eriss landscape projects in the Alligator Rivers Region – seminar presented to the Kakadu Board of Management

P Bayliss, D Walden & J Boyden

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By Peter Bayliss, Dave Walden and James Boyden

Environmental Research Institute of the Supervising Scientist

Supervising Scientist
ERISS

Landscape Projects
in the Alligator Rivers Region
ERISS Work – Mostly Monitoring Water Quality in Magela Creek
Monitoring mussels & fish
New Landscape Work in the ARR

- World Heritage Committee asked Independent Science Panel (ISP) to review the Supervising Scientist risk assessment of Jabiluka
- ISP agreed risks were small
- They recommended, however that ERISS develop a landscape program for Kakadu that:
  - separates mining & non-mining impacts on country
  - includes Traditional Land Owner views
  - helps conserve natural World Heritage values
- Talks with Parks, KRAC, ARRTC & other stakeholders (e.g. NLC, NTG etc).
- Now talk with Kakadu Board about landscape projects & how we can work together.
# ISP Landscape Project

## Aims

1. **To separate mining & non-mining impacts**

<table>
<thead>
<tr>
<th>East Alligator (Magela)</th>
<th>South Alligator (Boggy Plain)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mine</td>
<td>No mine (control)</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>None</td>
</tr>
<tr>
<td>Weeds</td>
<td>Weeds</td>
</tr>
<tr>
<td>Ferals</td>
<td>Ferals</td>
</tr>
<tr>
<td>Saltwater</td>
<td>Saltwater</td>
</tr>
</tbody>
</table>

2. **To contribute to monitoring of World Heritage values of Kakadu**
Landscape Projects

• Usually just means Balanda science
  (plants, animals, rocks, water & air)

• But to have meaning in ARR

  ➢ Include Bininj values & views

  ➢ Using “Caring for Country” thinking
Indigenous views of landscape management in the Northern Territory

~28% Population
~44% Land
~85% Coastline
Some Landscape Projects

1. WEEDS
2. FERALS
3. WATERBIRDS

4. FIRE & BOGGY PLAIN

5. CARING FOR SEA COUNTRY

6. OTHERS
WEEDS

Mimosa

Biggest threat to tropical wetlands in northern Australia

But – Paragrass, Salvinia & other weeds catching up
MIMOSA REDUCES MAGPIE GOOSE NESTING HABITAT
MIMOSA & PARAGRASS DESTROYS OTHER BUSH TUCKER HARVESTS

Pig nose turtle (Lofty Nadjamerrek, Oenpelli)

& ALSO POTENTIAL COMMERCIAL USE
Mapping Paragrass & other weeds on the Magela
FERAL ANIMAL MANAGEMENT KAKADU

• How many & where (whose country & responsibility)?
• Which cultural resources (assets) are damaged?
• How do TOs view this “damage”? 
• How do TOs value pigs & buffalo?
• How do we manage these different views?
• What are the “trade-offs”?
• Don’t forget the others.
Boggy Plain (Nanjbagu) Fire Project

Cultural resource management project
Peter Christo, Violet & Sandra – with help from EA (Parks & Eriss)
Boggy Plain Vegetation transects

Native *Hymenachne*

*Eleocharis dulcis* - Burnda
Saltwater Intrusion

For important freshwater wetlands like Boggy Plain we can map those places most likely to suffer from saltwater intrusion.
**Waterbirds**


Showed Boggy Plain & Mamukala wetlands had biggest *Eleocharis* swamps in NT & also 85% of dry season geese numbers

But what has happened since 1989?
Migratory shorebirds found in Kakadu travel the world
Looking after Sea Country

• **Marine wildlife** highly valued by Indigenous people – dugongs, crocodiles & sea turtles

• **Coastal habitats** – seagrass, islands, mangroves, mudflats, rivers & creeks
Are mangroves moving inland because of climate change (sea level rise)?

- East Alligator 20 year study
- West Alligator study
How can we work together on these Landscape Projects?