Excellence in Research for Australia
Briefing and interesting Ag stuff

Australian Council of Deans of Agriculture

April 2014
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.
**Volume and Activity**
- Staffing Profile
- Research Outputs

**Publishing Profile**
- Journal articles
  - Conference publications
  - Books
  - Book Chapters

**Citation Analysis**
- Centile Profile
- Relative Citation Impact (RCI) Classes
- RCI against world and Australian benchmarks

**Peer Review**
- Peer review

**Esteem Measures**
- Editor of prestigious works of reference
- Recipient of, Category 1 Fellowship or Australia Council Grant or Fellowship
- Membership of, statutory committee or Learned Academy

**Research Income**
- Category 1-4

**Applied measures**
- Patents
- Commercialisation Income
- Plant Breeder’s Rights
- NHMRC Endorsed Guidelines
- Registered Designs

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- FoR codes are apportioned to Journal articles from ERA Journal List or FoR of institution’s choice where content >66%.
- All other outputs and eligible researchers can be assigned and apportioned to up to 3 four-digit FoR codes of the institution’s choice.
- Eligible researchers must be employed on the census date to count towards ‘FTE’.

- Journal articles are apportioned against the FoR codes of the ERA Journal List, or Institutions may assign to a journal article an FoR code outside of the ERA Journal List FoR code, if 66% or more of the journal article belongs to another FoR code.

- Only applies to journal articles.
- Low volume threshold is 50 apportioned indexed journal articles.
- The citation supplier for 2012 is Scopus.
- The citation census date is 1 March 2012.

- Applies to a range of outputs including journal articles, books, book chapters, non-traditional research outputs.
- Low volume threshold is 50 apportioned outputs (any type).
- Institutions nominate 30% of total output for a FoR for peer review.

- Each individual esteem measure can be apportioned up to 3 four-digit FoRs of the institution’s choice.
- Esteem must be linked to an eligible researcher of the institution.
- Individual researchers cannot be identified through the esteem measures.

- Institutions can apportion each income item between as many four-digit FoRs as relevant.
- Number of grants is collected for Category 1 income only.
- FTE is used as a denominator for all Categories.
- Category 3 income is disaggregated into the 3 subcategories (Australian, International A and International B).

- Institutions can select up to 3 four-digit FoRs (apportioned) for each applied measure submitted, except for commercialisation income where there are no limit on the number of four-digit FoR codes submitted.
- Applied measures are linked to either the institution or individual eligible researchers.
ERA 2012 Reference Periods

- Outputs Reference period
- Income, applied, esteem period
- Additional period for citations
- Staff census (March 31st)
**ERA Process Overview**

<table>
<thead>
<tr>
<th>Citation Analysis and/or Peer Review</th>
<th>Journal Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume and Activity</td>
<td>Research Income</td>
</tr>
<tr>
<td>Applied Measures</td>
<td>Esteem</td>
</tr>
</tbody>
</table>

**Note** - There are no weightings

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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.
Stages of Evaluation

**Stage 1**
REC Members evaluate assigned material and record preliminary evaluations in SEER

**Stage 2A**
REC Members are given access to the preliminary evaluation outcomes for 4-digit UoEs from other REC Members and Peer Reviewers’ evaluations for moderation. REC Members complete preliminary evaluation of 2-digit UoEs.

**Stage 2B**
REC Members are given access to the preliminary evaluation outcomes for 2-digit UoEs from other REC Members and Peer Reviewers’ evaluations for moderation.

**Stage 2C**
REC Members are given view only access to moderated 2- & 4-digit evaluations to prepare for Stage 3 meeting.

**Stage 3**
REC Members meet to finalise all UoE ratings

**ERA National Report**
### The ERA rating scale

<table>
<thead>
<tr>
<th>Rating</th>
<th>Descriptor</th>
</tr>
</thead>
<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>
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</table>
ERA National Report includes:

- quality **ratings** for all assessed two- and four-digit UoEs
- aggregated **submission data** from institutions profiling national research effort and resourcing by discipline
- preliminary **analyses** of the national data

In addition, the ARC has provided institutions with:

- **aggregated indicator profiles** for each of their assessed units of evaluation
- **performance measures benchmarked** for each discipline to the rest of the Australian higher education sector and to ‘world’ performance where possible
- **raw citation information** for all submitted journal articles and constructed benchmarked citation profiles
<table>
<thead>
<tr>
<th>FoR Code</th>
<th>FoR Title</th>
<th>Patents</th>
<th>Registered designs</th>
<th>Plant breeder's rights</th>
<th>NHMRC endorsed Guidelines</th>
<th>Research Commercialisation income</th>
<th>Researchers by level</th>
<th>Traditional outputs by type</th>
<th>Non-traditional outputs by type</th>
<th>Research Report for External Body</th>
</tr>
</thead>
<tbody>
<tr>
<td>07</td>
<td>Agriculture and Veterinary Sciences</td>
<td>Yes</td>
<td>-</td>
<td>Yes</td>
<td>-</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<td>Yes</td>
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</tr>
<tr>
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<td>-</td>
<td>Yes</td>
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<td>Yes</td>
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</tr>
<tr>
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<td>Yes</td>
<td>Yes</td>
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</table>
# ERA Discipline Matrix

<table>
<thead>
<tr>
<th>FoR Code</th>
<th>FoR Title</th>
<th>Low Volume Threshold</th>
<th>Journal Article Citation Analysis</th>
<th>Traditional outputs by outlet frequency</th>
<th>HERDC Research Income (Categories 1-4)</th>
<th>Esteem Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>07</td>
<td>Agriculture and Veterinary Sciences</td>
<td>50IJ</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>-</td>
</tr>
<tr>
<td>0701</td>
<td>Agriculture, Land and Farm Management</td>
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<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>0702</td>
<td>Animal Production</td>
<td>50IJ</td>
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<td>Yes</td>
<td>Yes</td>
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</tr>
<tr>
<td>0703</td>
<td>Crop and Pasture Production</td>
<td>50IJ</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>-</td>
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<tr>
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<td>Yes</td>
<td>Yes</td>
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<tr>
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<td>Forestry Sciences</td>
<td>50IJ</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>-</td>
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<tr>
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<tr>
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<td>50IJ</td>
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<td>Yes</td>
<td>-</td>
</tr>
<tr>
<td>0799</td>
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<td>50IJ</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>-</td>
</tr>
</tbody>
</table>
ERA 2012 Staff Profile

- Quality ratings for all assessed two- and four-digit UoEs
- Aggregated submission data from institutions profiling national research effort and resourcing by discipline
- Preliminary analyses of the national data

In addition, the ARC has provided institutions with:
- Aggregated indicator profiles for each of their assessed units of evaluation
- Performance measures benchmarked for each discipline to the rest of the Australian higher education sector and to 'world' performance where possible
- Raw citation information for all submitted journal articles and constructed benchmarked citation profiles
ERA 2012 Research Output Types

- Quality ratings for all assessed two- and four-digit UoEs
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ERA 2012 Research Outputs by Year

Includes:
- Quality ratings for all assessed two- and four-digit UoEs
- Aggregated submission data from institutions profiling national research effort and resourcing by discipline
- Preliminary analyses of the national data

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- Raw citation information for all submitted journal articles and constructed benchmarked citation profiles

Graph showing ERA 2012 Research Outputs by Year for various disciplines from Sum of 2005 to Sum of 2010.
ERA 2012 HERDC Category 1 Income

- Quality ratings for all assessed two- and four-digit UoEs
- Aggregated submission data from institutions profiling national research effort and resourcing by discipline
- Preliminary analyses of the national data

In addition, the ARC has provided institutions with:
- Aggregated indicator profiles for each of their assessed units of evaluation
- Performance measures benchmarked for each discipline to the rest of the Australian higher education sector and to 'world' performance where possible
- Raw citation information for all submitted journal articles and constructed benchmarked citation profiles
ERA 2012 HERDC Category 2 Income

The ERA 2012 HERDC Category 2 Income report includes:

- Quality ratings for all assessed two- and four-digit UoEs
- Aggregated submission data from institutions profiling national research effort and resourcing by discipline
- Preliminary analyses of the national data

In addition, the ARC has provided institutions with:

- Aggregated indicator profiles for each of their assessed units of evaluation
- Performance measures benchmarked for each discipline to the rest of the Australian higher education sector and to 'world' performance where possible
- Raw citation information for all submitted journal articles and constructed benchmarked citation profiles
ERA National Report includes:

- Quality ratings for all assessed two- and four-digit UoEs
- Aggregated submission data from institutions profiling national research effort and resourcing by discipline
- Preliminary analyses of the national data

In addition, the ARC has provided institutions with:

- Aggregated indicator profiles for each of their assessed units of evaluation
- Performance measures benchmarked for each discipline to the rest of the Australian higher education sector and to 'world' performance where possible
- Raw citation information for all submitted journal articles and constructed benchmarked citation profiles

**ERA 2012 HERDC Category 3 Income**

<table>
<thead>
<tr>
<th>Category</th>
<th>Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, Land and Farm Management</td>
<td>$5 M</td>
</tr>
<tr>
<td>Animal Production</td>
<td>$5 M</td>
</tr>
<tr>
<td>Crop and Pasture Production</td>
<td>$25 M</td>
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<tr>
<td>Fisheries Sciences</td>
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<tr>
<td>Forestry Sciences</td>
<td>$5 M</td>
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<td>Horticultural Production</td>
<td>$5 M</td>
</tr>
<tr>
<td>Veterinary Sciences</td>
<td>$20 M</td>
</tr>
</tbody>
</table>
ERA 2012 Patents Sealed

includes:
- quality ratings for all assessed two- and four-digit UoEs
- aggregated submission data from institutions profiling national research effort and resourcing by discipline
- preliminary analyses of the national data

In addition, the ARC has provided institutions with:
- aggregated indicator profiles for each of their assessed units of evaluation
- performance measures benchmarked for each discipline to the rest of the Australian higher education sector and to 'world' performance where possible
- raw citation information for all submitted journal articles and constructed benchmarked citation profiles
ERA National Report includes:

- Quality ratings for all assessed two- and four-digit UoEs
- Aggregated submission data from institutions profiling national research effort and resourcing by discipline
- Preliminary analyses of the national data

In addition, the ARC has provided institutions with:

- Aggregated indicator profiles for each of their assessed units of evaluation
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Assessed 4-Digit UoEs
ERA National Report includes:

- Quality ratings for all assessed two- and four-digit UoEs
- Aggregated submission data from institutions profiling national research effort and resourcing by discipline
- Preliminary analyses of the national data

In addition, the ARC has provided institutions with:

- Aggregated indicator profiles for each of their assessed units of evaluation
- Performance measures benchmarked for each discipline to the rest of the Australian higher education sector and to ‘world’ performance where possible
- Raw citation information for all submitted journal articles and constructed benchmarked citation profiles
World Standard and Higher

ERA National Report includes:

• quality ratings for all assessed two- and four-digit UoEs
• aggregated submission data from institutions profiling national research effort and resourcing by discipline
• preliminary analyses of the national data

In addition, the ARC has provided institutions with:

• aggregated indicator profiles for each of their assessed units of evaluation
• performance measures benchmarked for each discipline to the rest of the Australian higher education sector and to 'world' performance where possible
• raw citation information for all submitted journal articles and constructed benchmarked citation profiles
Public Consultation for ERA 2015

- Next round scheduled for 2015

- Public consultation on submission documentation closed in February
  - Draft ERA 2015 Submission Guidelines
  - Draft ERA-SEER 2015 Business Rules and Verification
  - Draft ERA-SEER 2015 Technical Specifications
  - Draft ERA 2015 Discipline Matrix
  - Draft ERA-SEER 2015 Technology Pack

- Public consultation on Journal and Conference Lists closed in March

Web: arc.gov.au  |  Email: era@arc.gov.au
Summary of key changes for ERA 2015

• Reintroducing conference list (no ranking)
• Book publisher list (for data streamlining and collection only)
• New research output type: Research Report for an External Body
• Gender data (not for evaluation)
• Open access repository (not for evaluation)
• Peer review research outputs must be in ERA repository
• Staff eligibility for 0.4 FTE or less (publication association required)
• Conference citation trial (selected FoRs only)
• Peer review dashboard

Web: arc.gov.au | Email:era@arc.gov.au
Research report for an external body

A written research report commissioned or solicited by an external body such as a government department or private company.

To be eligible to be submitted, a research report must:

- meet the definition of research;
- not be eligible to be submitted as a traditional research output; and
- have been published or made publicly available during the reference period for research outputs.
Staff eligibility rule for less than 0.4 FTE

For staff who are employed at less than 0.4 FTE to be eligible to be submitted they must:

• be employed as ‘research only’ or ‘teaching and research’
• have at least one eligible research output associated with the submitting institution.
ERA Questions ???
ARC funding awarded by program – last 5 years

- Discovery Projects: 40.3%
- Future Fellowships: 17.3%
- Linkage Projects: 17.1%
- Centres of Excellence: 6.0%
- Australian Laureate Fellowships: 5.1%
- DECRA: 4.1%
- LIEF: 4.3%
- Special Research Initiatives: 2.9%
- Other: 2.7%
- Discovery Indigenous: 0.2%
- Special Research Initiatives: 2.9%
- Other: 2.7%
National Competitive Grants Program

*Discovery Projects*

- Discovery Projects
- Future Fellowships
- DECRA
- Other Fellowships

*Linkage Projects*

- Linkage Projects
- Centres of Excellence
- Co-Funded & SRI
- ITRP
- LIEF

Area of box represents $$ awarded over the period 2008-2013.
N.b. ITRP & DECRA running for less than five years.
Harmonised funding rules

• One set covering all schemes in the Program

• One section dedicated to the Discovery Program

• Harmonisation of cross-scheme eligibility rules for clarity and consistency
National Competitive Grants Program

Harmonised funding rules

• Discovery Projects now available for 5 years

• No Discovery Outstanding Research Awards

• Increase in ICA $$ within DP to promote internationalisation

• Extension of career interruption time available in DECRA (to 8 years)
Discovery Projects Grants rankings 2013

Each symbol represents at least 2 observations
Thank you