

Research Data Management Procedures Section 1 - Purpose and Scope

Purpose

- (1) The purpose of this Procedure is to provide a clear framework for the management of Research Data, Information and Primary Materials. This Procedure supports the <u>Research Quality</u>, <u>Standards and Integrity Policy</u> and ensure that:
 - a. Research Data is managed according to the FAIR Principles (Findable, Accessible, Interoperable and Reusable) and the <u>CARE Principles</u> for Indigenous Data Governance;
 - b. Primary Materials, such as laboratory notebooks, are treated with the same level of care as the research data; and
 - c. Individuals who have a role in the management of Research Data, and Primary Materials, and their responsibilities, are clearly identified.
- (2) This Procedure supports compliance with Section 4.1 of <u>The Australian Higher Education Standards Framework</u> (Threshold Standards) 2021.
- (3) This Procedure supports compliance of research activities with the <u>Australian Code for the Responsible Conduct of Research</u> (Code).
- (4) This Procedure adopts the following:
 - a. NHMRC Guide to Management of Data and Information in Research
 - b. Australian Research Data Commons Resource Hub: FAIR Data Principles
 - c. Global Indigenous Data Alliance CARE Principles

Scope

(5) This Procedure applies to all staff, including adjunct, visiting, emeritus and conjoint academic appointees and Higher Degree by Research (HDR) students who carry out research under the auspices of Southern Cross University. This Procedure also applies to Honours students or students undertaking coursework units with a research component.

Section 2 - Definitions

- (6) The following definitions apply to this Procedures:
 - a. Associate Dean (Research): means the Associate Dean (Research) for the Faculty in which the Researcher is affiliated, or, the Dean, Gnibi College of Indigenous Australian Peoples where the Researcher is affiliated with Gnibi College of Indigenous Australian Peoples.
 - b. Author: means an individual who has made a significant intellectual or scholarly contribution to research and its output and who has agreed to be listed as an author
 - c. Code means the Australian Code for the Responsible Conduct of Research 2018.

- d. Higher Degree Researcher (HDR): means a Higher Degree by Research student.
- e. Metadata: mean structured information that describes and provides context for research data, facilitating its discovery, interpretation, and reuse. It includes elements such as keywords, file format, ownership, contact and access conditions, ensuring efficient data management and interoperability across systems and disciplines.
- f. NHMRC: means the National Health and Medical Research Council.
- g. Primary Materials: means physical or digital items that are collected or generated through the research from which Research Data can be developed. This includes, but is not limited to; biological samples, surveys, photographs, measurements, artwork and recordings.
- h. Research: As defined in the <u>Australian Code for the Responsible Conduct of Research</u> or any replacing Code or document "the concept of research is broad and includes 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, inventions and understandings. This could include synthesis and analysis of previous research to the extent that it is new and creative". For the purposes of this procedure, research includes research training.
- i. Research Data: means all data created as part of research work on which an argument, theory or test is based. This includes but is not limited to; facts, observations, computer results, measurements or experiences. Research Data may be numerical, descriptive or digital. Research Data may be records derived from Primary Materials such as assays, test results, transcripts, and laboratory and field notes. Research Data may be raw or analysed, experimental or observational. Research Data includes information necessary for the reconstruction and evaluation of the results of research.
- j. Research Data Breach: means the accidental or deliberate access or exposure of Research Data, Information or Primary Materials to unauthorised parties.
- k. Research Data Management Plan (RDMP): means a document that outlines how the Research Data for a specific project will be collected, organised, stored, shared, archived and disposed.
- I. Research Data Manager: means an individual responsible for managing, safeguarding, and overseeing access to Research Data. Their duties include responsibility for the RDMP, thus ensuring the data's integrity, security, and compliance with relevant ethical, legal, and regulatory requirements. They are responsible for the data's collection, storage, archiving, and sharing, ensuring that the data is accessible to authorised users while protecting it from unauthorized access or misuse.
- m. Research Outputs: communicate or make available the findings of research that may be in hardcopy, electronic or other form. Examples of research outputs include, but are not limited to journal articles, book chapters, books, conference papers, reports, open access repositories, datasets, patents and patent applications, preprints, performances, videos and exhibitions.
- n. Research Data Repository: is an information infrastructure. A Research Data Repository is used to store datasets for the long term, and often supports data sharing or publication (open or mediated access) and data reuse reporting.
- Research Data Security: refers to the process of protecting data from unauthorised access and data corruption throughout all stages of its lifecycle. This may include practices such as: data encryption, two factor authentication, backup and other key management practices that protect data across all applications and platforms.
- p. Research Integrity Advisor (RIA): is a person or persons with knowledge of the Code and institutional processes nominated by the University to promote the responsible conduct of research and provide advice to those with concerns or complaints about potential breaches of the Code.
- q. Lead Researcher: is an individual who has primary responsibility for the planning, design, approval and conduct of a research project from its conception through to its finalisation. For collaborative research involving researchers at more than one institution, one researcher from each participating institution may be designated a Lead Researcher.
- r. Researcher: means a person who conducts or assists with the conduct of research.
- s. Staff: means all persons who are academic or professional employees of Southern Cross University, including

- full time, part time, fixed term and casual and all adjunct, visiting, emeritus and conjoint appointees who are engaged in supervisory and other research roles on behalf of the University.
- t. Student: means a person who is registered as a student of the University regardless of whether they are currently enrolled in a course of study conducted by or within the University.
- u. University Processes includes references to Rules, Policies, Procedures, Guidelines, Codes and Standards.

Section 3 - Responsibilities

Researchers

- (7) Must familiarise themselves with relevant legislative, regulatory and contractual requirements in relation to data management prior to undertaking research.
- (8) Maintain accurate records of research materials and data and ensure that these records and the Research Data and Primary Materials are safely stored.
- (9) Use internal storage solutions wherever possible.
- (10) Use third-party storage solutions only after consultation with the Office of the Senior Deputy Vice-Chancellor and Technology Services.
- (11) Understand the risks and limitations of third-party storage solutions and, where appropriate, take the necessary action to protect Research Data and Primary Materials stored on these services.
- (12) Report circumstances where a suspected or known security breach might have resulted in the unauthorised access, unintended disclosure, loss, theft, destruction or alteration of data, in accordance with the <u>Information Technology Conditions of Use Policy</u>, <u>Information Technology Security Policy</u>, <u>Information Technology Third Party Security Policy</u> and <u>Privacy Management Plan</u> and <u>Privacy Data Breach Response Process</u>.
- (13) Make Research Data available for use by other researchers unless prevented by ethical, privacy, legal, and Intellectual Property (IP) or confidentiality matters.
- (14) Retain the Research Data and Primary Materials according to legal, statutory, funding body and publisher requirements.
- (15) Plan for and execute the handover of Research Data and Primary Materials at the conclusion of the research or when a researcher leaves the University, including information about access to and potential re-use of data collections.
- (16) If the Lead Researcher, develop a research data management plan which can be made available upon request from the University.

Research Supervisors

- (17) Must understand the relevant policy, contracts, regulation and licensing considerations that relate to research data management within their respective discipline.
- (18) Take joint responsibility with their research students for the management of the Research Data and Primary Materials.

Senior Deputy Vice-Chancellor and Associate Dean (Research)s.

(19) Ensure that there is appropriate communication and organisational awareness of Research Data and Primary Materials management issues.

Technology Services

- (20) Provide enterprise-level storage services and solutions, such as localised hardware/software solutions, networked storage, collaboration tools, file sharing utilities.
- (21) Provide technical support for centrally provided storage services and solutions.
- (22) Ensure centrally provided storage services and solutions are appropriately backed up, maintained, and secure. University Library
- (23) Maintain and disseminate research data management best practice guidelines.
- (24) Provide training and support for researchers, research supervisors, Associate Deans (Research) in collaboration with the Office of the Senior Deputy Vice-Chancellor.
- (25) Provide advice on access and re-use of research data under the appropriate conditions.

Section 4 - Ownership Of Research Data and Primary Materials

- (26) Unless specified in the terms of agreement between the University and any other party, the University owns Primary Materials and Research Data created by staff.
- (27) Ownership of the data as specified in Clause(28) is separate to the ownership of any intellectual property rights that may exist in the Research Data which is subject to the University's Intellectual Property Rights Policy.
- (28) It is the responsibility of staff and students to manage and retain the Primary Materials and Research Data on behalf of the University.
- (29) In the case of collaborative research conducted with another institution/s or organisation/s, ownership of Research Data and Primary Materials must be specified in the Collaboration Agreement as described in the University's Collaborative Research Procedure.
- (30) Where Research Data and Primary Materials are not owned by the University, management, access, and any conditions must be documented in the collaboration agreement (see <u>Collaborative Research Procedures</u>).
- (31) The ownership of Research Data and Primary Materials which are collected and/or held outside of Australia must be managed in compliance with the relevant laws and regulations of the relevant jurisdiction.
- (32) The ownership or cross-border transfer of Research Data and Primary Materials must be carried out in compliance with any relevant legislative requirements, including Australia's <u>Foreign Relations (State & Territory Arrangements)</u>
 <u>Act 2020.</u>, export / import controls and privacy requirements.
- (33) Use of Research Data must be appropriately acknowledged (citation, licencing) in any presentation, publication or sharing of the research.

Data from Research involving Indigenous People and Communities

- (34) The University recognises that Aboriginal and Torres Strait Islander peoples have data sovereignty and information governance rights. Where a conflict arises between Research Data use, access and Indigenous peoples' rights, Indigenous peoples' rights should prevail.
- (35) Researchers must be aware of and apply the international data principles of FAIR (Findable, Accessible, Interoperable and Reusable) and CARE (Collective benefit, Authority, Responsibility and Ethics).
- (36) Research involving Aboriginal and Torres Strait Islander peoples and communities must be conducted according to the AIATSIS Code of Ethics for Aboriginal and Torres Strait Islander Research 2020 and the NHMRCs Ethical Conduct in Research with Aboriginal and Torres Strait Islander Peoples and Communities: Guidelines for Researchers and Stakeholders.
- (37) A collaboration agreement regarding the ownership, management, access to and reuse of Research Data collected from research involving Indigenous people and communities must be established.
- (38) These data sharing agreements must be clearly detailed within the collaboration agreement, and include but not be limited to application and consideration of:
 - a. AIATSIS Code of Ethics for Aboriginal and Torres Strait Islander Research 2020
 - b. CARE Principles for Indigenous Data Governance of; Collective Benefit, Authority to Control, Responsibility, and Ethics
 - c. Aboriginal and Torres Strait Islander peoples and communities cultural and intellectual property rights

Section 5 - Research Data Management Plans

- (39) A RDMP is required for every research project. This includes research generated by Higher Degree by Research students.
- (40) The RDMP will normally be developed by the Lead Researcher and/or the Research Data Manager once they have been appointed.
- (41) The Lead Researcher may perform the role of Research Data Manager.
- (42) In the case of collaborative research, this will be undertaken in conjunction with any partners as detailed in the Collaborative Research Procedures.
- (43) The RDMP for research conducted by staff and HDR students must be lodged with the office of the Senior Deputy Vice-Chancellor, unless this is prevented by contractual and/or legal restrictions, such as classified defence research. In these cases, researchers are required to advise the Office of the SDVC of the storage arrangements.
- (44) The RDMP for research conducted by Honours students should be retained by the supervisor or unit co-ordinator.
- (45) The RDMP in accordance with the NHMRC Guide to Management of Data and Information in Research.
- (46) The RDMP must be completed at the outset of the research process.
- (47) The RDMP should be updated at least annually to account for any changes to the research project and / or Research Data and Primary Materials generated and collected. Updated versions of the RDMP should be lodged as described in Clause (45) and Clause (46).
- (48) The RDMP should be linked, where relevant, to:

- a. The ethics application submitted to the Human Research Ethics Committee or Animal Care and Ethics Committee
- b. The grants application submitted to the Office of Research and/or
- c. The HDR confirmation documents submitted to the Graduate School.

Research Data Manager

- (49) All research projects must be assigned a Research Data Manager by the Lead Researcher.
- (50) The Lead Researcher may choose to also perform the role of Research Data Manager.
- (51) In the case of Collaborative Research, a Research Data Manager will be assigned at each partner institution.
- (52) The Research Data Manager will be identified in the RDMP.
- (53) The Research Data Manager will be responsible for the proper management of the Research Data and Primary Materials in accordance with these procedures. This will include, but not be limited to:
 - a. Overseeing the completion and regular review of the Research Data Management Plan, in consultation with the research team. See Clause (41) to Clause (49)
 - b. Ensuring storage of and access to Research Data and Primary Materials is managed according to the RDMP and Section 6 of these procedures
 - c. Providing access to the Research Data as detailed in Clause (83) to Clause (92)
 - d. Enacting the conditions of retention and disposal of the Research Data and Primary Materials as stipulated in the RDMP and according to Clause (75) to (85) of these procedures
 - e. In the case of any data breach, undertaking the actions detailed in Clause (68) to Clause (74) of these procedures.
- (54) If the Research Data Manager is unable to fulfil these responsibilities or the Research Data Manager leaves the University, the Lead Researcher and / or appropriate Associate Dean (Research) must assign a new Research Data Manager.

Researchers Leaving Southern Cross University

- (55) Researchers, in conjunction with their Supervisor and any research teams they are members of, must ensure prior to leaving the University that:
 - a. All RDMPs, including inactive ones, with which they have were involved are up to date and accessible
 - b. Any RDMPs for which they are Research Data Manager have been assigned a new custodian
 - c. Research Data and Primary Materials are stored according to the RDMP
- (56) In accordance with the University's <u>Intellectual Property Rights Policy</u>, a copy of Research Data may be taken by the researcher for future use in research and teaching. This must be agreed to by all members of the research team and a representative of the Office of Senior Deputy Vice-Chancellor, subject to any legal, contractual, commercial, confidentiality, ethical or other requirements.
- (57) Where the researcher moves to another research institution, the master copy of Research Data and any Primary Materials may only be transferred if a formal written agreement is reached.

Section 6 - Storage of Research Data and Primary Materials

- (58) Research Data Storage protocols will be outlined in the RDMP (see Clause 48h).
- (59) Wherever possible, Primary Materials such as laboratory records should be recorded digitally (e.g. on a computer or tablet) rather than physically, (e.g. on paper).
- (60) Wherever possible and appropriate, physical Research Data and Primary Materials should be digitised in a preferred format, to minimise the risk of loss or damage, and minimise physical storage requirements.

Digital Research Data Storage

- (61) Digital Research Data should only be stored on:
 - a. The University systems
 - b. The University approved storage services for the Australian research sector. Details of current approved services can be obtained from Technology Services.
- (62) Digital Research Data should not be stored on:
 - a. Individual desktop or laptop hard drives
 - b. Removable media such as flash, drives, CDs or DVDs
 - c. Third party cloud services not approved by Technology Services for the storage of Research Data.

Physical Research Data Storage

- (63) In the case of physical Research Data and Primary Materials that cannot be digitised, protocols for storage should be designed in consultation with the appropriate Associate Dean (Research).
- (64) This includes Primary Materials that are in use prior to being digitised, (e.g. where it has been necessary to create paper records).
- (65) The storage of physical Research Data and Primary Materials other than paper (e.g. clinical samples) must be stored appropriately and ensure compliance with the University's Work, Health & Safety Policy. and other relevant policies and procedures. If storage of Research Data and/or Primary Materials is not possible within the University, it may be necessary for researchers to utilise external third parties for storage options. This will require written approval from Technology Services.

Research Data Security and Breaches

- (66) If extenuating circumstances require Research Data or Primary Materials to be stored on local computers or removable media, regular backups must be made at the researcher's responsibility. Any storage media should be password protected and encrypted to ensure that the Research Data and Primary Materials are as secure as possible
- (67) Research Data must be stored on high-quality products. The instructions provided by the manufacturer for care and handling, including environmental conditions and labelling must be followed.
- (68) Researchers must provide the same level of care and protection to working copies of non-digital Research Data and Primary Materials, such as laboratory notebooks, interview recordings, biological specimens, and survey

responses.

- (69) Where Research Data or Primary Materials generated during research are lost or subject to unauthorised access or disclosure, the researcher must report the Research Data security breach immediately to the Research Data Manager and in case of digital data to Technology Services.
- (70) The Research Data Manager must notify other relevant parties of suspected or actual Research Data breaches. This will include the appropriate Associate Dean (Research).
- (71) The Associate Dean (Research) and Research Data Manager will agree on initial appropriate remedial action to reduce the likelihood of serious harm occurring from the inappropriate use of, access to, or loss of Research Data or Primary Materials.
- (72) Researchers must report circumstances where a suspected or known security breach might have resulted in the unauthorised access, unintended disclosure, loss, theft, destruction or alteration of data, in accordance with Privacy Data Breach Response Process.

Section 7 - Retention, Disposal, and Access to Research Data

Retention and Disposal of Research Data

- (73) The RDMP will identify the retention period for data (see Clause (54d)). The minimum retention period will reflect the requirements of NSW State Archive General Retention and Disposal Authority: <u>GA47 records documenting the function of higher & further education and research.</u>
- (74) If it is not practical to retain all Primary Materials, durable records derived from them must be retained, e.g., clinical samples may be destroyed when required for biosecurity reasons if any test results and laboratory notes are retained.
- (75) In the event that research results are challenged, all associated records, materials and data must be retained unaltered until the matter is resolved. Research records that are subject to allegations of a breach of the Code or are subject to legal proceedings must not be destroyed or altered.
- (76) When disposal is justified, data used in research should be disposed of in a manner that is safe and secure, consistent with any consent obtained. It should follow the <u>National Statement on Ethical Conduct in Human Research</u> 2023 and any legal requirements, and as appropriate for the design of the research.
- (77) The destruction process must be irreversible, meaning that there is no reasonable risk that any information may be recovered later. Extra care must be taken when dealing with records that contain sensitive information.
- (78) Print materials should be shredded and pulped. For non-sensitive materials, office shredders can be used. For sensitive materials, a confidential waste bin can be ordered through Facilities Services.
- (79) Research Data in digital formats must be processed so the information is irretrievable. These processes can include deleting or overwriting information, purging magnetic media through degaussing (exposure to a strong magnetic field), or destroying the physical media (e.g. CD-ROMS, DVDs). Technology Services should be consulted for assistance.

Access to Research Data

(80) The University encourages open access to Research Data according to the FAIR principles of Findable, Accessible,

Interoperable and Reusable.

- (81) Research should be associated with a creative commons licence to enable re-use.
- (82) Research Data should be as open as possible, with access only restricted to meet ethical, contractual, legislative, or intellectual property requirements.
- (83) At the conclusion of a project, or at the time of publication or dissemination of a research output, researchers should also deposit Research Data Outputs in a repository appropriate to the discipline, methodology or data type, and / or the University data repository, Cross Connect.
- (84) Repositories differ in their discipline focus, the types of Research Data that they accept and the conditions of access they support. Library staff should be consulted regarding the appropriateness of different data repositories for the Research Data Output.
- (85) Intended or expected data repositories to be utilised should be detailed in the RDMP.
- (86) All Research Data Outputs must have accompanying Metadata in English, which is of an acceptable standard that allows the data to comply with the FAIR principles of Findable, Accessible, Interoperable and Reusable.
- (87) Dissemination of Research Data may be subject to an embargo period to allow researchers time to publish results before making data public. Any embargo period must be agreed by the Senior Deputy Vice-Chancellor and detailed in the RDMP. In case of HDR research data, embargos are approved by the Dean, Graduate Studies.
- (88) In making data outputs accessible, consideration should be given to the ownership of data collected from research involving Aboriginal and Torres Strait Islander peoples and cultures as detailed in Clause (38) to Clause (41).
- (89) Any request not to disseminate Research Data must be justified in the RDMP and have been agreed by the Senior Deputy Vice-Chancellor. Such requests from HDR students are assessed by the Dean, Graduate Studies.
- (90) Where Research Data is unable to be made openly available in full, consideration should be given to providing mediated access or access to a subset of data should be allowed when this can be achieved without breaching any ethical, legal, cultural, or funding obligations.

Research Data Reuse

- (91) Researchers who reuse Research Data from any source or repository must comply with any existing conditions that apply to the data.
- (92) Researchers who manipulate or make changes to existing Research Datasets thereby creating a new Research Dataset must manage the Research Data in accordance with these procedures.

Section 8 - Training and Support

- (93) Ongoing training, education, and advice in Research Data and information management will be offered in a variety of formats through Library Services, the Graduate School, and the Office of the Senior Deputy Vice-Chancellor.
- (94) Researchers, staff and research students must engage with training, education and resources relevant to Research Data Management made available through and external to the University.
- (95) Researchers, staff and research students must complete all mandatory training and education relevant to Research Data Management.

Section 9 - Research Integrity, Ethics and Breaches of the Code

(96) All decisions concerning the management of Research Data, Information and Primary Materials must be consistent with the ethics, compliance and safety requirements detailed in, as relevant:

- a. National Statement on Ethical Conduct in Human Research 2023.
- b. Australian Code for the Care and Use of Animals for Scientific Purposes 8th Edition 2013 (Updated 2021).
- c. AIATSIS Code of Ethics for Aboriginal and Torres Strait Islander Research 2020.
- (97) Researchers will have a good understanding of their responsibilities as researchers under the <u>Australian Code for the Responsible Conduct of Research</u>.
- (98) Researchers must be familiar with University policies including; <u>Research Quality, Standards and Integrity Policy</u>; Research Integrity Procedures Staff, <u>Research Integrity Procedures Higher Degree Researchers (Students)</u>, and Research Integrity Advisor Procedures.
- (99) Breaches of the Code that are related to management of data and information in research include, but are not limited to:
 - a. Falsification of Research Data or Primary Materials
 - b. Fabrication of Research Data or Primary Materials
 - c. Failure to notify the institution and relevant authorities in a timely manner of a data breach or instance of inappropriate access to Research Data held by the researcher
 - d. Failure to retain clear, accurate, secure and complete records of all research including Research Data and Primary Materials
 - e. Failure to adhere to the conditions of any institutional policy or project-specific approvals that relate to the retention, sharing or destruction of Research Data or Primary Materials
 - f. Selective retention of Research Data or Primary Materials so as to hinder the verifiability of a research output or access request
 - g. Failure to apply appropriate security controls to Research Data or Primary Materials
 - h. Failure to obtain necessary approvals or acting inconsistently with a condition of any approval granted in relation to the management of Research Data or Primary Materials.
- (100) In the case of concerns regarding research integrity, it is recommended that in the first instance, discussions be held at a local level between members of the research team.
- (101) If the concerns are not alleviated at a local level, or it is not possible to have those conversations, an appropriate Research Integrity Advisor (RIA) should be contacted to discuss the concerns.
- (102) The concern will then be managed according to the Research Integrity Advisors Procedures.

Section 10 - Associated Documents

(103) These procedures should be read together with the following:

- a. Australian Research Council Research Integrity Policy
- b. AIATSIS Code of Ethics for Aboriginal and Torres Strait Islander Research 2020

- c. <u>National Health and Medical Research Council's Ethical Conduct in Research with Aboriginal and Torres Strait</u>
 <u>Islander Peoples and Communities: Guidelines for Researchers and Stakeholders</u>
- d. National Statement on Ethical Conduct in Human Research 2023
- e. Australian Code for the Care and Use of Animals for Scientific Purposes 8th Edition 2013 (Updated 2021)
- f. NSW State Archive General Retention and Disposal Authority: <u>GA47 records documenting the function of higher</u> & further education and research
- g. Australia's Foreign Relations (State and Territory Arrangements) Act 2020
- h. Research Quality, Standards and Integrity Policy
- i. Research Integrity Procedures Staff
- j. Research Integrity Procedures Higher Degree Researchers (Students)
- k. Research Integrity Advisor Procedures
- I. Research Collaboration Procedure
- m. Intellectual Property Rights Policy
- n. Code of Conduct
- o. Work Health Safety Policy
- p. Information Asset Classification Policy
- q. Information Technology (IT) Security Policy

Status and Details

Status	Current
Effective Date	1st April 2025
Review Date	1st April 2028
Approval Authority	Academic Board
Approval Date	19th November 2024
Expiry Date	Not Applicable
Responsible Executive	Mary Spongberg Deputy Vice Chancellor (Research and Academic Capability) +61 7 55893361
Head of Work Unit	Brenda Gradwell Executive Officer
Enquiries Contact	Brenda Gradwell Executive Officer Office of the Senior Deputy Vice Chancellor