

# 1 Introduction

This report has been prepared in response to a request from the members of the Alligator Rivers Region Technical Committee (ARRTC) at the ARRTC8 meeting of 8–9 December 2001. The objective is to summarise information on the mining-related research undertaken in the Alligator Rivers Region (ARR) since 1978 that will enable members to place current and proposed future research programs in context.

Several formal reviews of research in the region have been undertaken in the past. These include the Taylor review of Alligator Rivers Region Research Institute (renamed as the Environmental Research Institute of the Supervising Scientist, *eriss*, in 1994) in 1989/90 and the Barrow review in 1993/94. These reviews, because of their specific terms of reference, concentrated on the program of *eriss*. In this report we attempt to integrate the research undertaken by *eriss* and its collaborators and consultants with that undertaken by Energy Resources of Australia (ERA), Earth Water Life Sciences (EWLS) and their consultants.

A comprehensive review of the mining related research in the ARR over the past 24 years is beyond the scope achievable in the short time available for the production of this report. What we have attempted to do is:

- Identify the major fields in which research has been necessary in the region to ensure that the environment of the region is protected from the effects of uranium mining,
- Summarise the major issues or problem areas in these fields and the scope of studies carried out,
- Summarise the principal outcomes for operation of mining in the region and for subsequent rehabilitation of mine sites
- Identify issues that still require scientific research to either ensure ongoing environmental protection to a very high standard during mining operations or to ensure rehabilitation of mine sites to the standard demanded by governments and the community.

## Addendum to the introduction

The preface to this report identifies that it was produced in February 2002 in response to a request from the ARRTC8 meeting in December 2001.

It comprises a major body of work that was undertaken in a short time and, as such, the preface includes caveats essentially stating that the report requires more work before it could be considered to be complete.

It is not considered to be practicable to attempt to update it in its entirety prior to publication or to periodically rewrite the document to maintain its currency, but it was considered appropriate to add a later chapter, Chapter 6, that covers the Key Knowledge Needs (KKNs) that were developed by ARRTC, largely in response to the first release of this report as a work in progress.

Since 2002, and also subsequent to the development of the first iteration of the KKNs, there have been a number of new developments in the region that date the content of this report. With the exception of the KKNs, which were current from 2004 to 2006, the remainder of the report should be considered to be a snapshot of the status quo as at February 2002.

Since the release of the first KKNs in 2004, *eriss* has produced annual research summaries that are compatible with the KKN format. Some additional compilation will be required to catalogue research undertaken between February 2002 and commencement of the current annual research summary series.

Revision of the KKNs commenced in January 2007.

Alan Hughes, Supervising Scientist

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