Plan Overview

A Data Management Plan created using DMPonline

Title: Re-defining Nature-based Solutions

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Template: UU Data Management Plan (DMP)

Project abstract:

Nature-based Solutions (NbS) offer actions to work with nature, to address societal challenges and provide benefits for both human well-being and biodiversity. The Re-NbS project will use a decolonial lens to understand the historical roots of the concept and how NbS has been adapted to the Global South context.

Nature-based solutions were initially introduced in the Global North but are now widely adopted, including in the Global South. Here, NbS are applied for coastal protection and carbon storage through, for example, mangroves. Interestingly, there is a tendency for countries in the Global North to involve in designing and implementing mangrove NbS in the Global South. These facts raise critical questions of whether this North-South collaboration integrates local knowledge and considers inclusivity in the process, implements good governance, and achieves expected socio-ecological impacts.

This project will use the decolonization lens to understand historical roots of the concept and how NbS has been adapted to the Global South context. Ecological restorations and socio-ecological system governance will be used as umbrella concepts, where interactions between societal and ecological systems become the core 'issues to govern’.

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Re-defining Nature-based Solutions

Data Collection

1.1 Will you re-use existing data ?

If yes: explain which existing data you will re-use and under which terms of use.

- No, I will be collecting/generating new data

1.2 Describe your data.

Fill the table below with a brief description of the data, including the type, format and volume.

#	Data Description	Data Type	Format	Total Volume
1	**Satellite imagery**: high resolution such as Worldview, Sentinel, and Landsat to map landscape distribution	Geospatial information	.geo.json	2 GB
2	**Digital Elevation Models (DEM)**: to analyze topographic features	Geospatial information	.tif	2 GB
3	**Bathymetric data**: to assess seabed topography and impact on wave propagation and coastal erosion	Geospatial information	.tif	2 GB
4	**Field data:** to validate remote sensing data and collect ground truth information	Images	.jpeg	10 GB
5	**Field data:** to validate remote sensing data and collect ground truth information	Tabular	.csv	200 MB
6	**Governance capacity data:** through workshop & focus group discussion	Tabular	.csv	200 MB
7	**Interview**	Audio	.wav	5 GB
8	**Questionnaire**	Tabular	.csv	200 MB

Data Documentation

2.1 Describe the documentation and metadata that you will use to to make your data reproducible and interoperable.

Describe which files you will provide, along with a brief description of the information they will contain, to make your data reproducible and interoperable. Describe the information that you will provide to make the data items in questions 2.1 reusable and interoperable. If using a specific metadata standard, please mention this below.

In my research, I will have two separate assessment: (1) Quantifying the exposure of natural hazards and (2) Governance capacity. For each experiment there will be an accompanying README.txt file. This file will contain an in-depth explanation of the methodological procedures used to collect and analyze the data.

I will also provide metadata of all data used, as follows:

Satellite imagery: general information, acquisition details, geospatial information (CRS, spatial resolution), spectral information, radiometric and atmospheric conditions, data source and usage.

Digital elevation models & bathymetric data: general information, spatial information, elevation/depth characteristics, data acquisition and processing, quality and validation, temporal information.

Field data (images): basic file information, geolocation, title, description, author/creator, copyright information.

Field data (tabular): any measurement with specific unit, column definition.

Governance capacity data (tabular): participant details**,** any measurement with specific unit, column definition.

Interview (audio): participant information, session details, content information.

Questionnaire (tabular): participant information, session details, content information.

2.2 Describe the folder structure you will provide to make your data reproducible and interoperable.

Describe the folder structure, naming conventions and/or version control you will use for this project.

Folder structure will be broken down as follows:

>Assessment 1

>> Raw

>>> Audio

>>> Image

>>> Map

>>> Document

>> Processed

>>> Audio

>>> Image

>>> Map

>>> Document

Naming convention will be consistent throughout the files and version control will be kept track of by

adding V1, V2, and so on.

Data Storage

3.1. Select the storage solution(s) where you will store and back-up your data.

Select the locations where your data will be stored. You may select more than one. Please describe the storage solution and the backup strategy of your storage solution if it does not appear in the list below.

- YoDA
- U: Drive or O:Drive
- Other (please specify below)
- One Drive

Back up to personal external storage (hard disk)

Data Privacy and Security

4.1 Will you be collecting or using personal data ?

Personal data is any data which, alone or in combination with other information, can identify a living person. Such data must abide by the GDPR and requires additional safeguards and documentation to be processed lawfully.

- Yes, I will collect and/or use personal data

4.2 What is the legal basis by which you are collecting and/or processing this data ?

If you are uncertain as to which legal basis applies to your type of research ; please do not hesitate to contact us at info.rdm@uu.nl or by using the "Request feedback" button and leaving a comment alongside this question.

- Informed consent

4.3 Select the privacy and security measures you will employ to protect the privacy of your data subjects. Check all that apply.

- Pseudonymization

- Minimization
- Access control
- Secure storage

4.4 Who is the controller of the personal data ?

The controller of the personal data is the entity which determines what is done with the data. In most cases the controller is Utrecht University.

Utrecht University

4.5 How will ownership and intellectual property rights of the data be managed?

Describe who controls access to the data and who determines what is done to the data.

The ownership and intellectual property rights are held by Utrecht University. During the project, all project members will have access to the data, including members of the research group, external partners, and master's students.

Data Selection, Preservation & Sharing

5.1 Describe the data you will be preserving and the storage solution where it will be preserved?

Describe which data will be preserved under long-term storage. You may refer back to the data described in question 1.2 to specify which data will be preserved. Explain where you will preserve your data, and how procedures are applied to ensure the survival of the data for the long term.

All data collected will be preserved and kept for at least 10 years. They will be stored in One drive and personal external storage.

5.2 Describe the data you will be sharing and the repository where it will be shared?

Describe which data you will be sharing. Select where you will make your data findable and available to others. If selecting "Other" please specify below which repository and provide a URL.

Please also write below if you will apply any conditions to the re-use of your data. (i.e. Creative commons license or Data Transfer Agreement).

- YoDA

Only the non personal data and final version will be shared publicly in YoDA. The data will be re-usable under a CC-BY creative commons license.

5.3 Are specialized, uncommon or expensive software, tools or facilities required to use the data?

Please list any specialized, uncommon or expensive software, tools or facilities that are absolutely required to obtain, use or handle your data, if any.

No, all the data can be accessed by free, open-source or non-proprietary software (QGIS, Ms. Office)

Data Management Costs and Resources

6.1 What are the foreseeable research data management costs and how do you expect to cover them ?
Please specify the known and expected costs involved in managing, storing and sharing your data. Also explain how you plan to cover these costs.

So far, we don't anticipate significant data management costs. Currently, the only potential cost we foresee is related to data storage, possibly requiring the purchase of external hard drives (100 euro). The research budget may cover these expenses.

6.2 Who will be responsible for data management?
Please specify who is responsible for updating the DMP and ensuring it is being followed accordingly.

The PhD student as principal investigator, Dinda Prayunita, will be responsible for maintaining the DMP up to date.

6.3 State if you contacted an RDM consultant from Utrecht University to help you fill out your DMP.

Please list their name and date of contact.
This is mandatory for NWO grants.

n/a