Tree mortality dynamics in response to invasive forest pests

A Data Management Plan created using DMP Assistant

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Affiliation: Other Organisation

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Project abstract:

Modelling tree death over time from invasive species, comparing the mortality curves across tree species and invasive forest pests.

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Responsibilities and Resources

Who will be responsible for data management? Will the Principal Investigator (PI) hold all responsibility during and beyond the project, or will this be divided among a team or partner organizations?

Marie and Emma

In the event that the PI leaves the project, who will replace them? Who will take temporary responsibility until a new PI takes over?

Emma

List all expected resources for data management required to complete your project. What hardware, software and human resources will you need? What is your estimated budget?

Our personal computers, no budget

Data Collection

What types of data will you collect, create, link to, acquire and/or record?

We will be using publicly available data from previous publications

Answer the following regarding file formats:

A. **What file formats do you expect to collect (e.g. .doc, .csv, .jpg, .mov)?**
B. **Are these file formats easy to share with other researchers from different disciplines?**
C. **In the event that one of your chosen file formats becomes obsolete (or is no longer supported) how will you ensure access to the research data?**
D. **Does your data need to be copied to a new media or cloud platform, or converted to a different file format when you store or publish your datasets?**

1. File formats include Excel files, .csv files, .rds files and R scripts.
2. The code is all open source
3. The code to produce the data will be availble
4. Data and code will be stored on osf throughout

Answer the following regarding naming conventions:

A. **How will you structure, name and version-control your files to help someone outside your research team understand how your data are organized?**
B. **Describe your ideal workflow for file sharing between research team members step-by-step.**
C. **What tools or strategies will you use to document your workflow as it evolves during the course of the project?**

1. We will keep a readme file for all methodology
2. We will use github and osf for file sharing
3. We will keep track of written methodology as we go on osf

Documentation and Metadata

What support material and documentation (e.g. ReadMe) will your team members and future researchers need in order to navigate and reuse your data without ambiguity?

The github and osf folders will have descriptions and metadata

How will you undertake documentation of data collection, processing and analysis, within your workflow to create consistent support material? Who will be responsible for this task?

Marie and Emma will produce the scripts and metadata necessary to reproduce the analysis

Do you plan to use a metadata standard? What specific schema might you use?

NA (Bennett lab specifications)

How will you make sure that a) your primary data collection methods are documented with transparency and b) your secondary data sources (i.e., data you did not collect yourself) — are easily

identified and cited?

a) NA
b) referring to original publication(s)

Storage and Backup

List your anticipated storage needs (e.g., hard drives, cloud storage, shared drives). List how long you intend to use each type and what capacities you may require.

personal laptops and cloud storage backups ~5GB - backed up to cloud indefinitely, 8 months on personal machines

What is your anticipated backup and storage schedule? How often will you save your data, in what formats, and where?

continuous cloud backup in original formats

Keeping ethics protocol review requirements in mind, what is your intended storage timeframe for each type of data (raw, processed, clean, final) within your team? Will you also store software code or metadata?

stored on github, all data are publicly available, GPL licensed code

Sharing, Reuse, and Preservation

How will your data (both raw and cleaned) be made accessible beyond the scope of the project and by researchers outside your team?

it will be shared on OSF and github

Is digital preservation a component of your project and do you need to plan for long-term archiving and preservation?

OSF is a stable long term storage source

What data will you be sharing publicly and in what form (e.g. raw, processed, analyzed, final)?

All data will be shared publicly

Have you considered what type of end-user license to include with your data?

GPL 3 for code CC-BY for data

What tools and strategies will you take to promote your research? How will you let the research community and the public know that your data exists and is ready to be reused?

Honours symposium

Ethics and Legal Compliance

Are there institutional, governmental or legal policies that you need to comply with in regards to your data standards?

NA

Will you encounter protected or personally-identifiable information in your research? If so, how will you make sure it stays secure and is accessed by approved team members only?

NA

Before publishing or otherwise sharing a dataset are you required to obscure identifiable data (name, gender, date of birth, etc), in accordance with your jurisdiction's laws, or your ethics protocol? Are there any time restrictions for when data can be publicly accessible?

NA