

Centre for Ecosystem Science

BUSINESS PLAN (2013-2016)



CENTRE'S CURRENT OPERATING STATUS

The Centre was established in July 2009, with 30 members including 16 staff from UNSW and 9 postgraduates. In 2010, we established our own cost code centre to track funding and performance more transparently from the rest of the School of Biological, Earth and Environmental Science. It is sponsored by the Faculty of Science. In 2013, there were 54 members of the Centre, including 24 academic and postdoctoral research staff, 7 research assistants and 23 Visiting Fellows associated with the Centre. There are 18 postgraduate students and 2 MPhil and 5 Honours students. Funding base is mixed from ARC and government research. The Centre broadly focuses on understanding ecosystem dynamics and long-term change and mechanisms to manage this.

There is an executive established consisting of two deputy directors. We have established an Executive, Board and External Advisory Committee (see Appendix G for membership). The Board of the Centre meets once a year. The External Advisory Committee was formed from all the major Government agencies in southeastern Australia involved in river and wetland management and was formed in 2010. It meets twice a year for a day and is chaired by the Director of Scientific Services, NSW Office of Environment and Heritage. Its role is to advise on the direction of research as well as for us to provide information relevant to management.

(Brief description of the Centre in terms of its function, formation, success, sponsoring Faculty(s), structure, operations, funding source, staffing, etc for the next five years)

Successful grants for special purpose funding through has assisted attracting new staff who continue to bring additional funding and profile to the Centre. All staff hired through these grants have successful ARC and other government grants.

PLANNING CONTEXT

(key issues and challenges the Centre is facing regarding its own plans, internal issues or external influences)

- Access to ARC funding
- Non-ARC funding (State and Commonwealth governments)
- Postgraduate recruitment and experience
- Publications in high quality journals
- Communication of research
- Influence and engagement with natural resource management agencies

SWOT ANALYSIS

(significant items in each category)

<p>Strengths</p> <ul style="list-style-type: none"> • Excellent researchers • Growing postgraduate experience • Good communication, outreach and engagement with government • Excellent internal support (School, Faculty, University) 	<p>Weaknesses</p> <ul style="list-style-type: none"> • Access to funding • More high quality publications • Improved coherence and identity • Space • Strong strategic partnerships • Successional planning
<p>Opportunities</p> <ul style="list-style-type: none"> • Engagement with Commonwealth government on environmental flows monitoring • Development of remote sensing capabilities • Increasing collaboration among researchers in the Centre • Increasing collaboration with other Centres within Faculty of Science and with other Faculties 	<p>Threats</p> <ul style="list-style-type: none"> • Internal funding model • Loss of State and Commonwealth funding • Loss of ARC competitiveness • Relatively small number of staff bringing in grants

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| <ul style="list-style-type: none"> Further involvement of government and non-government scientists in the Centre's work | |
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CENTRE'S GOALS

(Goals for the next 5 years, taken from Centre's terms of reference and/or its long term strategic plan - expressed in clearly defined (verifiable) terms.)

- grow research, teaching and expertise capability by attracting academic research staff and other researchers;
- increase the number of postgraduate students and improve their postgraduate experience;
- increase number and size of research grants;
- increase the number and impact of research publications;
- increase collaboration with other UNSW research centres, government agencies and other research partners;
- increase effectiveness of research in influencing decision-making and;
- continue to communicate results of research widely to the community.
- Increase collaboration and outreach to international researchers, conservation organisations and natural resource managers
- Increase participation in and placement for international students in exchange programs and internships
- Demonstrate uptake of research products by resource agencies

ANNUAL PERFORMANCE INDICATORS

	Current Yr. 2012	Next Yr. 2013 (Dec)	5 Year Goal
a) Financial Indicators – Indicating Self Sustainability			
ARC grants/LIEF Funding	\$142,785	\$265,684	\$340,000
Australian Centre of International Agriculture Research	\$237,854	\$295,898	\$350,000
Commonwealth, state, local Government and tertiary collaborations ^a	\$1,007,420	\$1,177,404	1,400,000
Fees income	\$243,064	\$321,916	\$350,000
UNSW Special Purpose Funds	\$443,000	\$609,000	
UNSW/School Operating	\$126,000	\$130,000	\$145,000
UNSW Block Grants			\$100,000
b) Non-Financial Indicators			
Total projects underway	37	31	40
No. of publications	77 peer review 8 reports	TBA TBA	100 12
% of research used by external party(s)	100	100	100
% of research completed before or on time	90+	95+	100
% of research completed within budget	100	100	100

Notes and Assumptions:

^a this includes ARC Linkage partner funds

BUSINESS PLAN IMPLEMENTATION

1. HUMAN RESOURCES PLAN

1.1 **Organisation Structure** (*Profile and features of staffing and management required to operate the Centre. Note any likely changes, succession planning needs*):

The Centre requires one full-time position, the Centre Manager, and operating resources for equipment, the web site development. It also employs a research assistant one day a week to assist with information technology and management of research information. In addition, the Centre uses available funding for running courses and assisting with the graduate research program.

1.2 Staffing	Estimated cost including on-costs \$
Centre Manager	\$130,000
Research Assistant	\$22,000
Vehicles, boats and trailer maintenance(including compliance testing)	\$11,000

2. MARKETING & COMMUNICATIONS PLAN

(*If marketing and communication are important to the Centre's goals, what strategy will be undertaken to achieve these over the next 5 years? Research communication is covered in section 5*):

- The most critical issue is the redesign of the web site to ensure it reflects our new focus and structure, meets requirements for UNSW websites look and feel and Information & Technology security requirements.
- Development of a 'blog' which show currency of activities of the centre (dependent on restructure of web site with functionality).
- Badging centre at external and internal forums (template powerpoint including logo)
- Meetings with other centre directors to consider opportunities for collaboration
- Badging of publications
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3. CENTRE COMMUNICATIONS

- Regular meetings in first Thursday of each month
- Email listserver
- Annual strategic planning
- Develop policy documents to assist researchers (staff, postgraduates, volunteers)
 - Travel, volunteers, equipment, OH&S

4. INFRASTRUCTURE & EQUIPMENT PLAN

(What type of office, laboratory, storage, special equipment requirements will you have?)

4.1 Independent Facilities

Two laboratories both requiring additional room for storage of equipment, field equipment and sample storage. Will likely have to wait until completion of the new Bioscience block in 2017 for storage needs to be met. Will work with School to implement small works projects to improve existing space. Require additional sample processing space and benches for additional microscopes in the 514 laboratory.

5. RESEARCH DISSEMINATION PLAN

Where	How
5.1 Local Interaction with government research and management agencies within Sydney and NSW	External advisory committee and many other connections, including joint positions and projects with government agencies
5.2 National There is a strong emphasis on providing material from research through the media	Working with different media organisations and the University
5.3 International Some researchers have increasing strong international links	Continue to develop links through international conference. Increased engagement with the Society of Conservation Biology (Oceania). Increased recruitment of international postgraduate students and placement of exchange students (e.g. Science without Borders –Brazil)

6. QUALITY ASSURANCE

(What will you be doing to maintain or improve research quality/integrity and reduce errors, duplication and/or lack of relevance and application)

6.1 Research management

There is a school emphasis on performance in relation to funding, supervision and research output

6.2 Research quality assurance procedures, process & documentation

This is provided through usual process of development of manuscripts and publications. We are increasingly developing a system of data storage within the Centre to allow long-term tracking of information and data.

6.3 Internal support service (people based) delivery

Critically, the Centre Manager and her liaisons with other organisations in the University and outside provides much of the support

6.4 Student supervision

We have a supervisor/ student agreement and also align all postgraduate and honours student supervision with University practice and processes. We also are increasingly developing a graduate program.

6.5 Client feedback

We always provide draft documents, allowing for client feedback, working collaboratively with all clients and project partners

6.6 Complaint and dispute management

If this arises, it is dealt with through negotiation. We have not had any serious problems that have not been able to be resolved in this area to date.

7. RESEARCH PLAN

(Any changes to the current research focus and programs in terms of range, quantity, method, distribution/)

- Increase international research partnerships through collaborations and students
- Increase research partnerships with industry
- Develop partnerships with other universities and research groups
- Increase number of Memorandums of Understanding with industry and government

8. Postgraduate program

- Establish annual statistical training course
- Develop a series of workshops for statistical analyses
- Annual scientific writing course
- Annual Plant identification course, also including government agencies and consultants
- Ad hoc courses
- Discussion groups – first Friday of every month
- Postgraduate mentoring program
- Mentoring paper review process
- Mentoring on grant writing process
- Collaboration on manuscripts

9. Postdoctoral staff

- Establish annual statistical training course
- Mentoring with supervision of students
- Lecturing in courses
- Grant writing
- Opportunities for industry liaison

10. RISK MANAGEMENT PLAN

<i>Consider and comment on:</i>	Assessment (impact / likelihood)	Control or Prevention Action
10.1 Key personnel risk (succession planning)	medium	Working on succession planning, spreading activities/duties across staff, reducing risk
10.2 Competitor risk	medium	Creating partnerships and MOUs to work collaboratively

10.3 Credibility/reputation risk (Centre, UNSW)	low	Maintain and encourage professionalism in all staff and students
10.4 Data risk	low	Data management planning and storage on-going including disaster recovery
10.5 Independence risk	NA	
10.6 Supplier risk	NA	
10.7 Regulation- compliance risk	low	Work closely with regulators, monitor IP issues with all staff and contracts
10.8 Finance risk	low	Budget managed successfully, working within budgets on all projects, using budget tools provided by UNSW
10.9 Premises/lease risk	NA	
10.10 Funding risk	medium	Government funding for environmental and conservation projects mat

11. LIST OF RESEARCH ACTIVITY UNDERWAY

An innovative approach to maximising catchment water yield in a changing climate

Increasing Production from Inland aquaculture in Papua New Guinea for food and income security

Application of aquaculture planning tools in Indonesia

Diversification of smallholder coastal aquaculture in Indonesia

Refinement and application of Cage Aquaculture Decision Support Tool (CADS Tool) for freshwater systems in the Philippines

Aerial Survey of the Murray-Darling Basin Targeted Sites 2013

Aerial Survey of Eastern Australia

Flow, inundation patterns and vegetation responses in the Paroo and Warrego

Tackling Prey Naïveté in Australia's Threatened Mammals

Innovative approaches to identifying regional responses of biodiversity to climate change

Analysis of waterbird data for the Basin-wide environmental watering strategy

A novel approach for assessing environmental flows using satellite data

Improving The Sustainability Of Rice-Shrimp Farming Systems In The Mekong Delta

Provision of data quality and assurance services for the 2006-2012 NSW Waterbird survey

Monitoring the ecological response of Commonwealth environmental water delivered in 2012-2013 in the Murrumbidgee Catchment

NSW Regional Native Vegetation Classification and Mapping

Vegetation, biogeography and conservation status of temperate highland swamps

Delivering a Sustainable Long Term Ecosystem Research Network for Australia

Red listing ecosystems – testing the new global standard for conservation

12. LIST OF RESEARCH PROJECTS AWAITING FUNDING

Professor Richard Lucas ARC Linkage in Remote Sensing

13. ATTACHMENTS

(i) Strategic Plan (mission statement, values, objectives) if available

(ii) Organisation Structure

(iii) Financial Sustainability Plan (funding arrangements for 3-5 years)

(iv) Detailed Financial 3-5 Year Budget

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(vi)

Prepared By:	Chair of Board of Management/ Management Committee	Centre Director
Date:		