



Australian Government
Australian Research Council

PILOT SUBMISSION GUIDELINES

Consultation

RESEARCH in the national interest - enabling the future

Excellence in Research for Australia (ERA) Initiative

1 October 2008

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1. PILOT OVERVIEW

1.1 Purpose of the Guidelines

The purpose of the *Excellence in Research for Australia (ERA) Pilot Submission Guidelines* is to provide an overview of, and specify the content and data requirements for, submissions to the ERA Pilot. It also provides guidance to eligible higher education providers (henceforth ‘institutions’) on policy and practical matters in preparing submissions.

Institutions considered in ERA are the eligible institutions listed at **Appendix A**.

Pilot data is to be submitted electronically via a system which is being specifically developed for ERA purposes. The system is called ‘SEER’ (System to Evaluate the Excellence of Research). The *SEER Technical Specifications* inform institutions on the specific technical requirements of the ERA Pilot.

It is expected that a separate set of *SEER Technical Specifications* will be issued following feedback from the sector upon completion of the ERA Pilot. These specifications will outline in greater detail the data and submission requirements for the formal ERA process.

1.2 ERA Overview

ERA will undertake evaluations of research in Australian institutions in each of eight clusters of disciplines. Disciplines are defined as four-digit Fields of Research (FoR) as identified in the Australian-New Zealand Standard Research Classification (ANZSRC).

ERA will evaluate research excellence using a combination of indicators and expert review by committees comprising experienced, internationally-recognised experts. These evaluations will be informed by three broad categories of indicators:

1. *Indicators of research activity and intensity*
Indicators of research activity and intensity include research income and total number of research outputs.
2. *Indicators of research quality*
Indicators of research quality include analysis of publications and other research outputs using ranked outlets, citation analysis and percentile analysis where relevant.
3. *Indicators of applied research and translation of research outcomes*
Indicators of applied research and translation of research outcomes will be determined at a discipline-specific level.

For the purposes of the ERA Pilot only a narrow sample of data will be collected and no form of evaluation will be undertaken. The scope and data requirements for the Pilot are outlined in further detail in the remainder of these guidelines.

1.3 Purpose of the Pilot

The ERA Pilot aims to:

- facilitate the sector’s feedback on an early version of the ERA Submission Guidelines;
- ensure that institutions can successfully make submissions via the Pilot iteration of SEER; and
- test that the SEER technology works in terms of core submission functionality.

1.3.1 Indicators Development Group

The ERA Pilot will not pre-empt decisions on issues to be considered by the Indicators Development Group (IDG). Therefore, these guidelines do not include detailed information on all elements which will be considered in the formal ERA submission process. Rather, they specifically focus on information which is relevant and necessary to achieve the aims of the ERA Pilot.

1.4 Pilot Timelines

Institutions participating in the ERA Pilot are able to submit data from Wednesday 1 October until Friday 14 November 2008. SEER will not permit further data to be entered in the system for the purposes of the Pilot after this time.

1.5 Further Assistance

Queries regarding the *ERA Pilot Submission Guidelines* should be directed to the ERA Team on (02) 6287 6755 or email era@arc.gov.au.

As specified in the data dictionary, institutions are requested to provide Uniform Resource Identifiers (URIs) for each research output. Where institutions provide URIs to research outputs in their repositories, a member of the SEER Technical Team may contact the institution's nominated ERA Technical Contact Officer to discuss testing access to the repository. Research outputs that are stored in repositories must only be made available where the institution has a licence that gives them permission to do so.

1.6 Key Changes Since the Draft Pilot Guidelines

The following changes have been made to the ERA Pilot Guidelines since the release of the draft on 22 August 2008:

- inclusion of abbreviations and definitions;
- minor clarifications of the eligibility criteria; and
- revisions to the data dictionary, as per the list below:
 - publishedName element description added for Author group;
 - additional explanation of Bibliometric key elements usage (e.g., indexProvider and uniqueIdentifier);
 - honorific element description added for Name group;
 - staffReference element description added for Researcher group;
 - discipline element description added for Research Income group;
 - additional explanation of Research Income elements (e.g., annualValue, program, value and yearAwarded);
 - additional explanation of Research Outlet elements usage (e.g., issue and name);
 - additional explanation of Research Output elements usage (e.g., edition, ISBN and ISSN);
 - clarification that a discipline element (specifying at least one FoR code) is required for group Research Output.

For changes to the xml schema see RELEASE_NOTES.txt in the SEER Pilot Technology Pack.

2. PILOT SUBMISSIONS

2.1 Scope

For the purposes of the ERA Pilot, sample data is requested for the Physical, Chemical and Earth Sciences (PCE) Discipline Cluster only. This consists of all disciplines included in the table below:

| PHYSICAL, CHEMICAL AND EARTH SCIENCES | DISCIPLINE | FoR |
|---|---|------|
| | ASTRONOMICAL AND SPACE SCIENCES | 0201 |
| | ATOMIC, MOLECULAR, NUCLEAR, PARTICLE AND PLASMA PHYSICS | 0202 |
| | CLASSICAL PHYSICS | 0203 |
| | CONDENSED MATTER PHYSICS | 0204 |
| | OPTICAL PHYSICS | 0205 |
| | QUANTUM PHYSICS | 0206 |
| | OTHER PHYSICAL SCIENCES | 0299 |
| | PHYSICAL CHEMISTRY (INCL. STRUCTURAL) | 0306 |
| | INORGANIC CHEMISTRY | 0302 |
| | ORGANIC CHEMISTRY | 0305 |
| | ANALYTICAL CHEMISTRY | 0301 |
| | MACROMOLECULAR AND MATERIALS CHEMISTRY | 0303 |
| | THEORETICAL AND COMPUTATIONAL CHEMISTRY | 0307 |
| | MEDICINAL AND BIOMOLECULAR CHEMISTRY | 0304 |
| | OTHER CHEMICAL SCIENCES | 0399 |
| | GEOLOGY | 0403 |
| GEOFYSICS | 0404 | |
| GEOCHEMISTRY | 0402 | |
| OCEANOGRAPHY | 0405 | |
| PHYSICAL GEOGRAPHY AND ENVIRONMENTAL GEOSCIENCE | 0406 | |
| ATMOSPHERIC SCIENCES | 0401 | |
| OTHER EARTH SCIENCES | 0499 | |

Institutions participating in the ERA Pilot are required to submit a sample of the following kinds of research item against one or more of the FoRs identified above:

- Research Outputs:
 - Books-Authored Research;
 - Book-Chapters in Research Book;
 - Journal Articles-Refereed, Scholarly Journal; and
 - Conference Publications.

- Research Income:
 - Australian Competitive Grants.

Institutions may choose the amount of each kind of data they wish to submit for the purposes of the Pilot. Further detail on the format in which this data must be submitted is also outlined in **Appendix B**.

2.2 Pilot Submission Certification

For the purposes of the ERA Pilot, institutions are not required to certify their submissions.

For the formal ERA submission process institutions will be responsible for collecting, validating and transmitting to the ARC all information in each cluster submission by the due date for each evaluation process. Institutions will also be responsible for certifying that all the reported information is accurate and comprehensive.

3. SUBMISSION DATA

3.1 Research Outputs

For institutions to submit information on a research output, the research output must meet all of the following criteria:

1. meet the definition of research;
2. have been published within the research outputs reference period;
3. have one or more eligible researchers listed on the output; and
4. be an eligible research output type.

Further detail on each of these criteria is provided below.

For the purposes of the ERA Pilot, institutions are required to submit research output information only where it is listed against a FoR from the PCE Discipline Cluster. Institutions are required to ensure that research outputs are assigned to only one FoR code.

3.1.1 Definition of Research

For the purposes of ERA, research is defined as the creation of new knowledge and/or the use of existing knowledge in a new and creative way so as to generate new concepts, methodologies and understandings. This could include synthesis and analysis of previous research to the extent that it is new and creative.

This definition of research is consistent with a broad notion of research and experimental development (R&D) as comprising ‘creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of humanity, culture and society, and the use of this stock of knowledge to devise applications’.¹ This definition should be read as consistent with that used in the *2008 Higher Education Research Data Collection Specifications for the Collection of 2007 Data* (HERDC).²

This definition of research should be used by institutions when determining the acceptability of research outputs for submission in ERA.

3.1.2 Research Outputs Reference Period

For a research output to be eligible for submission, the output must have been published within the research outputs reference period. For the purposes of ERA, ‘published’ is broadly defined to mean that the research output must have been published (in the case of traditional research outputs such as publications) or brought into the public domain.

The research outputs reference period is defined as the six-year period from 1 January 2002 until 31 December 2007. Earlier outputs are not eligible to be included.

The years of publication of a research output must appear on the output and/or in the information to be provided for each research output. Where the actual date of publication differs from the listed date of publication, institutions should be able to explain this variance on request by the ARC.

The year of publication is normally the most recent year indicated as published, printed or the year of copyright. Institutions should note that copyright dates or ‘date last updated’ which appear on web pages do not typically refer to a publication included on that page. Web page dates should not be used as evidence of the year of publication.

¹ OECD (2002), *Frascati Manual: Proposed Standard Practice for Surveys on Research and Experimental Development*, OECD, Paris.

² http://www.dest.gov.au/sectors/research_sector/online_forms_services/higher_education_research_data_collection.htm

(a) Revisions

There may be some cases in which a research output was revised following the publication of the output (e.g., snapshots of research outputs on a website). These outputs are only acceptable if the institution can demonstrate that the research output meets all the eligibility criteria.

(b) Reprints and Multiple Editions

Where there has been a reprint or new edition of a research output within the reference period and both versions are submitted, institutions are required to be able to state, on request by the ARC, how the reprint or new edition has contributed substantially new research.

Where there have been multiple prints or editions within the reference period, none of which constitute substantially more new research than the other, the institution may decide which edition or print is to be submitted. Institutions are responsible for ensuring that any revisions or reprints that occurred outside the reference period are not included as a research output.

(c) Exceptions

Where a research output was originally produced in a medium where no year of publication is stated within (e.g., in the byline) or on the output, a letter from an editor, conference organiser or publisher may be acceptable evidence to identify the year of publication. A letter cannot override a year of publication stated within the output. Institutions are required to be able to provide the letter on request by the ARC.

Provided no other date exists within or on the research output, the year an output was ‘presented’ may be acceptable evidence of the year of publication (e.g., to a conference in the case of a conference paper).

3.1.3 Eligible Researchers

For institutions to submit information on a research output, the output must have one or more eligible researchers listed as an author either within (e.g., in the byline) or on the output being claimed. Eligible researchers must be affiliated on the staff census date.

(a) Staff Census Date

For the purposes of ERA, the staff census date is defined in accordance with the Higher Education Staff Data Collection (HESDC). Researchers must meet the HESDC definition of a member of staff as at 31 March 2008. This date determines the attribution of publications but not the attribution of research income.

(b) Affiliation

For the purposes of ERA, being “affiliated” means that, on the census date, the researcher meets one of the following criteria:

1. is an employee of, and derives more than 50 per cent of their annual earnings from, the eligible institution; or
2. is a holder of an adjunct appointment or equivalent at the eligible institution and does not have a substantive position or paid appointment elsewhere (either in Australia or internationally); or
3. derives more than 50 per cent of their annual earnings from an organisation and who has demonstrated a publication association with the eligible institution.

'Earnings' means the amount paid directly or indirectly as remuneration for work a researcher undertakes or services they perform. It includes amounts paid under employment and/or consultancy arrangements.

'Adjunct appointment or equivalent' means that an institution has a formal agreement in writing with a researcher which is publicly acknowledged and which establishes an ongoing association with the institution, of the nature of a conjoint, emeritus or honorary academic or visiting fellow.

To demonstrate a researcher's 'publication association' with an eligible institution, a researcher's research output must list the name of any eligible institution within (e.g., in the byline) or on the research output. The output must still meet the other research output criteria (i.e., sections 3.1.1 and 3.1.2) and be an eligible output type.

Researchers are not considered affiliated if they do not meet one of the above criteria. Research outputs on which they are listed therefore may not be included unless another listed researcher meets the eligibility requirements. This means that in the case of researchers whose eligibility is determined by their publication association only those outputs that list the name of any eligible institution are eligible.

3.1.4 Eligible Research Output Types

(a) Books-Authored Research

Institutions are required to submit information on all eligible books for each year of the research outputs reference period. Eligible books are those that, in addition to the criteria outlined in sections 3.1.1-3.1.3, meet the following criteria:

- must be a major work of scholarship;
- must have an International Standard Book Number (ISBN);
- must be entirely written by a single author, or by joint authors who share responsibility for the whole book; and
- must have been published by a commercial publisher (i.e., an entity for which the core business is producing books and distributing them for sale).

The following types of books are likely to meet the eligibility criteria for the 'Book' output type:

- critical scholarly texts;
- new interpretations of historical events; or
- new ideas or perspectives based on established research findings.

Many of the books published by professional bodies do not report original research findings but report the results of evaluations, or repackage existing information for the benefit of professionals or practitioners. It is important that institutions assess these publications very carefully against the definition of research and only count those books for this publication type which report research activities.

The following types of books are unlikely to meet the eligibility criteria for the 'Book' output type:

- textbooks;
- anthologies;
- edited books;
- creative works such as novels;
- translations; or
- revisions or new editions.

These types of research outputs may be included for specific disciplines in the formal ERA process.

For the ERA Pilot, institutions are not required to apportion the book according to the number of listed authors. Further guidance on apportionment for the formal ERA process will be provided following consideration by the IDG.

Institutions are required to provide information on each book against the fields outlined in **Appendix B**. It is expected that there will be some additional fields required for the formal ERA process.

(b) Book-Chapters in Research Book

Institutions are required to submit information on all eligible book chapters for each year of the research outputs reference period. Book chapters refer to a contribution, consisting substantially of new material, to an edited compilation in which the material is subject to editorial scrutiny. Eligible book chapters are those that, in addition to the criteria outlined in sections 3.1.1-3.1.3, meet the following criteria:

- must be a chapter in a book that has an International Standard Book Number (ISBN); and
- must be a chapter in a book that has been published by a commercial publisher (i.e., an entity for which the core business is producing books and distributing them for sale).

The following types of book chapters are likely to meet the eligibility criteria for the 'Book Chapter' output type:

- scholarly introduction of chapter length to an edited volume, where the content of the introduction reports research and makes a substantial contribution to a defined area of knowledge;
- critical scholarly text of chapter length; or
- critical reviews of current research.

The following types of book chapters are unlikely to meet the eligibility criteria for the 'Book Chapter' output type:

- chapters in textbooks;
- entries in reference books;
- anthologies;
- revisions of chapters in edited books;
- forewords;
- brief introductions;
- brief editorials;
- appendices; or
- translations.

These types of research outputs may be included for specific disciplines in the formal ERA process.

For the ERA Pilot, institutions are not required to apportion book chapters according to the number of authors listed on either the book or the chapter. Further guidance on apportionment for the formal ERA process will be provided following consideration by the IDG.

Institutions are required to provide information on each book chapter against the fields outlined in **Appendix B**. It is expected that there will be some additional fields required for the formal ERA process.

(c) Journal Articles-Refereed, Scholarly Journal

Institutions are required to submit information on all eligible journal articles for each year of the research outputs reference period. Eligible journal articles are those that, in addition to the criteria outlined in sections 3.1.1-3.1.3, meet the following criteria:

- must have been published in a scholarly journal;
- must have been peer-reviewed; and
- must have an International Standard Serial Number (ISSN).

For the purposes of ERA, an acceptable peer review process is one that involves an assessment or review, before publication, of the research output in its entirety by independent, qualified experts. Independent in this context means independent of the author.

Some journals may be regularly published as separate volumes with an ISBN rather than an ISSN. Provided that the publication is clearly identified as an edition of a journal, and not a book, articles in such publications may be eligible if they meet all other criteria.

For journal articles, any of the following are acceptable as evidence of peer review:

- the journal is indexed by one or more external citation suppliers;
- the journal is included in the ERA Journal Rankings;
- there is a statement in the journal which shows that contributions are peer reviewed;
- there is a statement or acknowledgement from the journal editor which shows that contributions are peer reviewed; or
- a copy of a reviewer's assessment relating to the article.

A statement from an author that a publication was peer reviewed is not sufficient evidence. The existence of a national or international advisory board is also not sufficient evidence that all relevant publications were assessed by its members.

The following types of journal article are likely to meet the eligibility criteria for the 'Journal Article' output type:

- commentaries and communications of original research;
- research notes;
- letters to journals, provided that the letter satisfies the definition of research and the subsequent definitions for journal articles provided above;
- critical scholarly texts which appear in article form;
- articles reviewing multiple works or an entire field of research;
- invited papers in journals;
- articles in journals which are targeted to both scholars and professionals; or
- articles in a stand alone series.

The following types of journal article are unlikely to meet the eligibility criteria for the 'Journal Article' output type:

- letters to the editor;
- case studies;
- articles designed to inform practitioners on existing knowledge in a professional field;
- articles in newspapers and popular magazines;
- editorials;
- book reviews; or
- brief commentaries and communications of original research.

These types of research outputs may be included for specific disciplines in the formal ERA process.

For the ERA Pilot, institutions are not required to apportion journal articles according to the number of listed authors. Further guidance on apportionment for the formal ERA process will be provided following consideration by the IDG.

Institutions are required to provide information on each journal article against the fields outlined in **Appendix B**. It is expected that there will be some additional fields required for the formal ERA process.

(d) Conference Publications-Full Paper Refereed

Institutions are required to submit information on all eligible peer-reviewed conference publications for each year of the research outputs reference period. Eligible conference publications are those that, in addition to the criteria outlined in sections 3.1.1-3.1.3, meet the following criteria:

- must be published in full (the papers may appear in a number of different formats, e.g., a volume of proceedings, a special edition of a journal, a normal issue of a journal, a book or a monograph, CD- or DVD-ROM or conference or organisational website);
- must be peer reviewed (i.e., an assessment or review of the research publication has been undertaken by independent, qualified experts. Independent in this context means independent of the author); and
- must be presented at conferences, workshops or seminars of national or international significance.

Keynote addresses and invited papers may be included where all other papers for the conference are peer reviewed.

The types of conference publications that are unlikely to meet the criteria include papers that appear only in a volume handed out to conference participants.

For the ERA Pilot, institutions are not required to apportion conference publications according to the number of listed authors. Further guidance on apportionment for the formal ERA process will be provided following consideration by the IDG.

Institutions are required to provide information on each conference publication against the fields outlined in **Appendix B**. It is expected that there will be some additional fields required for the formal ERA process.

3.2 Research Income

For the ERA Pilot, institutions are requested to only submit information related to 'Category 1' research income (i.e., Australian Competitive Grants).

Institutions are required to submit grant information only where it is listed by the institution against a FoR from the PCE Discipline Cluster. Institutions are required to ensure that research income is not double counted across multiple FoR codes.

For institutions to submit information on research income, the research income must:

1. meet the research income reference period requirements; and
2. be an eligible income category type, which, for the purposes of the ERA Pilot, refers only to 'Category 1' research income (i.e., Australian Competitive Grants).

Further detail on each of these criteria is provided below.

3.2.1 Research Income Reference Period

For an institution to include research income, it must have been reported as part of the HERDC for the relevant year of the research income reference period. The research income reference period is defined as the three-year period from 1 January 2005 to 31 December 2007.

Institutions are required to ensure that reporting of grant information from research income for one year does not occur for another year of the reference period.

It is recognised that the year a grant is awarded may differ from the year(s) income was received. Institutions may therefore include a grant where some or all of the income was received in the reference period.

3.2.2 Category 1 Income: Australian Competitive Grants

Institutions are required to only submit grant information on Australian Competitive Grants where it was submitted as part of the HERDC for the relevant year of the research income reference period. The *HERDC Specifications* for the relevant year should be used to determine the eligibility of the income unless otherwise indicated.

Institutions are required to provide information on each eligible grant against the fields outlined in **Appendix B**. It is expected that there will be some additional fields required for the formal ERA process.

For the ERA Pilot, institutions are not required to apportion research income across more than one FoR. Further guidance on apportionment for the formal ERA process will be provided following consideration by the IDG.

4. OTHER MATTERS

4.1 Privacy Complaints and Advice

The ARC is bound, in administering ERA, by the provisions of the *Privacy Act 1988* ('Privacy Act'). Section 14 of the Privacy Act contains the Information Privacy Principles (IPPs) which prescribe the rules for handling personal information. In brief, the IPPs require that:

- personal information is collected in accordance with IPPs 1-3;
- suitable storage arrangements, including appropriate filing procedures, are in place;
- suitable security arrangements exist for all records containing personal information;
- access to a person's own personal information held by an organisation is made available to the person at no charge;
- records are accurate, up-to-date, complete and not misleading;
- where a record is found to be inaccurate, the correction is made;
- where a person requests that a record be amended because it is inaccurate, but the record is found to be accurate, the details of the request for amendment are noted on the record; and
- the personal information is only to be used for the purposes for which it was collected, or for other purposes where expressly allowed by IPP 10.

Complaints about breaches of privacy should be referred to:

The Privacy Contact Officer
Research Excellence Branch
Australian Research Council
GPO Box 2702
Canberra ACT 2601

Privacy complaints may also be emailed to era@arc.gov.au.

Privacy complaints can be made directly to the Federal Privacy Commissioner. However the Commissioner prefers that the ARC be given an opportunity to deal with the complaint in the first instance.

4.2 Freedom of Information

All documents sent to the ARC with regard to ERA are subject to the *Freedom of Information Act 1982* ('FOI Act'). Unless a document falls under an exemption provision, it will be made available to the general public if requested under the FOI Act. Decisions regarding requests for access will be made by the ARC's authorised FOI decision-maker in accordance with the requirements of the FOI Act.

4.3 Intellectual Property

The ARC does not claim ownership of any intellectual property submitted by an institution as part of a cluster submission for ERA. However institutions are required to give an express licence to the ARC for the use of material submitted as part of ERA for the purposes of ERA.

The ARC retains the intellectual property in all materials created by the ARC, except where it is limited by licence with external suppliers.

APPENDIX A: ELIGIBLE INSTITUTIONS

Australian Catholic University
Batchelor Institute of Indigenous Tertiary Education
Bond University
Central Queensland University
Charles Darwin University
Charles Sturt University
Curtin University of Technology
Deakin University
Edith Cowan University
Flinders University
Griffith University
James Cook University
La Trobe University
Macquarie University
Melbourne College of Divinity
Monash University
Murdoch University
Queensland University of Technology
RMIT University
Southern Cross University
Swinburne University of Technology
The Australian National University
The University of Adelaide
The University of Melbourne
The University of New England
The University of New South Wales
The University of Newcastle
The University of Notre Dame Australia
The University of Queensland
The University of Sydney
The University of the Sunshine Coast
The University of Western Australia
University of Ballarat
University of Canberra
University of South Australia
University of Southern Queensland
University of Tasmania (incorporating Australian Maritime College)
University of Technology, Sydney
University of Western Sydney
University of Wollongong
Victoria University

APPENDIX B: SEER PILOT DATA DICTIONARY

| Group | Element | Type | Length | Mandatory (M) or Optional (O) | Description |
|------------------|------------------|---------|--------|-------------------------------|---|
| Author | orderInOutput | String | 3 | M | The order in which the author is listed on the Research Output. |
| Author | publishedName | String | 200 | M | Name (as published) of the author listed on a Research Output. (DC: the Creator) |
| Bibliometric Key | indexProvider | String | 100 | O | Name of the external index provider. Values supported are “thomson” or “scopus”. |
| Bibliometric Key | uniqueIdentifier | String | 36 | O | The value of the metrics reference key. While it is optional to specify a Bibliometric Key for a research output, if a key is specified then both a uniqueIdentifier <i>and</i> indexProvider must be supplied. |
| Name | firstName | String | 100 | O | The first or given name of a person (e.g., the author for a Research Output). |
| Name | honorific | String | 20 | O | The preferred title of a person (e.g., “Dr”, “Professor”, etc.). |
| Name | lastName | String | 100 | M | The last name, family name or surname of a person. |
| Name | middleName | String | 100 | O | Any other given name(s) of a person. |
| Researcher | staffReference | String | 100 | M | A reference given by an institution to allow a researcher to be nominated as an author of a research output (that they are associated with). Note that at least one researcher must be nominated per research output submitted. |
| Research Income | discipline | String | 6 | M | The group-level FoR code which describes the focus of a Research Income item. ANZSRC: Group |
| Research Income | annualValue | Integer | 10 | M | The value of the Research Income received for a grant for a year (yearClaimed) to the nearest thousand dollars. The annualValue should be stipulated as the amount received for each year claimed. |
| Research Income | program | String | 1000 | O | The name of the program against which a Research Income grant is reported. For an Australian Competitive Grant this must be supplied as the program name listed on the Australian Competitive Grants Register. |
| Research Income | value | integer | 10 | M | The total dollar value of a Research Income item to the nearest thousand dollars. Note that this value will be repeated for each year that a multi-year Research Income item is claimed. |

| | | | | | |
|-----------------|--------------------|--------|-----|---|--|
| Research Income | yearAwarded | String | 4 | O | The full (4-digit) calendar year in which a Research Income Item was awarded. Note that this value will be repeated for each year that a multi-year Research Income item is claimed. |
| Research Income | yearClaimed | String | 4 | M | The full (4-digit) calendar year against which a Research Income item is being claimed. |
| Research Outlet | discipline | String | 6 | O | The group-level FoR code which describes the focus of the Research Outlet. (ANZSRC: Group). |
| Research Outlet | issue | String | 3 | O | The issue number of the Research Outlet in the case of Journals and Conference Publications. |
| Research Outlet | name | String | 100 | M | The name of the Research Outlet (for a Journal, where possible use the standard Journal Name as specified in the Ranked Journal List). |
| Research Outlet | volume | String | 3 | O | The volume number of the Research Outlet. |
| Research Output | discipline | String | 6 | M | The group-level FoR code which describes the focus of the Research Output. (ANZSRC: Group). |
| Research Output | edition | String | 3 | O | The edition of the Research Output (in the case of a Book output). |
| Research Output | electronicLocation | String | 255 | O | The Uniform Resource Identifier (e.g., URL, Handle, DOI, etc.) that links to the Research Output. |
| Research Output | ISBN | String | 20 | O | The standard number for the Research Output. For the ERA Pilot no enforcement of syntax will apply. Full ISBN syntax requirements will be provided for the formal ERA process. |
| Research Output | ISSN | String | 20 | O | The standard number for the Research Output. For the ERA Pilot no enforcement of syntax will apply. Full ISSN syntax requirements will be provided for the formal ERA process. |
| Research Output | language | String | 100 | O | Language of the title of the Research Output if other than English. (DC: A language of the resource) |
| Research Output | physicalLocation | String | 100 | O | The physical location of the Research Output if not in a repository. (DC: Location) |
| Research Output | placeOfPublication | String | 100 | O | The location in which the Research Output was published. (DC: Place of publication) |

| | | | | | |
|-----------------|---------------------|--------|-----|---|--|
| Research Output | publisher | String | 100 | O | The entity responsible for making the Research Output available. (DC: The entity responsible for making the resource available) |
| Research Output | publisherDiscipline | String | 6 | O | The group-level FoR that describes the discipline focus of the Research Output in the context of the Publisher for the purposes of ranked publisher indicators. (ANZSRC: Group). |
| Research Output | title | String | 500 | M | The title of the Research Output. (DC: The name given to the resource) |
| Research Output | totalPages | String | 6 | O | The total number of pages of the Research Output. (DC: Extent - the size or duration of the resource) |
| Research Output | yearAvailable | String | 4 | O | The full (4-digit) calendar year in which the Research Output was first available if different to the published year. |
| Research Output | yearPresented | String | 4 | O | The full (4-digit) calendar year in which the Research Output was presented (if different to the published year). |
| Research Output | yearPublished | String | 4 | M | The full (4-digit) calendar year in which the Research Output is published. (DC: Date). |
| Research Output | staffReference | String | 10 | M | A reference given by the institution to allow a researcher to be assigned to a research output they are associated with. |

APPENDIX C: ABBREVIATIONS AND DEFINITIONS

| Term | Description / Definition |
|---------------------------------------|---|
| Adjunct appointment or equivalent | Means an institution has a formal agreement in writing with a researcher which is publicly acknowledged and establishes an ongoing association in the nature of a conjoint, emeritus or honorary academic or visiting fellow. |
| ANZSRC | Australian and New Zealand Standard Research Classification |
| Australian Competitive Grants | Grants listed on the Australian Competitive Grants Register for the appropriate year. |
| Category 1 research income | HERDC Category 1 (i.e., Australian Competitive Grants) - being those research schemes/programs listed on the Australian Competitive Grants Register for the relevant year. |
| Clusters | Groupings of disciplines. For ERA purposes, eight disciplinary clusters apply: <ul style="list-style-type: none"> • 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). |
| DOI | Digital Object Identifier |
| Dublin Core (DC) | Dublin Core is specified by the Dublin Core Metadata Initiative (DCMI) as an open specification for resources using the Dublin Core Metadata Element Set (DCMES). |
| Earnings | The amount paid directly or indirectly as remuneration for work a person undertakes or services he/she performs. It includes amounts paid under employment and/or consultancy arrangements. Consultancy means the provision of specialist advice, analysis, assistance, services or products to another organisation(s), generally where the consultancy services are for the sole or preferred use of that other organisation(s). |
| Eligible organisations / institutions | Institutions listed at Appendix A of the <i>Pilot Submission Guidelines</i> . |
| Field of Research (FoR) | A hierarchical classification of fields of research set out in the Australian and New Zealand Standard Research Classification (ANZSRC). For ERA Pilot purposes, data will be collected at the 4-digit code level (i.e., at the level of what is referred to as a “Group” in the ANZSRC classification). |
| FOI | Freedom of Information |
| Formal ERA process | The non-Pilot ERA processes of submissions and evaluation which is to commence in 2009. |
| HERDC | Higher Education Research Data Collection |
| IDG | Indicators Development Group |
| ISBN | International Standard Book Number |
| ISSN | International Standard Serial Number |
| Metadata | A record that contains data known about an information resource. Thus any data that refers to a discrete informational asset may be referred to as the metadata of that asset. For example, a bibliographic record of a journal article is a form of <i>metadata</i> describing that article. |
| PCE | Physics, Chemical and Earth Sciences |

| | |
|------------------------------------|--|
| Reference periods | The periods during which a research output must have been published or brought into the public domain, or during which research income must have been reported as part of the HERDC, for data on such research outputs or research income to be included in an institution's ERA Pilot submission. (See also "Research output reference period", "Research income reference period", and sections 3.1.2 and 3.2.1 of the <i>Pilot Submission Guidelines</i> .) |
| Research | For the purposes of ERA, research is defined as the creation of new knowledge and/or the use of existing knowledge in a new and creative way so as to generate new concepts, methodologies and understandings. This could include synthesis and analysis of previous research to the extent that it is new and creative. This definition of research is consistent with a broad notion of research and experimental development (R&D) as comprising 'creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of humanity, culture and society, and the use of this stock of knowledge to devise applications'. This definition should be read as consistent with that used in the <i>2008 Higher Education Research Data Collection Specifications for the Collection of 2007 Data</i> . |
| R&D | Research and experimental development |
| Research income | For the purposes of the ERA Pilot, the only relevant research income is Category 1 research income (see separate definition). |
| Research income reference period | Has the meaning specified in section 3.2.1 of the <i>Pilot Submission Guidelines</i> , namely, the three-year period from 1 January 2005 to 31 December 2007. |
| Research outputs reference period | Has the meaning specified in section 3.1.2 of the <i>Pilot Submission Guidelines</i> , namely, the six-year period from 1 January 2002 to 31 December 2007. |
| SEER | System to Evaluate the Excellence of Research |
| Uniform Resource Identifiers (URI) | A standard syntax for the textual naming (identification) of resources that exist on the Internet. Two concrete implementations of the URI syntax include the Uniform Resource Locator (URL) and the Uniform Resource Name (URN). A URL is a URI that defines how a given resource may be retrieved over the Internet (i.e., via a particular protocol such as HTTP). |
| URL | Uniform Resource Locator |
| XML | eXtensible Markup Language |