

8

Workshop overview

WORKSHOP OVERVIEW

DS MITCHELL

Murray-Darling Freshwater Research Centre, PO Box 921, Albury, NSW 2640

1 A brief summary

Research of relevance to the management of wetland systems in the 'Wet-Dry tropics' of Australia was presented and discussed under the following headings:-

- Wetlands in Kakadu National Park
- Wetland management, processes and functions
- Wetland inventory, survey and assessment
- Management issues and threats
- Monitoring ecological change in wetlands
- Wetland conservation

An attempt to identify the main research issues at the end of the second day developed too long a list of possibilities (not a surprise) though some emphases were apparent. These were:-

- the value of studying ecological processes
- the need for a holistic approach to project design and interpretation
- the pragmatic necessity of selecting key ecosystem components for study
- the seminal importance of rigorous design to ensure reliability and transferability of research
- the need for good communication between all involved in the determination of research needs, the performance of the research process, and the application of research results.

Discussion groups on the third day provided an effective means of nominating research priorities in respect of:

- Wetland inventory and assessment
- Threats and challenges
- Monitoring within these categories

Research topics were described with regard to background reasons, actions, and possible partners.

2 Surface issues and undercurrents

While the brief summary outlined above sets out the substance of the workshop, it does not reveal the interplay of ideas, experiences and influences that underlie the issues which will distil out in the workshop proceedings.

Many of these undercurrents consist of tensions between contrasting ends of a continuum of values, or attitudes, where the validity at any point of the continuum is determined by the

situation to which it pertains. For example, there is a continuum between basic research and applied research. Depending on the circumstances, there is validity at either end of the continuum and at any point between them. Thus, the precise scientific mix of basic and applied research in a particular research project, and therefore its position on the continuum, is determined by the objectives of the project and its resources of people, time and money.

The continuum between 'good research' and 'sloppy research' however, provides a contrasting example where only one end of a continuum is acceptable. In this case, the position on the continuum where the research ceases to have validity is determined by the objective judgement of scientists and evaluation of the reliability of the research when it is applied in management.

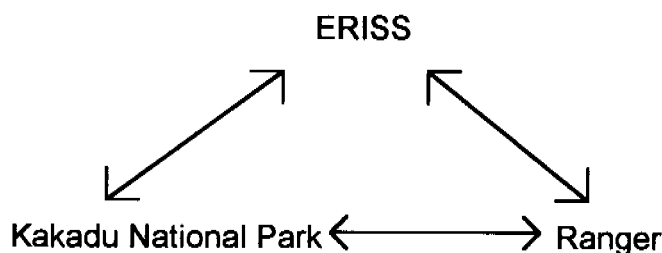
The intellectual environment at a workshop which considers management oriented research is generally influenced strongly by the need to reach an appropriate balance between a number of pairs of contrasting opposites, each pair being held in tension by a continuum between them. The relationship of basic and applied research is one example. Others that have arisen at this workshop include

- Western Science and Traditional Knowledge
- Objectivity and Subjectivity
- Economic Development and Ecological Sustainability
- Can and Ought (Ethics)
- Data Collection and Data Evaluation
- Rural and Urban attitudes to land use
- Commonwealth Government and Northern Territory Government

These contrasts should not be treated as conflicts but as positive tensions that provide a dynamic environment for planning scientifically rigorous research that relates well to management needs. Such research can be sufficiently focussed to advance scientific understanding and sufficiently flexible to be reactive and proactive to management issues as they evolve. Indeed, these tensions provide the matrix in which ideas are formed and traded, scientific hypotheses are refined and criticised, and research criteria are identified and written into contracts in a spirit of cooperation to the benefit of all concerned.

3 Opportunities for cooperation

Opportunities for scientific cooperation on research and management of wetlands in the Wet-Dry tropics are many and varied. At the local level they can be illustrated by the actual and potential relationships between *eriss* the Ranger Mine and Kakadu National Park as depicted in the figure below-



Opportunities for involving other organisations in cooperative ventures also exist at Regional, National and International levels.

4 Unanswered questions

There is always a danger that participants in a busy, focussed workshop such as this do not verbalise and define some of the intellectually challenging issues that may be raised by the workshop discussions. In some cases, these may not appear directly relevant, or they may challenge conventional practise and therefore be inconvenient, or they may lack sufficient evidence to be advanced beyond the level of a suspicion. However, healthy science should raise questions as well as answer them and should maintain uncertainty and doubt as a stimulus to progress. This workshop has exhibited many examples of healthy scientific debate and so I want to conclude this summary by articulating three of the unanswered questions that have emerged from, or been strengthened by, the deliberations of this Workshop.

They demonstrate for me the successful nature of the workshop and the health of wetland science in the Wet-Dry tropics:-

- Where do Wet-Dry tropical wetlands fit?
(relate to temperature, rainfall, seasonal/aseasonal climate patterns, north-south latitudes)
- Are highly successful invaders to be repelled, or incorporated, in terms of economic and ecological costs and benefits?
- Are Wet-Dry wetlands stabilised or destabilised by the regular wet and dry pulses?
(comparability with less strictly pulsed systems).

Acknowledgment

Finally on behalf of all participants, I want to acknowledge the hard work and excellent organisation of this workshop by the staff of *eriss* and express our appreciation of this opportunity to participate in it.