

## Open Science and FAIR Data in Slovenia

dr. Sonja Bezjak, University of Ljubljana, Slovenian Social Science Data Archives

Critical Knowledge Forum, Adelphi University, New York, November 15, 2022



#### **Content**

- About ADP & CESSDA
- FAIR principles & DMP
- Promoting Open Data in Slovenia
- Research data management rules in Slovenia (examples)
- About University of Ljubljana
- DMP PhD students of SSH
- DMP for all PhD students at UL

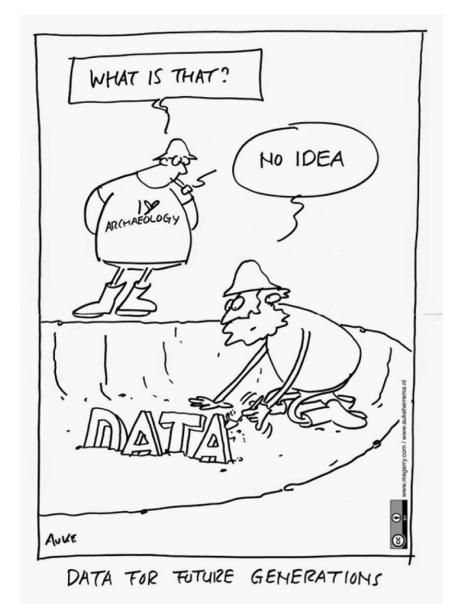


Image courtesy of http://aukeherrema.nl CC-BY



## Slovenian Social Science Data Archives (ADP-Arhiv družboslovnih podatkov)



- Founded in 1997
- 9 employees
- Slovenian national research data centre for social sciences
- Data depositors from public and private universities, research centers
  - Cca. 600 studies in a data catalogue
  - Cca. 700 users annually (90 % education purposes)
- Member of CESSDA ERIC since 2017
- Status of a trust-worthy archive (CoreTrustSeal since 2018)
- involved in EU and national projects





#### **ADP's mission**

**To ensure** and **promote** *sustainable services* of **ingest, storage and access** to *quality research data from the field of Slovenian social sciences* and broader, with *potential for secondary analysis*.

#### Main services:

- Acquiring important research data from a wide range of social sciences
- Appraisal of submitted research data and their selection for deposit
- **Ingesting and processing** research data and other documentation, together with the creation of metadata
- Long-term digital **preservation** (AIP), **access** and **re-use** for scientific, educational and other purposes (DIP)
- **Training** researchers on:
  - research data management
  - re-use of research data
- **Promotion** of open data and open science (researchers, students, librarians, journals, citizens...)



#### What is research data...

... primary sources that underpin scientific research and enable derivation of theoretical or applied findings.

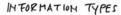
(Preparing research data for open access: guide for data producers, 2015)

Research data is **any information** that has been collected, observed, generated or created **to validate original research findings**.

(University of Leeds, Library)



The tangible forms this 'material' may take are e.g. "facts, observations, interviews, recordings, measurements, experiments, simulations, and software; numerical, descriptive and visual; raw, cleaned up and processed" (Van Berchum & Grootveld, 2017).





## What is research data...

	DATA EXAMPLES	SOURCES
Sciences	<ul> <li>Meteorological data, ground water data, sensor readings, historical records</li> <li>X-rays, clinical case studies</li> <li>Chemical structural data, crystal structure, molecular calculations</li> <li>Spectral surveys</li> <li>Specimens, biodiversity surveys</li> <li>Experiment data, observations, calculations</li> </ul>	Generate your own data  Obtain from other researchers  Data repositories
Social Sci <mark>e</mark> nces	- Opinion polls - Surveys - Interviews - Mass media, social media - Laboratory experiments - Field experiments - Fieldwork notes - Demographic records - Census records - Voting records - Economic indicators	Generate your own data  Obtain it from other researchers  Data repositories  Existing records
Arts and Humanities	<ul> <li>Newspapers</li> <li>Photographs, video material</li> <li>Letters</li> <li>Diaries</li> <li>Literature: books, articles</li> <li>Church records</li> <li>Court records</li> <li>Maps</li> <li>Art artefacts</li> <li>Historic artefacts</li> </ul>	Libraries Archives Museums Public/corporate/government records Data repositories



## From data to Data Publication (P!!!)



PUBLICATIONS AND DATA

Image courtesy of http://aukeherrema.nl CC-BY

**Data Publication** should be considered as a **first-class research output** (Knowledge Exchange, 2013).

For a dataset to »count« as a publication should be:

- Properly documented with metadata,
- Reviewed for quality,
- Searchable and discoverable in catalogues (or databases);
- Citable in articles.



## **How to CITE this study?**

Bufon, M., Sedmak, M., Rameša, M., Medarić, Z. and Zadel, M. (2022). *Cross-border integration and local communities, 2015: Effects of the entry of the Republic of Slovenia into the Schengen area and Republic of Croatia in the European Union on the development possibilities of the ethnically mixed area in Istria - Slovenian Istria* [Data file]. Ljubljana: University of Ljubljana, Slovenian Social Science Data Archives. ADP - IDNo: ISTRAS15. <a href="https://doi.org/10.17898/ADP\_ISTRAS15\_V1">https://doi.org/10.17898/ADP\_ISTRAS15\_V1</a>



## **Consortium of European Social Science Data Archives - CESSDA**

#### **Data Catalogue**

The CESSDA Data Catalogue contains the metadata of all data in the holdings of CESSDA's service providers. It is a one-stop-shop for search and discovery, enabling effective access to European social science research data.



- More than 40.000 studies
- In English & national languages
   <a href="https://datacatalogue.cessda.eu/">https://datacatalogue.cessda.eu/</a>



#### The CESSDA Consortium

The CESSDA Consortium is currently composed of 22 member countries and one observer. Several European countries are in the process of becoming a CESSDA member or observer. CESSDA also has partners in a number of countries outside of the consortium.



#### **CESSDA's Four Pillars**

#### **TRAINING**

- raises awareness on open science and FAIR data principles
- increases data skills of researchers and trainers
- provides training and educational materials
- builds internal capacity at the level of service providers and ensures coordination with other European partners.

#### **TOOLS**

- provides tools for data curation and publication
- supports finding, accessing and reusing research data and metadata
- works according to FAIR principles and regardless of borders
- is committed to respecting data privacy and security issues.

#### TRUST

- aims for a consortium of trusted repositories with full European coverage
- supports Service Providers and partners at different levels of maturity
- shares expertise
- enables the scaling of services while minimising duplication of effort.

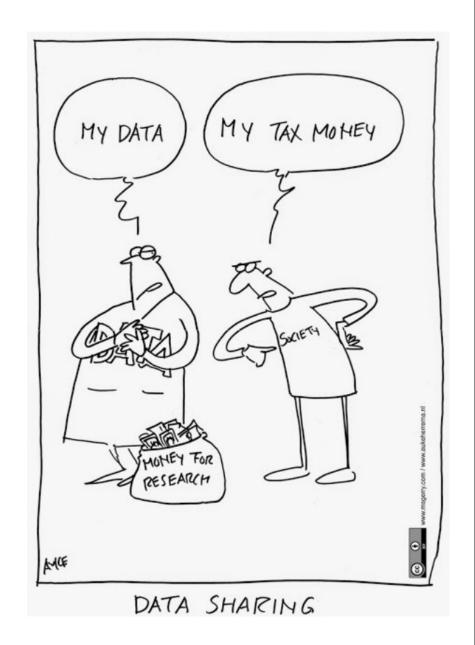
#### **WIDENING & OUTREACH**

CESSDA is developing a Pan-European collaboration going beyond the current CESSDA membership. We do this by addressing data archives in services in the social sciences and humanities in prospective non-member countries. CESSDA wishes to grow, while also strengthening ties with current members.



### **Content**

- About ADP & CESSDA
- FAIR principles & DMP
- Promoting Open Data in Slovenia
- Research data management services
- About University of Ljubljana
- DMP PhD students of SSH
- > DMP for all PhD students at UL





## **FAIR** principles



The ultimate goal of **FAIR** is to optimise the reuse of data.

#### indable

To aid automatic discovery of relevant datasets, (meta)data should be easy to find by both humans and machines and be assigned a persistent identifier.

#### Accesible

Limitations on the use of data, and protocols for querying or copying data are made explicit for both humans and machines.

#### nteroperable

(Meta)data should use standardised terms (controlled vocabularies), have references to other (meta)data and be machine actionable.

#### Reusable

(Meta)data are sufficiently well described for both humans and computers to be able to understand them and have a clear and accessible data usage license.



## **Horizon Europe mandate for RDM**

"<u>Horizon Europe</u> is the ambitious EU research & innovation framework programme for 2021-2027 with a budget of €95.5 billion."



Proper Research Data Management (RDM) is mandatory for any Horizon Europe project generating or reusing research data. It is a key part of Horizon Europe's open science requirements.

In Horizon Europe, beneficiaries must manage the digital research data generated in the action ('data') responsibly, in line with the <u>FAIR principles</u>, and should at least do the following:

- Prepare a Data Management Plan (DMP) and keep it updated throughout the course of the project
- Deposit data in a trusted repository and provide open access to it ('as open as possible, as closed as necessary')
- Provide information (via the same repository) about any research output or any other tools and instruments needed to re-use or validate the data

Keep in mind that 'research data' is a very broad concept and certainly not limited to numerical/tabular data.



## Slovenia: Scientific Research and Innovation Activities Act

Act on Scientific Research and Innovation Activity (Official Gazette of the Republic of Slovenia, No. 186/21)

Address Eng. "Scientific Research and Innovation Activities Act"

Date of acceptance
Date of publication
Effective date
Date of commencement of use

11/18/2021 30.11.2021 15/12/2021 01.01.2022 EVA 2017-3330-0062 EPA 2004 VIII SOP 2021-01-3695

http://www.pisrs.si/Pis.web/pregledPredpisa?id=ZAKO7733

#### I. GENERAL PROVISIONS

Principles (article 2):

\*\*\*

(6) Scientific research activity should be

based on the principles of open science, including in particular open access (open as possible, closed as necessary) to all research results, which should be findable, accessible, interoperable and reusable, as well as the use of responsible metrics for the evaluation of scientific research activity, and the involvement of the community and citizen science.

To be implemented with the ARRS in the future.



## **Experience from a real life**

#### **Common & Challenging situations in ADP**

- 1) I FORGOT TO ASK THE RESEARCH PARTICIPANTS FOR THEIR CONSENT TO SHARE DATA
- 2) I PROMISED THE PARTICIPANTS THAT I WOULD USE THE DATA EXCLUSIVELY FOR THIS PROJECT.
- 3) I NEED A DOI "ASAP", BUT I DON'T HAVE TIME TO TRANSCRIBE ALL 50 INTERVIEWS AND HAND THEM OVER TO THE ARCHIVES.

GOOD AND TIMELY DATA
MANAGEMENT PLANNING
CAN BE A GUARANTEE OF
DATA QUALITY.

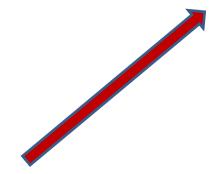




## Research data management services

#### Offered to researchers:

- Individual counselling
- Training (webinars, WS)
  - > RDM
  - > Data discovery



- On-line training materials

#### Data Management Expert Guide

This guide is designed by European experts to help social science researchers make their research data findable, accessible, interoperable and reusable.





### **Data Management Expert Guide (DMEG)**

The <u>CESSDA Data Management Expert Guide</u> (DMEG) aims to put social scientists at the heart of making their research data findable, understandable, sustainably accessible and reusable (**FAIR**).

You will be guided by different European experts who are - on a daily basis - busy ensuring long-term access to valuable social science datasets, available for discovery and reuse at one of the CESSDA social science data archives.

The core version of the DMEG has been created for CESSDA ERIC by a number of its service providers' experts at <u>ADP</u>, <u>AUSSDA</u>, <u>CSDA</u>, <u>DANS</u>, <u>FORS</u>, <u>FSD</u>, <u>GESIS</u>, <u>SIKT</u>, <u>SND</u>, <u>So.Da.Net</u> and <u>UKDS</u>. DANS has led the creation of the expert guide.

https://www.cessda.eu/Training/DMEG



**Chapters following research data lifecycle** 

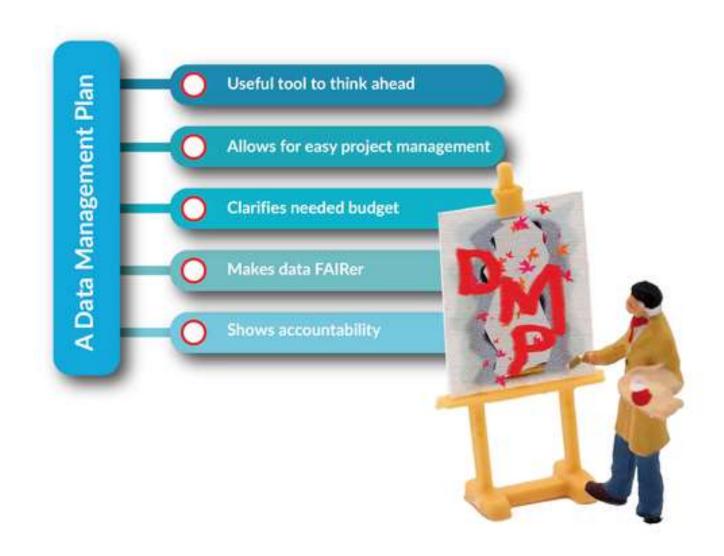


## A research data management plan

- A DMP is a formal document that provides a framework for how to handle the data material during and after the research project.
- It is a "living" document that changes together with the needs of a project and its participants.
- It is updated throughout the project to make sure that it tracks such changes over time and that it reflects the current state of your project.
- A lot of diversity exists in DMPs because they are always built around the particular needs of the data collected within your project.



## Research data management plan





## **Benefits of data management**



Easily find and understand data

Increase impact

Make research reproducible

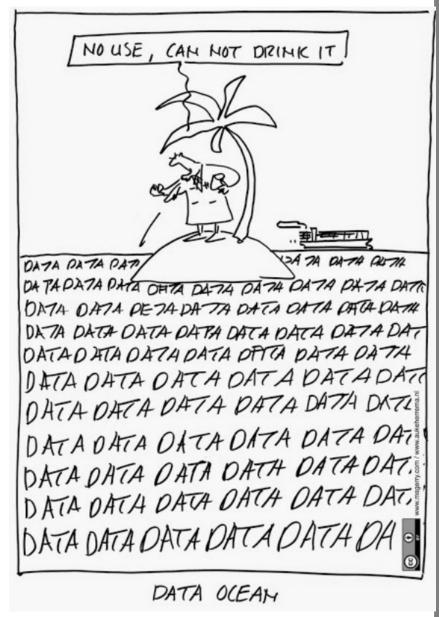
Increase reuse potential

Comply with funder mandates



#### Content

- About ADP & CESSDA
- FAIR principles & DMP
- Promoting Open Data in Slovenia
- Research data management rules in Slovenia (examples)
- About University of Ljubljana
- DMP PhD students of SSH
- DMP for all PhD students at UL





## **University of Ljubljana**

- founded in 1919
- the central and largest research institution in Slovenia with 30 % of all registered researchers
- > 23 faculties and three arts academies
- > approximately 40,000 undergraduate and postgraduate students
- approximately 6,000 higher education teachers, researchers, assistants and administrative staff

University of Ljubljana





https://www.uni-lj.si/university/



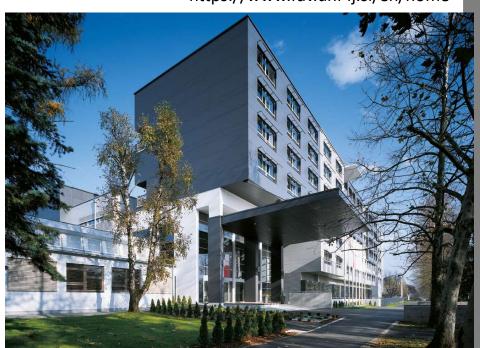
## **Faculty of Social Sciences (FDV)**

- > Founded in 1961
- Founder of social sciences in Slovenia
- offers 12 university undergraduate,
   1 higher undergraduate and 12
   postgraduate master's degree
   programmes
- ➤ 303 employees, including 115 academics and higher education staff, 96 researchers and 92 administrative and technical staff

- Social Sciences Research Institute: is the largest research institute for Social Sciences in Slovenia
- ODKJG Jože Goričar Central Social Sciences Library
- Slovenian Social Science Data Archives (est. 1997)

https://www.fdv.uni-lj.si/en/home





## **Promoting Open Data in Slovenia**

Aiming to change data (non)sharing culture in Slovenia

The top-down approach: heads of research organizations

Bottom up approach: working with researchers, librarians

Rules, regulations



Real life experience



## **Promoting Open Data in Slovenia**

• In **2010-2013**, ADP implemented the **Open Data project** for the Slovenian Ministry of Education and Science:



Bottom up approach: interviews with researchers and librarians from different disciplines.

- A draft proposal for a *Policy on the management of publicly funded research data*
- An *Action Plan* for the establishment of a system of open access to publicly funded research data

See: Štebe, Janez, Bezjak, Sonja, Lužar, Sanja (2013). Odprti podatki. URN:NBN:SI:DOC-US3XRRB2 from http://www.dlib.si

- In **2014-2015** with the support of the **FOSTER community**, ADP continued activities to raise awareness among researchers on the preparation of DMPs:
  - workshops for PhD students, librarians, researchers...
  - ŠTEBE, Janez; BEZJAK, Sonja; VIPAVC BRVAR, Irena. 2015. Preparing research data for open access, Guide for data producers, 2015. Faculty of Social Sciences, University of Ljubljana, Ljubljana, Slovenia.





Preparing Research Data for Open Access. Guide for Data Producers. Janez Štebe, Sonja Bezjak, Irena Vipavc Brvar

Size: 20 pages / e-book pdf & printed version / year of publication: 2015

ISBN: 978-961-235-723-8 (pdf)



### **Spread of data sharing culture in Slovenia**



The top-down approach: presentations to the heads of research organizations, research centers, and higher education institutions.

- Data management plan at the Faculty of Social Sciences, UL
  - ADP conducted a survey among the researchers to verify the extent of data production (carried out between 30 March to 20 April 2016)
  - The response rate was 34%. **56%** of the respondents answered that they **had generated research data** in the framework of a project or programme. These included: 32% survey data; 29% interview data; 13% data from administrative sources; 11% text data; 10% focus group data; 5% other
  - **Result:** inclusion of the **requirements on data management** in the *Rules on Organisation and Operation of the Faculty of Social Sciences of the University of Ljubljana* (adopted on 13 March 2017 and 9 March 2017)
    - > Instructions for the Research Data Management at the Faculty of Social Sciences
    - Creation of the institutional DMP form ADP asked for support



#### Basic RDMP for researchers at the FDV







#### Adapt your Data Management Plan

A list of Data Management Questions based on the Expert Tour Guide on Data Management



\_reative Commons Attribution-ShareAlike 4.0 International License.



The CESSDA Expert Tour Guide on Data Management is available at https://www.cessda.eu/DMEG

#### OSNOVNI NAČRT RAVNANJA Z RAZISKOVALNIMI PODATKI NA FDV, 2021

Prirejeno za objavo podatkov v ADP

Verzija obrazca 1.0, 15. 4. 2021

Obrazec se periodično posodablja. Za predloge in dodatne informacije pišite na arhiv.podatkov@fdv.uni-

Namen obrazca: je predstaviti osnovne informacije o zbiranju raziskovalnih podatkov v začetku raziskovalnega projekta, to je še pred začetkom zbiranja podatkov. Drugi namen je, da se predvidi in zagotovi objava in deljenje podatkov v ustreznem podatkovnem repozitoriju.

V teku projekta se načrt lahko periodično posodablja. Priporočeno se je o načrtu in njegovi izvedbi posvetovati s predvidenim podatkovnim repozitorijem, da se tako zagotovi ustrezna priprava podatkov in

Pričujoči obrazec je prilagojen navodilom FDV za objavo raziskovalnih podatkov v Arhivu družboslovnih podatkov in obsega samo osnovne informacije. Dobre raziskovalne prakse napotujejo na pripravo

Podlage za obrazec: so v Navodilih za ravnanje z raziskovalnimi podatki na Fakulteti za družbene vede, ki jih je na podlagi 26. člena Pravilnika o organizaciji in izvajanju raziskovalne dejavnosti na FDV na svoji seji 15. 3. 2021 sprejel Senat Fakultete za družbene vede.



#### **Basic RDMP for researchers at the FDV**





#### I OSNOVNE INFORMACIJE O RAZISKAVI

#### 1. Naslov projekta, v katerem poteka raziskava:

Naslov projekta oz. raziskave, npr. Slovensko javno mnenje 1999/4

#### 2. Odgovomost:

lme in priimek vodje projekta oz. nosilca raziskave

#### 3. Finančna podpora

Financer ter številka projekta ali pogodbe ali naročilnice

#### 4. Trajanje projekta

Obdobje trajanja projekta

#### 5. Ali raziskava vključuje zbiranje podatkov?

- a) DA -> Izpolnjevanje se nadaljuje
- b) NE Poiasnite
- 6. Ali raziskava vključuje uporabo sekundarnih podatkov?
  - a) DA -> Izpolnjevanje se nadaljuje
  - b) Ni

Če ste pri vprašanjih 5. in 6. obakrat izbrali odgovor "NE", pomeni, da ste z izpolnjevanjem obrazca zaključili. Pa vendar na kratko pojasnite, za kak tip raziskave gre:

Handed over to research office not later than 6 months after the start of the project

https://www.adp.fdv.uni-lj.si/usposobi/ZKG/nacrtovanje/#panel-15

#### **I BASIC INFORMATION ON STUDY**

- 1. Title of the project
- 2. Responsibility
- 3. Funder
- 4. Duration
- 5. Does your study include data collection (Y/N)
- 6. Does your study include use of secondary data (Y/N)



#### **Basic RDMP for researchers at the FDV**

#### For each data set to be provided:

II DATA DESCRIPTION

III RISK ASSESSMENT OF THE LEGAL AND ETHICAL ASPECTS OF DATA SENSITIVITY

IV PROVIDED PLACE OF PUBLICATION or ACCESS TO DATA

V EXCEPTIONS AND LIMITATIONS TO DATA SHARING



#### DMP for PhD students at FDV

- The PhD programme in Humanities and Social Sciences, coordinated by the Faculty of Social Sciences, University of Ljubljana.
- The requirement for the preparation and submission of the RDM in the context of the preparation of the PhD dissertation is included in the Regulations on the Organisation and Implementation of the Interdisciplinary Doctoral Programme in Humanities and Social Sciences (adopted 2018)
  - > At the submission of the doctoral thesis topic DMP must be presented (A. 40)
  - Doctoral Student Supervisory Board evaluates sumbitted DMP (A. 43. and 45)
  - ➤ The doctoral thesis shall indicate where the data is available and how it can be accessed (A. 51).



CESSDA's DMP proposed to students
ADP gives a 3 hour lecture for PhD students about it



## Data management plan for doctoral students at the University of Ljubljana

- Based on the experience of working with PhD students, ADP continued its outreach activities at the level of the University of Ljubljana.
- 2017-2021 a proposal for the inclusion of the data management planning into the *Rules and Regulations for Doctoral Studies at the University of Ljubljana* was developed.
- The Data Management Plan is in force from 1 October 2021, mentioned in several places in the Regulation.



Rules and procedures



## Data management plan for doctoral students at the University of Ljubljana



#### Research data management

Article 50

Rules and procedures

Research data generated and collected for the needs of a doctoral dissertation must be published or otherwise accessible in such a way that allows their visibility, access, interoperability and the possibility of renewed evaluation and use. The doctoral candidate shall submit research data to a data repository, data centre or research data archive, which shall satisfy the principle of verifiability, transparency and open science. As a priority the research data shall be sent to the sectoral national or international data centres intended for specific types of data, or to the UL Repository.

The doctoral dissertation shall state where the data are accessible and how they can be accessed. Exceptions in the sharing of data shall be justified where they involve personal or sensitive data,

or where there are reasons for protecting intellectual property or for non-disclosure of vulnerable areas, groups or species. In the case of implementing justified exceptions to data sharing, the doctoral candidate shall ensure an appropriate method of protecting the data and limiting access to such data in agreement with the data centre. In this case at least freely available metadata must be generated for the catalogue of the data centre, so as to indicate clearly where and under what conditions the research data are accessible.

Rules and Regulations for Doctoral Studies at the University of Ljubljana (PDF)



## Data management plan for doctoral students at the University of Ljubljana

#### Roles and responsibilities are defined and process set out:

- ✓ Students are required to <u>prepare a first draft of the research data</u> <u>management plan</u> already for the doctoral dissertation proposal (Article 36).
- ✓ At the Presentation of the results of research work before completion of the doctoral dissertation <u>candidate presents also the updated research data management plan</u> (Article 43).
- ✓ A <u>doctoral dissertation shall include: the final draft</u> of the research data management plan (Article 45).
- ✓ <u>Supervisors and co-supervisors shall advise</u> the doctoral candidate in the planning of research and research data management (Article 33).
- ✓ In its assessment, the comitee shall also <u>determine the suitability of</u> the draft of the research data management plan (Article 40).



### Implementation of the Regulations into practice

A need to prepare a template RDM plan to be used by doctoral students, their supervisors and the Committee was recognized.

ADP proposed to use the Science Europ

> developed internationally by ex

> aiming to make it suitable for landscape

> is internationally recogn order to avoid a flood specific needs but standards.

> the RDM Guid and RDM G

https://science

afferent disciplines

and heterogeneous research

commended by Science Europe in templates that may be tailored to ed with international common

earchers, RDM Guidance for Organisations eviewers.

/-priorities/research-data/research-data-management/





## Implementation of the DMP into practice

Guidelines for research data management planning for PhD students at the University of Ljubljana

#### Data management plan (DMP)

DMP Draft - when submitting your doctoral dissertation proposal

#### Name of the doctoral student:

Doctoral programme and scientific field:

Proposed title of the doctoral dissertation:

#### Type of data and methods used for data collection or production

- 1. What data will be collected or produced?
- 2. How will new data be collected or produced and/or how will existing data be re-used for the purposes of your doctoral thesis?
- 3. Will you be dealing with sensitive data? If yes, how will you ensure compliance with ethical requirements when producing and/or creating data?

#### How data will be stored and protected during research for a doctoral thesis

- 1. How will data be stored?
- If you will be dealing with sensitive data, how will you keep it safe and secure? (Move to the next question if not applicable)

#### Long-term data availability and storage

- In which data repository will you store the data for the long term after the completion of the research work and make it accessible in accordance with the requirement of Article 50 of the Regulations on Doctoral Studies of the UL?
- 2. Do you plan to restrict access to the data for a certain period? If yes, please explain the reasons for this (e.g. for intellectual property or patent protection, or other reasons).

A NEW
INSTITUTIONAL
TEMPLATE WAS
DEVELOPED





## Introduction and training

- ➤ The topic "research data management" was introduced on the website of the doctoral school.
- ➤ University of Ljubljana Doctoral School organised a series of events on the management of doctoral students' research data in the context of their doctoral studies (2021/2022)

# DOCTORAL SCHOOL University of Ljubljana

The Doctoral School of the University of Ljubljana will organize trainings for doctoral students and supervisiors.

- 7. 4. 2022: RESEARCH DATA MANAGEMENT BASICS FOR PHD STUDENTS
- 12. 5. 2022 MANAGEMENT OF RESEARCH DATA ACCORDING TO THE FAIR PRINCIPLES (FINDABLE, ACCESSIBLE, INTEROPERABLE AND REUSABLE)

More information about future trainings on research data management organized by UL Doctoral School will be published <a href="here.">here.</a>



## **Experience so far**

There are still rare cases when researchers and students ask support at DMP.

- researchers *do not understand* the meaning and purpose of the preparation of the DMP,
- try to delay the publication of data or do not want to share data, arguing that it is in the interest of the institution that data are reserved for the researchers who collected them,
- DMP prepared after the data collection, and the completed DMP shows that they made one of the common mistakes that timely preparation of the DMP would have prevented
  - they did not ask the participants for their consent to share the data
  - they did not resolve copyright/licences





## Challenges and support needed

- 1) introduction of the regulations
- 2) the monitoring of the implementation
- raising awareness among researchers and PhD students about the timely preparation of the DMP
- 4) individual advice at different steps of the data management provided





## Challenges and support needed

A particular challenge for data archives is the **variety of DMP templates** (institutional: for researchers and for PhD students, sectoral, international).

#### **Disciplinary specific:**



- DMP for social sciences developed by CESSDA
- You can view and download the checklist as pdf (CESSDA, 2019a) or editable form (CESSDA, 2019b)

#### Institutional:

- DMP for PhD students at University of Ljubljana
- DMP for researchers at the Faculty of Social Sciences, UL

#### **General:**

RDM Guidance for Researchers





## **Examples of DMPs**

### Another challenge for data archives:

- > Data archive gives advice
- > Another committee evaluates the work

#### **General:**

- RDM Guidance for Researchers
- Template for Data Management Plans
- Guiding the Selection of a Trustworthy Repository
- RDM Guidance for Reviewers
- Template for a Data Management Plan Evaluation Rubric







### **Conclusion**

"Varying organisational requirements can be confusing for researchers who work with different organisations, who change their home institution, or who work together with researchers from other organisations where different rules apply."

(Science Europe, 2022)



### IF YOU HAVE ANY FURTHER QUESTIONS...



#### ... sonja.bezjak@fdv.uni-lj.si

University of Ljubljana Faculty of Social Sciences

**Social Science Data Archive** 

Kardeljeva ploščad 5 1000 Ljubljana Slovenia



www.adp.fdv.uni-lj.si



arhiv.podatkov@fdv.uni-lj.si



Arhiv.Druzboslovnih.Podatkov



@ArhivPodatkov









