Assessment and Evaluation in the new ERA

Leanne Harvey
General Manager
Australian Research Council
The Minister announced ERA on 26 February 2008.

He is fully committed to ERA and supports the ARC in developing the initiative.
ERA will...

Assess research quality within Australia’s higher education institutions using a combination of indicators and expert review by committees comprising experienced, internationally-recognised experts.
ERA aims to...

Have the confidence of the research community

Identify excellence across all areas of research

Minimise the burden on those making submissions and those doing the evaluations
Clusters

• Physical, Chemical and Earth Sciences (PCE);
• Humanities and Creative Arts (HCA);
• Engineering and Environmental Sciences (EE);
• Social, Behavioural and Economic Sciences (SBE);
• Mathematics, Information and Communication Sciences (MIC);
• Biological Sciences and Biotechnology (BSB);
• Biomedical and Clinical Research (BCR); and
• Public and Allied Health and Health Services (PAHHS).
ANZSRC

01 Mathematical Sciences
02 Physical Sciences
03 Chemical Sciences
04 Earth Sciences
05 Environmental Sciences
06 Biological Sciences
07 Agricultural and Veterinary Sciences
08 Information and Computing Sciences
09 Engineering
10 Technology
11 Medical and Health Sciences
12 Built Environment and Design
13 Education
14 Economics
15 Commerce, Management, Tourism and Services
16 Studies in Human Society
17 Psychology and Cognitive Sciences
18 Law and Legal Studies
19 Studies in Creative Arts and Writing
20 Language, Communication and Culture
21 History and Archaeology
22 Philosophy and Religious Studies
DIVISION 01 MATHEMATICAL SCIENCES

This division covers mathematics, statistics, and mathematical aspects of the physical sciences.

This division contains six groups:

0101 Pure Mathematics
0102 Applied Mathematics
0103 Numerical and Computational Mathematics
0104 Statistics
0105 Mathematical Physics
0199 Other Mathematical Sciences

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\int e^{ix^2} \, dx = \sqrt{\frac{\pi}{i}} \sum_{n=1}^{\infty} a_n x^n = \sum_{n=1}^{\infty} a_n
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\[
\int e^{ix^2} + 1 = 0
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\frac{\partial u + u \partial_x u + \partial_x^3 u = 0}{\partial t}
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\varphi(s + t) = \varphi(s) \sqrt{1 - \varphi(t)^4} + \varphi(t) \sqrt{1 - \varphi(s)^4}
\]

\[
\int_{s=0}^{\infty} \frac{1}{\varphi(s)^2 \varphi(t)^2} \, ds
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\int_{0}^{1} \frac{1}{\partial M} \, ds
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\sum_{n=1}^{\infty} \sqrt{n_s^4 - z^4} \, ds
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u_t - \nu_{xt} + 3\nu u_x - 2\nu_x u_{xx} - uu_{xx} - uu_{xxx} = 0
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Consultation Paper

Released 4 June 2008

Closed 30 June 2008

103 submissions received
Decisions made as a result of the consultation

– inclusion of categories 2-4 research income further work on ‘category 5’,

– collection of all ERA data at four-digit FoR,

– attribution of research outputs

– Inclusion of non-salaried staff
Journal Rankings consultation

Began 12 June, concluded on 14 August 2008

114 submissions received

Currently reviewing feedback:
  • Data cleansing
  • ARC review
  • Expert review
  • Further review by stakeholders
  • Analytical testing
  • International review
ERA/SEER Pilot

Confined to Cluster 1 (PCE)

No analysis will be conducted of data collected for the Pilot

Using an ARC-developed IT system (System to Evaluate the Excellence of Research, or SEER)

Institutions participating in the ERA Pilot uploaded their data between 1 October and 14 November.
Indicators - proposed approach

ERA will use discipline-specific indicators to assess research where appropriate.

One of these indicators is discipline-specific tiered outlet rankings, for which consultation has occurred.

Indicator methodologies will be developed in accordance with international best practice.

ERA indicator development is guided by the Indicators Development Group (IDG).
Indicators Development Group

Comprises 12 experts to provide advice to the ARC across a range of indicators

Is supported by an analytical testing team, contracted to the ARC, to test various approaches using Australian data

Will make recommendations to the ARC CEO

Will take advice from discipline specific representatives to ensure appropriate indicators are used for each discipline
# Indicators Development Group

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
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<tbody>
<tr>
<td>Terry Nolan</td>
<td>University of Melbourne</td>
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<td>Tony Sheil</td>
<td>Griffith University</td>
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<td>Linda Butler</td>
<td>Analytical Support Team</td>
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<td>Ken Richardson</td>
<td>University of Queensland</td>
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<td>Patty Solomon</td>
<td>University of Adelaide</td>
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<td>Marcus Nichol</td>
<td>NHMRC</td>
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<td>Paula Callan</td>
<td>Queensland University of Technology</td>
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<td>Tim Yapp</td>
<td>CSIRO</td>
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<td>Jonathan Adams</td>
<td>Evidence UK</td>
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<td>Paul Hubbard</td>
<td>HEFCE</td>
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<td>Anthony van Raan</td>
<td>Leiden University</td>
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<td>Max King</td>
<td>Monash University</td>
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Indicator principles

Multiple citation suppliers
Accrediting an output to an institution
Interdisciplinary research outputs
Reference period
Where to use expert review
Combining indicator profiles to derive an overall ‘Excellence Profile’
### Indicator matrix example

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Humanities sub-group

Stuart Macintyre (Chair)—University of Melbourne
Tom Murray—La Trobe University
Moira Gatens—University of Sydney
Cheryl Saunders—University of Melbourne
Graeme Turner—University of Queensland
Margaret Harris—University of Sydney
John Byron—Academy of the Humanities
Cliff Goddard—University of new England
Creative Arts sub-group

Margaret Seares—University of Western Australia
Desley Luscombe—University of Technology, Sydney
Su Baker—University of Melbourne
Dennis Del Favero—University of New South Wales
Huib Schippers—Griffith University
Ann Stephen—Powerhouse Museum
PCE Working Group

A group of PCE experts are currently assisting the ARC in preparation for a Cluster 1 trial, which will occur in 2009.
What is next?

Review of the outcomes of the SEER Pilot and further development to prepare for Cluster 1 and 2 evaluation

IDG and sub-groups will report back to the ARC CEO on matters for consideration

Release of ERA formal documents to guide the sector on evaluation for Cluster 1 and 2
International research excellence exercises

United Kingdom (UK)
- Research Assessment Exercise (RAE)
- Research Excellence Framework (REF)

New Zealand
- Performance-Based Research Fund (PBRF)