Plan Overview

A Data Management Plan created using DMPonline

Title: Paleoecology in Scandinavian peatlands

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Template: 1. UvH template PhD/WP

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Project abstract:

This PhD project seeks to understand the impacts of regional climate changes and the local landscape and vegetation changes on carbon accumulation in peatlands. Did carbon (C) accumulation differ in different climate regimes, from oceanic to continental to arctic during the Holocene? Did changes of local vegetation and water table influence in the carbon accumulation? How did human impact and land-use changes influence their capacity for carbon accumulation, particularly during warmer periods?

The project will reconstruct the main ecological and climatic factors in each of the three sites and their relationship to carbon accumulation capacity. At a local level, variables such as natural succession, change in land use, and local temperature and moisture regimes will be evaluated to determine their relevance in the past. Once a better understanding of the carbon accumulation changes and drivers is obtained, it can be used to evaluate the impacts of current progressive warming and expected rise of precipitation along with modelling ecological and climate trends, thus reducing uncertainties for future scenarios.

The methods for achieving the goals will include: 1. a first stage of compilation and analysis of paleoenvironmental data from different online resources including databases and data from published articles focused on northern peatlands, 2. fieldwork for the collection of 3 new peat cores at different geographical sites following a hydrological gradient, 3. laboratory analysis of the biological and sedimentological proxies of the peat cores, and the possibility to link the results to an established climate/carbon model. The laboratory work at BIO will include pollen and macrofossils analysis to reconstruct the local vegetation, testate amoeba analysis to reconstruct the water table changes in the sites, C/N measurements to reconstruct primary productivity and loss-on-ignition (LOI) for determining the percentage organic matter. 4. The analyses from external institutions from UiB will include radiocarbon and isotope analysis to generate the age-depth models and to determine the carbon accumulation rate of the peat cores. .

The proxies will be analyzed at multidecadal, centennial, and millennial scales to disentangle timescales where drivers caused stronger feedbacks.

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End date: 28-05-2024

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Paleoecology in Scandinavian peatlands

1. General features of the project

Please fill in the table the table below.

DMP template version number	1.0 (do not change!)
Project number (if available)	
Name of Research folder on the UvH R: drive	
Name Chairgroup	
Name Chairgroup leader	
Name Promotor	
Name data consultant/data steward	
Check date data consultant/data steward	<to be filled in by de data consultant>

2. Data collection and re-use

2.1 In collecting data for my project, I will:

- Generate new data
- Use existing data (for example interview reports and or other documents or recordings collected in another context) (please specify below)

Existing data from Neotoma database will be used in addition to new data generated from peat cores in Norway that involves, water table , carbon and pollen reconstruction.

2.2 I will be reusing existing data, and I have the owner's permission for that.

- Yes I will be reusing existing data but no permission is required, since the data are openly accessible

2.3 In collecting new data, will you be collaborating with other parties such as project partners and/ or suppliers of data.

- No

2.4 What method(s) do you use for the data collection?

- Lab experiment(s)
- Field experiments/interventions
- Other

2.5 Check boxes and describe the tools/software you will use for the data collection.

I will be using online databases

2.6 Describe what metadata and documentation will accompany the data?

will be in the form of csv files of the data

3. Data storage

3.1 Will you store your data at the universities network drive?

- Yes

3.3 Do you need to store non-digital data, e.g. on paper? If so, please describe which data, whether the data are personal data and who will have access to the data.

No

3.2 Please fill in the table below about which file types you will have and what the format and volume will be. Think about all information that you will have at the end of the project.

File type	Format	Volume
datsets	csv	

4. Data analysis

4.1 What will be the method by which you will analyse the data?

Multivariate analysis

4.2 Which tools will you need to process, analyse or visualise the data?

- Other

R

5. Participants and Personal data

5.1 Does your research involve human subjects?

- No

8. Data Preservation and Archiving

8.1 What data will be in your data package? Please explain if necessary.

- Several versions of processed data
- Raw data

8.2 In which repository will the data package be archived and made available for re-use, and under which license?

- I will deposit my data package with DANS and will use the Dublin Core metadata standard

8.4 Upon finishing your project you need to hand over the data package to the UvH, so you need to inform yourself in how to do this. Please read the guidance and check the proper box below.

- I have read the minimal requiremenets before graduation on the intranet and will comply to that

9. Data Sharing

9.1 Describe what re-use of your research data you intend or foresee, and what audience will be interested in your data.

My peers will be re-using my research dataset to incorporate in larger databases and to use them for new research questions

9.2 Are there sharing requirements by third parties? (e.g. funder data sharing policy)? Please explain how you will comply with those requirements.

- No

9.3 Are there any possible restrictions to data sharing or embargo periods?

No

9.4 Please state per data type in what way the scientific community will have access to your data.

Data type	Full access	Restricted access	Embargo period	Data immediately linked in the publicatoin	Explanation
radiocarbon data	yes	no	no	yes	it will be freely accessible
pollen historical data	yes	no	no	yes	it will be freely accessible
LOI data	yes	no	no	yes	it will be freely accessible

10. Costs

10.1 Will you have to hire personnel for the data collection process or any other stage in datamanagement? Please explain and make an estimation.

- No

10.2 Will there be costs for data archiving, e.g. when you work with very large datasets, such as audio and video? Please explain and give an estimation.

- No