

Summary of Linkage Projects Proposals for Funding to Commence in 2007

Northern Territory

Charles Darwin University

LP0776798 Prof B Campbell; Mr AG Drucker; Prof Dr MK Luckert; A/Prof A Angelsen

Approved Project Title **Natural resource management and enterprise development: can they improve Indigenous livelihoods?**

2007 : \$ 33,500

2008 : \$ 61,000

2009 : \$ 61,000

2010 : \$ 33,500

Primary RFCD 3008 ENVIRONMENTAL SCIENCES

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Department of Business, Economic and Regional Development
Ramingining Homelands Resource Centre Aboriginal Corporation
Centre for International Forestry Research

Administering Organisation Charles Darwin University

Project Summary

High on the Australian agenda is the removal of disadvantage faced by Indigenous groups and the sustainable use of biodiversity on Indigenous land. In terms of Eastern Indonesia, the Australian agenda relates to poverty eradication, with fewer threats to Australian borders in terms of illegal fishing and migration. This project provides fundamental knowledge on household resource use patterns, and the constraints and opportunities for natural resource activities, as a step towards identifying ways in which natural resources can be mobilised to improve livelihoods.

LP0776402 A/Prof KS Gibb; Prof DL Parry; Dr KA McGuinness; Dr MK Smith; Mr JV Anderson

Approved Project Title **Coastal monitoring using metal resistant microbes**

2007 : \$ 62,553

2008 : \$ 121,070

2009 : \$ 116,647

2010 : \$ 58,130

Primary RFCD 2703 MICROBIOLOGY

Collaborating/Partner Organisation(s)

Department of Business, Economic and Regional Development
Alcan Queensland Research and Development Centre
Xstrata Zinc - McArthur River Mining Pty Ltd
Rio Tinto Aluminium Ltd
Northern Land Council
Department of Natural Resources Environment & the Arts (DNRETA)

Administering Organisation Charles Darwin University

Project Summary

We will develop an early warning, rapid biological assessment (RBA) for sediment toxicity that can be used alongside chemical tests to detect sub-chronic changes in the environment. The assessment will be validated by extensive testing of impacted sediment. We will show how the RBA fits into existing decision trees defined by the Australian and New Zealand Environment and Conservation Council (ANZECC) 2000 Guidelines. The biological tests resulting from this project will be as rapid and straightforward as existing chemical tests, which will facilitate industry acceptance. The project has strong industry involvement from mining companies, the Environment Protection Agency (EPA) and traditional owners. These partners will guide this project and facilitate communication to the wider industry to aid acceptance and uptake.

Summary of Linkage Projects Proposals for Funding to Commence in 2007

LP0776399 Prof DL Parry; A/Prof KS Gibb; Prof BA Neilan

Approved Project Title **Managing acid mine drainage in northern Australia using microbial mats**

2007 : \$ 62,793

2008 : \$ 126,753

2009 : \$ 130,989

2010 : \$ 67,029

Primary RFCD 2703 MICROBIOLOGY

Collaborating/Partner Organisation(s)

Department of Business, Economic and Regional Development

Department of Primary Industry, Fisheries and Mines

Zinifex Century Limited

Xstrata Zinc - McArthur River Mining Pty Ltd

Compass Resources NL

Vista Gold Corp

Administering Organisation Charles Darwin University

Project Summary

One of the most difficult environmental issues for the mining industry is acid mine drainage (AMD) that can lead to significant environmental damage. This project aims to identify microbes and characterise their roles in AMD formation in north Australia. We will use our new knowledge to design and trial microbial mats for the treatment of AMD. A successful AMD microbial treatment technology will minimise the risk of acid runoff and metal seepage into rivers and through groundwater. AMD treatment technology we develop in the tropics where we experience the extremes of dry and wet seasons will require only minor modification to operate in temperate climates however the reverse is not true.