

Upper Hunter

RIVER REHABILITATION INITIATIVE

Upper Hunter River Rehabilitation Initiative

and

ARC-Linkage

Project Management Review

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UHRRI Report 2005/01

Macquarie University

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Summary

1. A review of Project Management of the Upper Hunter River Rehabilitation Initiative (UHRRI) and Australian Research Council (ARC-Linkage) Research program was initiated by Mark Sanders on taking up the role of Project Manager in August 2004. The review sought written and verbal feedback from UHRRI and ARC-Linkage personnel, and from stakeholders associated with UHRRI.
2. The overall goal of the review was to identify key project management tasks and to assist in determining the direction that the project needed to take over the next several years.
3. The review also aimed to identify stakeholder expectations, and perceived strengths, weaknesses, opportunities, and threats related to UHRRI and the ARC-Linkage research.
4. Feedback highlighted the different expectations that various parties have of the project. The resources of the project are sufficient to meet most expectations of all parties, including all contractual obligations. However, there is inevitably always more that could be done on any given aspect of the project. A key challenge for the Project Manager is to ensure that UHRRI resources – particularly staff time – are allocated fairly among the various parties.
5. In particular, balancing the needs of research and rehabilitation requires careful management. The UHRRI Project Manager and Research Officer are funded by the ARC-Linkage Research Grant, and a major responsibility of these positions is to support the research. At the same time, Macquarie University has committed to employing a Project Manager to implement “the overall UHRRI project”.
6. The main strengths of UHRRI/ARC-Linkage project identified by stakeholders were:
 - Rehabilitation objectives that are widely supported by stakeholders and the local community.
 - Industry Partners are keen to see UHRRI succeed.
 - A strong team of Chief Investigators and PhD students from three universities.
 - A multi-disciplinary, research-based approach to river management, led by a team of experienced scientists.
 - The high level of funding and in-kind support for the project, particularly from Industry partners, the Hunter Central Rivers Catchment Management Authority (HCRCMA) and the Department of Infrastructure, Planning and Natural Resources (DIPNR).
 - Some excellent baseline data (e.g. the Digital Elevation Model).
7. Main opportunities identified were:
 - Building a strong case for further financial and material support by achieving rehabilitation and research outcomes, and promoting these achievements.
 - Various opportunities to apply for further funding.
 - Building support among the community by getting different sectors of the community involved in rehabilitating the river.

- Documenting how our research results inform and improve river rehabilitation techniques.
 - Improving research output by improving integration of research activities.
 - Combining local experience and knowledge with scientific rigour to test and develop better, cost-effective techniques for revegetation.
8. The main risks identified by stakeholders were:
- Although low, there is some risk of fatality or serious injury, as with all field work.
 - The long-term future of rehabilitation works is not secure.
 - Floods may threaten engineered structures and plantings.
 - Prolonged drought will reduce survivorship of plantings and increase watering costs of new plantings.
 - The risk to revegetation from invasive weeds is unclear, but may be high.
 - A lack of information flowing through to stakeholders and the community, and failure to meet reporting obligations, such as newsletter and Stakeholder committee meetings. If not addressed, this could compromise industry support for the project.
9. The main weaknesses identified by stakeholders were:
- Although research funding is secure, rehabilitation works (e.g. revegetation) depend entirely on gaining funding from external sources.
 - Use of voluntary labour for tree planting has contributed to poor tree survival in some instances.
 - Industry concern about OH&S system needs to be addressed.
 - The lack of a clear process for allocating limited resources between research and rehabilitation.
 - The lack of a strong conceptual framework for research and rehabilitation.
 - Relatively little research is built around the revegetation works.
 - Research could be better integrated.
 - The project does not directly address water quality – a major public concern.
 - There is a need to develop protocols and principles for sharing concepts and data.
 - Because UHRRI has only two staff to undertake a large diversity of tasks, it is vulnerable to staff turnover. Attracting and retaining suitably qualified staff in Muswellbrook may be difficult.
 - The complex contractual basis and management structure of UHRRI, the several reporting lines, and the large number of committees and meetings.
10. Secondary goals of the review were to clarify the roles of the Project Manager, the Research Officer, and the Chief Investigators.
11. The Chief Investigators, Industry Partners, and UHRRI Project Manager discussed feedback from stakeholders. On the basis of this discussion, and a review of UHRRI's contractual commitments, The Project Manager identified key project management actions to be undertaken over the next year in relation to:
- Financial management
 - Reporting
 - Staff management

- OH&S
- Communications & Public Relations
- The UHRRI Strategic Plan
- Memorandum of Understanding
- Revegetation
- Research management

A timeline for these key project management actions is presented in Table 1:

Table 1. Key Project Management Actions

Date	Action
Monthly	Monthly email updates
Monthly	Monthly Operating Reviews between Research Officer and Project Manager, and Project Manager and head Chief Investigator
Quarterly	Quarterly newsletter
Quarterly	ARC report to industry
6-monthly	Research workshop
Ongoing	Provide SCCC members with copies of all UHRRI output
Ongoing	Establish and maintain a UHRRI internal reports series
Ongoing	Post UHRRI & ARC outputs (e.g. newsletters) to the Website
20-Dec-04	Establish and maintain UHRRI/ARC-Linkage Bibliography
20-Dec-04	Review OH&S procedures & update as necessary
24-Dec-04	Provide a draft revision of MOU to DIPNR and HCRCMA
31-Jan-05	Submit ARC Annual report
28-Feb-05	Establish and maintain a UHRRI timeline, listing significant dates of significant events
31-Mar-05	Establish and maintain a library of all UHRRI-related written output, videos, posters etc. Make available as far as practical on UHRRI website
30-Apr-05	Review all publicity materials, including PowerPoint presentations
30-Jun-05	Complete Project Management Review
30-Jun-05	Produce a written report on revegetation and monitoring undertaken August 2004 - May 2005
31-Aug-05	Produce an updated OH&S management plan
31-Aug-05	Produce a working revegetation plan
30-Sep-05	Complete a substantial update of the UHRRI Website
31-Oct-05	Produce a revised UHRRI Strategic Plan
31-Oct-05	Produce a Project Plan that identifies milestones
30-Nov-05	Complete the (Miller & Keating) written review of revegetation undertaken November 2002 – June 2004
28-Feb-06	Produce an updated written UHRRI Communications Strategy

Background

This review of the management of the Upper Hunter Rehabilitation Initiative (UHRRI) and ARC-Linkage Research program was initiated by Mark Sanders on taking up the role of Project Manager in August 2004. The overall goal is to identify the key tasks and direction that the project needed to take over the next several years. Specific objectives of the review are:

1. To clarify the role of the Project Manager and the Research Officer.
2. To clarify the roles of Chief Investigators.
3. To understand the expectations of the various parties involved with UHRRI and ARC-Linkage Research.
4. To identify any issues that arise from differences in expectations – with a view to addressing and resolving these issues.
5. To identify weaknesses and risks of the project, especially any critical risks that could severely compromise the project, or even lead to its failure – with a view to minimising or eliminating such risks.
6. To identify strengths and positive opportunities for the project, with a view to capitalising on such opportunities.
7. To provide an opportunity for stakeholders to suggest changes that they would like to see in the way the project is run.

A questionnaire addressing these objectives was distributed to:

- All members of the ARC-Linkage team – CIs, PIs, and PhD students
- Bob Creese at NSW fisheries (co-supervisor of Tim Howell, ‘fish PhD)
- Narelle Wolf and Ian Tredinnick at Mt Arthur Coal
- Mike Chapman at Bengalla Mining Company
- Malcolm Rothe at Macquarie Generation
- Amanda Payton at Muswellbrook Shire Council
- Nick Godfrey-Smith (Newcastle Ports Corporation – who contributed funds to the Large Woody Debris installation)
- Andrew Donnelly (Australian Museum, which is doing complimentary research on this stretch of the river).
- Stuart Garrard, Supervisors of Department of Lands River Crew
- Fiona Marshall, DIPNR
- Peter Ainsworth, HCRCMA
- Dan Keating, Research Officer
- Craig Miller, previous Project Manager

The questions in the review questionnaire were also raised in a general way with Landholders. People were supportive of the review and provided verbal or written feedback in direct response the questionnaire, or both. In addition, various stakeholders took other opportunities to give feedback, e.g. at the Stakeholders and Consultative Committee Meeting in September 2004.

Project Management Actions

Using feedback from stakeholders as a starting point for discussion, Chief Investigator (CI), Partner Investigators (PIs), Industry partners, and UHRRI Project Manager identified the following actions to be undertaken over the next year. A timeline for these actions is presented in Table 1, above.

Financial management

- Maintain comprehensive local financial record-keeping at Muswellbrook office.
- Maintain up-date, accurate records of financial position and performance. This requires close liaison with budget controllers at other organisations who manage budgets to be spent on UHRRI or ARC-Linkage work, particularly the CMA and Macquarie University.

Staff management

- Comply with Macquarie University staff management and performance review systems.
- In addition, maintain system of Monthly Operating Reviews between the UHRRI Research Officer and the Project Manager, and between the Project Manager and the head CI at Macquarie University.

Reporting

UHRRI and ARC-Linkage reporting requirements are specified in three contractual documents, as follows.

1. The *ARC-Linkage Research Contract* between the Australian Research Council, Macquarie University, Bengalla Mining Company, Mt Arthur Coal, Macquarie Generation and DIPNR requires:
 - A written annual report to the ARC on progress on the research program specified in the contract.
 - PhD students must also provide written annual progress reports on their Australian Postgraduate Awards Industry (APAI) to their university's Research Offices.
2. The *Upper Hunter River Rehabilitation Initiative Memorandum of Understanding* between HCRCMA, DIPNR, and Macquarie University (still in draft form) requires:
 - Verbal reports with written supporting material to meetings of the UHRRI Executive Committee and UHRRI Scientific Committee.
3. The '*Funding Agreement for the Hunter River Rehabilitation Research Project*' (also informally referred to as the 'License Agreement') between Macquarie University, Bengalla Mining Company, Mt Arthur Coal, Macquarie Generation, and Water Administration Ministerial Corporation (i.e. DIPNR) specifies reporting requirements for 'The Project'. The Project is described in Schedule 1 of the contract and comprises the ARC-Linkage Research. In summary, the University must provide supporters ('industry partners') with:

- A project plan that identifies research milestones.
- Sufficient information to allow monitoring of the The Project.
- Copies of project output, as requested.
- Two research workshops per annum.
- Quarterly written reports to each supporter, detailing progress, significant events, project material created, personnel, and costs vs. budget.
- A final report.

The relevant clauses and requirements are reproduced in Box 1, below.

Box 1. From the Funding Agreement for Hunter River Rehabilitation Research Project

2.4 Milestones and Project Plan

- 2.4.1 The University must develop Milestones and the Project Plan in agreement with each supporter at the first Research Workshop.
- 2.4.2 The University may, from time to time, vary the Milestones or the Project Plan with the prior written consent of each Supporter.

2.5 Progress reporting

- 2.5.1 The University must provide Supporters with sufficient information and reports to allow Supporters to monitor the University's conduct of the Project in accordance with this Agreement.
- 2.5.2 A minimum of two (2) Research workshops must be held per annum, to plan and/or review the progress of the Project.
- 2.5.3 The University must, on request by a Supporter, provide that Supporter with a copy of any Project Material requested by that Supporter.
- 2.5.4 Without limiting clause 2.5.1 the University must provide a written report to each Supporter within 30 days after the end of each Quarter during the Term detailing:
- (a) progress of the Project, including whether any applicable Milestones have been met;
 - (b) any highlights, breakthroughs or difficulties encountered by the University in relation to the Project during the preceding Quarter;
 - (c) possible applications of research results and any areas of potential commercialisation;
 - (d) any Project Material created;
 - (e) Project IP created and an assessment of its actual or potential commercial value to the Parties;
 - (f) a list of all personnel who participated in providing the Project Services during the preceding Quarter;
 - (g) costs incurred by the University in conducting the Project; and
 - (h) comparisons of the actual Project budget, status or research results against the budget, status or research results set out in the Project Plan.
- 2.5.5 The University must forward a final report to each Supporter within ninety (90) days of the expiry of the Term setting out:
- (a) the information referred to in clause 2.5.4;
 - (b) recommendations on potential future commercialisation or other use or exploitation of the Project IP (if any).

OH&S

- Review UHRRI OH&S management system and ensure that it complies fully with the OH&S Act and Regulation, and minimises risk to UHRRI personnel and site visitors.
- Produce an updated OH&S management plan and gain approval of this plan by BMC, MAC, and Macquarie University OH&S committee. The plan will detail UHRRI audit trail, and provide for regular review.

Communications & Public Relations

In addition to the formal reporting as set out under 'Reporting', above, the Project manager will:

- Produce an updated written UHRRI Communications Strategy to be approved by the UHRRI Executive committee.
- Commencing November 2004, provide 1-2 page e-mail updates to the ARC team and SCCC Members at least once per month.
- Commencing February 2005, produce quarterly newsletters for distribution to SCCC members, UHRRI personnel, local media and information centre. Post on UHRRI website.
- Commencing February 2005, update the UHRRI website at least four times per year.
- Review all publicity materials, including PowerPoint presentations. Update and cull as necessary. Ensure all logos are up to date.
- Establish and maintain a library of all UHRRI-related written output, videos, posters etc. Where practical and permitted by copyright, make these available on the UHRRI website.
- Commencing with this report, establish and maintain a UHRRI internal reports series.
- Establish and maintain UHRRI/ARC-Linkage Bibliography. Post on UHRRI website.
- Commencing December 2004, provide SCCC members with copies of all UHRRI output.
- Establish and maintain a UHRRI timeline, listing significant dates of significant events. Include this on website.

Planning

- Produce a revised UHRRI Strategic Plan.
- Include explicit risk analysis in planning any substantial operational work, including analyses of financial, operational, OH&S, community relations risks, and strategies to eliminate or minimise these risks.

Memorandum of Understanding

UHRRI was established by the former Hunter Catchment Management Trust (now the Hunter Central River Catchment Management Authority, HCRCMA), the Department of Land and Water Conservation (now the Department of Infrastructure, Planning and Natural Resources, DIPNR), and Macquarie University. The roles and responsibilities of these parties were set out in a Memorandum of Understanding (MOU). The dissolution of the Hunter Catchment Management Trust in 2004 has necessitated the drafting of a new MOU between Macquarie University, DIPNR, and the HCRCMA.

The Project Manager will:

- Lead the process of producing a new MOU.
- Provide a draft revision of MOU to DIPNR and HCRCMA.

Revegetation

- Complete Craig Miller and Dan Keating's written review of revegetation undertaken between November 2002 and June 2004.
- Produce a written report on revegetation and monitoring undertaken between August 2004 and May 2005.
- Produce a working revegetation plan, including an assessment of threats posed by weeds. The plan needs to recognise that progress on revegetation is contingent upon obtaining resources for further planting and ongoing maintenance.

Role Definitions

Project Manager

The Macquarie University Job Description for the Project Manager describes the main purpose of the position as follows.

“To manage ARC-Linkage Research and the Upper Hunter River Rehabilitation Initiative. This involves co-ordination of the operational aspects of a large research project, particularly management of contractors, student field research activities, and data management. It also requires liaison with other research institutions, industry partners, government agencies, community groups, landholders, and the media.”

The Project Manager's Job Description lists the following key tasks.

- Oversee management of the research project.
- Build and maintain positive working relationships externally with influential stakeholders, including industry partners, government agencies, research institutions, community groups, landholders, and the media.
- Organise industry, research and community-based workshops, and liaise with media.
- Build and maintain positive working relationships internally with students, UHRRI staff, Chief Investigators, and university support staff.
- Liaise with industry to ensure project goals are met.
- Facilitate and co-ordinate interaction among researchers.
- Communicate ongoing development of the project, eg via newsletters.
- Co-ordinate the work schedule of the research officer.
- Co-ordination of field monitoring programs.
- Co-ordination of project data management.
- Maintain and enhance revegetation program.
- Identify potential funding sources and develop funding applications.

- Build and maintain well-documented project management systems at the Muswellbrook office.
- Ensure that all reporting and contractual requirements are met in a timely manner.

Research Officer

The Macquarie University Job Description for the Research Officer describes the main purpose of the position as follows.

“The research assistant provides technical and logistical support to the ARC-Linkage funded research team investigating complex system dynamics and rehabilitation of the Hunter Provide technical and logistical support to researchers, including postgraduate students, involved in a multi-disciplinary research program.”

The Research Officer’s Job Description lists the following key tasks.

- Organise and undertake extensive fieldwork with postgraduate students and CI’s involved in the project.
- Collect, manage, and analyse ecological and geomorphic data.
- Collect and collate background and academic documents (historical, ecological and geomorphological) on the Hunter catchment.
- Liaison with landowners and industry partners.
- Maintain project website.
- Administration as required.
- The opportunity exists to be involved and undertake individual research as part of the position.

In practice, a large part of the Research Officer’s time has been spent on the operational aspects of UHRRI, particularly installation of Large Woody Debris and revegetation.

Chief Investigator

The main role shared by all of the Chief Investigators is to ensure that the research program described in the ARC-Linkage Contract is completed. This mainly involves supervising and guiding PhD students in their research, and meeting Arc-Linkage reporting commitments.

Chief Investigators at Macquarie have additional roles and responsibilities because Macquarie University is a party to the MOU, the ARC-Linkage contract, and the *Funding Agreement for the Hunter River Rehabilitation Research Project*. The MOU specifies that representatives from Macquarie University will sit on the UHRRI Executive Committee and Scientific Committee.

A Chief Investigator at Macquarie University is responsible for managing the UHRRI Project Manager. This role was initially fulfilled by Professor Gary Brierley, and is now fulfilled by Dr Michelle Leishman.