled mechanisms guided by the Knowledge Brokering and Communications Plan, Indigenous Engagement and Participation Strategy, nominated Project Leaders and Project associates.

Hub Leadership & Governance

The NESP TWQ Hub is hosted by the Reef and Rainforest Research Centre Ltd (RRRC), a consortium of research providers, key industry groups, and an independent Chair. Governance of the NESP TWQ Hub includes direct communication lines between the Hub Administrator (RRRC), the Hub Leader (Dr Damien Burrows, JCU), the six partner institutions and the Department of the Environment and Energy.

The six partner institutions of the NESP TWQ Hub are:

- Australian Institute of Marine Science (AIMS)
- James Cook University (JCU)
- Commonwealth Scientific and Industrial Research Organisation (CSIRO)
- Central Queensland University (CQU)
- University of Queensland (UQ)
- Griffith University (GU)

Hub Collaboration and Partnerships

The NESP TWQ Hub Administrator, the Reef and Rainforest Research Centre Ltd encourages a collaborative, multi-disciplinary approach to environmental and climate science research.

The RRRC has an established track record of working collaboratively with other research programs and centres to maximise science output value. Key to the success of the Hub is the capacity to foster partnerships across Hubs and with a wide range of relevant research stakeholders.

Steering Committee

The NESP TWQ Hub Steering Committee provides strategic supervision over the Hub's performance against its objectives. The roles, responsibilities and membership of the Steering Committee are outlined in its terms of reference, and include:

- Ensuring the alignment of research activity to the policy needs and interest of the DoEE and other key stakeholders;
- Connecting the Hub's research questions, activities and outputs to relevant research activity and policy initiatives outside the DoEE;
- Overseeing the development and implementation of the Research Plan, including the review and amendment of the Research Plan, as required;
- Directing, and endorsing, the development, and delivery of any reporting, monitoring and evaluation requirements under this agreement; and
- Review, monitor and guide project performance.

The Department of the Environment and Energy

The Minister for the Department of the Environment and Energy (DoEE) provided approval to fund the NESP TWQ Hub and is the sole delegate with authority to approve major changes to the scope and funding allocation to the Hub. The Minister approves annual versions of the Research Plan. The DoEE has responsibility for managing the NESP and is the key end user of research under the NESP and works closely with the NESP TWQ Hub and other key stakeholders in determining and negotiating the delivery of research under the Research Plan.

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