

# 1 INTRODUCTION

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## 1.1 Role and function of the Supervising Scientist

The position of Supervising Scientist was established under the Commonwealth *Environment Protection (Alligator Rivers Region) Act 1978* (the EPARR Act) in response to a recommendation of the second and final Fox Commission report in May 1977.

The roles and responsibilities of the Supervising Scientist are to:

- develop, coordinate and manage programmes of research into the effects on the environment of uranium mining within the Alligator Rivers Region;
- develop standards, practices and procedures that will protect the environment and people from the effects of uranium mining within the Alligator Rivers Region;
- develop measures for the protection and restoration of the environment;
- coordinate and supervise the implementation of requirements made under laws applicable to environmental aspects of uranium mining in the Alligator Rivers Region;
- provide the Minister (the Australian Government Minister for the Environment and Water Resources) with scientific and technical advice on mining in the Alligator Rivers Region;
- on request, provide the Minister (the Australian Government Minister for the Environment and Water Resources) with scientific and technical advice on environmental matters elsewhere in Australia.

The Supervising Scientist heads the **Supervising Scientist Division (SSD)** within the Department of the Environment and Water Resources. The Division comprises two branches.

The **Office of the Supervising Scientist (oss)** undertakes supervision, audit and assessment activities and provides policy advice to the Australian Government in relation to the environmental performance of uranium mines in the Alligator Rivers Region. **oss** also provides business and administrative support to the Supervising Scientist Division.

The **Environmental Research Institute of the Supervising Scientist (eriss)** undertakes environmental monitoring and scientific research into the impact of uranium mining on the environment within the Alligator Rivers Region to support the work of the Supervising Scientist. **eriss** also conducts research into the sustainable use and environmental protection of tropical rivers and their associated wetlands.

## 1.2 Performance summary

As a division of the Department of the Environment and Water Resources, SSD is funded under the Portfolio's departmental output appropriation and contributes to the delivery of the Department's Outcome 1:

The environment, especially those aspects that are matters of national environmental significance, is protected and conserved.

Outcome 1 is divided into five Outputs. The Supervising Scientist contributes to Sub-output 1.2.4 *Tropical wetlands research* under Output 1.2 *Conservation of the land and inland waters* and Sub-output 1.5.3 *Supervision of uranium mines* under Output 1.5 *Response to the impacts of human settlements*.

Further details on SSD activities during 2006–07 contributing to Sub-output 1.2.4 are provided in Chapters 3 and 5 of this Annual Report. Details on SSD activities contributing to Sub-output 1.5.3 are provided in Chapters 2 and 3.

Communicating the outcomes of research, monitoring and supervision activities to relevant stakeholders and the broader scientific community is a key part of the work of the Division. Of particular importance is the ongoing communication and liaison SSD undertakes with the Aboriginal people living in the Alligator Rivers Region. Further details on SSD communications activities during 2006–07 are provided in Chapter 5.

### **1.3 The Alligator Rivers Region and its uranium deposits**

The Alligator Rivers Region is located some 220 km east of Darwin and encompasses an area of approximately 28 000 km<sup>2</sup> (see Map 1). The Region includes the catchments of the West Alligator, South Alligator and East Alligator Rivers, extending into west Arnhem Land. The World Heritage listed Kakadu National Park lies entirely within the Alligator Rivers Region.

The Ranger, Jabiluka and Koongarra uranium deposits within the Alligator Rivers Region are not, and never have been, located within Kakadu National Park. Nabarlek is situated to the east of Kakadu National Park within Arnhem Land.

Ranger is currently the only operational uranium mine in the Region. Mining ceased at Jabiluka in 1999 and the site is under long-term care and maintenance. Mining at Nabarlek ceased in 1980 and the site has been decommissioned and is subject to ongoing rehabilitation. Development of the Koongarra uranium deposit is subject to traditional owner approval as required under the Commonwealth *Aboriginal Land Rights (Northern Territory) Act 1976*. There are also a number of former uranium mines in the South Alligator River Valley that operated during the 1950s and 1960s which are currently being rehabilitated.

#### **1.3.1 Ranger**

Energy Resources of Australia Ltd (ERA) operates the Ranger mine, which is located approximately 8 km east of the township of Jabiru. The mine lies within the 78 km<sup>2</sup> Ranger project area, adjacent to Magela Creek, a tributary of the East Alligator River. The Ranger project area is surrounded by Kakadu National Park.

Ranger is an open cut mine and commercial production of uranium concentrate (U<sub>3</sub>O<sub>8</sub>) has been under way since 1981. Orebody No. 1 was exhausted in late 1994 and excavation of Orebody No. 3 began in 1997.

Current ERA planning is for mining at Ranger to cease in 2009 with processing of stockpiled ore to continue until 2020.

### 1.3.2 Jabiluka

The Jabiluka mineral lease abuts the northern boundary of the Ranger project area and the Jabiluka site is situated some 20 km north of the Ranger minesite. It is also owned by ERA.

Unlike the Ranger and Nabarlek deposits, the Jabiluka orebody lies beneath a cover of cliff-forming sandstone. It is in the catchment of the East Alligator River, adjacent to Ngarradj (Swift Creek), which drains north to the Magela floodplain. The Australian Government completed its assessment of ERA's Environmental Impact Statement, which provided for milling of Jabiluka ore at Ranger, in 1997.

Development work at Jabiluka took place in the late 1990s but ceased in September 1999, at which time the site was placed in an environmental management and standby phase that lasted until 2003.

During 2003, discussions were commenced between ERA, the Commonwealth and Northern Territory Governments, the Northern Land Council (NLC) and the Gundjeihmi Aboriginal Corporation (GAC), which represents the area's traditional Aboriginal owners, the Mirarr people. Following these discussions, an agreement was reached between the parties which resulted in Jabiluka being placed in long-term care and maintenance. This agreement included an undertaking by ERA not to engage in mining activities at Jabiluka without the consent of the Mirarr people. The agreement was endorsed by the NLC in 2004 and was approved by the Australian Government Minister for Immigration and Multicultural and Indigenous Affairs in 2005.

### 1.3.3 Nabarlek

Nabarlek is located approximately 280 km east of Darwin. Queensland Mines Ltd undertook mining at Nabarlek during the dry season of 1979, and milling of the ore continued until 1988. Some 10 857 t of uranium concentrate ( $U_3O_8$ ) was produced while the mill was operational.

Decommissioning of the mine was completed in 1995 and the performance of the rehabilitation and revegetation programme continues to be monitored by SSD prior to final close-out.

### 1.3.4 Koongarra

The Koongarra deposit is located approximately 25 km south-west of Ranger, in the South Alligator River catchment. The Koongarra deposit is owned by Koongarra Pty Ltd, a subsidiary of the French company Areva. The site is subject to the provisions of the Commonwealth *Aboriginal Land Rights (Northern Territory) Act 1976*, which requires that traditional owner approval must be obtained before any application for a mining title can be made to the Northern Territory Government.

### 1.3.5 South Alligator Valley mines

During the 1950s and 1960s, several small uranium mines and milling facilities operated in the South Alligator River Valley, in the southern part of the Alligator Rivers Region. Mining occurred at several locations in the valley, principally at El Sherana, El Sherana West,

Rockhole Creek and Coronation Hill (Guratba). Milling occurred at Rockhole Creek within the South Alligator Valley as well as at nearby Moline, which lies outside the Alligator Rivers Region.

Output from these mines was relatively small. It is estimated that less than 1000 t of uranium concentrate was produced at the Rockhole Creek and Moline mills from the ore mined in the South Alligator Valley during this period.

These sites, excluding Moline, are the responsibility of the Australian Government Director of National Parks and are administered through Parks Australia North.

SSD is assisting Parks Australia North with the implementation of the \$7.3 million four year project for rehabilitation of abandoned uranium mining sites in the valley, announced by the Australian Government in May 2006. Further details on SSD involvement in this project are provided in Section 2.5.1 of this Annual Report.