Excellence in Research for Australia

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ARMS 2014
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What is ERA?

- ERA evaluates the quality of the research undertaken in Australian universities against national and international benchmarks.
- The outcomes (ratings) are determined and moderated by committees of distinguished researchers, drawn from Australia and overseas.
- The unit of evaluation is broadly defined as the Field of Research (FoR) within an institution based on the Australia and New Zealand Standard Classification (ANZSRC).
- The indicators used in ERA include a range of metrics such as citation profiles which are common to disciplines in the natural sciences, and peer review of a sample of research outputs which is more broadly common in the humanities and social sciences.
- ERA is a comprehensive collection. The data submitted by universities covers all eligible researchers and their research outputs.
The **ERA 2012 National Report** presents data submitted as part of a comprehensive assessment by discipline of the research quality and research activity within Australia’s higher education institutions.
ERA 2015 changes

• Streamlined data collection –
  • book publisher and conference series lists
  • digital storage of peer review outputs

• New data collections for reporting and analysis (not evaluation):
  • Gender
  • Open access

• New category of research reports for external bodies
The ERA Data Collection

Data provided by Universities & Citation Data Supplier

Coded by 4-digit Field of Research codes

Presented by indicator category
ERA Indicator Categories

- Research quality
- Research volume and activity
- Research application
- Research recognition
The ERA Unit is *not* the department nor the individual researcher

Various 6-digit codes will sit within a 4-digit UoE
Assigning outputs to FoR codes

• Submitted outputs may be assigned to up to three FoR codes relevant to the output.
• For journals only, an article must be assigned to any of the FoR codes listed for the journal.
• Reassignment exception - institutions may assign journal articles containing significant discipline content (≥66%), but published in non-discipline journal, to the relevant discipline code.

Apportionment of outputs

• Where more than one FoR code is attributed to a single output, institutions must apportion across FoR codes.
• This prevents outputs being counted multiple times in different FoRs within the same institution.
• The minimum is 20% per FoR code. The total of apportionment for each output equals 100% within an institution.
ERA 2015 Reference Periods

<table>
<thead>
<tr>
<th>Data type</th>
<th>Reference period</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research outputs</td>
<td>1 Jan 2008-31 Dec 2013</td>
<td>6</td>
</tr>
<tr>
<td>Research income</td>
<td>1 Jan 2011-31 Dec 2013</td>
<td>3</td>
</tr>
<tr>
<td>Applied measures</td>
<td>1 Jan 2011-31 Dec 2013</td>
<td>3</td>
</tr>
<tr>
<td>Esteem measures</td>
<td>1 Jan 2011-31 Dec 2013</td>
<td>3</td>
</tr>
</tbody>
</table>

Staff census date: 31 March 2014
Indicators of Research Quality

Publishing behaviour (Universities & Citation Provider)
- Output metadata

Citation analysis (Citation Provider)
- Average RCI against world benchmark & Australian HEP benchmark by UoE
- % of papers indexed by Citation Provider
- % of contribution to the Australian HEP FoR total for papers & for citations

ERA peer review (Peer Reviewers, REC members & Universities)
- ERA Reviewer reports
- Research statements for original creative works
- Public policy documents/reports

Peer-reviewed Australian and International income (Universities)
- Apportioned by year
## Indicators of Research Volume & Activity

<table>
<thead>
<tr>
<th>Research outputs (Universities)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Output metadata (including type of output and quantity)</td>
<td>Research statements for original creative works</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Research staff (Universities)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>FTE &amp; headcount</td>
<td>Status</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other research items within the context of eligible researchers (Universities)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Research income</td>
<td>Applied measures</td>
</tr>
</tbody>
</table>
Research Application

Applied Measures (Universities)

- Plant Breeder’s Rights
- Patents
- Commercialisation income
- NHMRC endorsed guidelines
- Registered designs

Some categories of research income (Universities)

- CRC income (Cat. 4)
- Industry research income (Cat. 3)

Some categories of Esteem (Universities)

- Count of Membership of Statutory Committee
Research Recognition

Measures of Esteem (Universities)

- Editor of a prestigious work of reference
- Fellowship of a learned academy and membership of AIATSIS
- Recipient of a nationally competitive research fellowship
- Recipient of an Australia Council grant or fellowship
### Example - Applied/Impact Data

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanatory Statement</strong></td>
<td>• Included for each assessable 2-digit unit of evaluation</td>
</tr>
<tr>
<td><strong>Publishing profile</strong></td>
<td>• Research statements for creative works</td>
</tr>
<tr>
<td></td>
<td>• Public policy reports</td>
</tr>
<tr>
<td><strong>Applied Measures</strong></td>
<td>• Patents</td>
</tr>
<tr>
<td></td>
<td>• Plant Breeder’s Rights</td>
</tr>
<tr>
<td></td>
<td>• Registered Designs</td>
</tr>
<tr>
<td><strong>Income</strong></td>
<td>• Industry (Australian and International A &amp; B)</td>
</tr>
<tr>
<td></td>
<td>• CRC research income</td>
</tr>
<tr>
<td></td>
<td>• Commercialisation income</td>
</tr>
</tbody>
</table>
### Example - matrix of indicators

<table>
<thead>
<tr>
<th>Engineering &amp; Environmental Sciences</th>
<th>Public &amp; Allied Health Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Electrical and Electronic Engineering (0906)</strong>&lt;br&gt;☑ Citation Analysis&lt;br&gt;☑ Patents and Research Commercialisation Income</td>
<td><strong>Nursing (1110)</strong>&lt;br&gt;☑ Citation Analysis&lt;br&gt;☑ Patents</td>
</tr>
<tr>
<td><strong>Crop and Pasture Production (0703)</strong>&lt;br&gt;☑ Citation Analysis&lt;br&gt;☑ Patents and Research Commercialisation Income&lt;br&gt;☑ Plant Breeders Rights</td>
<td></td>
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<td></td>
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</table>
Interrogating the ERA Data Set

Topic: Maximise social and economic participation in society

Data is shown at the four digit Field of Research (FoR) code level:

- **Relevance** - The colour of the circle represents the relevance of that FoR to the keyword

- **Level of activity** - The size of the circle indicates the level of activity in that FoR
ERA data: informing research policy

‘Renewable Energy’ research not immediately apparent at the four-digit Field of Research (FoR) code level.

Text mining techniques applied to the ERA data set identifies the range and focus of related activity within the higher education sector.

ARENA report is a collaboration with CSIRO.

ERA 2015 Submission Documents

Below are key documents needed for the Excellence in Research for Australia (ERA) 2015 submission process:

- ERA 2015 Submission Guidelines - PDF Format (1.4MB) - Word Format (1MB)
- ERA-SEER 2015 Business Rules and Verification - PDF Format (1.5MB) - Word Format 1MB)
- ERA-SEER 2015 Technical Specifications - PDF Format (2.8MB) - Word Format (2.5MB)
- ERA 2015 Discipline Matrix - PDF Format (477KB) - Excel Format (41KB)
- ERA-SEER 2015 Technology Pack - ZIP File (5MB)

ERA 2015 Submission Guidelines FAQs.

If you have questions or require any of these documents in any other format, please email era[@]arc.gov.au or call the ERA Helpdesk on 02 6287 6755 (between 9.00am and 5.00pm, Canberra time, Monday-Friday).
Thank you