



The BAC logo identifies key issues for the community. The fish trap signifies bringing and holding people together for decisions about the land. The water lily links the earth, water and air, it is a thing of beauty and a source of food. The two stems stand for two laws – traditional and balanda (non-Aboriginal). The lily bulbs and roots represent people in the district. The dilly bag holds the important messages for all the people of the Djelk wetlands.

Source: Bawinanga Aboriginal Corporation 1996.  
Caring for Country. Compiled by Helen Bond-Sharp,  
Printed by Maningrida LPC, Maningrida.

The BAC is also interested in harvesting wild freshwater fish for the aquarium trade. As a first step they needed to know what types of fish live in the Blyth–Liverpool wetlands, their abundance and where they occur. This information could be used to evaluate the ecological and economic viability of such a venture. Discussion between landowners, **eriss** staff and other experts could lead to the development of methods for harvesting suitable fish species in a sustainable manner.

In an initial freshwater fish survey in November 1996 **eriss** and community rangers sampled isolated pools in the lowland channels of three rivers flowing into the Blyth–Liverpool wetlands. They recorded 26 species. The most notable finding was the occurrence of the threadfin rainbowfish in the Cadell and Mann Rivers. Previously this species was only known in the Northern Territory from eastern Arnhem Land in the Goyder River. It also occurs on Cape York and in New Guinea.

The plant resources of the Blyth–Liverpool wetlands are also of great interest to the BAC. They want to set up a reference herbarium to document plants used by traditional owners. A botanist from **eriss** recently visited Maningrida to collect specimens and show the community rangers how to collect and curate plants for herbarium storage.

Apart from surveys by **eriss**, other studies in progress include the distribution and abundance of trepang (sea cucumber), and the use of Geographic Information Systems (GIS) to gather information on wetland use and crocodile nest distribution.

This program provides an example of how **eriss** can assist the development of a community-based wetland management plan. The program is in the spirit of community-based environmental conservation which is supported by **eriss** and other agencies.



**eriss** carries out scientific research for the protection of people and the environment in places that are highly valued by the Australian community.

#### Contact Officer

Lisa Thurtell, Ph: (08) 8979 9711  
e-mail [lisat@eriss.erin.gov.au](mailto:lisat@eriss.erin.gov.au)  
Wetland Protection and Management  
**eriss**  
Locked Bag 2, Jabiru NT 0886

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notes

## THE BLYTH–LIVERPOOL WETLANDS AND **eriss**

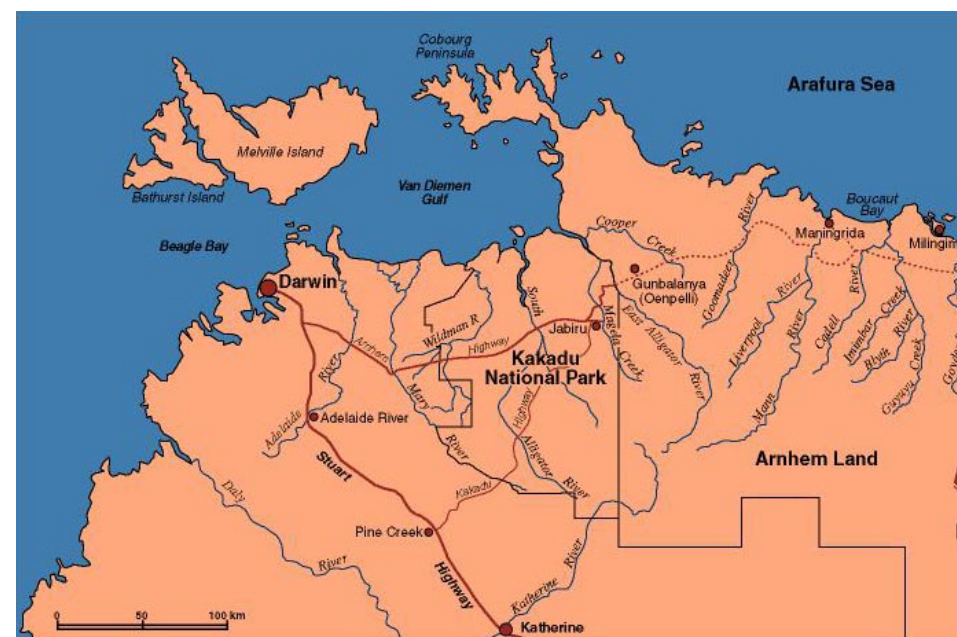
The Environmental Research Institute of the Supervising Scientist (**eriss**) undertakes research on environmental issues related to uranium mining and wetland management. It is located at Jabiru in Kakadu National Park in Australia's Northern Territory.

In 1996 **eriss** was asked by the Bawinanga Aboriginal Corporation (BAC) to help develop a management plan for their wetlands. The BAC represents people in outstation communities living near Maningrida in central Arnhem Land (about 400 km east of Darwin) and is keen to enhance the future prospects of these communities by developing a pro-active wetland management strategy. The BAC wanted **eriss** to assist them to assess the 'health' of their wetlands. Based on this and other assessments, the BAC will create a management plan that reflects community ideas for sustainable use and protection of the wetlands.

Consultations between **eriss** and the BAC to discuss community aspirations for the wetlands were facilitated by the Northern Land Council (NLC). This was important to ensure community ownership and control of planning, research and development of the management plan.

### The Bawinanga Aboriginal Corporation and the Blyth–Liverpool wetlands

Maningrida, at the mouth of the Liverpool River, is the largest settlement near the wetlands. It has a population of around 1800. The BAC, however, mostly represents the interests of a surrounding scattered population of approximately 700 people who live in small community groups on outstations.



Location of Maningrida and surrounding wetlands

The BAC's role is to maintain and improve outstation life by keeping the land, culture and people 'strong' by using traditional and non-traditional ways to 'care for country'. They identify the special values of their wetlands through use of the term 'Djelk', a word from the local Gurrmoni language meaning 'land' and 'caring for the land'.

The wetlands cover approximately 100 000 hectares and include diverse floodplain and estuarine environments associated with the Blyth–Cadell and Liverpool–Tomkinson River systems. These wetland systems represent some of the least disturbed coastal wetlands in the Northern Territory and many local people continue to utilise their traditional resources.





## The Djelk Community Rangers

The Djelk Community Rangers are a special interest group within the BAC with strong connections to the Blyth–Liverpool wetlands and a desire to produce and implement a wetland management plan. The skills to do these tasks are being developed through an extensive ranger training program. The program includes participation by scientists and wetland managers, who help by sharing their experience from other places and assisting the Djelk trainees carry out scientific studies on their wetlands. To encourage involvement by individuals and organisations from elsewhere, and as a focus for their activities, the Djelk Rangers have built a field laboratory and ranger station overlooking the Liverpool River floodplain. It incorporates visitor accommodation, general laboratory space and computer facilities and was funded by grants from the Aboriginal and Torres Strait Islander Commission.

## Djelk Community Ranger Training Program

Ranger training began in 1990 under the Northern Land Council's *Caring for Country* (CFC) program. The training program has utilised expertise from a number of management and research agencies in the Top End, including **eriss**, Parks Australia North, NT Parks and Wildlife Commission, NT Department of Primary Industry and Fisheries and NT Department of Land, Planning and the Environment. The rangers are also enrolled in a certificate course in resource management at Northern Territory University.



*Otto Campion and Hedley Brian (BAC Community Rangers) and Lisa Thurtell (**eriss**) take a close look at a macroinvertebrate sample collected from the Mann River.*

Training objectives are based on priority issues identified by the rangers and the local community. Feral animals and weeds, in particular mimosa, are seen as major issues and there is strong interest in commercial utilisation of animals and plants.

During training programs, rangers and visiting research or management personnel work together to develop specific projects. Programs are planned to encourage a two-way learning environment where a mix of traditional and scientific ecological knowledge can occur.

*BAC Community Rangers at Marngalgadjurrmeah Billabong near Mann River*



All studies undertaken by outside organisations have a training component for the community rangers. This ensures that:

- ❑ knowledge is not simply taken away by visiting researchers, but is retained and used to help the community
- ❑ visitors do not go into restricted places
- ❑ visitors are guided to the most suitable sampling locations with prior permission from appropriate land owners
- ❑ there is active involvement by traditional owners in ecological studies
- ❑ there are maximal opportunities for information exchange between those who care for the land and the visiting researchers

## The role of **eriss**

**eriss** is contributing to the BAC wetland management plan by providing planning advice and expertise to assist the Djelk rangers conduct baseline biological studies.

In terms of management planning, the **eriss** contribution is a review of technical information on the

Blyth–Liverpool wetlands. This will set the scene for researchers to undertake technical projects in the wetlands and loosely follows a Ramsar wetland management planning model. Where necessary, advice from other experts is being sought, for example, on issues concerning weed and feral animal management. Plain English versions of the management plan will be available to the local community as part of the community consultation process undertaken by the BAC to draft the plan. The draft management plan will be widely circulated and discussed. It will be a flexible, process-orientated working document which may be changed in response to better knowledge or refined community needs.

The management planning process is seen as a tool to bring traditional and scientific expertise together. The management plan helps the BAC continue using their valued wetlands in a sustainable manner.

## Ecological surveys by **eriss**

Aquatic macroinvertebrate, fish and plant surveys were undertaken by **eriss** in the 1996 and 1997 dry seasons. (Aquatic macroinvertebrates are small animals that complete part or all of their lifecycle in water; this includes shrimp, mosquito and dragonfly larvae.) Community rangers participated in the surveys, received training in survey work and exchanged knowledge with **eriss** scientists. The information exchange before, during and after the surveys was crucial in the formulation of survey objectives, site selection and reporting processes.

The macroinvertebrate survey revealed diverse, healthy communities typical of many Top End waterbodies. The streams had low nutrient concentrations and low turbidity reflecting the 'healthy' condition of the catchments through which they flow. At a few slightly salty sites some animals usually only found in marine environments were collected.