

5 NATIONAL CENTRE FOR TROPICAL WETLAND RESEARCH

5.1 Introduction

The National Centre for Tropical Wetland Research (*nctwr*) is a collaborative venture between the Environmental Research Institute of the Supervising Scientist (*eriss*) and three university partners: James Cook University, Charles Darwin University and the University of Western Australia.

The *nctwr* conducts research and training with the aim of providing information and expertise to assist managers and users of tropical wetlands to use these valuable habitats in a sustainable manner. Information about *nctwr* is available on the Internet at www.nctwr.org.au.

5.2 National Centre for Tropical Wetland Research activities

5.2.1 Board of Management

The Board of Management is chaired by the Hon Bob Collins, AO, former Senator for the Northern Territory and former Commonwealth Minister. The Board guides the research and training directions of the *nctwr* and met on 30 January 2004.

Membership of the Board is made up of representatives from each partner institution:

- Professor Charles Webb and Professor Greg Hill of the Charles Darwin University;³
- Professor Richard Pearson and Mr George Lukacs from James Cook University;
- Dr Ian Eliot and Professor John Dodson/Associate Professor Neil Drew of the University of Western Australia;
- Dr Arthur Johnston and Dr Peter Bayliss representing *eriss*.

Dr Max Finlayson, Director of *eriss*, is also the Director of the *nctwr*.

5.2.2 Operational Committee

During the year the Board identified that the *nctwr* had moved from a setup and establishment phase into an operational phase. The Board decided that there was a need for a more hands-on involvement by partner organisations for the running and coordination of the Centre and established an Operational Committee. The Committee's objectives are to develop cooperation, networking, and communication between partner organisations, and to access skills, expertise, facilities and opportunities from the partner organisations.

³ Professor Robert Wasson replaced Professor Charles Webb towards the end of 2003–04.

Each partner organisation nominated two representatives to participate in the Operational Committee:

- Dr Michael Douglas and Dr Mark Meekan from Charles Darwin University;
- Dr Brenton Knott and Dr Ian Eliot from the University of Western Australia;
- Mr George Lukacs and Dr Damien Burrows from James Cook University;
- Dr Peter Bayliss and Dr Chris Humphrey from *eriss*.

They met once during the year with other planning and discussion taking place through e-mail. The main activities discussed included the development of new projects and placement of students at *eriss*.

5.2.3 Advisory Committee

The Advisory Committee is now chaired by Mr Theo Hooy, Assistant Secretary of the Coast and Waters Branch in the Department of the Environment and Heritage.

Members include:

- Ms Michele Handley from WWF Australia;
- Dr Simon Townsend of the Northern Territory Department of Infrastructure, Planning and Environment (DIPE);
- Mr Steve Vellacott of Nabalco;
- Ms Clair O'Brien, a pastoralist;
- Ms Fiona Fraser of the Northern Land Council (NLC);
- Mr Alexander Stubbs;
- Mr Vern Veitch from Sunfish Queensland;
- Dr Ilse Kiessling of the National Oceans Office (NOO);
- Ms Susan Worley from the Water and Rivers Commission of Western Australia.

The Committee advises the Board of Management on research and training priorities and identifies issues of concern to major stakeholders. An informal meeting was held with some members of the Committee during the Tropical Rivers Forum held in February 2004. This covered preferred ways of interaction between members of the committee and staff of the *nctwr*.

5.2.4 Research programme

The *nctwr* research programme included collaborative projects with a number of national and international agencies and organisations, including:

Tropical rivers inventory and assessment

This activity was managed by Land and Water Australia with funds provided by the Department of the Environment and Heritage. The project is collaborative between *eriss*

and James Cook University with additional involvement of the University of Western Australia and the University of Wageningen in the Netherlands. The project aims to provide an information base to support the management of Australia's tropical rivers and consists of three sub-projects: mapping and inventory; risk assessment of key threats; and development of a framework for evaluating ecosystem services.

Biological assessment of hydro-power developments in Timor-Leste (East Timor)

The activity involves ecological studies of streams and lakes in Timor-Leste the results of which will be used to assess the potential impacts of proposed hydro-electric power plant developments at three sites in Timor-Leste. The study is part of a broader Norwegian aid project for which *eriss* has been subcontracted. A team of four *eriss* workers undertook intensive field sampling in October 2003, with a follow-up sampling trip proposed for September 2004.

Ecological risk assessment of the ginger ant (*Solenopsis germinata*) on seabird colonies at Ashmore Reef

This activity was funded by the Department of the Environment and Heritage's Marine Protected Areas Branch, and is a collaboration between *eriss*, the Parks and Wildlife Commission of the Northern Territory, and the Australian Quarantine and Inspection Service (AQIS). Through a desk-top analysis and field survey, the project aims to identify key vulnerable bird (and other) species and locations, determine the types of and need for risk reduction/management actions, and develop a framework for a comprehensive, quantitative assessment of risks.

Review of low-cost GIS software and data for use in wetland inventory

This activity was funded by the Scientific and Technical Review Panel (STRP) of the Ramsar Wetlands Convention. The project focuses on the application of low-cost GIS technologies and data to wetland inventory, assessment and monitoring. The project will be presented in draft format to the STRP workshop in July 2004 and presented in final form to the next Conference of the Contracting Parties of the Convention. This work builds on the *nctwr*'s previous wetland inventory projects (for example, a Global Review of Wetland Resources and Inventory, and the Asian Wetland Inventory).

5.2.5 Training programme

Training activities that were undertaken included the following.

10th International Course on Wetland Management

The 10th International Wetland Management Course was held in Lelystad in the Netherlands in September 2003. *nctwr* contributed to this course by providing training in the design and planning of integrated wetland monitoring programmes. The course was run by RIZA (the Netherlands Institute for Inland Water Management and Waste Water Treatment). *nctwr*'s involvement was a direct result of the tripartite agreement between *eriss*, Wetlands International and RIZA, established in 2003.

Integrated Catchment Management Training

nctwr, through GecOz Geospatial Consultants Australia, contributed to this course, held in Merauke, West Irian, Indonesia, in May 2004. The course was coordinated by the World Wide Fund for Nature (WWF) and covered water and catchment management issues including problem definition, stakeholder consultation, identification of socio-economic and biodiversity values, development of catchment management objectives and application of remote sensing technologies. *nctwr* provided expertise in assessing management issues and developing strategic responses for immediate and longer term objectives and at different spatial scales.

Other training activities

A formal agreement was signed between *nctwr*, the University of the Sunshine Coast and the International Global Change Institute, University of Waikato, New Zealand, to cooperate and develop training courses and materials. In particular, the agreement will focus on the development of appropriate training (and research) activities in Australia, New Zealand and the Asia-Pacific region.

Substantial discussions have been underway between numerous institutions including *nctwr*, Wetlands International, RIZA and Charles Sturt University to develop wetlands management training activities for south east Asia. During the year, Wetlands International published a report on training activities undertaken under the tripartite Letter of Intent with RIZA, Wetlands International and *nctwr*. The Letter of Intent sets out a strategic alliance to develop and deliver effective training courses and training materials. It also provides a forum for seeking advice and identifying priority audiences in different parts of the region.

5.2.6 Extension activities

Extension activities built on the above research and training programmes and included the following activities.

Letter of Intent with Sunshine Coast University

A meeting was held in January 2004 to discuss formal links between organisations, particularly in relation to wetland training and coastal change assessment and research.

Climate Change Conference

This conference was held in Surfers Paradise, December 2003, to discuss the extent of information on impacts of climate change and possible responses. Dr Max Finlayson gave a presentation on tropical wetlands and climate change based on research undertaken by *eriss* and *nctwr*.

Student projects

A number of student projects are run through the *nctwr* including: Ms Emma Woodward (PhD in information technology and its benefits); Ms Dimity Smith (PhD on the impacts of catchment modification on salt lake benthic microbial communities); Mr Brad Palmer (PhD on drivers of natural resource management in coastal wetland systems of the Northern Territory); Mr Grant Walsh (BSc (Honours) on investigating the potential for Aboriginal

people to develop commercial ventures on country and use this as a broader model for areas elsewhere); Mr John Collins (PhD on remote area tourism and the environmental impacts); and Mr Mike Saynor (PhD on the geomorphology of Swift Creek in Kakadu National Park).

Other activities

Ms MariaGrazia Bellio, from the Ecological Risk Assessment programme of *eriss*, was awarded the Bill Lane Award for Outstanding Ornithological Student in 2003. The Award is given annually by the Australian Bird Study Association to the most outstanding student in ornithology at Charles Sturt University. It was presented at the 2nd Australasian Ornithological Conference held at The Australian National University, Canberra, from 10–13 December 2003, and comes at the completion of an external study programme for the Certificate in Ornithology from Charles Sturt University.

Dr Finlayson provided radio media comments on tropical rivers and wetlands at the Tropical Rivers Forum in Darwin in February 2004 and at the Gulf Wetlands Forum at Karumba in May 2004.