



**Australian Government**  

---

**Australian Research Council**

# **Excellence in Research for Australia**

**Leanne Harvey**  
**General Manager**

**Andrew Calder**  
**Director - Research Performance and Analysis**

*Research*



**Australian Government**  

---

**Australian Research Council**

# 1. ERA Overview

Research

# Objectives of ERA

- Establish an evaluation framework that gives government, industry, business and the wider community assurance of the excellence of research conducted in Australia's institutions;
- Provide a national stocktake of discipline-level areas of research strength and areas where there is opportunity for development in Australia's higher education institutions;
- Identify excellence across the full spectrum of research performance;
- Identify emerging research areas and opportunities for further development;
- Allow for comparison of Australia's research nationally and internationally for all discipline areas.

# General ERA Principles

1. Unit of Evaluation is the four-digit ANZSRC Field of Research code (ie. 157 possible **Units of Evaluation**); evaluation occurs at the two-digit level as well
2. Evaluation by **Research Evaluation Committees** in discipline clusters; eight clusters in total
3. There is a minimum level of output for a discipline to be considered '**research active**' for evaluation in ERA
4. Evaluations informed by a '**dashboard**' of discipline-specific indicators
5. Some **peer review of outputs** accessed through institutional **repositories** in some clusters

# The ERA Clusters

<b>Cluster 1</b>	<b>Physical, Chemical &amp; Earth Sciences</b>
<b>Cluster 2</b>	<b>Humanities and Creative Arts</b>
Cluster 3	Engineering and Environmental Sciences
Cluster 4	Social, Behavioural and Economic Sciences
Cluster 5	Mathematics, Information and Communication Sciences
Cluster 6	Biological Sciences and Biotechnology
Cluster 7	Biomedical and Clinical Research
Cluster 8	Public and Allied Health, and Health Sciences

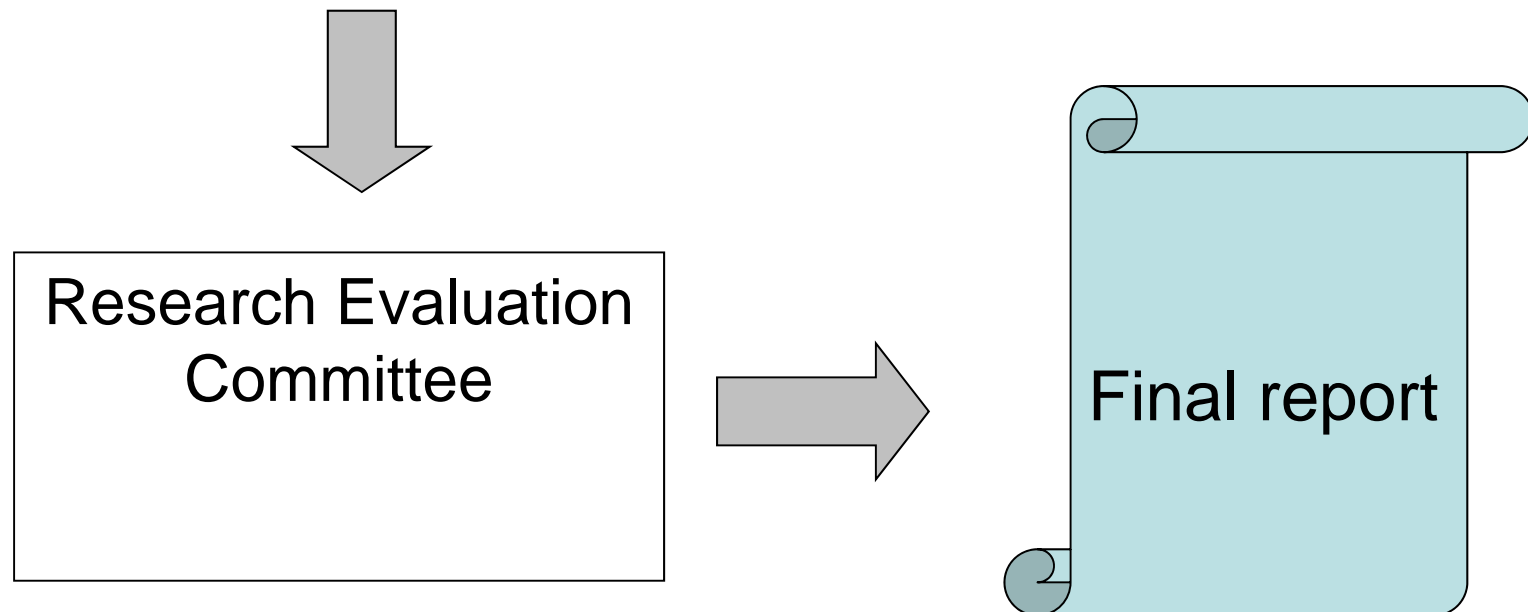
# The ERA Unit of Evaluation

- The unit of evaluation is the 4-digit field of research code
- All research outputs must be submitted
- Journal articles are limited to the assigned FoRs
- Non-journal outputs may be assigned to up to 3 FoRs
- Institutions may tag research outputs with two institutional codes and two research theme codes

# ERA Process Overview

Metrics Profile 1	Metrics Profile 2
Metrics Profile 3	Metrics Profile 4
Metrics Profile 5	Metrics Profile 6
<b>Peer Review</b> (if included)	

Note - There are no weightings!





**Australian Government**  
**Australian Research Council**

## **2. ERA Trial 2009**

*Research*

# The ERA Trial in 2009

- Testing the methodologies
- Two clusters were selected for trial
  - PCE - metrics based
  - HCA - combination of metrics and peer review
- Trial RECs formed
  - HCA chaired by Professor Graeme Turner from the University of Queensland (22 members)
  - PCE chaired by Professor Mark von Itzstein from Griffith University (17 members)

# Summary of the 2009 Trial Submissions

- **Cluster 1** (Physical, Chemical and Earth Sciences)
  - 39 out of 41 institutions submitted data
  - Just over 40,000 research outputs were submitted
- **Cluster 2** (Humanities and Creative Arts)
  - All 41 institutions submitted data
  - Just over 47,000 research outputs were submitted including 7,000 creative works

# Indicators for 2009 Trial

- **Volume and Activity**
  - Profiles showing research outputs and staffing
- **Citation Analysis (PCE)**
  - Relative Citation Impact (RCI) against world and Australian institution benchmarks.
- **Peer Review (HCA)**
- **Ranked Journals**
- **Research Income**
  - Broken down into categories and profiled against field average benchmarks using full-time equivalent (FTE) staff numbers
- **Applied**
  - Patents sealed & Commercialisation income

# Viewing profiles - Trial Dashboard

The screenshot shows the SEER EVALUATE dashboard interface. At the top, it features the Australian Government and Australian Research Council logos, the text 'SEER EVALUATE', and a user login 'Logout: Ms Liz Visser'. Below this is a 'FoR Group:' input field. The main content area is divided into tabs: 'Allocated tasks', 'Background', 'View indicators', and 'Evaluation'. The 'View indicators' tab is active, showing a list of indicators on the left and two data tables on the right. An arrow points from the text 'Indicators for discipline' to the 'Applied indicators' option in the list.

**Indicators for discipline**

**Volume and Activity: Research publication outputs by type**

Outlet type	No. of outputs	% of outputs	% of Contribution to Aust. Group
Journal Articles	5	83.3%	0.5%
Book Chapters	0	0.0%	0.0%
Books	0	0.0%	0.0%
Conference Proceedings	1	16.7%	0.6%
Total	6	100.0%	0.5%

**Volume and Activity: FTE by academic level**

HESDC Level	No. of FTE	% of FTEs
Level E	0.0	0.0%
Level D	0.4	48.8%
Level C	0.3	39.0%
Level B	0.1	12.2%
Level A	0.0	0.0%
Other	0.0	0.0%
Total	0.8	100.0%

**Volume and Activity: Headcount by academic level**

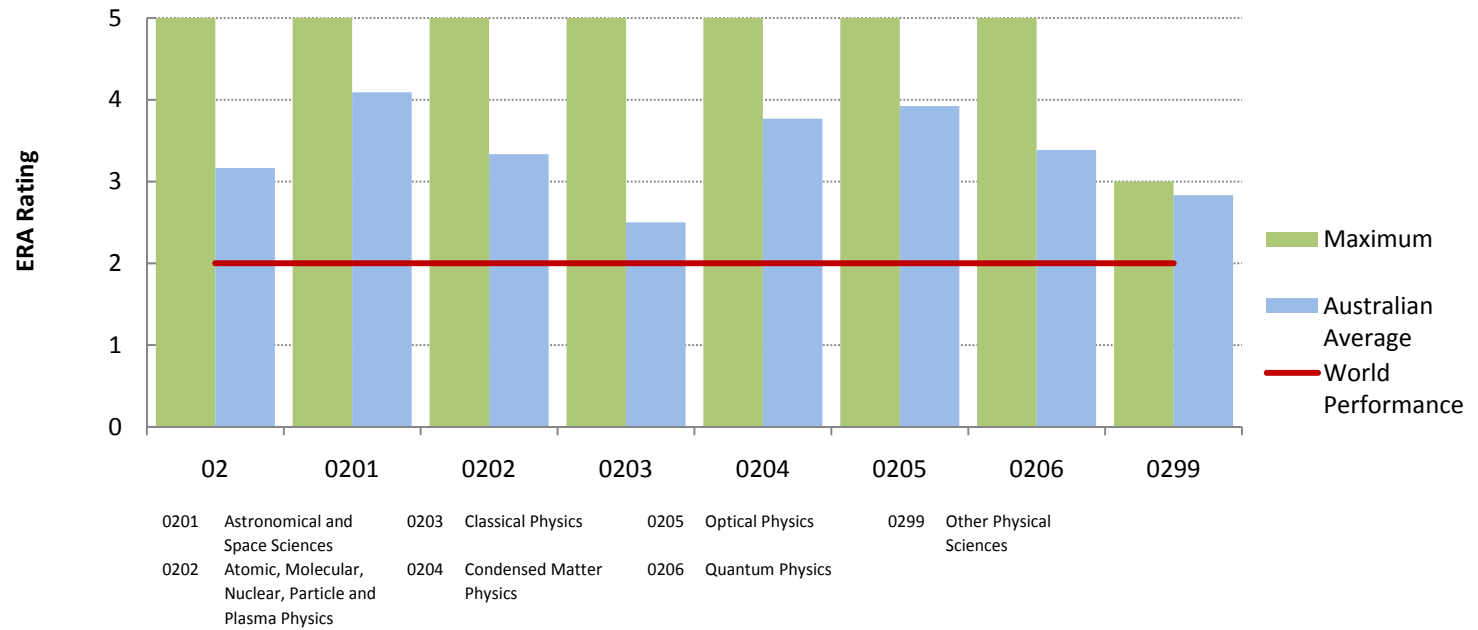
HESDC Level	Headcount of FTE	% of Headcount FTE
-------------	------------------	--------------------

Privacy Policy | Copyright | Disclaimer | Terms and Conditions  
© Commonwealth of Australia  
era@arc.gov.au  
ABN: 35 201 451 100

# What was reported from the Trial?

- **Institution reports** (only to each institution):
  - Ratings for each assessable Unit of Evaluation, plus Committee comments
  - Feedback to institutions about their submission, repositories, data integrity etc.
- **National report** on the ARC website

2009 ERA Trial - Australian national report for PCE  
Cluster - 02 Physical Sciences



# Some issues from the Trial

- Data integrity and validation
  - No FTE data
  - No information about authors, or partial author lists
  - No Background Statement or incomplete
  - Incomplete Research Statements
  - Duplication of some output data
  - Incorrect EID tagging of outputs
- Does the output really meet the ERA definition of research?
- Repository access and access to non-repository items for peer review



**Australian Government**  
**Australian Research Council**

## 3. ERA 2010

Research

## Addressing the issues from the Trial

- ‘Soft close’ for submission to allow time to correct errors in 2010
- Sneak peek – plans for an early Dashboard
- Portfolios – eg non-traditional outputs, with attached research statement
- Apportionment – outputs apportioned by institutions into FoR codes up to 100%
- Peer review – institutions able to nominate preferred FoR in which output is to be reviewed
- Research statements will remain at 250 words

# The 2010 Rating Scale

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

## ERA – What's ahead?

- Submission Guidelines and Technical Specifications were released in December 2009
- The full list of ranked journals and conferences is out now
- ERA Submissions open 1 June 2010
- Full ERA process commencing in 2010 – all eight clusters evaluated simultaneously
- ARC has to:
  - Work with institutions on repositories
  - Set up eight committees and peer reviewers
  - Do further system development (SEER)

## FAQ - Low Volume Thresholds

- For disciplines where citation analysis is used:
  - 50 or more indexed journal articles
- For disciplines where peer review is used:
  - ERA Trial: 20 (equivalent) or more outputs
  - ERA 2010: threshold raised to 30 outputs
- In cases of low volume at the four-digit level, analysis can still occur at the two-digit level if it reaches the threshold.
- Note books weighted 5:1 for threshold calculation, not for evaluation



**Australian Government**  

---

**Australian Research Council**

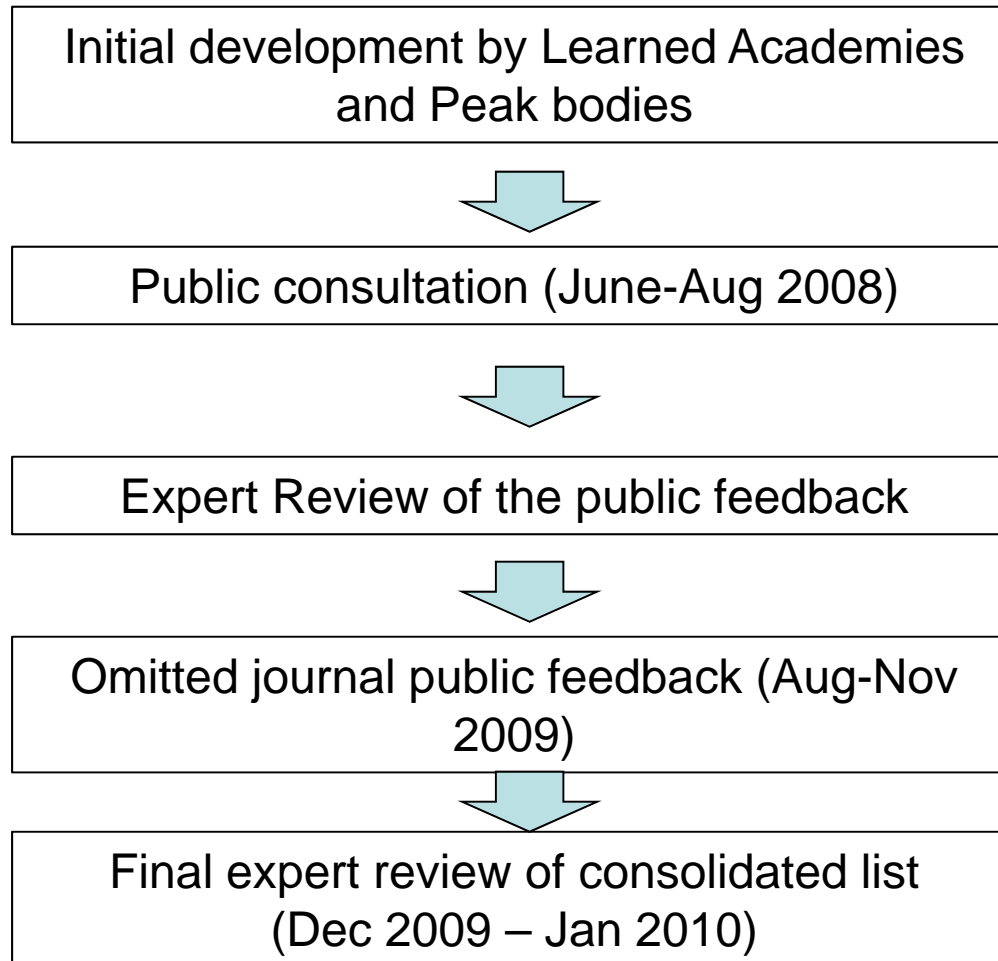
## 4. Ranked Outlets

Research

## Mythbusting - Ranked Outlets

- Only **one** of a number of unweighted indicators on the “Dashboard”
- Ranked Journals required for development of discipline-specific benchmarks for citation analysis
- Ranked conference essential for IT, Engineering & built Environment
- Note discipline-specific practices

# Developing the ranked journal list



## Parameters for inclusion in the lists

- academic/scholarly
- publishes original research
- peer reviewed or equivalent process
- active during the ERA reference period (2003-2008)
- has an ISSN
- able to withstand international scrutiny

# Tier Descriptors

## A\*

Typically an A\* journal would be one of the best in its field or subfield in which to publish and would typically cover the entire field/subfield. Virtually all papers they publish will be of a very high quality. These are journals where most of the work is important (it will really shape the field) and where researchers boast about getting accepted. Acceptance rates would typically be low and the editorial board would be dominated by field leaders, including many from top institutions.

## A

The majority of papers in a Tier A journal will be of very high quality. Publishing in an A journal would enhance the author's standing, showing they have real engagement with the global research community and that they have something to say about problems of some significance. Typical signs of an A journal are low acceptance rates and an editorial board which includes a reasonable fraction of well known researchers from top institutions.

## B

Tier B covers journals with a solid, though not outstanding, reputation. Generally, in a Tier B journal, one would expect only a few papers of very high quality. They are often important outlets for the work of PhD students and early career researchers. Typical examples would be regional journals with high acceptance rates, and editorial boards that have few leading researchers from top international institutions.

## C

Tier C includes quality, peer reviewed, journals that do not meet the criteria of the higher tiers.

## Parameters for inclusion in the lists

- academic/scholarly
- publishes original research
- peer reviewed or equivalent process
- active during the ERA reference period (2003-2008)
- has an ISSN
- able to withstand international scrutiny

# The 2010 Ranked Outlet Lists

- The 2010 lists are fixed for this ERA evaluation
- ERA 2010 Ranked Journal List
  - 20,712 journals included
  - Over 88% agreement on ranks and FoR
  - 252 added and 145 removed (from 17 December list)
- ERA 2010 Ranked Conference List
  - 1,952 conferences included
  - 62 added and 98 removed (from 17 December list)

# Proportions of journals at each tier

Rank	Number of journals	Proportion
A*	1,030	4.97%
A	3,054	14.75%
B	5,667	27.36%
C	10,682	51.57%
Unranked (started 2008)	279	1.35%
Total	20,712	

## Maintaining ranked outlets

- The ARC will continue to accept feedback regarding new and ceased journals/conferences and will record this in the database
- List would be updated and reviewed prior to any future ERA round
- What can be done to improve a rank?