FAIR UAV Metadata for a reproducible workflow: Leveraging GeoNetwork Opensource

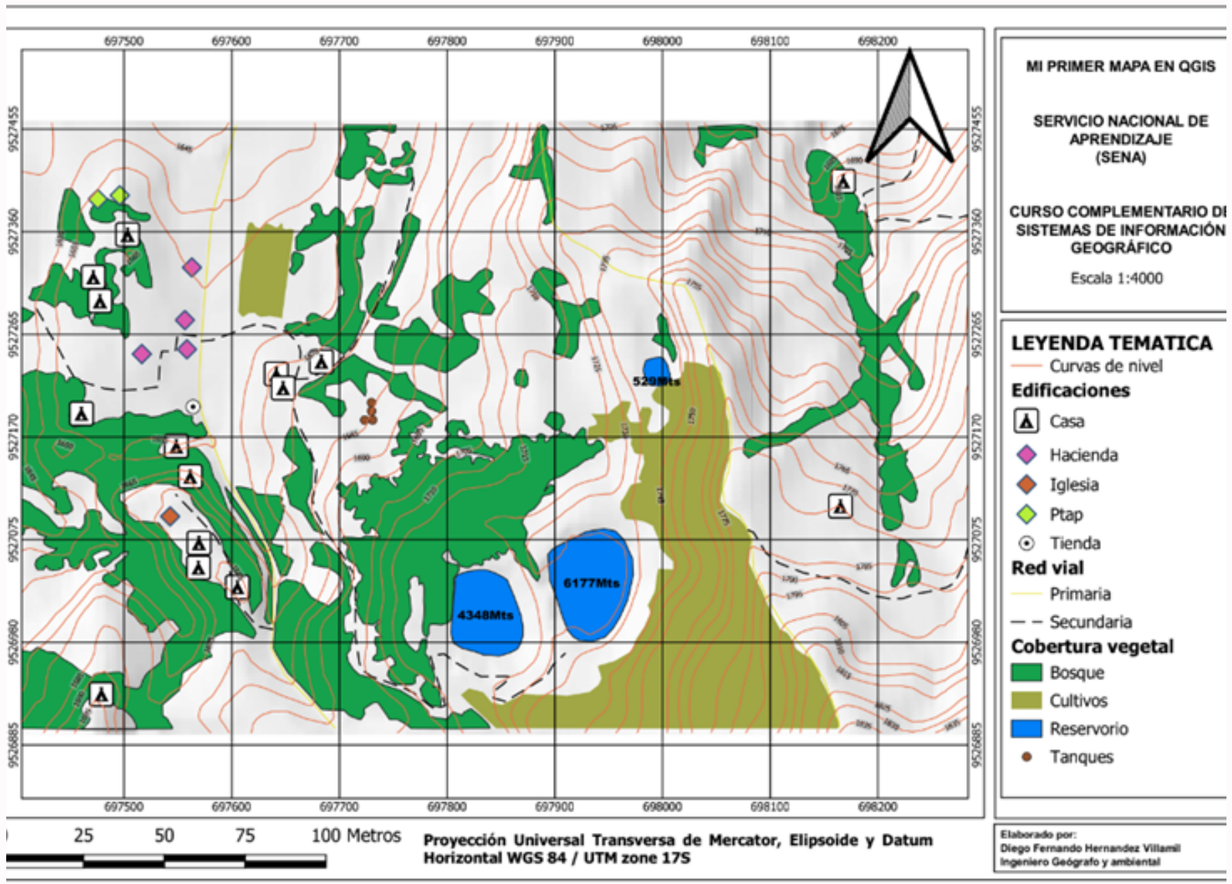
Diego Hernandez

GeoGeeks - 10/04/2024

About myself

About myself

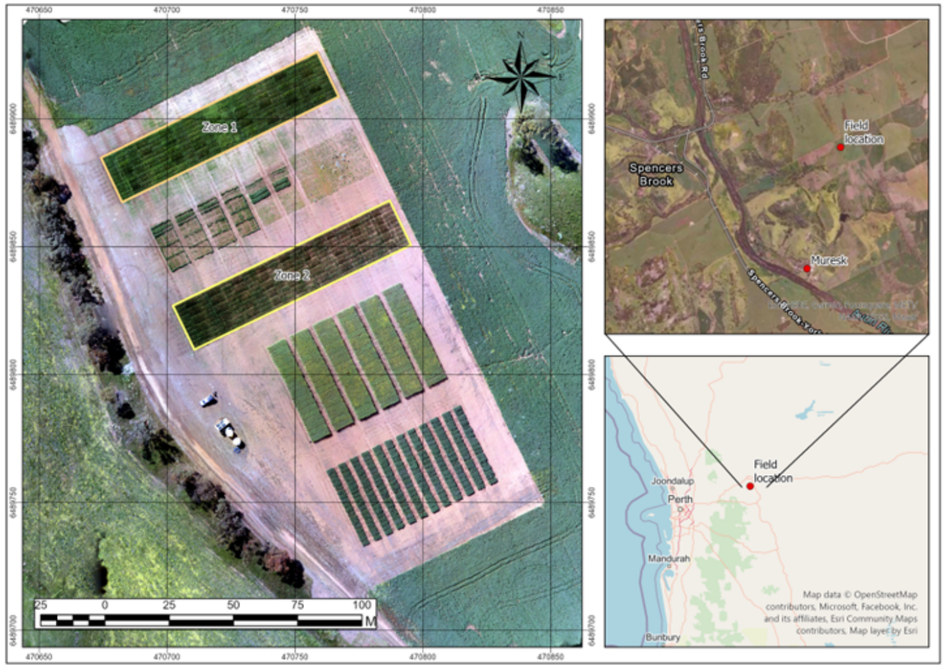
My experiences working with Drones



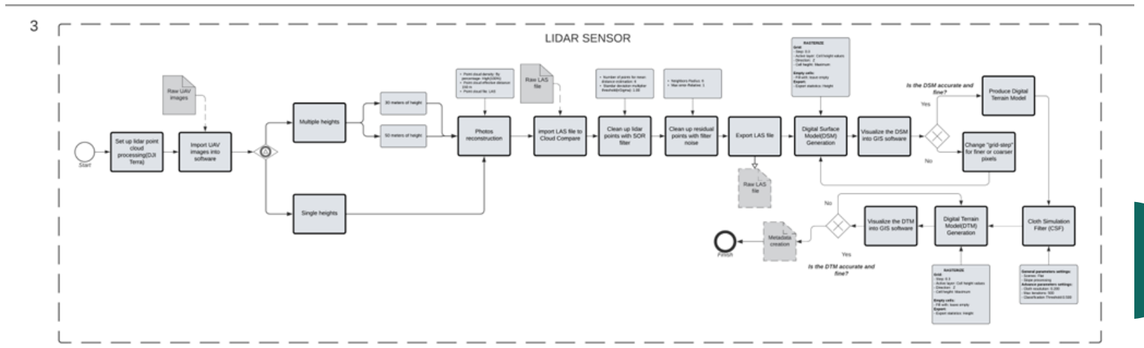
My First map using QGIS

Research project

STUDY AREA



DEVELOPMENT REPRODUCIBLE WORKFLOWS



FLIGHT 1	FLIGHT 2	FLIGHT 3	FLIGHT 4
11-Aug-23	8-Sep-23	29-Sep-23	13-Oct-23

The importance of constructing reproducible workflows

Workflow addressed by

OMG OBJECT MANAGEMENT GROUP®

BPMN™

Findable

Accessible

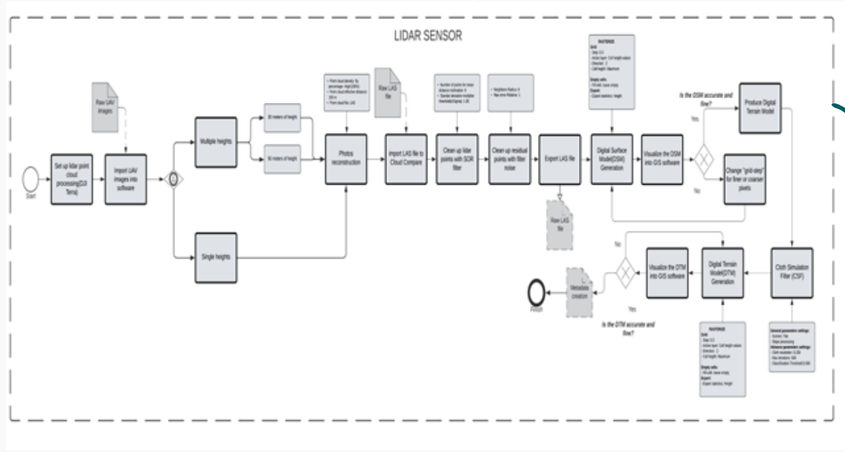
Interoperable

Reusable

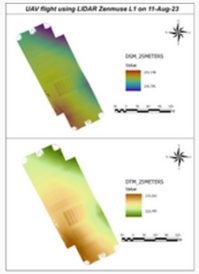
ISO

ISO 19115-1:2014
Geographic information
Metadata
Part 1: Fundamentals

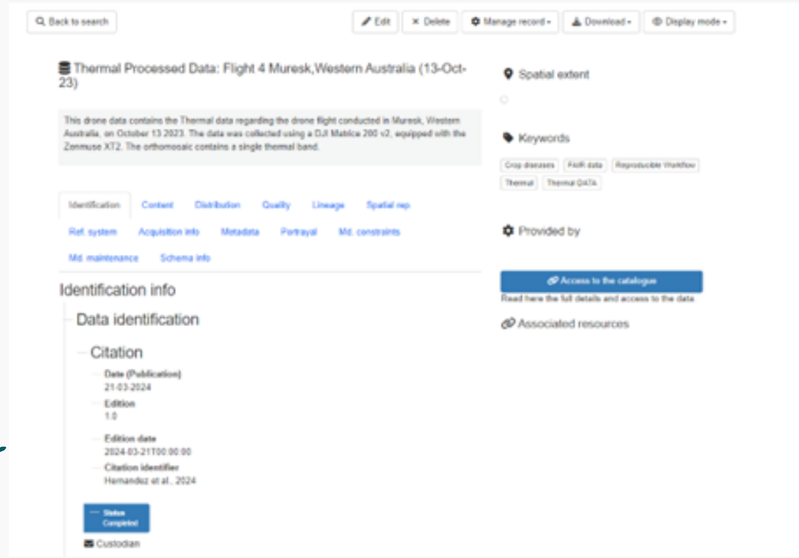
Workflow example



Datasets



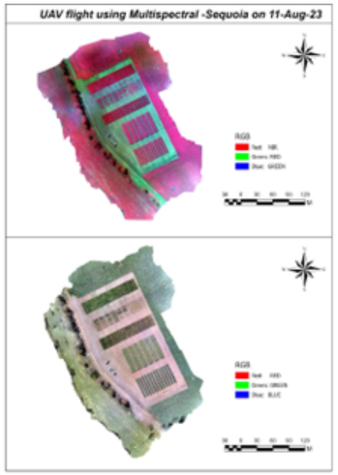
Metadata creation



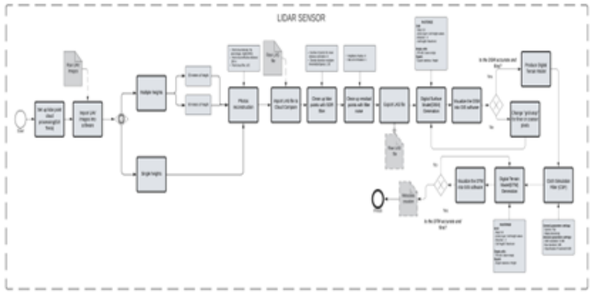
How do we construct a reproducible workflow?

1.FAIR PRINCIPLES

Datasets

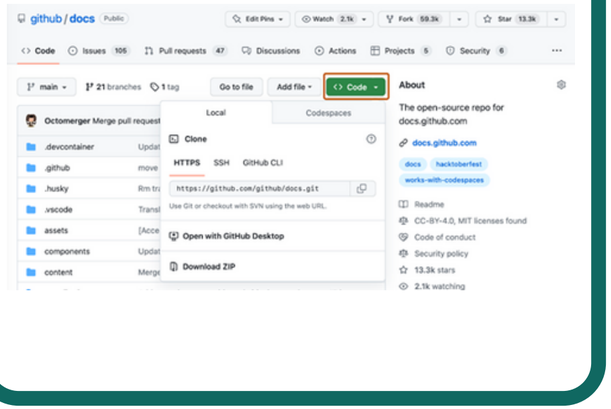


Workflows models



2.WEB ACCESIBLE

Repositories



How do we construct a reproducible workflow?

3.STANDARISATION

XML

4.METADATA STANDARDS

ISO 19115-1:2014

Geographic information

Metadata

Part 1: Fundamentals

GeoNetwork opensource

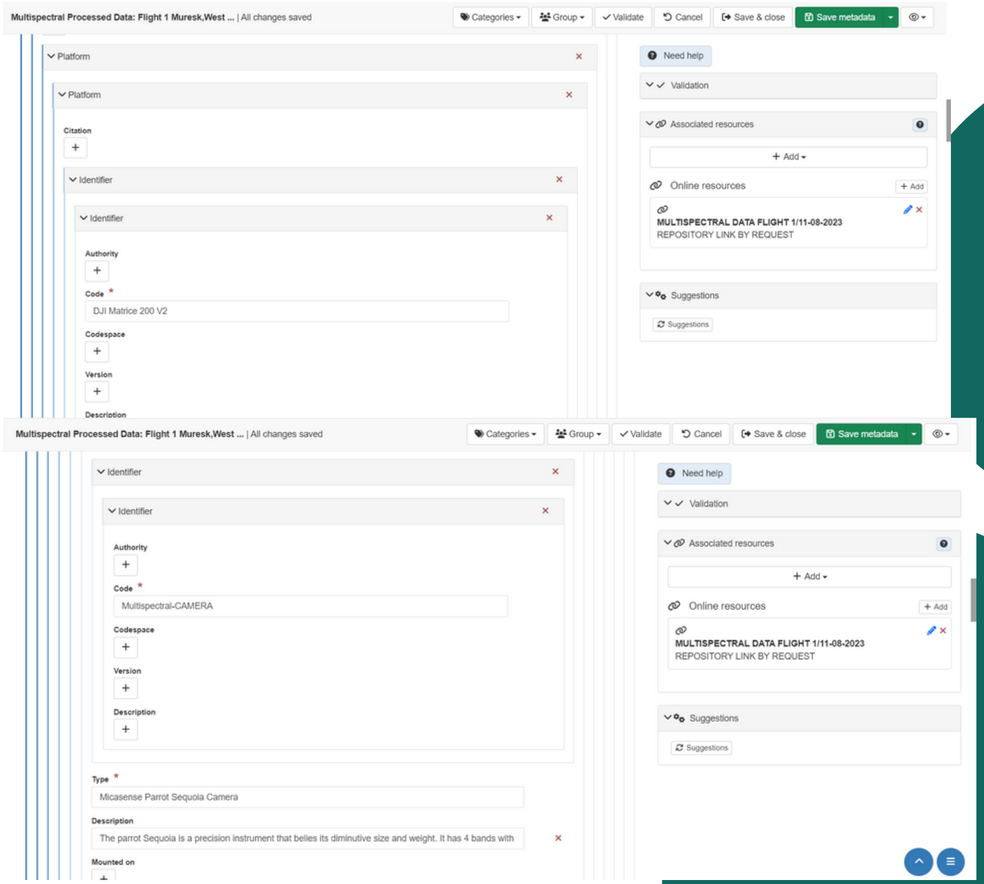
GeoNetwork and its significant role in this research

ISO STANDARD

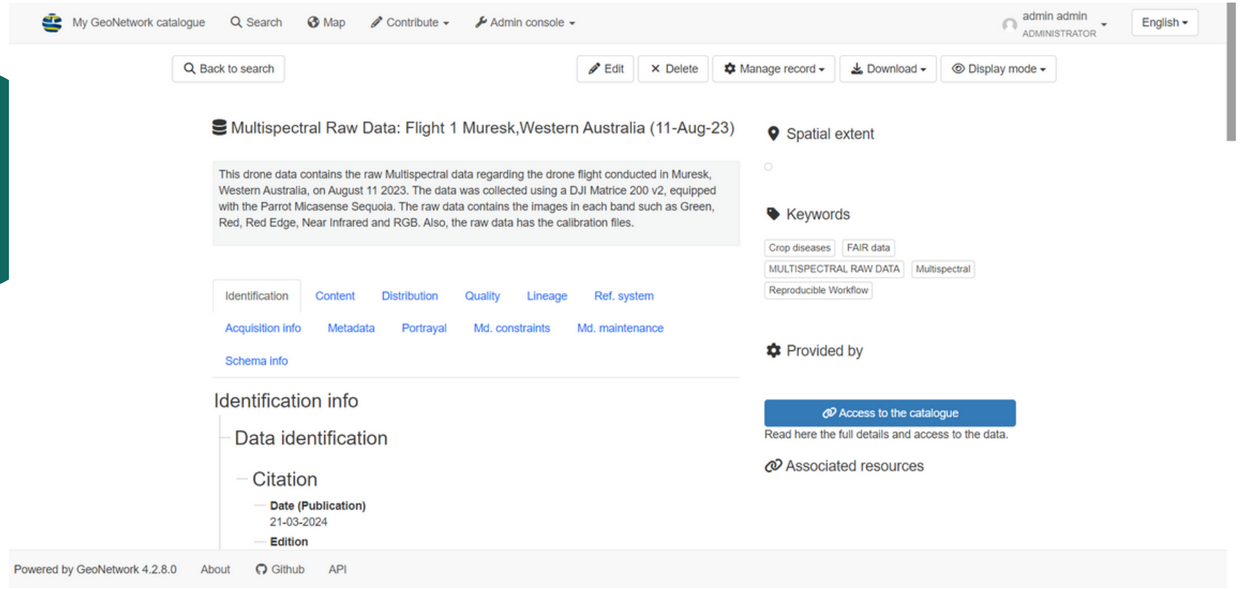
ISO 19115-1:2014	
Class	**Attribute Name**
Identification information	Citation
	Title
	Abstract
	Point of Contact
	Resource Maintenance
	Date
	Identifier
	Resource Constraints
	Descriptive keywords
Spatial Representation Information	Spatial resolution
	Topic category
	Extent
	Temporal extent
	Geographic Extent (Geographic bounding box)
Reference System Information	Reference system identifier
	Coordinate system
	Codespace
	Version
	Authority
Data Quality information	Lineage
	Data quality scope
Distribution Information	Distribution format
	Distribution contact
	Online resource
	Transfer options
Content information	Coverage description
	Feature catalog description
	Image description
Portrayal catalogue information	portrayal catalogue info
Application Schema info	Citation
	Schema language
	Constraint language
	Schema ASCII
	Graphics file
	Software development file
	Sofware development file format
Maintenance information	Maintenance and update frequency
	Date of next update
	User-defined maintenance frequency
	Update scope
	Update scope description
	Maintenance note
	Contact
Constraint information	Legal constraints
	Use Limitations
	Security constraints
Metadata extension information	MD_MetadataExtensionInformation
	Metadata standard name
	Metadata standard version

19115-2:2019	
Class	**Attribute Name**
Acquisition information	MI_AcquisitionInformation
Instrument	MI_Instrument
	Type
	Description
Platform	MI_platform
	Type
	Description
acquisition plan	ML_AcquisitionPlan
	Type
	Status
Objective	MI_Objective
	Type
	Function
Operation	MI_Operation
	Description
	Status
Environmental conditions	MI_EnvironmentalRecord

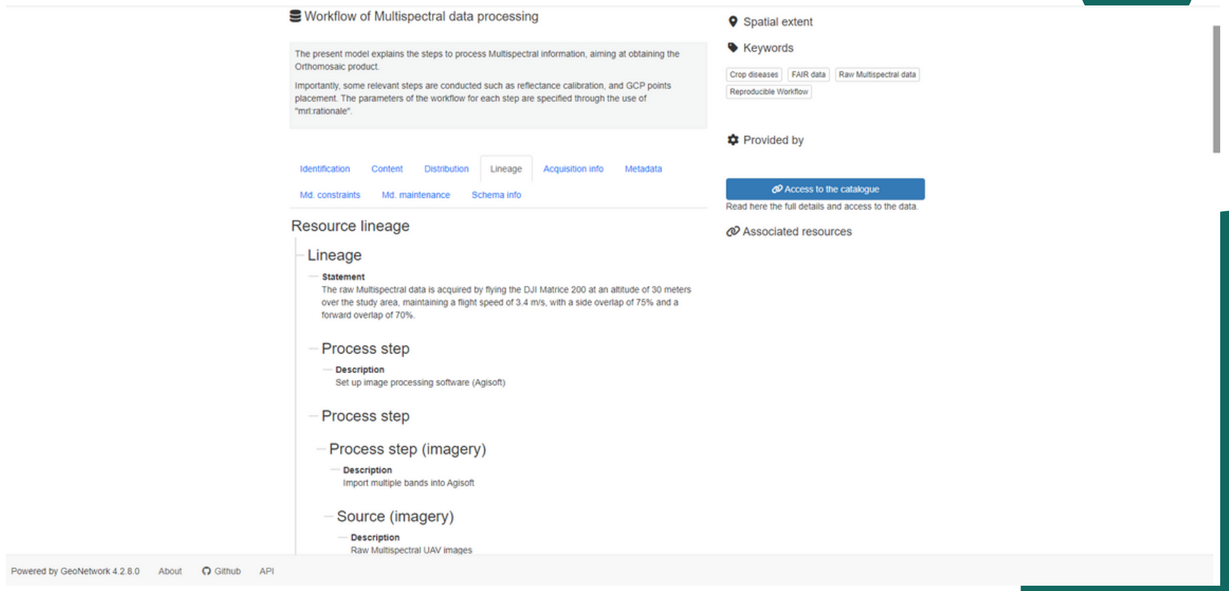
METADATA CONSTRUCTION



Raw Dataset metadata



Workflow metadata



THANKS FOR YOUR ATTENTION

Any questions?