



Australian Government

NAWFA NEWSLETTER

Issue 1 January 2011

IN THIS ISSUE

Issue 1
January 2011

What is NAWFA?

Water in northern Australia: a limited resource

Moving water long distances: Grand schemes or pipe dreams?

The Northern Australia Aquatic Ecological Assets Project

Water and People - cultural and social aspects of northern Australia's water resources

Planning for the future: the NAWFA Knowledge Base

NAWFA interactive map

Northern Australia Land and Water Taskforce presents final report to the Government

SUBSCRIPTIONS

You can subscribe or unsubscribe by emailing us at northern.assessment@environment.gov.au

Northern Australia Water Futures Assessment

Welcome to the first edition of the Northern Australia Water Futures Assessment (NAWFA) e-newsletter. This newsletter will provide you with updates on the progress of the NAWFA program. Please advise us by return email if you do not wish to receive further correspondence from us.

What is NAWFA?

The Australian Government established the Northern Australia Water Futures Assessment (NAWFA) to inform the development and protection of northern Australia's water resources. NAWFA is a multidisciplinary program delivered jointly by the Department of Sustainability, Environment, Water, Population and Communities and the National Water Commission, in close collaboration with relevant state and territory government agencies. The Australian Government has allocated up to \$13 million for NAWFA projects for four years to 2012.

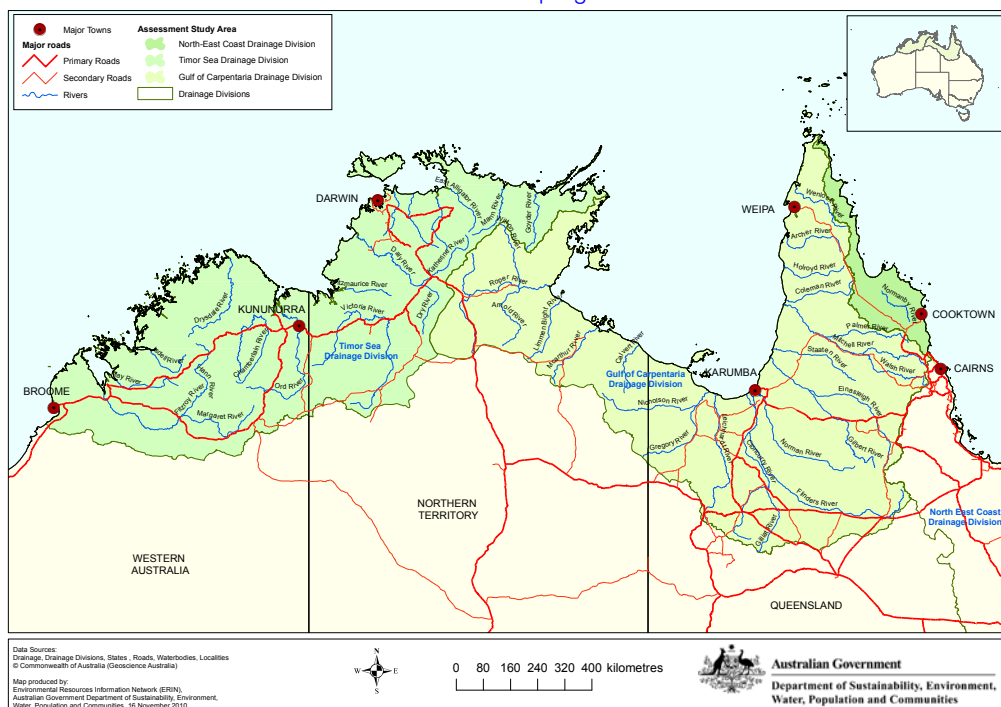
The NAWFA comprises four programs:

- the **Water Resources Program** aims to develop a better understanding of water availability in northern Australia
- the **Ecological Program** aims to identify and understand key ecological assets in northern Australia

- the **Cultural and Social Program** aims to understand the socio-cultural values, beliefs and practices associated with water and how they may be affected by changes in water availability
- the **Knowledge Base Program** aims to provide an enduring knowledge base to inform development and protection of northern Australia's water resources, and ensure development proceeds in an ecologically, culturally and economically sustainable way.

The geographical area being considered by NAWFA stretches more than 3,000 km, from Broome in the west to Cairns in the east. This area includes three drainage divisions, the Timor Sea, the Gulf of Carpentaria, and part of the North-East Coast Drainage Division, north of Cairns.

For more information visit the NAWFA website <http://www.environment.gov.au/water/policy-programs/northern-australia/>



A map of the area covered by the Northern Australian Water Futures Assessment

Water in northern Australia: a limited resource

Despite popular perceptions that northern Australia has a surplus of water, the climate is extremely seasonal.

The **Northern Australia Sustainable Yields (NASY)** project, undertaken by CSIRO as part of the NAWFA Water Resources Program, is a comprehensive scientific assessment of water yield in all major water systems across northern Australia.

Key findings of the NASY project include:

- Northern Australia experiences high rainfall during the wet season but most rain falls near the coast, where there are few opportunities for storage or diversion, and rainfall year-to-year can be highly variable.
- Runoff follows a similar pattern to rainfall; hence potential inland dam sites receive less water and suffer very high evaporation rates.
- Annually, rainfall is usually less than potential evapotranspiration¹, so the area may be described as water-limited.
- In the near future (around 2030) potential evapotranspiration is likely to increase whilst rainfall is likely to be similar to historical levels, which were generally drier than the last decade, especially in the west.
- Groundwater may offer potential for increased extractions but shallow aquifers rapidly fill during the wet season and drain through the dry season, and provide little opportunity for increased groundwater storage.
- There are few river reaches that flow year-round and those that do have high cultural, social and ecological value and are generally sustained by localised groundwater discharge.

For more information on the NASY project and to download the summary reports visit: <http://www.csiro.au/partnerships/NASY.html>



Cadjeput Waterhole on the Fitzroy River, Western Australia (Nick Rains)

1. **Evapotranspiration** is a collective term for the transfer of water, as water vapour, to the atmosphere from both vegetated and un-vegetated land surfaces. It is affected by climate, availability of water and vegetation.



Norman River, Gulf of Carpentaria, Queensland (Department of Foreign Affairs and Trade - Overseas Information Branch)

Moving water long distances: Grand schemes or pipe dreams?

Managing Australia's scarce water resources is one of this country's greatest challenges. One of the recurring 'big ideas' in managing our water resources is to move water from the north, where water is perceived to be in abundance, to the south, where shortages are often experienced.

Although water transport projects may be technically possible, studies have found that such projects would have high energy, economic, social and environmental costs. These projects, as well as other alternatives for securing Australia's water supplies are explored in further detail in the ***Moving water long distances: Grand schemes or pipe dreams?*** publication.

Moving water long distances: Grand schemes or pipe dreams? can be downloaded at: <http://www.environment.gov.au/water/publications/action/moving-water.html> Or phone 1800 218 478 for a copy.

Northern Australia Aquatic Ecological Assets project

Northern Australia includes a large proportion of intact rivers and wetlands, many with significant ecological value. This project, under the NAWFA Ecological Program, seeks to identify and map the key water dependent ecological assets across northern Australia, and will also undertake a trial of the draft High Ecological Value Aquatic Ecosystems (HEVAE) framework. The Tropical Rivers and Coastal Knowledge Hub is undertaking the project due to finish December 2010. The aims of the project are to:

- assess aquatic ecological assets across northern Australia
- undertake an evaluation at the Drainage Division scale of these assets against the draft HEVAE framework
- develop and identify thresholds of ecological change for management purposes
- provide an assessment of risks to the assets
- suggest further work for the NAWFA Ecological Program.



Gilbert River, Queensland, just before the wet season (Steve Wray DSEWPaC)

A broad scale assessment of the NAWFA region's aquatic ecological assets was finalised in July 2010.

The interim report setting out the assessment's findings can be accessed at: <http://www.environment.gov.au/water/publications/policy-programs/nawfa-hcvae-trial-report.html>

The current phase of the project involves fine scale assessments of aquatic ecological assets in key focal regions/catchments identified by the northern jurisdictions as high priority or planned development areas.

Water and people – cultural and social aspects of northern Australia's water resources

Northern Australia's water resources and aquatic ecosystems are important to individuals and communities across northern Australia for a range of cultural, spiritual, recreational and economic reasons.

As part of the NAWFA Cultural and Social Program, an initial review of projects, research initiatives and water planning processes relevant to cultural values, beliefs and practices was completed in September 2009 by the CSIRO.

To access the final report, *Review of existing cultural and social initiatives, and key groups and organisations across northern Australia associated with water*, visit: <http://www.environment.gov.au/water/publications/action/nawfa-cultural-report.html>

Work is currently underway on a literature review that will seek to draw conclusions about the relationship between HCVAE and cultural and social values associated with water.

Planning for the future: the NAWFA Knowledge Base

The NAWFA Knowledge Base will integrate the outputs from the Water Resources, Ecological and Cultural and Social programs to provide easy access to information to help decision-making and planning of water resource development in northern Australia.

The Department commissioned NGIS Australia Pty Ltd to consult with potential users of the Knowledge Base to find out how they will use it and what they want from the Knowledge Base. This feedback will be used to make recommendations regarding its design, including possible structure, content and architecture.

The NAWFA Interactive Map

The NAWFA interactive map shows other water projects in northern Australia. The map draws together information on programs and initiatives across northern Australia, including information on relevant organisations, the work being undertaken, collaborations between organisations, and illustrates how water related activities fit together.

Feedback received from organisations included on the map is being incorporated into the map's development. The interactive map is based on Google-Maps and will be available in the near future through the NAWFA website: <http://www.environment.gov.au/water/policy-programs/northern-australia/>





Kakadu National Park, NT (Sarah Stuart-Smith DSEWPaC)

Northern Australia Land and Water Taskforce presents final report to the Government

The Northern Australia Land and Water Taskforce examined the potential for new developments in northern Australia that rely on significant local or regional water resources. In developing their report, the Taskforce consulted with stakeholders in the north to identify opportunities for further development.

To view the final report *Sustainable development of northern Australia* visit: <http://www.nalwt.gov.au/reports.aspx>

The Report considers the broad range of sustainable development opportunities for northern Australia that are based on water resource availability and provides 15 recommendations for the Government's consideration.

As an initial response the Australian Government has committed \$6 million for the *Northern Australia Sustainable Futures Program*, to build on existing programs and measures and advance the economic, social and cultural interests of people living in the north. Through the recently established Northern Australia Ministerial Forum, the governments of Western Australia, Northern Territory and Queensland have agreed to build on the Sustainable Futures Program and develop a joint government response to the Taskforce findings and recommendations.

The *Northern Australian Sustainable Futures Program* will address the need for:

- national leadership and inter-jurisdictional dialogue and collaboration
- enhanced Indigenous and community engagement in policy and planning
- development of sustainable careers and business opportunities for Indigenous people in northern and remote communities
- improved understanding of regional infrastructure investment priorities
- improved water management
- improved understanding of opportunities and risks to sustainable development in the northern beef industry.

For more information on the Northern Australia Land and Water Taskforce, visit: <http://www.nalwt.gov.au>

Further information

Phone: 1800 218 478

Email: northern.assessment@environment.gov.au

Website: www.environment.gov.au/nawfa



Ord River Dam and Lake Argyle, Western Australia (John Baker DSEWPaC)

NAWFA is a multidisciplinary program being delivered jointly by the Department of Sustainability, Water, Population and Communities and the National Water Commission, in close collaboration with the Office of Northern Australia and state and territory government agencies. Through the Raising National Water Standards program under Water for the Future, the Australian Government will allocate up to \$13 million for projects for four years to 2012.