

# 研究資料管理國際趨勢

## The International Trend of Research Data Management

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# Outline

- RDM Policy
- Data Management Plans
- Metadata
- Data Sharing - Repository
- RDM Conferences or Resources



**Table 2. Research data lifecycle.**

Research Data Lifecycle Phase	Articles, <i>n</i> (%) <sup>a</sup>
<b>Distribution of articles according to phase of Research Data Lifecycle<sup>b</sup></b>	
Creating Data <i>Components:</i> Design research, Plan data management, Plan consent for sharing (e.g., create consent forms), Locate existing data, Create data, Capture / create metadata	90 (13.53)
Processing Data <i>Components:</i> Enter data / digitize / transcribe / translate data, Check / validate / clean data, Anonymise data, Describe data, Manage / store data	49 (7.37)
Analysing Data <i>Components:</i> Interpret data, Derive data, Produce research outputs, Author publications, Prepare data for preservation	28 (4.21)
Preserving Data <i>Components:</i> Migrate data to best format, Migrate data to suitable medium, Back up / store data, Create metadata / documentation, Archive data	178 (26.77)
Giving Access to Data <i>Components:</i> Distribute data, Share data, Control access, Establish copyright, Promote data	207 (31.13)
Re-Using Data <i>Components:</i> Follow up research, New research, Undertake research reviews, Scrutinise findings, Teach and learn	113 (16.99)

**Purpose:** to describe the volume, topics, and methodological nature of the existing research literature on research data management in academic institutions.

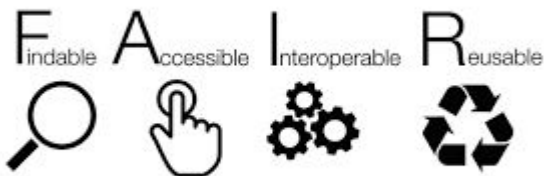
# RDM Policy

- What is RDM Policy for?
- Elements in policy



# What is RDM Policy for?

- 改善研究效率
- 強化合作
- 促進研究可靠度



## OECD Principles and Guidelines for Access to Research Data from Public Funding (2007)

1. Openness
2. Flexibility
3. Transparency
4. Legal Conformity
5. Protection of Intellectual Property
6. Formal Responsibility
7. Professionalism
8. Interoperability
9. Quality
10. Security
11. Efficiency
12. Accountability
13. Sustainability

## RDM Policy 常見元素

- Data quality and standards
- Data access and sharing
- Data retention and preservation
- Data management plans
- Privacy
- Traditional knowledge
- Data of a sensitive nature
- Intellectual property / Data ownership
- Principles
- Scope / Coverage of policy
- Roles and responsibilities
- Monitoring and enforcement

# European Commission Recommendation (EU) 2018/790

of 25 April 2018

on access and preservation of scientific information

- 
4. Member States should ensure that research funding institutions responsible for managing public research funding and academic institutions receiving public funding implement the policies and national action plans referred to in point 3 at national level in a coordinated way by:
- setting institutional policies for research data management, and establishing implementation plans,
  - including requirements for data management plans and open access to research data as a principle ('as open as possible, as closed as necessary') for projects producing research data in grant agreements and other financial support for research, together with mechanisms for monitoring compliance with those requirements and follow up actions to correct cases of non-compliance,
  - making the necessary funding for data management available, by these policies or national action plans,
  - taking into account technological developments (including of dynamic (real-time) data), licensing terms used on the market do not unduly restrict text and data mining of research data resulting from publicly funded research, in accordance with and without prejudice to the applicable copyright legislation,

Research Funders	Published outputs	Data	Time limits	Data plan	Sharing/access	Long-term curation	Monitoring	Guidance	Repository	Data centre	Costs
AHRC	● (opens in a new window)	● (opens in a new window)	●	●	●	○	○	●	○	○	○
BBSRC	●	●	●	●	●	●	●	●	●	○	●
EPSRC	●	● (opens in a new window)	● (opens in a new window)	○	●	●	●	○	○	○	●
ESRC	●	● (opens in a new window)	●	●	●	●	●	●	●	●	○
MRC	●	●	●	●	●	●	○	○	●	○	○
NERC	●	● (opens in a new window)	●	●	●	●	●	●	●	●	○
STFC	●	●	●	●	●	●	●	○	●	○	○
Cancer Research	●	●	●	●	●	●	●	○	●	○	●
European Commission	●	●	○	●	○	○	○	●	●	○	●

**\*Funder's Policy**



Research data management policy



全部

圖片

新聞

影片

地圖

更多

工具

約有 3,250,000,000 項結果 (搜尋時間 : 0.54 秒)

<https://www.southampton.ac.uk> > doc > calendar ▾ PDF

### [Research Data Management Policy - University of Southampton](https://www.southampton.ac.uk/doc/calendar)

**Research Data Management Policy.** 1. Introduction and Purpose. All researchers at the University of Southampton (The University) create some type of data as.

7 頁

<https://www.york.ac.uk> > about > index ▾ [翻譯這個網頁](#)

### [Research Data Management Policy - University of York](https://www.york.ac.uk/about/index)

**Research Data Management Policy** ... This policy applies to all University members engaged in research, including staff and research students, and those who are ...

<https://policy.csu.edu.au> > view.current.php ▾ [翻譯這個網頁](#)

### [Research Data Management Policy](https://policy.csu.edu.au/view.current.php)

**Research data management** means all the processes and actions required to manage and curate data throughout the research life-cycle to enable it to be preserved ...

<https://www.fosteropenscience.eu> > resear... ▾ [翻譯這個網頁](#)

### [Research Data Management Policies - FOSTER Open Science](https://www.fosteropenscience.eu/resear...)

**Research Data Management Policies.** Refer to a set of principles, typically mandated by various bodies, that should be followed when managing research data.

# 資料管理方案 (Data Management Plan, DMP)

- **DMP 範本 (DMP Templates)**
- **評量 (Evaluation or Assessment)**
- **範例和工具 (DMP Samples and Tools)**

# DMP 範本 (DMP Templates)

- 確認應採用的範本 or 側重的面向: Funder's 或 customized ?
- 若是 customized, 應包含哪些要素 ?
- 評量標準

H2020 templates: Data management plan v2.0 – 15.02.2018

TEMPLATE HORIZON 2020 DATA MANAGEMENT PLAN (DMP)

Annotated version for the use of participants under Societal Challenge 1

- Instructions and footnotes in blue must not appear in the text.
- For options [in square brackets]: the option that applies must be chosen.
- For fields in [grey in square brackets] (even if they are part of an option as specified in the previous item): enter the appropriate data.

In EU Horizon (2021-2027): Data management plans are mandatory for all projects generating or reusing data and should be aligned with the D&E plan.



Data and Digital **Outputs** Management Plan Template



Checklist for a Data Management Plan, v4.0

Please cite as: DCC. (2013). *Checklist for a Data Management Plan*. v.4.0. Edinburgh: Digital Curation Centre. Available online: <http://www.dcc.ac.uk/resources/data-management-plans>



## 國際合用的研究資料管理實用指南 — 增訂版

2021/01 : Science Europe 出版

2021/07 : 研究資料寄存所 (depositor) 團隊中文化  
完成

# \*Science Europe: DMP 範本

## 1 資料的描述與蒐集，或既有資料的再次使用

### 1a

如何蒐集或產生新的資料？如何  
再次使用既有資料？

- 請說明蒐集或產生新資料的方法或軟體。
- 陳述既有資料於再次使用上的任何限制或使用條款（如果有的話）。
- 闡述如何記錄資料溯源 (data provenance)。
- 若有考慮過再次使用既存資料來源，但最終卻不採用的情形，請簡述原因。

## \*Science Europe: DMP 範本 (cont.)

### 1b

#### 要蒐集或產生什麼（種類、格式和數量）資料？

- 提供資料類型的詳細資訊：例如數值（資料庫，試算表）、文本（文件）、圖像、音訊、影片和／或混合媒體。
- 提供資料格式的詳細資訊：儲存資料的編碼方式，通常反映在檔案的副檔名（如 pdf、xls、doc、txt、rdf）。
- 為使用某種資料格式提供理由。例如，決定的理由可以基於：機構員工的專業知識、使用開放檔案格式的偏好、資料儲存庫接受的標準、研究社群內皆廣泛使用該格式，或為符合將要使用的軟體或設備的環境。
- 優先選用開放、標準的檔案格式，因為它們有助於資料共享和長期再次使用（多個資料儲存庫會提供此類「偏好格式」的列表）。
- 提供資料大小及數量的詳細資訊：可以用所需的儲存空間（位元組）和／或資料的件數、行數、列數等表示。

# 評量 (Evaluation or Assessment)

## DMP 評量指標

DMP 問題	DMP 指引	表現等級	
一般資訊			
給研究人員的指引		於 DMP 已充分陳述	於 DMP 未充分陳述

**行政資訊**

- 提供關於研究計畫的一般資訊，如計畫申請人名稱、計畫編號、經費來源、DMP 的版本等。
- 包含識別申請人和計劃參考資訊所需的最基本資訊。
- 沒有提供或提供的資訊很有限，因此很難辨別計劃負責人的身份。

I 資料的描述與蒐集，或既有資料的再次使用			
給研究人員的指引		於 DMP 已充分陳述	於 DMP 未充分陳述

**1a**

**如何蒐集或產生新的資料？如何再次使用既有資料？**

- 請說明蒐集或產生新資料的方法或軟體。
- 陳述既有資料於再次使用上的任何限制或使用條款（如果有的話）。
- 闡述如何記錄資料來源。
- 若有考慮過再次使用既存資料來源，但最終卻不採用的情形，請簡述原因。
- 清楚地交代現有資料來源，以及蒐集或產生新資料的方式。清楚解釋所使用的方法和軟體等資訊。
- 若既有資料可被再次使用，說明取得這些資料的方法，以及是否有任何再次使用上的限制。
- （如適用）明確說明必須蒐集新資料，而非再次使用既有資料的原因。
- 沒有說明資料來源、所蒐集的資料類型、及會被再次使用的資料等資訊，或僅提供少許的細節。
- （如適用）未提供充分的理由，說明需要產生新資料的原因。

1b			
要蒐集或產生什麼（種類、格式和數量）資料？		於 DMP 已充分陳述	於 DMP 未充分陳述
<ul style="list-style-type: none"> <li>提供資料類型的詳細資訊：例如數值（資料庫、試算表）、文本（文件）、圖像、音訊、影片和/或混合媒體。</li> <li>提供資料格式的詳細資訊：儲存資料的編碼方式，通常反映在檔案的副檔名（如 pdf、xls、doc、txt、rdf）。</li> </ul>		<ul style="list-style-type: none"> <li>清楚地描述或列出將會產生的資料類型（如數字、文本、聲音或影片）及其關聯的資料格式與（如需要）資料轉換的策略。</li> <li>說明選擇某些格式的原因，並指出它們是否為開放、標準的格式。如果使用專屬格式，則說明原因。</li> </ul>	

## Belmont Forum Criteria

	Complete Response (score = 2)	Incomplete Response (score = 1)	No Response (score = 0)	SCORE
<b>1. What types of datasets and other digital outputs of long-term value do you expect the project will produce or reuse?</b>				
<p>1.1 Plan lists the <u>types</u> of data and other digital outputs of long-term value.</p> <p>(e.g. text, databases, images, 3D models, software, audio files, code, video files, reports, surveys, patient records, samples, and so forth)</p>	<p>Datasets and other digital outputs of long-term value are identified, including data type and encoding.</p> <p>"Environmental data will be delivered as NetCDF (Network Common Data Format) files. Raster files will use the raster2pgsql PostGIS module. Maps and other geographic data will use shapefiles."</p> <p>"Transcripts and coding will be provided in text files. Audio recording will be MP3 format."</p>	<p>Datasets and other digital outputs of long-term value are identified, but lack detail for users beyond the project to understand.</p> <p>"A combination of geo-referenced data at various spatial, temporal, and taxonomic scales (e.g., populations, regions, nations, circumpolar, biomes, habitats) will comprise our data of long-term value."</p> <p>"Long-term value data include data from anthropological field studies: transcripts of interviews and discussion workshops, associated metadata."</p>	No information about data types is included.	X



# 範例和工具 (DMP Samples and Tools)

- DMP Online
  - 英國, 數位策展中心維護
  - <https://dmponline.dcc.ac.uk/>
- DMPTool
  - 美國, 多所典藏機構共同維護
  - <https://dmptool.org/>
- DMP Assistant
  - 加拿大, 由 Portage Network 維護
  - <https://assistant.portagenetwork.ca/>

The screenshot shows the DMPTool website homepage. At the top, there is a navigation bar with links for 'Learn', 'Sign in', and 'Language'. The main header features the DMPTool logo and the tagline 'Build your Data Management Plan'. Below this is a large blue banner with the text 'Welcome to the DMPTool' and 'Create data management plans that meet institutional and funder requirements.' A 'Get started' button is located on the right side of the banner. The background of the banner shows a modern office hallway with a 'WASH' sign and a person's hand using a computer mouse. Below the banner, there is a section titled 'DMPTool by the Numbers' with three statistics: 64,902 Users, 62,922 Plans, and 312 Participating Institutions. To the right, there is a 'Top Templates' section listing several templates, including 'Digital Curation Centre', 'Template USP - Baseado no DCC', 'Template USP - Mínimo', 'Digital Curation Centre (português)', and 'NSF-SBE: Social, Behavioral, Economic Sciences'.



## Funder Requirements

Templates for data management plans are based on the specific requirements listed in funder policy documents. The DMPTool maintains these templates, however, researchers should always consult the program officers and policy documents directly for authoritative guidance. Sample plans are provided by a funder or another trusted party.

## Participating Institutions

Participating institutions/organizations can configure the DMPTool users affiliated with participating institutions.

Institution
American University (AU)
American University of Beirut (AUB)
American University of Sharjah (AUS)
Appalachian State University
Arizona State University (ASU)
Auburn University (auburn.edu)
AUC Woodruff Library (CAU, ITC, Morehouse, Spelr)
Augusta University
Auraria Library (UCD, MSU Denver, CCD)
Australian National University (ANU)








View all

[About](#) [Terms of use](#) [Privacy statement](#) [Accessibility](#)

## Public DMPs

Public DMPs are plans created using the DMPTool service and shared publicly by their owners. They are not vetted for quality, completeness, or adherence to funder guidelines.

Project Title	Template	Organization	Owner	DMP ID	Download
As viagens de Cecilia Meireles no campo educacional (1917 - 1964)	Template USP - Baseado no DCC	Universidade de São Paulo (USP)	Kella Vieira		
Predição do comportamento elétrico dos OTFTs a partir dos dados de caracterização morfológica	Template USP - Baseado no DCC	Universidade de São Paulo (USP)	Dennis Cabrera Garcia	10.48321/D16G6X	
São Paulo Prehistoric Archaeological Database	Digital Curation Centre (português)	Universidade de São Paulo (USP)	Leticia Cristina Correa		
Copy of Exploring evolutionary history of lichen moths by integrated approach (Lepidoptera: Lithosini)	UNICAMP-GENÉRICO: Aplicável a todas as áreas	University of Campinas (UNICAMP)	Simeão Moraes		
Chat Apps Analytics: the use of Telegram during the pre-campaign to 2022 Brazilian presidential election	Digital Curation Centre	Universidade Federal do Rio de Janeiro	Giulia Tucci	10.48321/D1MP4Z	
DIREITOS AUTORAIS DE DADOS CIENTÍFICOS NO CONTEXTO DA CIÊNCIA ABERTA: estudo do Repositório de dados do Consórcio Madroño	Digital Curation Centre	São Paulo State University (UNESP)	Elizabete Cristina de Souza de Aguiar Monteiro	10.48321/D1HP41	
Immunological and locomotor response of individuals of the anuran species <i>Xenopus laevis</i> and <i>Xenopus allofraseri</i> injected with lipopolysaccharide (Lps) as a pro-inflammatory stimulus.	Digital Curation Centre (português)	Universidade de São Paulo (USP)	Thaysa Gomes de Oliveira	10.48321/D1W595	
Restrição proteica materna associada ao consumo de açúcar pós-desmame na prole: Efeitos sobre o perfil proteômico no fígado de ratos jovens e senis Projeto	Digital Curation Centre (português)	Universidade Estadual Paulista "Júlio de Mesquita Filho" - UNESP	Isabelle Ribeiro	10.48321/D10W32	
Plano de gerenciamento de dados Documentais de Arquivo do Hospital Universitário	Digital Curation Centre	PGD como teste	Ana Catia Catia	10.48321/D19C76	
Caracteres redutivos e miniaturização na família Characidae: estudo osteológico da espécie miniatura <i>Hyphessobrycon elachys</i> Weitzman, 1965 (Characiformes: Characidae)	USP Template - Minimum	Universidade de São Paulo (USP)	First Name Surname		

Last Updated	Funder Links	Create a new plan	Sample Plans (if available)
	Proposal Guidelines	Requires login	
	State Center DMP Resources & Award Policies & Procedures (G)	Requires login	
	Template and Data Policy & Governance Guidance	Requires login	
	Access Plan & Plans for NJ Funding	Requires login	
	For Digital Research Data	Requires login	
	Guided Elements for a Data Plan & Science Statement on Digital		
	Energy Efficiency and Energy (EERE) Policy on Digital		
	Data Management Elements for an EERE Data Plan	Requires login	
	Science Statement on Digital & Guided Elements for a Data Plan & Requirements and Guidance from	Requires login	

## New research output

[View all research outputs](#)

### Repository search

X

[Apply filter\(s\)](#)

Displaying repositories 1 - 10 of 106 in total

1 2 3 4 5 ... Next Last

#### Animal Genome Size Database [Select](#)

Welcome to the Animal Genome Size Database, Release 2.0, a comprehensive catalogue of animal genome size data.

[amphibians](#) [annelids](#) [arachnids](#) [biodiversity](#) [birds](#) [chordates](#) [crustaceans](#) [echinoderms](#) [fishes](#) [flatworms](#) [genomics](#) [haploid DNA](#) [insects](#) [invertebrates](#) [mammals](#) [molluscs](#) [nematodes](#) [reptiles](#)  
[sequencing](#)

[More info](#)

#### Atlas of Living Australia [Select](#)

The Atlas of Living Australia (ALA) combines and provides scientifically collected data from a wide range of sources such as museums, herbaria, community groups, government departments, individuals and universities. Data records consist of images, literature, molecular DNA data, identification keys, species interaction data, species profile data, nomenclature, source data, conservation indicators, and spatial data.

Close

[Add a repository](#)

### Metadata standards

[Add a metadata standard](#)

Anticipated release date

Initial access level

## 後設資料 (Metadata)

- 如何找到適合你的 metadata 標準？
- 如何管理你的 metadata？
- 豐富 metadata 的好處



# 如何找到適合你的 metadata 標準？

- 各學科領域所慣用的標準不同，亦有一些學科目前並無相關標準
  - 慣用標準可查詢：
    - RDA Metadata Directory: <https://rd-alliance.github.io/metadata-directory/standards/>
    - DCC discipline Metadata list: <https://www.dcc.ac.uk/guidance/standards/metadata>
    - Bath Metadata Standard Catalogue: <https://rdamsc.bath.ac.uk/>
- 確認機構或偏好的資料儲存庫 (data repository) 在 data 或 dataset level 上的慣用標準
  - e.g.1, GBIF: Darwin Core @data level | EML @dataset level
  - e.g.2, Zenodo - DataCite @dataset level
  - e.g.3, CKAN - DCat @dataset level

# Metadata

RDA | Metadata Directory

Edit this page

[View the standards](#)

[View the extensions](#)

[View the tools](#)

[View the use cases](#)

[Browse by subject areas](#)

Contribute

[Add standards](#)

[Add extensions](#)

[Add tools](#)

[Add use cases](#)

github

## Arts and Humanities

[Encoded Archival Description \(EAD\)](#) [Edit](#)

A standard for encoding archival finding aids using XML in archival and manuscript repositories, implementing the recommendations of the International Council on Archives [ISAD\(G\): General International Standard Archival Description](#).

[TEI - Text Encoding Initiative](#) [Edit](#)

The guidelines of the Text Encoding Initiative make recommendations about suitable ways of representing those features of textual resources which need to be identified explicitly in order to facilitate processing by computer programs. They specify a set of XML tags in order to mark the textual metadata, text structure, relationship between images and transcriptions and other features of interest. The guidelines both describe the formal TEI encoding scheme, and document the TEI markup vocabulary. In their 30 years community driven development they have developed to a de-facto standard in the production of textual data in the humanities.

[DDI \(Data Documentation Initiative\)](#) [Edit](#)

A widely used, international standard for describing data from the social, behavioral, and economic sciences. Two versions of the standard are currently maintained in parallel:

- DDI Codebook (or DDI version 2) is the simpler of the two, and intended for documenting simple survey data for exchange or archiving. Version 2.5 was released in January 2014.
- DDI Lifecycle (or DDI version 3) is richer and may be used to document datasets at each stage of their lifecycle from conceptualization through to publication and reuse. It is modular and extensible. Version 3.2 was published in March 2014.

Both versions are XML-based and defined using XML Schemas. They were developed and are maintained by the DDI Alliance.

[MARC \(Machine-Readable Cataloging\)](#) [Edit](#)

MARC is a standard and serialization format for representing bibliographic metadata, originally designed as a way of exchanging bibliographic records between library catalogs. Various different versions have been defined, mostly with national or regional scope, of which MARC 21 is probably the most widely used. There also exists an XML serialization of MARC 21, known as MARCXML.

[MIDAS-Heritage](#) [Edit](#)

A British cultural heritage standard for recording information on buildings, archaeological sites, shipwrecks, parks and gardens, battlefields, areas of interest and artefacts.

# 標準化／豐富 metadata 的好處

- 讓資料可被再次利用。
- 讓不同的資料、資料集可被交互操作。
- 提高資料能見度。

## 台中市南屯區鎮平溪 - 劉厝溪航攝影像

產製者	王豫煌
資料產製時間	2021-04-18
資料處理歷程	<b>航攝製圖影像拍攝</b> 採用DJI Phantom 4 RTK無人載具及D-RTK 2 Mobile Station連接國土測繪中心DGPS定位服務進行影像拍攝；航線規劃採用Linear飛航模式，沿中心線KML檔向左右兩側80公尺設定為航拍範圍；鏡頭俯角90度，航高保持離起降點地面60公尺，影像重疊率前後80%、左右70%。
depositor 原始資料集	<b>影像處理</b> 採用中央研究院網格計算中心WebODM 測試平台，設定High Resolution計算模式，輸出正射影像、DSM、3D點雲和模型，再經由中央研究院網格計算中心WebODM平台發布計算成果網頁連結。
	<b>360影像拍攝與發佈</b> 使用DJI Mavic 2 Pro無人載具和DJI GO4 App拍攝空中360全景影像，並將影像發佈至Google Street View。

## 台中市南屯區鎮平溪 - 劉厝溪航攝影像

前往以下網頁探索: [depositor](#)

external resources, zip(77363561), kml(2334)

### 資料集更新日期

Apr 18, 2021

### 資料集提供者

Asian Ecological Observation Network

### 授權

[Attribution-NonCommercial-ShareAlike 4.0 \(CC BY-NC-SA 4.0\)](#)

授權資訊是由系統自動產生

### 說明

台中市南屯區鎮平里劃入台中高鐵站特定區，已完成區段徵收；在尚未進行都市重劃前，以無人載具航拍紀錄該子溪支線鎮平溪

Google  
dataset  
search

# Data Sharing

- 為何分享資料
- 你需要什麼資料儲存庫 (data repository)
  - 挑選可信賴的資料儲存庫
    - Science Europe - 指引
    - 資料儲存庫的認證 - 以 CoreTrustSeal 為例
  - 資料論文 (data paper)



# 為何要分享資料

- 增進學術成果的引用
- 期刊、機構、贊助者要求
- 增加資料再次利用的可能
- 確保學術成果可驗證
- 降低重複產製資料的成本
- 增進公共利益

## Sharing Detailed Research Data Is Associated with Increased Citation Rate

Heather A. Piwowar , Roger S. Day, Douglas B. Fridsma

Published: March 21, 2007 • <https://doi.org/10.1371/journal.pone.0000308>



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FR



OECD/LEGAL/0347

 Adopted on:  
14/12/2006

 Amended on:  
20/01/2021

### Recommendation of the Council concerning Access to Research Data from Public Funding

 In force  Recommendation  Governance: Science and Technology



## What are Open Science Badges?



- Badges to acknowledge open science practices are incentives for researchers to share data, materials, or to [preregister](#)
- Badges signal to the reader that the content has been made available and certify its accessibility in a persistent location.
- Currently, over **75** journals offer Open Science Badges to signal and reward when underlying data, materials, or preregistrations are available, see below.

### Badges seem silly. Do they work?



## The Effect of Prediction Error on Belief Update Across the Political Spectrum

Madalina Vlasceanu, Michael J. Morais, Alin Coman

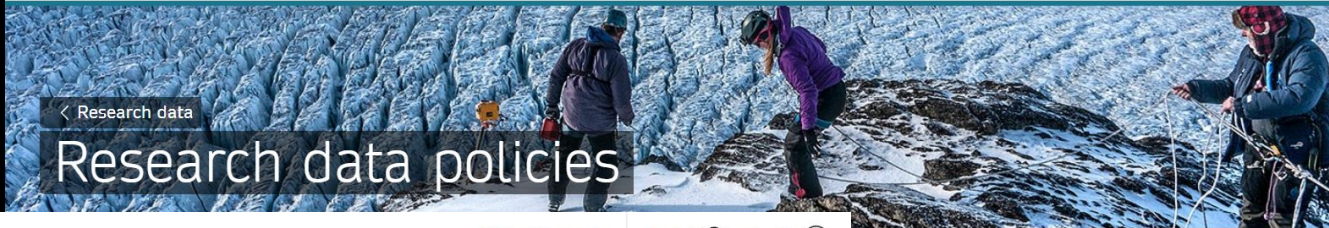
First Published June 2, 2021; pp. 916–933

[Abstract](#)

[> Preview](#)



Open URL


 < Research data

# Research data policies

## scientific data

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are unsure where to deposit their data, and disciplines. This does not preclude the use of ages. Please be aware that some repositories

Policies

## Data Repository Guidance

# PLOS ONE


[advanced search](#)
[Introduction](#)
[Minimal Data Set Definition](#)
[Acceptable Data Sharing Methods](#)
[Acceptable Data Access Restrictions](#)
[Unacceptable Data Access Restrictions](#)
[FAQs](#)

## Data Availability

The following policy applies to all PLOS journals, unless otherwise noted.

### Introduction

PLOS journals require authors to make all data necessary to replicate their study's findings publicly available without restriction at the time of publication. When specific legal or ethical restrictions prohibit public sharing of a data set, authors must indicate how others may obtain access to the data.



盡可能都開放，視需要再保留  
as open as possible, as closed as necessary

↓

敏感資料下個場次會提到！

# 你需要什麼資料儲存庫？

- 領域的習慣
- 期刊、機構、贊助者推薦或指定
- 通用型 (Zenodo, 4TU, DANS, depositar...etc.)
- 搜尋 : re3data (Datacite) : <https://www.re3data.org/>

**re3data.org**  
REGISTRY OF RESEARCH DATA REPOSITORIES

Search...

Search

以 Nature 為例

## View data repositories

- **Biological sciences:** Nucleic acid sequence; Protein sequence; Molecular & supramolecular structure; Neuroscience; Omics; Taxonomy & species diversity; Mathematical & modelling resources; Cytometry and Immunology; Imaging; Organism-focused resources
- **Health sciences**
- **Chemistry and Chemical biology**
- **Earth, Environmental and Space sciences:** Broad scope Earth & environmental sciences; Astronomy & planetary sciences; Biogeochemistry and Geochemistry; Climate sciences; Ecology; Geomagnetism & Palaeomagnetism; Ocean sciences; Solid Earth sciences
- **Physics**
- **Materials science**
- **Social sciences**
- **Generalist repositories**

# 挑選可信賴的資料儲存庫



← 從這裡來

## 可信賴的資料儲存庫 的選用指引

下方表格提供了一份指引，用以列出挑選可信賴的資料儲存庫的準則，這些準則是由四個主要議題構成：

### 1 提供持續及唯一的識別碼 (Persistent and Unique Identifiers, PIDs)

可信賴的資料儲存庫應該：

#### 1a 能進行資料探索和識別

- 確保 PIDs 包含在對應的後設資料裡。

#### 1b 能搜尋、引用、和擷取資料

- 一致、有系統地編配 PIDs (如 DOI,<sup>5</sup> URN,<sup>6</sup> ARK<sup>7</sup>) 予持有的資料，使得即使資料的存放位置有變，其對應的資料和後設資料仍可被找到、參照、及擷取。

#### 1c 可支援多個資料版本

- 確保儲存庫中儲存的資料版本，都有被明確標示並以永久的稽核軌跡 (Audit Trail) 進行紀錄，以追蹤其來源出處。

*注意：不是所有的儲存庫都使用上述被認可及普遍的 PID 系統。相反地，他們會使用儲存庫自己維護的編碼系統或管理編號。在這情況下，一旦資料存放的位置改變，或儲存庫不復存在、重組、或變更治理方式，資料無法尋獲的風險將會增加。*

# 資料儲存庫的認證 - 以 CoretrustSeal 為例

- International, community based, non-governmental, and non-profit organization
- 發起: 2017 年
- 秘書處: WDS and DANS (荷蘭)
- 目的: 審核可信賴的資料儲存庫, 並核發認證標章
- 其他的認證:
  - Extended level: nestor certificate:  
[https://www.langzeitarchivierung.de/Webs/nestor/EN/Home/home\\_node.html](https://www.langzeitarchivierung.de/Webs/nestor/EN/Home/home_node.html)
  - Formal level: ISO 16363: <http://www.iso16363.org/>



# CoreTrustSeal 的審核項目

1. 任務／範疇
2. 授權
3. 存取的連續性
4. 機密性 / 倫理
5. 組織的基礎建設
6. 專家指引
7. 資料的完整性與真實性
8. 資料鑑定

- 保存資料的責任層級, 包含已 (對使用者) 擔保的資料保存期限。

- 為確保資料可持續有效及可存取, 所採取的中期 (3-5年) 或長期 (大於5年) 方案。陳述必須同時能回應迅速變化的情勢, 並提供長期方案的資訊: 如將資料搬遷或轉移至另一單位運作的可能、或者把資料交還給其資料 產製者的可能。例如當面臨資金緊縮 (例如經費意外被砍)、資助計畫到期終結、主責機構的利益轉移時, 該如何處理?



可以看見通過認證的 repository

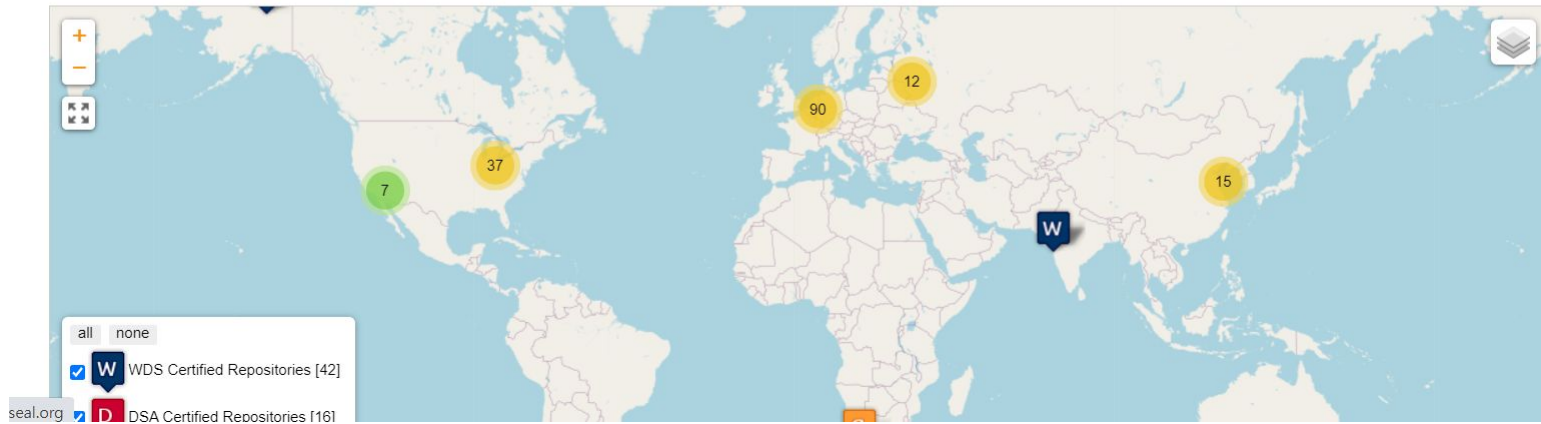
Home About ▾ Certification ▾ Certified Repositories ▾ Apply ▾ Contact ▾



## Core Certified Repositories

Home > Why certification > Core Certified Repositories

Applications are made public only once certification of a data repository has been approved by the CoreTrustSeal Board. Certification is against the version of the Core Trustworthy Data Repositories Requirements named in the link to the public application (e.g., 2017–2019). The CoreTrustSeal for Data Repositories is valid for three years from the certification date listed within the public application.





# 台灣通過認證的資料儲存庫

all none

- WDS Certified Repositories [42]
- DSA Certified Repositories [16]
- CTS Certified Repositories [112]

Map: © OpenStreetMap contributors

Search: taiwan

Marker ID

	<b>Survey Research Data Archive</b> <a href="https://srda.sinica.edu.tw/">https://srda.sinica.edu.tw/</a> CoreTrustSeal certification 2017-2019 WDS Regular Members
Center for Survey Research, RCHSS, Academia Sinica, Section 2, Academia Road, Nangang District, Taipei City, Taiwan	
	<b>Fish Database of Taiwan (Academia Sinica, Taiwan)</b> <a href="http://fishdb.sinica.edu.tw">http://fishdb.sinica.edu.tw</a> WDS Regular Member certification date: 2011 [EXPIRED] WDS Regular Members
128, Sec. 2, Academia Rd., Nankang, Taipei, Taiwan 11525	

2 results

# GBIF

## 2019 Progress

The exploration of necessary steps to achieve CoreTrustSeal data repository certification is starting in Q4 2019. This includes the data management services within GBIF.org, but also seeks to identify a set of trusted repositories for publishing datasets within the GBIF network.

Documentation for all stages in the GBIF data ingestion process to start Q3/Q4 2019, following deployment of the informatics infrastructure upgrade (pipelines project).

# Zenodo

## Does Zenodo have the CoreTrustSeal or other certification?

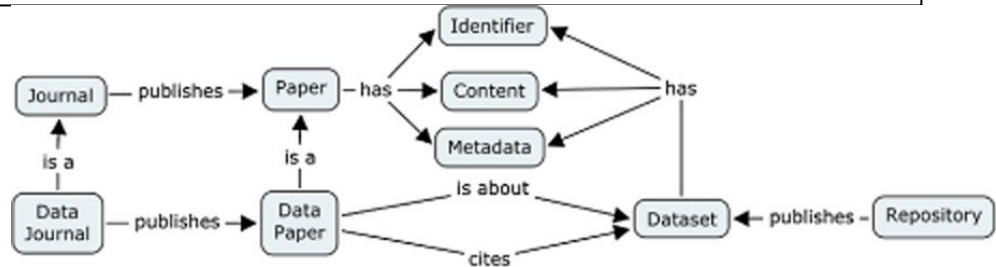
Not yet since CoreTrustSeal at the moment only certifies repositories that serve a specifically designated community and therefore not generalist repositories like Zenodo. CoreTrustSeal is considering including generalist repositories in CoreTrustSeal 2022, at which point we would apply for certification. We have provided our input to CoreTrustSeal's request for community feedback on this issue.

# \*資料論文

“a scholarly journal publication whose primary purpose is to describe a dataset or a group of datasets, rather than to report a research investigation. As such, it contains facts about data, not hypotheses and arguments in support of the data, as found in a conventional research article” (Penev et al. 2012).

“A data paper is a peer reviewed document describing a dataset, published in a peer reviewed journal. It takes effort to prepare, curate and describe data. Data papers provide recognition for this effort by means of a scholarly article.” (GBIF)

“a **data paper describes a dataset**, giving details of its collection, processing, software, file formats etc, without the requirement of novel analyses or ground breaking conclusions. It allows the reader to understand the when, how and why data was collected and what the data-product is.” (Geoscience Data Journal)



# 為何寫資料論文？

- 資料產製者也能得到學術上的 credit
- 增加資料的能見度、促成資料再次利用、提升研究可信度
- 以人類可理解的方式描述資料的產製與特性
- 更有效率追蹤你資料被引用的狀況

## Data Journals

*Hier wird eine Liste von Data Journals gepflegt, die vorwiegend Data Papers publizieren. Einige Journals neue kommen hinzu. Ergänzungen sind erwünscht.*

- [Atomic Data and Nuclear Data Tables](#) (Elsevier)
- [Biodiversity Data Journal](#) (Pensoft Publishers)
- [Biomedical Data Journal](#) (Procon Ltd.)
- [BMC Research Notes](#) (Biomed Central)
- [Chemical Data Collections](#) (Elsevier)
- [Data](#) (MDPI)
- [Data in Brief](#) - Zusammenschluss u.a. 2017 mit [Genomics Data](#) (Elsevier)
- Rubrik [Data Observer](#) der Jahrbücher für Nationalökonomie und Statistik (DeGruyter)
- [Dataset Papers in Science](#) - 2017 *eingestellt* (Hindawi Publishing Corporation)
- [Earth System Science Data - ESSD](#) (Copernicus Publications)
- [Ecological Archives](#) (Ecological Society of America - ESA/Wiley)
- [F1000Research](#) (F1000 Research)
- [Geoscience Data Journal](#) (Wiley)
- [Geoscientific Model Development](#) (Copernicus)
- [GigaScience](#) (Oxford University Press)
- [Internet Archaeology](#) (Internet Archaeology)
- [International Journal of Epidemiology](#) (Oxford University Press)
- [The Astrophysics Journal: Supplement Series](#) (American Astronomical Society)
- [The International Journal of Robotics Research](#) (Sage Publications)

# RDM Conference or Resources

## Conferences

- International Digital Curation Conference (annual): <https://www.dcc.ac.uk/events/international-digital-curation-conference-idcc>
- Open Repositories (annual): <https://or2021.openrepositories.org/>
- \*\*Research Data Alliance Plenary (biannual, Nov. 3-11): <https://www.rd-alliance.org/plenary-meetings/next-plenary>
- \*\*SciDataCon (annual, hosts: CODATA, World Data System, Oct. 18-28): <https://www.scidatacon.org/virtual-2021/programme/>

## Resources

- Research Data Management Hub: <http://rdm.depositar.io>



Research data management is not exciting until you need it

Donna Bourne-Tyson, 2021

# Thank You!

<https://data.depositar.io/>

data.contact@depositar.io

<http://rdm.depositar.io>

rdm.contact@depositar.io

