

Outline

1. Research Data Management
2. Data Management Plans & RDMO
3. Open Data & Publication
4. RDM Support @ University Library LMU
5. Cooperations & Outlook

1. Research Data Management

Libraries and RDM

- Knowledge in preserving (digital) publications
- Making knowledge accessible
- Experts in Metadata Management
- Technical and personnel infrastructures
- Advice and training offers
- Established networks and standards

(Open) Data Excuse Bingo

My data contains personal/sensitive information	My data is too complicated	People may misinterpret my data	My data is not very interesting
Commercial funder doesn't allow data sharing	We might want to use the data in several publications	Other researches might contact me to ask about stuff	Data Privacy/National Security
My data is too extensive	Others could see that my data is bad	I want to patent my discovery	Data Publication is not a priority and I'm busy
I don't know how	I'm not sure I own the data	Someone might steal/plagiarise it	My funder doesn't require it

Inspired by:
 Kingsley, D.: *The purpose, practicalities, pitfalls and policies of managing and sharing data in the UK* (2015)

1. Research Data Management



2. Data Management Plans (DMP)

General information and benefits of DMP:

- Guideline for entire duration of a project
- Regulations/Recommendations on whereabouts of data after project ends
- often required by national and international funding programmes for documentation
- Optimization of research data management

2. Data Management Plans (DMP)

- What data will be collected and where does it come from?
- Which **metadata** should be used to describe the data?
- Where should the data be **stored**? During the project phase? After the project?
- What about Open Data? Do you plan to **publish** the data?
- Is sufficient staff provided? Does your project require special **infrastructure**?
- How do you ensure the **quality** of your data?
- Does your project process personal or sensitive data? What **law** will be applied? Are there **ethical aspects** you need to consider?

Based on: <https://www.fdm.uni-hamburg.de/en/fdm/datenmanagementplan.html>

2. Data Management Plans (DMP)

Tool: Research Data Management Organiser (RDMO)

- Web-based application to support creation of DMP
- Development co-funded by DFG from 2015-2020
- Large and active community
- Local installation on servers at University Library

 RDMO (University Library LMU)

<https://rdmo.ub.uni-muenchen.de/>

2. Data Management Plans (DMP)

erc
European Research Council
Established by the European Commission

ERC OPEN RESEARCH DATA MANAGEMENT PLAN (DMP)

Bitte füllen Sie das Formular für jeden PI aus. Die verschiedenen PI werden eventuell in späteren Fragen wieder verwendet. Sie können einen neuen PI mit dem grünen Button hinzufügen. Bereits angelegte PI können mit den Buttons oben rechts bearbeitet oder wieder entfernt werden.

Project Acronym: _____ Project Number: _____

SUMMARY (dataset² reference and name and formats)

1. MAKING DATA FINDABLE (dataset description: metadata, persistent and unique identifiers e.g., DOI)

2. MAKING DATA OPENLY ACCESSIBLE (which data will be made openly available and if some datasets remain closed, the reasons for not giving access; where the data and associated metadata, documentation and code are deposited (repository?); how the data can be accessed (are relevant software tools/methods provided?))

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Fragebogen

Projekt / Allgemeine Informationen II

Bitte füllen Sie zunächst einen hauptverantwortlichen Wissenschaftler oder eine hauptverantwortliche Wissenschaftlerin (PI) über den grünen Knopf hinzu.

Bitte füllen Sie das Formular für jeden PI aus. Die verschiedenen PI werden eventuell in späteren Fragen wieder verwendet. Sie können einen neuen PI mit dem grünen Button hinzufügen. Bereits angelegte PI können mit den Buttons oben rechts bearbeitet oder wieder entfernt werden.

Projektleiter [PI hinzufügen](#)

Name der Projektleiterin / des Projektleiters (PI)
Beispielsweise: "Noether".

Name: _____

Vorname(n) des PI:
Geben Sie die Vornamen am besten ohne Trennzeichen an, beispielsweise: "Amalie Emmy".

Vorname: _____

Affiliation:
Falls die hauptverantwortliche Wissenschaftlerin oder der hauptverantwortliche Wissenschaftler Mitglied mehrerer Forschungsorganisationen ist, kann für jede Angabe eine eigene Zeile verwendet werden.

E-Mail-Adresse:

ORCID:
Die ORCID (Open Researcher and Contributor ID) ist eine eindeutige Identifikationsnummer für Forschende. Mit einer ORCID lassen sich beispielsweise Aufsätze einfach der richtigen Wissenschaftlerin oder dem richtigen Wissenschaftler zuordnen.

Kontaktperson für daten-bezogene Fragen?
 Ja Nein

Zurück Überspringen Sichern Sichern und fortfahren

Übersicht

Projekt: Horizon 2020 (Test)
Katalog: Horizon 2020 Katalog

[Zurück zu meinen Projekten](#)

Fortschritt

Zurück Überspringen

Navigation

Bitte beachten Sie das durch die Benutzung der Navigation ungesicherte Eingaben verworfen werden.

- Projekt
- Allgemeine Informationen I
 - Allgemeine Informationen II
 - Zusammenfassung der Daten
 - FAIR-Prinzipien
 - Benötigte Ressourcen
 - Datensicherheit
 - Ethische Aspekte
 - Sonstiges

2. RDMO Live-Demo

UB RDMO (University Library LMU) Language ▾ Login

Welcome to the RDMO service of LMU Munich

The service is provided by the University Library LMU and uses a web application to assist structured planning, implementation and administration of the data in a scientific project. Additionally, the gathered information can be cast into textual forms suitable for funding agencies requirements or for reports.

Quick Start Guide ([Download](#), [PDF \[German version\]](#))

For more information about Reaserch Data Management at the University Library LMU visit our website: [Research Data Management](#).

Login

Username

Password

Remember Me

[Login](#)

If you have not created an account yet, then please [sign up](#) first.

If you forgot your password and want to reset it, click [here](#).











Alternatively, you can login using one of the following third party accounts:

[SIGN IN with ORCID ID](#)

2. RDMO Live-Demo

UB RDMO (University Library LMU) Language ▾ Maria Muster ▾


My Projects

Name	Role	Last changed	
Social behaviour of Emperor Penguins	Owner	April 20, 2021, 1:10 p.m.	 
Social behaviour of Emperor Penguins / Newborn penguins	Owner	April 20, 2021, 1:09 p.m.	 
Sozialverhalten der Kaiserpinguine	Owner	April 20, 2021, 1:02 p.m.	 
Sozialverhalten der Kaiserpinguine / Neugeborene Pinguine	Owner	April 6, 2021, 3:39 p.m.	 
Sozialverhalten der Kaiserpinguine / Flugpinguine		April 6, 2021, 11:17 a.m.	 

Options

[Create new project](#)

Search projects



Import existing project

Keine Datei ausgewählt.
Select file

2. RDMO Live-Demo

Create new project

Title
The title for this project.

Description
A description for this project (optional).

Catalog
The catalog which will be used for this project.

RDMO
 DFG grants (social/economic sciences)
 Horizon 2020 Grants

Parent project
The parent project of this project.

2. RDMO Live-Demo

UB RDMO (University Library LMU) Language ▾ Maria Muster ▾

Social behaviour of Emperor Penguins

Description The emperor penguin is a social animal in its nesting and its foraging behaviour; birds hunting together may coordinate their diving and surfacing. Individuals may be active day or night. A mature adult travels throughout most of the year between the breeding colony and ocean foraging areas; the species disperses into the oceans from January to March (https://en.wikipedia.org/wiki/Emperor_penguin#Behaviour). This project investigates the social behavior of emperor penguins.

Catalog RDMO

Project hierarchy **Social behaviour of Emperor Penguins**

- Newborn penguins

Tasks

Tasks are generated automatically from the answers given in the project. On the page of each task you can see which of your answers lead to the activation of the task.

Task	Description	Time frame	Status
Identify rights owner	Identify the rights owner and contact him / her to see if the rights necessary for long-term preservation and re-use will be granted.		open

Views

Views are created using the answers given in the project and can then be exported in various formats. Initially, all views are empty. Please answer some questions by visiting **Answer Questions** (at the top of the sidebar).

No views are configured for this project.

Members

Here you can see who can access the project and invite additional members. You can use the user roles to manage which rights the benefits have. Unless you are the last owner, you can leave the project with the button next to your name.

User	E-Mail	Role
Maria Muster	forschungsdaten@ub.uni-muenchen.de	Owner

Options

Answer questions

View answers

- Update project information
- Update project catalog
- Update parent project
- Update project tasks
- Update project views
- Delete project

Add member

Create snapshot

Back to projects overview

Export

- RDMO XML
- CSV comma separated
- CSV semicolon separated

Import values

Import from file

Durchsuchen... Keine Datei ausgewählt.

Select file

➔

2. RDMO Live-Demo

UB RDMO (University Library LMU) Language ▾ Maria Muster ▾

Questionnaire

General / Topic

What is the main research question of the project?
Describe briefly the project and its aims.

In this project, the social behavior of emperor penguins is studied.

Please give some keywords describing the research question.
Please enter the keywords line by line. You can add keywords using the green button and remove them using the blue cross (x).

Emperor penguin ✕

Behaviour ✕

Add keyword

Back Skip Save Save and proceed

Overview

Project: Social behaviour of Emperor Penguins
Catalog: RDMO

[Back to my projects](#)

Progress

Back Skip

Navigation

Please note that using the navigation will discard any unused input.

General

- Topic
- Research field
- Project schedule
- Project coordination
- Project partners
- Funding
- Other requirements I
- Other requirements II
- Content classification
- Technical classification
- Data usage
- Metadata and referencing
- Legal and ethics
- Storage and long-term preservation

2. RDMO Live-Demo

UB RDMO (University Library LMU) Language ▾ Maria Muster ▾

Questionnaire

Metadata and referencing / Metadata

Please fill in the form for each dataset. The different datasets will be referred to in following questions. You can add a new dataset using the green button. Once created, you can edit or delete datasets using the buttons in the top right corner.

Measuring data Video recordings Add dataset ✎ 🗑

Which information is necessary for other parties to understand the data (that is, to understand their collection or creation, analysis and research results obtained on its basis) and to re-use it?

- Location
- Content
- Methodology
- Creation process
- Technology
- Documentation of the software necessary to use the data
- Time
- Sources
- Agents
- Identifiers
- Other:

Overview

Project: Social behaviour of Emperor Penguins
Catalog: RDMO
[Back to my projects](#)

Progress

BackSkip

Navigation

Please note that using the navigation will discard any unused input.

- General
- Content classification
- Technical classification
- Data usage
- Metadata and referencing
 - Metadata
 - Metadata costs
 - Structure, granularity and referencing
 - Persistent Identifiers (PIDs)

2. RDMO Live-Demo

In case it is unavoidable that you use uncommon or generate project-specific ontologies or vocabularies, will you provide mappings to more commonly used ontologies?

This information is needed for a Horizon 2020 data management plan.

Yes No

Which metadata are collected automatically?

Which metadata are collected semi-automatically?

So what metadata are automatically collected by the computer/software, but must be checked?

Overview

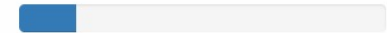
Project: Social behaviour of Emperor

Penguins

Catalog: RDMO

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Progress



[Back](#)

[Skip](#)

Navigation

Please note that using the navigation will discard any unused input.

[General](#)

[Content classification](#)

[Technical classification](#)

[Data usage](#)

[Metadata and referencing](#)

→ [Metadata](#)

[Metadata costs](#)

[Structure, granularity and referencing](#)

[Persistent Identifiers \(PIDs\)](#)

[PIDs costs](#)

2. RDMO Live-Demo

UB RDMO (University Library LMU) Language ▾ Maria Muster ▾

Answers for *Social behaviour of Emperor Penguins*

In the following, we have summarized the information about the project as given by you and your collaborators.

General

Topic

What is the main research question of the project?

In this project, the social behavior of emperor penguins is studied.

Please give some keywords describing the research question.

- Emperor penguin
- Behaviour

Research field

Which research field(s) does this project belong to?

- Life Sciences / Zoology
- Life Sciences / Agriculture, Forestry, Horticulture and Veterinary Medicine

Snapshots

→ Current
Version 1

Options

[Back to project overview](#)

Export

PDF
Rich Text Format
Open Office
Microsoft Office
HTML
Markdown
mediawiki
LaTeX

3. Open Data & Publication

In theory:

- Previously outlined in DMP
- strategy should be clear at project start

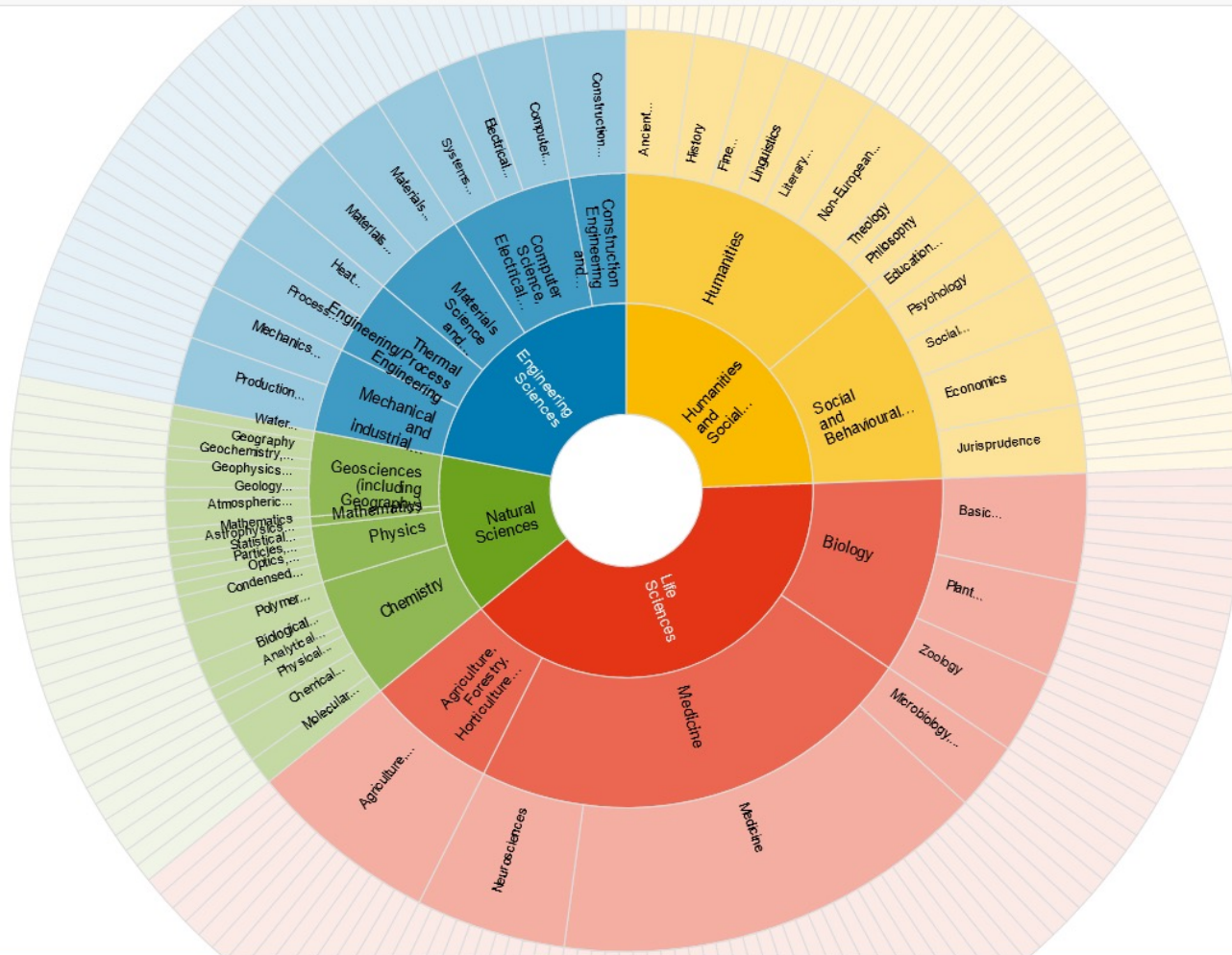
But, often questions come up:

- What happens to data after research project ends?
- Can the data be published?
- Are there aspects that need to be considered prior publication?
- Are there reasons why data should not be published?

Reliable infrastructure for storage and publication:

- Subject-specific repositories (List of repositories: re3data.org)
- Generic repositories (e.g. Zenodo)
- Institutional repositories (e.g. Open Data LMU)

3. Open Data & Publication



3. Open Data & Publication

The screenshot shows the 'Open Data LMU' website. At the top, there are logos for LMU (Ludwig-Maximilians-Universität München) and UB (Universitätsbibliothek München). The main heading is 'Open Data LMU'. Below this, there is a search bar and navigation links for 'FACULTIES', 'SUBJECTS', and 'PERSONS'. The main content area displays the text: 'On this server you'll find 112 items of primary data of the University of Munich. The latest 5 additions:'. It lists five recent data additions with their titles, authors, and dates. For example, the first entry is 'Supplementary data from: Adrenal venous sampling (AVS) in Primary Bilateral Macronodular Adrenocortical Hyperplasia (PBMAH): A study of 16 patients. 10. April 2021. Open Data LMU. 10.5282/ubm/data.236'. On the right side, there are buttons for 'HELP', 'CONTACT', and 'STATISTICS'. At the bottom, there are links to 'More Repositories ...' including 'Theses', 'OPH', 'Open Access LMU', 'Open Journals LMU', and 'MPRA'. A footer note states: 'Open Data LMU is powered by ePrints 3, which is developed by the School of Electronics and Computer Science at the University of Southampton. Imprint - Privacy Disclaimer'.

<https://data.ub.uni-muenchen.de/>

3. Open Data & Publication

Publication at University Library LMU includes:

- Persistent identifier (PID):
 - DOI
 - ORCID (& ROR)
- Metadata Services:
 - DataCite Best Practice Guide: <https://zenodo.org/record/3559800>
 - DataCite Metadata Generator: <https://dhvlab.gwi.uni-muenchen.de/datacite-generator/>
- Reliable Storage and Backup Strategies

4. RDM Services @ UB der LMU

RDM Help Desk („FDM-Beratungsstelle“)

- Offers general support regarding RDM:
 - Basic RDM requirements
 - FAIR compliance
 - Directing to discipline-specific resources
 - RDM Workflows
- Supports planning of RDM (“data management plans”)
- Advice on data publication options
- persistent identifier services
- Offers virtual and in-house training (planned) (“data literacy”)

5. Cooperations & Outlook

Linking services at LMU

- Faculty members
- LMU Unit for Research Funding
- LMU Open Science Center (OSC)
- University Library LMU

Regional & International Communities

- rdmuc (Research Data Management in Munich)
- eHumanities – interdisziplinär (fdm-bayern.org)
- ORCID and DataCite memberships
- Research Data Alliance

5. Cooperations & Outlook

Perspective for future cooperation at LMU:

- Expand and advertise services of the University Library
- Collaborate with researchers to establish discipline-specific RDM services:
 - Use case from the Humanities:
 - Established a service point for research data management in the Digital Humanities (Servicestelle FDM-DH)
 - Guideline for research data management in the Digital Humanities at LMU (<https://doi.org/10.5282/ubm/epub.72675>)
 - RDM workflows covering consultation, project support and storage/publication strategy
 - Model could be transferred to other interested faculties.

Contact

RDM Helpdesk:

- forschungsdaten@ub.uni-muenchen.de
- rdm@ub.uni-muenchen.de

Website:

https://www.en.ub.uni-muenchen.de/writing/research_data/index.html

Presenters:

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