**I-GUIDE RESEARCH PRODUCT MANAGEMENT PLAN**

The I-GUIDE Research Product Management Plan is an easy-to-use tool that will help you systematically manage and document your project’s datasets, models, and other research outputs.

Using this tool will help mitigate ethical risks from your research; ensure compliance with relevant policies from funding agencies, journals, and institutions; and facilitate effective, efficient, and trustworthy dissemination to targeted stakeholders.

Move step-by-step through the Plan, completing what information you can. Start to complete what fields you can right at the beginning of your project. You are unlikely to be able to complete all fields at this early stage. However, you can revisit and update this Plan throughout your project.

As you acquire, create, or modify datasets and models, record them in the Dataset and Model Inventories (sections #6 and #7 of this Plan). You should also create or update a Dataset or Model Card for each of these datasets and models.

**Research Product Management Plan (RPMP) Attribution and License**

The Research Product Management Plan (RPMP) was designed for use on the I-GUIDE platform.

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1. **BASIC INFORMATION**

|  |  |
| --- | --- |
| **Project Name** | (Enter the project name exactly as it appears on the funding proposal) |
| **Funder(s)** | (List all relevant funding agencies, with grant reference numbers) |
| **Project Description** | *(Summarize key objectives, research questions, intended impact, and the role of data and models)* |
| **Principal Investigator (PI)** | *(*Name, affiliation, contact details, ORCID ID if available*)* |
| **Contact Person** | *(*If different from PI; include contact details*)* |
| **Date of First Version** | *(*When this Plan was first created*)* |
| **Date of Latest Update** | *(*When this Plan was last revised*)* |
| **Relevant Policies and Standards** | *(List relevant institutional, funder, or regulatory guidelines: e.g., GDPR, NSF Open Science Policy, FAIR Principles, NIST AI RMF)* |
| Intended Research Outputs and Impact | ☐ Academic publications (journal papers, conference proceedings) ☐ Dissertation or master’s/undergraduate thesis ☐ Policy and decision support (government, non-governmental organizations, non-profits) ☐ Community empowerment & stakeholder engagement ☐ Industry applications  ☐ Informing the public (blogs, outreach, visualizations, etc.)  ☐ Other: *(Specify)* |

1. **DATASETS**

**2a. Acquisition, Collection, and Refinement of Datasets**

|  |  |
| --- | --- |
| Primary Datasets | *(Types, formats, structures, and volume of data expected to be internally generated)* |
| Methods for Collection and Generation of Primary Datasets | *(Standards, tools, and methodologies)* |
| Secondary Datasets | *(Types, formats, structures, and volume of data expected to be acquired from external sources)* |
| Processing | *(Describe how raw data will be cleaned, transformed, and processed before analysis)* |
| Quality Control | *(List quality control procedures, e.g., validation, peer review)* |

**2b. Documentation for Datasets**

|  |  |
| --- | --- |
| **Metadata Standards** | *(List metadata standards, e.g., ISO 19115 for geospatial datasets, Dublin Core for earth science datasets)* |
| Metadata Creation and Maintenance | *(Describe how metadata will be created, managed, and updated)* |

**2c. Compliance Measures for Datasets**

|  |  |
| --- | --- |
| Privacy and Ethical Compliance | *(List measures to be taken to mitigate ethical harms, e.g., consent processes, anonymization, addressing over- or underrepresentation of demographic groups or geographic areas)* |
| Intellectual Property | *(Describe who has rights to access, use, modify, disseminate these datasets, and for what purposes; describe licensing terms)* |

**2d. Storage, Security, and Backup of Datasets**

|  |  |
| --- | --- |
| Storage Locations | *(State where datasets will be stored, e.g., institutional servers, cloud storage, etc.)* |
| File Naming | *(Describe file naming conventions)* |
| Versioning | *(Describe methods for version control)* |
| Security | *(Describe access control and encryption methods, and how permissions will be enforced)* |
| Backup and Recovery | *(State backup frequency, and where backups will be stored)* |

**2e. Long-Term Management of Datasets**

|  |  |
| --- | --- |
| Preservation Criteria | *(State criteria for selecting datasets for preservation beyond this project, e.g., relevance, regulatory compliance, potential utility for yourselves or others)* |
| Preservation Plan | *(State repositories to be used for long-term dataset storage, and retention duration)* |
| Sharing Strategy | *(Describe when, how, with who, and for what purposes datasets will be shared)* |
| Restrictions and Embargoes | *(Describe restrictions or embargoes on dataset sharing, if applicable)* |
| Access | *(Describe procedures for secure access by various stakeholders, e.g., other researchers, policymakers, members of the public)* |

1. **MODELS**

**3a. Acquisition, Collection, and Refinement of Models**

|  |  |
| --- | --- |
| Types and Purposes of Models Acquired from External Sources | *(Describe models that will be acquired by project team members, e.g., machine-learning, spatial simulation, geospatial analysis; State possible sources, e.g., researchers’ names, repositories, commercially available)* |
| Adaptation of Models Acquired from External Sources | *(Specify techniques used, e.g., new training data)* |
| Types and Purposes of Models Generated Internally | *(Describe models that will be generated by project team members)* |
| Development Methods of Models Generated Internally | *(Specify techniques used)* |
| Types and Purposes of Models Generated by Integration of Pre-existing Models | *(Describe models that will be generated by integration of two or more pre-existing models)* |
| Integration of Models | *(Specify techniques used)* |
| Quality Assurance | *(Validation criteria and processes)* |

**3b. Documentation for Models**

|  |  |
| --- | --- |
| **Documentation Standards** | *(List standards used to promote reproducibility, transparency, explainability, and interpretability of models)* |
| Documentation Creation and Maintenance | *(Describe how documentation will be created, managed, and updated)* |

**3c. Compliance Measures for Models**

|  |  |
| --- | --- |
| Transparency, Explainability, and Interpretability | *(Describe plans to ensure model transparency, explainability, and interpretability, including model limits, to relevant stakeholders, e.g., other researchers, policy- and decision-makers, and affected communities)* |
| Intellectual Property | *(Describe who has rights to access, use, modify, disseminate these models, and for what purposes; describe licensing terms)* |

**3d. Storage, Security, and Backup of Models**

|  |  |
| --- | --- |
| Storage Locations | *(State where models will be stored, e.g., institutional servers, cloud storage, etc.)* |
| File Naming | *(Describe file naming conventions)* |
| Versioning | *(Describe methods for version control)* |
| Security | *(Describe access control and encryption methods, and how permissions will be enforced)* |
| Backup and Recovery | *(State backup frequency, and where backups will be stored)* |

**3e. Long-Term Management of Models**

|  |  |
| --- | --- |
| Preservation Criteria | *(State criteria for selecting models for preservation beyond this project, e.g., relevance, regulatory compliance, potential utility for yourselves or others)* |
| Preservation Plan | *(State repositories to be used for long-term model storage, and retention duration)* |
| Sharing Strategy | *(Describe when, how, with who, and for what purposes models will be shared)* |
| Access | *(Describe procedures for secure access by various stakeholders, e.g., other researchers, policymakers, members of the public)* |

1. **PUBLICATIONS AND CONFERENCES**

|  |  |
| --- | --- |
| Intended Venues | *(Specify target journals, conferences, presentations, and audiences)* |
| Outreach Activities | *(Describe planned outreach activities, e.g., workshops, policy briefings, opinion pieces, blogs; describe other planned outputs, e.g., dashboards, visualizations)* |

1. **PLAN MAINTENANCE AND UPDATES**

|  |  |
| --- | --- |
| Update Frequency | *(Specify how frequently this Plan will be reviewed and updated)* |
| Person Responsible | *(Name and contact details of the person or people responsible for maintaining this Plan)* |
| Compliance Verification | *(Describe how you will verify ongoing compliance with this Plan and relevant policies)* |

1. **DATASET INVENTORY (add extra rows if necessary)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NAME**  ***(dataset name, filename, DOI)*** | **SOURCE**  ***(Include origin, e.g., census, own survey, satellite imagery)*** | **SENSITIVITY** | **RETENTION PERIOD**  ***(e.g., “Indefinite”)*** | **DATA CARD ID** |
|  | ☐ Primary  ☐ Secondary  Origin: | ☐ Public  ☐ Restricted  ☐ Confidential |  |  |
|  | ☐ Primary  ☐ Secondary  Origin: | ☐ Public  ☐ Restricted  ☐ Confidential |  |  |
|  | ☐ Primary  ☐ Secondary  Origin: | ☐ Public  ☐ Restricted  ☐ Confidential |  |  |
|  | ☐ Primary  ☐ Secondary  Origin: | ☐ Public  ☐ Restricted  ☐ Confidential |  |  |
|  | ☐ Primary  ☐ Secondary  Origin: | ☐ Public  ☐ Restricted  ☐ Confidential |  |  |
|  | ☐ Primary  ☐ Secondary  Origin: | ☐ Public  ☐ Restricted  ☐ Confidential |  |  |
|  | ☐ Primary  ☐ Secondary  Origin: | ☐ Public  ☐ Restricted  ☐ Confidential |  |  |
|  | ☐ Primary  ☐ Secondary  Origin: | ☐ Public  ☐ Restricted  ☐ Confidential |  |  |
|  | ☐ Primary  ☐ Secondary  Origin: | ☐ Public  ☐ Restricted  ☐ Confidential |  |  |
|  | ☐ Primary  ☐ Secondary  Origin: | ☐ Public  ☐ Restricted  ☐ Confidential |  |  |
|  | ☐ Primary  ☐ Secondary  Origin: | ☐ Public  ☐ Restricted  ☐ Confidential |  |  |

1. **MODEL INVENTORY (add extra rows if necessary)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NAME**  ***(model name, filename, DOI)*** | **TYPE (*e.g., machine learning*) AND PURPOSE (*e.g., flood prediction*)** | **SOURCE** | **RETENTION PERIOD**  ***(e.g., “Indefinite”)*** | **MODEL CARD ID** |
|  | Type:  Purpose: | ☐ Self-developed  ☐ Acquired  ☐ Integrated |  |  |
|  | Type:  Purpose: | ☐ Self-developed  ☐ Acquired  ☐ Integrated |  |  |
|  | Type:  Purpose: | ☐ Self-developed  ☐ Acquired  ☐ Integrated |  |  |
|  | Type:  Purpose: | ☐ Self-developed  ☐ Acquired  ☐ Integrated |  |  |
|  | Type:  Purpose: | ☐ Self-developed  ☐ Acquired  ☐ Integrated |  |  |
|  | Type:  Purpose: | ☐ Self-developed  ☐ Acquired  ☐ Integrated |  |  |
|  | Type:  Purpose: | ☐ Self-developed  ☐ Acquired  ☐ Integrated |  |  |
|  | Type:  Purpose: | ☐ Self-developed  ☐ Acquired  ☐ Integrated |  |  |
|  | Type:  Purpose: | ☐ Self-developed  ☐ Acquired  ☐ Integrated |  |  |
|  | Type:  Purpose: | ☐ Self-developed  ☐ Acquired  ☐ Integrated |  |  |
|  | Type:  Purpose: | ☐ Self-developed  ☐ Acquired  ☐ Integrated |  |  |

1. **DISSEMINATION MATERIALS INVENTORY WITH IDS OF CARDS FOR DATASETS AND MODELS USED TO SUPPORT THE MATERIALS (add extra rows if necessary)**

|  |  |  |  |
| --- | --- | --- | --- |
| **TITLE** | **TYPE** | **CITATION AND DOI** | **MODEL AND DATA CARDS’ IDS** |
|  | ☐ Journal article  ☐ Conference paper  ☐ Presentation  ☐ Other: *(Specify)* |  |  |
|  | ☐ Journal article  ☐ Conference paper  ☐ Presentation  ☐ Other: *(Specify)* |  |  |
|  | ☐ Journal article  ☐ Conference paper  ☐ Presentation  ☐ Other: *(Specify)* |  |  |
|  | ☐ Journal article  ☐ Conference paper  ☐ Presentation  ☐ Other: *(Specify)* |  |  |
|  | ☐ Journal article  ☐ Conference paper  ☐ Presentation  ☐ Other: *(Specify)* |  |  |
|  | ☐ Journal article  ☐ Conference paper  ☐ Presentation  ☐ Other: *(Specify)* |  |  |
|  | ☐ Journal article  ☐ Conference paper  ☐ Presentation  ☐ Other: *(Specify)* |  |  |
|  | ☐ Journal article  ☐ Conference paper  ☐ Presentation  ☐ Other: *(Specify)* |  |  |
|  | ☐ Journal article  ☐ Conference paper  ☐ Presentation  ☐ Other: *(Specify)* |  |  |