FWO DMP Template

Project supervisors (from application round 2018 onwards) and fellows (from application round 2020 onwards) will, upon being awarded their project or fellowship, be invited to develop their answers to the data management related questions into a DMP. The FWO expects a **completed DMP no later than 6 months after the official start date** of the project or fellowship. The DMP should not be submitted to FWO but to the research co-ordination office of the host institute; FWO may request the DMP in a random check.

At the end of the project, the **final version of the DMP** has to be added to the final report of the project; this should be submitted to FWO by the supervisor-spokesperson through FWO's e-portal. This DMP may of course have been updated since its first version. The DMP is an element in the final evaluation of the project by the relevant expert panel. Both the DMP submitted within the first 6 months after the start date and the final DMP may use this template.

1. General Information	
Name applicant	**Glenn Strypsteen**
FWO Project Number & Title	**1243022N** **A field-based model to predict early-stage dune development**
Affiliation	☒ KU Leuven ☐ Universiteit Antwerpen ☐ Universiteit Gent ☐ Universiteit Hasselt ☐ Vrije Universiteit Brussel ☐ Other:
2. Data description	
Will you generate/collect new data and/or make use of existing data?	☒ Generate new data ☒ Reuse existing data

Describe the origin, type and format of the data (per dataset) and its (estimated) volume

*If you **reuse** existing data, specify the **source** of these data.*
*Distinguish data **types** (the kind of content) from data **formats** (the technical format).*

Existing data:

Type of data	**Format**	**Volume**	**Originating from**
Regional weather station data (wind velocity, 3sec wind gusts, wind direction, precipitation)	.txt	2 GB	Meetnet Vlaamse Banken (local agencies)
Tidal elevation data from regional gauges	.txt	1 GB	Meetnet Vlaamse Banken (local agencies)
Data on significant wave heights and wave direction from regional wave buoys	.txt	2 GB	Meetnet Vlaamse Banken (local agencies)
LiDAR data	.txt, .xyz	10 GB	Eurosense, Flemish Goverment

Generated data:

Type of data	**Format**	**Volume**	**Originating from**
Timeseries of local weather station data (wind velocities, wind direction, temperature)	.dat	2 GB	Local meteorological station, field measurements
Timeseries of aeolian saltation intensity	.dat	1 GB	Local saltiphone, field measurements
RTK-GPS measurements	.txt, .csv	1 GB	Field measurements
Qualitative images of beach state	.jpg	10 GB	GoPRO camera's
Data on aeolian sand transport rates	.xls	1 GB	Field measurements
Data on surface moisture contents, shell and coarse materials and grain size distributions	.xls	2 GB	Field measurements

	Drone survey data of topography and marram grass	.TIFF, .jpg	50 GB	Drone surveys conducted by ATO, Flemish Government
	Characteristics of vegetation	.xls	2 GB	Field measurements
	Model codes and output	.py, .txt, .mat	50 GB	Aeolis model, MATLAB

3. Ethical and legal issues	
Will you use personal data? If so, shortly describe the kind of personal data you will use AND add the reference to your file in your host institution's privacy register. *In case your host institution does not (yet) have a privacy register, a reference is not yet required of course; please add the reference once the privacy register is in place in your host institution.*	☐ Yes ☒ No If yes: - Privacy Registry Reference: - Short description of the kind of personal data that will be used:
Are there any ethical issues concerning the creation and/or use of the data (e.g. experiments on humans or animals, dual use)? If so, add the reference to the formal approval by the relevant ethical review committee(s).	☐ Yes ☒ No If yes: - Reference to ethical committee approval:
Does your work possibly result in research data with potential for tech transfer and valorisation? Will IP restrictions be claimed for the data you created? If so, for what data and which restrictions will be asserted?	☐ Yes ☒ No If yes, please comment:

Do existing 3rd party agreements restrict dissemination or exploitation of the data you (re)use? If so, to what data do they relate and what restrictions are in place?	☒ Yes ☐ No If yes, please comment: **The data of regional weather conditions, drone surveys, LiDAR surveys are obtained through local authorities. These data cannot be shared beyond the project collaborators.**

4. Documentation and metadata	
What documentation will be provided to enable understanding and reuse of the data collected/generated in this project?	**All generated model output is produced in a standardized and documented way, either with metadata available inside the files, or via user documentation. AeoLiS is an open-source model (https://aeolis.readthedocs.io/en/latest/model.html), documented and published on GitHub after and during the development.** **The collected field measurement data will be accompanied by a ReadMe file containing information on the data collection, structure, and content.**
Will a metadata standard be used? If so, describe in detail which standard will be used. If not, state in detail which metadata will be created to make the data easy/easier to find and reuse.	☒ Yes ☒ No If yes, please specify: **The generated model output and metadata are standardized as described in https://aeolis.readthedocs.io/en/latest/model.html**

5. Data storage & backup during the FWO project	
Where will the data be stored?	**All data will be stored on local and shared OneDrive servers and large volume network servers. The algorithms and codes (relevant and personal scratch files) are stored in private GitHub repositories (or public once published) in the cloud, with copies on local devices for working on them.**
How will the data be backed up?	**All data is automatically backed up one OneDrive serves and on large volume network servers with regular back-up procedures, according to the KU Leuven security standards.**

Is there currently sufficient storage & backup capacity during the project? If yes, specify concisely. If no or insufficient storage or backup capacities are available, then explain how this will be taken care of.	☒ Yes **There is sufficient storage and back-up capacity for the project. If more storage would be needed, this is taken on by the research group working budget.** ☐ No If no, please specify:
What are the expected costs for data storage and backup during the project? How will these costs be covered? *Although FWO has no earmarked budget at its disposal to support correct research data management, FWO allows for part of **the allocated project budget** to be used to cover the cost incurred.*	**Possible costs are covered by the research group working budget.**
Data security: how will you ensure that the data are securely stored and not accessed or modified by unauthorized persons?	**The data are stored on network servers following KU Leuven security standards; all data are secured with access restrictions on file-system level.**

6. Data preservation after the end of the FWO project FWO expects that data generated during the project are retained for a period of minimally 5 years after the end of the project, in as far as legal and contractual agreements allow.	
Which data will be retained for the expected 5 year period after the end of the project? In case only a selection of the data can/will be preserved, clearly state the reasons for this (legal or contractual restrictions, physical preservation issues, ...).	**All created data (field observations, results, models, and publications) will be retained for at least 5 years after the end of the project. Either through availability at third party archives, through storage on the network servers, or through GitHub.**
Where will these data be archived (= stored for the long term)?	**Relevant algorithms and codes are stored long-term on GitHub. The other created data will be archived on the KU Leuven network servers.**

What are the expected costs for data preservation during these 5 years? How will the costs be covered? *Although FWO has no earmarked budget at its disposal to support correct research data management, FWO allows for part of **the allocated project budget** to be used to cover the cost incurred.*	**Additional costs for back-up and storage are covered with the research group working budget.**

7. Data sharing and reuse	
Are there any factors restricting or preventing the sharing of (some of) the data (e.g. as defined in an agreement with a 3rd party, legal restrictions)?	☒ Yes ☐ No If yes, please specify: **The data of regional weather conditions, drone surveys, LiDAR surveys are obtained through local authorities. These data cannot be shared beyond the project collaborators.**
Which data will be made available after the end of the project?	**Relevant algorithms will be made available on GitHub once an accompanying paper is published. Similarly, field observation data and models will be made available with an accompanying paper for repeatability.**
Where/how will the data be made available for reuse?	☒ In an Open Access repository ☒ In a restricted access repository ☒ Upon request by mail ☒ Other (specify): **Relevant algorithms will be released on GitHub. Field observation data and models will be available upon request. Journal publications will be made available on the journal website, and the KU Leuven tool Lirias.**
When will the data be made available?	**Upon publication of the research results**
Who will be able to access the data and under what conditions?	**The created data will be available to anyone, provided that they give appropriate credit to the creators.**

What are the expected costs for data sharing? How will these costs be covered? *Although FWO has no earmarked budget at its disposal to support correct research data management, FWO allows for part of **the allocated project budget** to be used to cover the cost incurred.*	**None**

8. Responsibilities	
Who will be responsible for the data documentation & metadata?	**The project PI**
Who will be responsible for data storage & back up during the project?	**The project PI, project coordinator**
Who will be responsible for ensuring data preservation and sharing?	**The project PI, project coordinator**
Who bears the end responsibility for updating & implementing this DMP? *Default response: The PI bears the overall responsibility for updating & implementing this DMP*	**The PI bears the end responsibility of updating & implementing this DMP.**