Research Workforce Forum
Thursday 17 March 2011

Fostering and Evaluating Research Excellence

Professor Margaret Sheil
CEO, Australian Research Council
Strategic Objectives

• To *support* excellence in *research*
• To *build* Australia’s research *capacity*
• To *provide* informed high quality *policy advice* to government
• To *enhance* research outcomes through effective *evaluation*
• To *raise the profile* of Australia’s research effort and *be an effective advocate* for its benefits
Strategic Objectives

The ARC aims to:

- Provide opportunities for researchers at every career stage
- Foster a range of different cohorts

- Researchers in industry
- Teaching and research
- Women
- Indigenous
- Research-only
The ARC does not:

- Employ researchers directly
- Aim to provide a complete externally funded career structure
- Fund all the excellent research proposals it receives
Fostering & Evaluating Excellence through:

**Funding & Investment**
- Government to the ARC
- ARC to researchers

**Flexibility**
- Career interruptions (ECRs and women)
- Options to convert & teaching transitions

**Linking & Developing**
- High quality, supportive & exemplary training
- Outcome orientated & enabling

**Information**
- Providing a research excellence roadmap
- Finding stronger ways to evaluate research

**Partnerships**
- International
- Industry
Fostering & Evaluating Excellence through:

- Government to the ARC
- ARC to researchers
Government Investment in Research
2010-11

- Universities: 21%
- Industry Tax Concession: 18%
- Energy and Environment: 6%
- CRCs & Other Science: 9%
- Other business: 6%
- Other R&D Agencies: 11%
- ARC: 8%
- NHMRC et al: 12%
- CSIRO: 9%
• NCGP funding (2010-11) = $708,733 million

• $376 million – Major Grants supporting 1126 innovative projects

• $255.9 million – 13 new ARC Centres of Excellence
National Competitive Grants Program (NCGP)

- Highest-quality research
- New ideas, advancement of knowledge
- Facilities and equipment
- Internationally competitive researchers
- Building research capacity
- Industry links and internationalisation
Fostering & Evaluating Excellence through:

- Career interruptions
- For ECRs and women researchers
- Options to convert & teaching transitions
Discovery Projects – Male and female applicants and corresponding success rates by career age
Discovery Early Career Researcher Award (DECRA)

- Provide career opportunities for early-career researchers who have been awarded a PhD within five years or, commensurate with significant career interruption, within eight years.
- Up to 200 three-year awards will be available each year, commencing in 2012.
- Funding of up to $125,000 will be provided to support a fixed salary ($85,000) and project costs.
Research Opportunity and Performance Evidence (ROPE)

- Changing how we think about performance
- Track record becomes
- Assessors take into account any career interruptions, such as:
  - Childbirth
  - Carer’s responsibility
  - Misadventure
  - Debilitating illness
Fostering & Evaluating Excellence through:

- High quality and supportive (DECRA)
- Exemplary training environment (Laureates)
- Outcome orientated, high-calibre (Linkage)
- Enabling Indigenous Australians (Discovery)
### Australian Laureate Fellowships
- 2x PhD
- 2x Post-Doc
- 17 5-year awards

### Discovery Early Career Researcher Award (DECRA)
- $125,000
- 200 p.a. 3-year awards

### Researchers in Industry Training Awards
- $30,000
- 100 3-year awards (bi-annual)

### Future Fellowships
- Up to $143,000
- 200 p.a. 4-year fellowships
Discovery Indigenous Researchers Development – consultation process

• November 2010: meeting with leading Indigenous researchers at the ARC

• February 2011: consultation with the Indigenous Higher Education Advisory Council (IHEAC)

• February-March 2011: additional consultation with IHEAC, AIATSIS, members of the DI Selection Advisory Committee for the past five years, and past and present Indigenous College of Experts members
Future Fellowships

• Aim to attract and retain the best and brightest mid-career researchers (between 5 and 15 years research experience since the award of their PhD)
• Up to 200 Future Fellowships may be awarded for funding commencing in 2011.
• Three salary steps (academic levels C to E) and up to $50,000 project costs.
## DECRA and FT

<table>
<thead>
<tr>
<th></th>
<th>DECRA</th>
<th>FT</th>
</tr>
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<tbody>
<tr>
<td><strong>Career Stage</strong></td>
<td>Early career</td>
<td>Mid career</td>
</tr>
<tr>
<td><strong>PhD award</strong></td>
<td>0-5 yrs post PhD, 8yrs with interruption</td>
<td>5-15 years post PhD</td>
</tr>
<tr>
<td><strong>Eligibility exemption</strong></td>
<td>n/a</td>
<td>Significant interruption or limitation of career outputs (up to 22 yrs post PhD, but not less than 5 yrs)</td>
</tr>
<tr>
<td><strong>Duration</strong></td>
<td>3 years</td>
<td>4 years</td>
</tr>
<tr>
<td><strong>Salary</strong></td>
<td>Contribution of $85,000/year</td>
<td>Three salary levels</td>
</tr>
<tr>
<td><strong>Project costs</strong></td>
<td>Up to $40,000/year</td>
<td>Up to $50,000/year</td>
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Fostering & Evaluating Excellence through:

- Providing a research excellence roadmap
- Finding stronger ways to evaluate research
### ERA Process Overview

<table>
<thead>
<tr>
<th>Volume &amp; Activity</th>
<th>Ranked Outlets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citation Analysis</td>
<td>Esteem</td>
</tr>
<tr>
<td>Research Income</td>
<td>Applied Measures</td>
</tr>
</tbody>
</table>

**Peer Review**

**International Benchmarks**

**Research Evaluation Committees**

[Image of ERA 2010 National Report]
## ERA Unit of Evaluation – the FoRs

<table>
<thead>
<tr>
<th>2-digit</th>
<th>4-digits</th>
<th>6-digits</th>
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</thead>
<tbody>
<tr>
<td>19</td>
<td>Studies in Creative Arts and Writing</td>
<td>+ 1901 ART THEORY AND CRITICISM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>+ 1902 FILM, TELEVISION AND DIGITAL MEDIA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>+ 1903 JOURNALISM AND PROFESSIONAL WRITING</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 1904 PERFORMING ARTS AND CREATIVE WRITING</td>
</tr>
<tr>
<td></td>
<td>&gt; 190401 Aboriginal and Torres Strait Islander Performing Arts</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; 190402 Creative Writing (incl. Playwriting)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; 190403 Dance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; 190404 Drama, Theatre and Performance Studies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; 190405 Māori Performing Arts</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; 190406 Music Composition</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; 190407 Music Performance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; 190408 Music Therapy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; 190409 Musicology and Ethnomusicology</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; 190410 Pacific Peoples Performing Arts</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; 190499 Performing Arts and Creative Writing not elsewhere classified</td>
<td></td>
</tr>
<tr>
<td>+ 1905</td>
<td>VISUAL ARTS AND CRAFTS</td>
<td></td>
</tr>
<tr>
<td>+ 1999</td>
<td>OTHER STUDIES IN CREATIVE ARTS AND WRITING</td>
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The ERA Unit is **not** the department nor the individual researcher.
The ERA Clusters

<table>
<thead>
<tr>
<th>Cluster 1</th>
<th>Physical, Chemical &amp; Earth Sciences</th>
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<tbody>
<tr>
<td>Cluster 2</td>
<td>Humanities and Creative Arts</td>
</tr>
<tr>
<td>Cluster 3</td>
<td>Engineering and Environmental Sciences</td>
</tr>
<tr>
<td>Cluster 4</td>
<td>Social, Behavioural and Economic Sciences</td>
</tr>
<tr>
<td>Cluster 5</td>
<td>Mathematics, Information and Communication Sciences</td>
</tr>
<tr>
<td>Cluster 6</td>
<td>Biological Sciences and Biotechnology</td>
</tr>
<tr>
<td>Cluster 7</td>
<td>Biomedical and Clinical Research</td>
</tr>
<tr>
<td>Cluster 8</td>
<td>Public and Allied Health, and Health Sciences</td>
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### The ERA 2010 Rating Scale

<table>
<thead>
<tr>
<th>Rating</th>
<th>Descriptor</th>
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<tbody>
<tr>
<td>5</td>
<td>The Unit of Evaluation profile is characterised by evidence of outstanding performance <strong>well above world standard</strong> presented by the suite of indicators used for evaluation.</td>
</tr>
<tr>
<td>4</td>
<td>The Unit of Evaluation profile is characterised by evidence of performance <strong>above world standard</strong> presented by the suite of indicators used for evaluation.</td>
</tr>
<tr>
<td>3</td>
<td>The Unit of Evaluation profile is characterised by evidence of average performance <strong>at world standard</strong> presented by the suite of indicators used for evaluation.</td>
</tr>
<tr>
<td>2</td>
<td>The Unit of Evaluation profile is characterised by evidence of performance <strong>below world standard</strong> presented by the suite of indicators used for evaluation.</td>
</tr>
<tr>
<td>1</td>
<td>The Unit of Evaluation profile is characterised by evidence of performance <strong>well below world standard</strong> presented by the suite of indicators used for evaluation.</td>
</tr>
<tr>
<td>NA</td>
<td>Not assessed due to low volume. The number of research outputs does not meet the volume threshold standard for evaluation in ERA.</td>
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National Strengths

- Astronomical and Space Sciences
- Optical Physics
- Quantum Physics
- Macromolecular & Materials Chemistry
- Physical & Structural Chemistry
- Geology
- Ecology
- Evolutionary Biology
- Plant Biology
- Zoology

- Electrical and Electronic Engineering
- Historical Studies
- Cardiovascular Medicine and Haematology
- Human Movement and Sports Science
- Immunology
- Oncology and Carcinogenesis
- Pharmacology and Pharmaceutical Sciences
- Medical Physiology
Gaps

- Agriculture, Land and Farm Management
- Automotive Engineering
- Maritime Engineering
- Engineering Design
- Complementary and Alternative Medicine

Pockets

- Classical Physics
- Aerospace Engineering
- Transportation and Freight
ERA 2010 Consultation for ERA 2012

- Publications 1 Jan 2005 - 31 December 2010
- Review of ranked journal list underway
- Broad sector feedback underway, regarding:
  - Low volume thresholds (plus outputs that contribute)
  - FORs allocated to clusters
  - Utility of 2-digit versus 4-digit
  - Indicator matrix for each discipline
  - Reference periods for income etc.
  - Researcher eligibility
Fostering & Evaluating Excellence through:

Partnerships

• International
• Industry
Partnerships (International)

- Non-Australian PhD candidates
- Non-Australian Fellowships
- Overseas Partner Investigators
- DECRA encourages international post docs
Partnerships (Industry)

- Non-Australian APA(I)s
- Linkage
- Research in Industry Training Award
- Cooperative sharing - research facilities
The ARC is committed to working with institutions to support careers in flexible and innovative ways in order to maximise opportunities for our talent.

Professor Margaret Sheil
CEO, Australian Research Council