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AIMS Data Repository User Guide for AIMS STAFF

This document provides a detailed user guide of the AIMS Data Repository's metadata and data submissions for preservation and archival. There are a number of quick start guides available on the AIMS Intrant. This document is used for step by step processes and other general information and is intended for use by AIMS Research Staff.

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The value of AIMS Data

The collection of data, analysis and exploration can be a long process that requires a lot of investment of time, resources and capital. The final outputs of a research project are one of the most important and vital aspects of any research study, and our responsibility to preserve, disseminate and support research findings is becoming increasingly important Data has value (not just expenditure in its creation) because scientists' value what they can do with it now, and what they can do with it in the future.

The AIMS Data Repository's aim is to archive and preserve data files with appropriate metadata descriptions, to ensure future use and accessibility. We also make data records and data files publicly available where indicated in the metadata submission form to promote accessibility to public data.

- Datafiles stored in the AIMS Data Repository (connected to the metadata) will be subject to ongoing protection, preservation and file security for the long term
- Files will be audited and versions updated to prevent data loss (i.e versions of excel will be updated) Where possible, users should submit data files using open-source software i.e. csv, pdf, txt, shapefiles, tiff.

What is Metadata and why do we use it?

Metadata is "data about data", that is information about an object or resource that describes characteristics such as content, quality, format, structure and creation information. Metadata can take many different forms, from free text (such as read-me files) to standardized, structured, machine-readable content. It can also provide standardized information on location, quality and other parameters.

The AIMS Data Repository uses the ISO 19115-3 embedded into the metadata entry tool, which enables a standardized capture of information relating to the dataset. These metadata records are harvested into the GeoNetwork application, providing a searchable catalogue of metadata records for both geospatial and non geospatial resources. GeoNetwork enable spatial layers and maps and is used across numerous spatial data infrastructure across the world.

It defines metadata elements, their properties, and the relationships between elements, and establishes a common set of metadata terminology, definitions, and extension procedures

The application

• Well described metadata records show the power of rich metadata in making research data collections discoverable, citable, reusable and accessible for the long term.

Responsibilities

Curating data throughout the data lifecycle is essential to maintaining data integrity and ensuring data preservation to enable reproducible, trustworthy data.



The responsibilities of both the research staff and the institute are derived from the Australian Code for the Responsible Conduct of Research and are translated in several policies and procedures at AIMS. The **Data Access Policy (DAP)** and the **External Data and Document Control Policy (EDDCP)** are two key policies that describe how data should be managed at AIMS. There are specific responsibilities for project leaders or their delegate (create a data management plan and ensure data archival at the end of the project) as well as overarching directions on where research outputs should be stored (EDDCP). Please take the time to look over these policies, as well as the **AIMS Responsible Conduct of Research Framework**.

Please contact the Research Data Systems Engineering team (<u>adc@aims.gov.au</u>) for assistance or further information with:

- Help with your AIMS Data Management Plan
- Advice on collecting good metadata and data
- Submissions to the repository, ensuring compliance with Data Access Policy and Data and Document Control Policy.
- Data Publication: Datasets are published online at https://apps.aims.gov.au/metadata/search
- Discovery & Access: metadata records published on the AIMS Catalogue are also harvested by AODN, Research Data Australia and data.gov.au
- Data Use & Reuse: Publicly funded data must be made available freely accessible under creative commons license. Data restrictions should be indicated on the record where applicable through license option. Where applicable, data may be attached to data record as internal only links.
- Preservation: the AIMS Data Repository works with the Data Engineering Team (DSE) and Information Communications and Technology (ICT) team to achieve long term preservation according to government regulations.





User Access and Sharing

User – a user of the AIMS Data Repository is a member of the public, industry partner, researcher, student or other person accessing AIMS' metadata records and linked data products.

Internal/AIMS User – a member of AIMS staff or affiliate who is granted AIMS profile log in rights. The internal user can access the AIMS private version of the Data Repository and view internal information associated with metadata (project codes, record owners, internal only records, internal only data locations and files).

Data Submitter – A member of AIMS research staff or associate, and creator of metadata records and datasets.

Data Custodian – a nominated AIMS research staff or officer who is responsible for datasets once the original owner is no longer at AIMS, or where the data has been submitted by an AIMS associate (i.e. student). The custodian may assist with updating metadata information when required, with data requests or database extractions. Custodianship is designated through the ownership role within the metadata record which is an internal information field.

Administrator/Data Curator – The administrator has read and write access over files added to the AIMS Data Repository.

Access Levels for metadata and data

A number of difference access levels have been integrated into the Repository.

When metadata are published into the public domain they are indexed by web serviced (searchable on google) and are harvested across metadata services such as data.gov.au and Research Data Australia. Harvesting occurs every night, and newly published records will appear in the AIMS External Data Repository (The Data Repository) the following day after publishing. Metadata are made public when complete, and the Data Constrains license is set to CC-BY, CC-BY-NC or under contract restrictions.

Several options for access to metadata and datafiles exist depending on the requirements of the collection.

Public Record with Public Data Download files: metadata are public and datafiles added to the collection are added as a publicly accessible document. Documents designated for the public domain will be added to the AIMS Data Repository (file server) and copied to the AWS Cloud to provide public access via the API workflows. Publicly Downloadable datasets may be through API key registration, data tools (via email registration and parameters selection) or other automated function (LTMP data downloads).

Public Record with Internal Data Files: metadata are public and datafiles added to the collection are internal only documents. Data Access is provided on request to ADC, where we will contact the data owner/custodian when requests are received. Licenses can be under CC-BY-NC or Under Contractual Restrictions, and circumstances in which access is provided may vary. Data may be stored in the AIMS Data Repository or File locations entered into the metadata record (e.g. some WA projects are contractually required to restrict access to authenticated project members only). In some cases, a formal





data sharing agreement will be actioned through AIMS Legal Services using templates found on the Intranet.

Internal Access to metadata only: metadata user the 4th Data Constraint license option - 'Metadata not to be made Public" thereby ensuring once complete, metadata are not published into the public domain. Metadata will be searchable only in the internal metadata system and only viewable by AIMS staff. Datafiles may be uploaded and stored in the Repository, or ADC managed databases referenced where applicable.

This option maybe used for project metadata prior to project completion (i.e. a place marker for data archival).

Submission Assistance

The preferred method for data submitters to create metadata records it to use the online metadata tool <u>http://tsv-apps.aims.gov.au/metadata/search</u>. Data Submitters should log into the tool and select '+ New Record' or go to 'My Records' to complete an existing draft.

Helper text is available throughout the online tool for each entry field. This is generally found underneath each editable field:

Tit	le	
	Example Record	
The	e name of the resource/dataset	Helper text

An alternative method to submit data is using the metadata word document template, created for users unable to access the submission tool, or for researchers who prefer document submissions. The template must be submitted to <u>adc@aims.gov.au</u> with relevant data files and will be subsequently entered into the online metadata tool by ADC on behalf of the submitter.

A user or data submitter may also request assistance from ADC <u>adc@aims.gov.au</u> and will generally be assisted by the research data curator.

In addition, a number of Fact Sheets have been created to inform and assist AIMS researchers in a number of areas. These fact sheets are made readily available through the AIMS Intranet or see the bottom of this document.

How to contribute data:

Data should be uploaded to the online submission tool with completed metadata or contact ADC to arrange large data transfer. Offline options include using the Data-Submission-Template.docx and email submission to <u>adc@aims.gov.au</u>.





- Data files may be uploaded to the online data submission's upload tool (see section "Uploading Data Files" for detailed instructions).
- Spatial data can be included and visualized on the data tool (see section "Spatial Data")
- Sequence accession numbers can be added as links to the sequence repository (such as NCBI's GenBank) for accessibility and discoverability, (see section "Existing Data Repository Link")
- Code, software and models associated with your data should also be submitted (uploaded) or added as an existing data repository link (i.e. GitHub repository on Open-AIMS-GitHub)

Formats

The repository accepts data in any format, noting that open access formats are preferred for archival file longevity and to prevent data loss (.csv, .pdf, .txt, .tiff, .shp, ascii files or netCDF). Any data which is in proprietary software should be converted to open file formats prior to archival, or a copy of the software provided as part of the archive package. See the fact sheet 'Data Formats' at the end of this document.

Some tips for submitting data tabular data (excel, csv, etc):

- include a description (can be a separate file i.e. data dictionary) of the units of measurement, data and time format, position information (decimal degrees preferred). Some examples of published data dictionaries are presented on data download documents on the following records: <u>https://doi.org/10.25845/xa98-3449</u>; <u>https://doi.org/10.25845/5cc64f29b35a1</u>
- Comments should be in a separate column to the data
- Columns should consistently contain one 'type' of data, and not include ranges i.e. <10, >50. Ranges should ideally be categorised e.g. Itmp coral cover 1L= 1-5%, 1U = 5-10%, 2 = 10-30% etc.
- Blanks or missing data should be described i.e. missing data or no data can be described as 'nd' in a cell, '0' in cell is a value and means it was measured as '0'.
- Colour formatting in a spreadsheet does not archive well. Consider adding columns to describe the colour values or describing this in a different way.

Metadata capture processes:

An AIMS user/submitter enters in record information into the Data Repository online submission form, which is then converted to an xml file in ADC databases. When the record is complete and published the xml file will be harvested to the external AIMS GeoNetwork Database and presented on the AIMS Data Repository, and available for other web services.

Once a record is started, a draft record is available for the user to update until all mandatory fields are completed. As the record is entered all tabs within the edit mode turn green (or in some cases where information entry is optional, orange). A record cannot access the 'Publish' tab until all red (mandatory) fields are completed. Some entry fields have been pre-entered, but are also editable.





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Mandatory fields include:

- i. Title
- ii. Data Description
- iii. Program and project code (internal information)
- iv. Update frequency
- v. Data Restrictions (Constraints/license)
- vi. Temporal Extent
- vii. Data files upload or description of repository location

Fields pre-filled by the tool

- i. Creation Date
- ii. Owner (based on log in to tool, editable by owner)
- iii. Cited Organization (set to AIMS, editable)
- iv. Point of Contact (set to ADC, editable)

Additional Fields (optional):

- i. Lineage
- ii. Data Status
- iii. DOI (administration use only, see note below)
- iv. Exclusivity period / embargo
- v. Data Sampling Frequency
- vi. Principal Investigator
- vii. Spatial extent
- viii. Credits
- ix. Parameters (AODN accepted vocabulary)
- x. Additional data links such as publication DOIs, cruise reports or other related information

Note regarding DOIs: to have a DOI as the link to your record, please contact the ADC administrators. An ADC officer will mint a DOI and the metadata coordinator will enter this into the record. A DOI will replace the URL link in the citation of the public record. Please don't enter the DOI of a related paper.

Once all required Fields are complete, each of the navigation tabs will be green (or orange where optional) and the 'Publish' tab will be accessible:

Australian Go	vernment	AUSTRALIAN I OF MARINE S	NSTITUTE CIENCE	TOWNSVI	ILLE	DARWIN	PERTH
	Status: Draft						
	Core Fields	Spatial	Credits	Parameters O	<u>Data</u>	Publish	- 81
	_				-		-

Once the fields are completed, the red and orange tab headings will turn to green and you will be able to access the 'Publish' tab:

	.0				
Core Fields	Spatial	Credits	Parameters	Data	Publish
	0	O	0	0	•

At the Publish stage, the user must confirm the record is ready for submission by confirming the record is not longer in draft status, and can be moved to complete:

Congratulations you have successfully created a metadata record. Due to your constraints this record will be available to the public.	Uncheck Draft and Click the Complete button to make your metadata viewable.
Uncheck Draft and Click the Complete button to make your metadata viewable.	► Draft □
Draft Z Previous	Previous

A clear notice advising the record will be made available to the public is also provided at the completion stage, depending on the constraints (license) selection.

Public sections of the record will be made available in the external AIMS Data Repository when a user, and able to be harvested by web services.

Uploading Data Files:

Upload: The metadata submission tool provides an option to upload data files to the AIMS Data Repository. Data files may be added as a public document (i.e. available as a data download on the public record) or as an internal only document.





To upload a file [process]

Click on the '+Add' button on the Data navigation tab, to bring up the upload tool:

Core Fields	Spatial	Credits	Parameters	Data	Publish
0	0	O	0	•	0
Providing a location for	your dataset is critical	to ensure future accessi	bility and preservation. This	s section will allow you	to archive one or more
of the following:					
1. Upload a file					
2. Note repository loc	ations and identifiers				
3. Link a URL/DOI					
4. Attach a Web Map	Service layer				
5. Attach a Web Featu	re Service layer				
6. Note Lab book nun	nbers				
7. Registry EDRM Doc	uments				
8. List any publication	s/ press releases related	to you dataset			
Press the Add details but	ton below to add each of	the details for your datas	set.		+ Add

The drop down box "Add What?" will be preselected to "Upload a File":

Upload a File	~
Jpload a File	
Select File	
File Input Choose file No file chosen	
Maximum file size: 100n No file chosen ADC if the file exceeds this limit.	





Add What?	
Upload a File	~
Upload a File	
Select File	
File Input Choose file No file chosen	
Maximum file size: 100mb. Please contact ADC if the file exceeds this limit.	
Description	
Label	
Enter a brief description or label for file to upload Type	
Data Location 🗢	
Accessibility	
○ Public Link	
Internal Link	
	Opidad
button below to add each of the details for your dataset.	

By clicking on "Choose file" you may locate this on your computer or file drives:

PC > Desktop > Example-data-upload		V O Sea	rch Example-	data-upload
Name	Date modified	Туре	Size	
Example-data-upload.csv	2/09/2021 1:32 PM	Microsoft Excel Co	4 KB	
[]				
	Name	Name Date modified Example-data-upload.csv 2/09/2021 1:32 PM	Name Date modified Type S Image: Example-data-upload.csv 2/09/2021 1:32 PM Microsoft Excel Co	Name Date modified Type Size Image: Example-data-upload.csv 2/09/2021 1:32 PM Microsoft Excel Co 4 KB





By selecting the correct file and clicking "Open" the tool will add the selected file to the upload function. **Please note:** it is best to not have any spaces ' ' in the title of the file, replace these with a dash '-' or underscore '_'.

This file tiltle will then appear next to the original "Choose file" button:

Upload a File	~
Ipload a File	
elect File	
File Input Choose file	Example-data-upload.csv
Maximum file size: 100mb. P	ease contact ADC if the file exceeds this limit.

Once uploaded to the tool, you should complete the remaining fields on the upload tool:

a) enter in a text **Description** of the file which will appear on the record, include [size: xx KB/MB] where appropriate to let the user know how big the file is when downloading;

b) select from '**Type**' of item [Data location*, Related Information, Image] (Use related information or image if the file is not data)

and c) set the Accessibility of the item [Internal link* or Public Link]

* default selection

Example data file [cs	sv size: 4KB]	
Enter a brief description or la	bel for file to upload	
pe		(Appears on completed record)
Data Location	\$	Data Downloads
cessibility		Example data file [csv size: 4KB]
Public Link		
\odot Internal Link		





If you are uploading a file which is a related information item, be sure to change the 'Data Location' type to 'Related Information' or Image', as appropriate.

Items uploaded will appear in a table on the main data tab:

Repository	Description	Type Visil	oility Order
AIMS Data	Example data file [csv size: 4KB]	Data Publ	ic 🔶 🗙
Centre - File		Location	.
Archive			

Large data Transfer

Uploading data to the metadata tool has a limit of 100 MB. Contact the AIMS Data Curator or DSE to arrange direct transfer of project files to the AIMS Data Repository or to snap shot databases at a particular time point. Do this via email to: <u>adc@aims.gov.au</u>

DSE will arrange a data download option if you need to make large data files or folders publicly available: for example on the record AIMS Photo Transects - Lizard Island Coral Communities 1981 to 2000, https://apps.aims.gov.au/metadata/view/2f88a3b9-9f9c-4eb7-ae50-14f47d6b8b26. These links are be set up by DSE rather than the general data upload tool (which will timeout with large data files).

Existing Data Repository Link:

Where data is already managed by DSE (i.e. in Oracle databases), on the file server or is in an existing repository (e.g. code repositories on AIMS Open GitHub) you may add a description instead of adding it to the Upload tool. To do this, click on the '+Add' button and change the drop down menu for 'Add What?' to "Description of Data Location":

	Description of Data Location	~	
ι	Jpload a File		
C	Description of Data Location	N.	
F	Related Information	13	
٧	VMS Map Layer		•
V	VFS Map Laver		

A selection of DSE managed databases are listed in Repository drop down that will appear to chose from, or select 'other':





Description of Data Location	~
epository	
select data repository	
AIMS Data Centre - File Archive	
AIMS Data Centre - BRUVS	
AIMS Data Centre - LTMP	
AIMS Data Centre - Water Quality	
AIMS Data Centre - Sensor Systems	
AIMS Data Centre - TowedVideo	
AIMS Data Centre - Temperature Logger	
AIMS Document Management System	
AIMS Image Archive	
Genbank	
Laboratory Book Registry	
Laboratory Info Management System	
Other - please specify	

When the repository is not specified in the drop down, you may select "Other – please specify" and note the name of the repository in the 'Other Details' field that will appear e.g. GitHub Repository, etc:

Description of Data Location	~	
Repository		
Other - please specify		~
Select a repository from the list. Use Other if unsure Other Details		
Describe the repository you are using e.g file systems, databases, hard copy files, etc.		

Additional details should be added such as a 'location-description' of the tables or query in the database, URL for a publication (use DOI link for papers) as well as description to appear on the metadata record.





ocation		
URL		
Location is the repository, can be path, URL, schema or tables in a database Description		
Label		
Enter description or label for data and/or specify what type of data you are describing (raw, processed, derived, etc.		
accessibility		
O Public Link		
Internal Link		
	Add	Canaal
	Add	Cancer

Publications & Related information:

Links and other documents related to the data record can be added to the record, such as publications, reports, associated datasets or links to source data or other repositories where appropriate i.e. GitHub Code Repository.

To add a related information link select 'Related information" from the drop down options when adding a new data item:

Upload a File	~
Jpload a File	
Description of Data Location	
Related Information	
WMS Map Layer	
WFS Map Laver	

Add a repository where appropriate. In the case of external publication links (i.e. using the paper's DOI) select 'Other – please specify'.





Related Info	rmation		~		
pository					
select dat	a repository			~	
AIMS Data (AIMS D	Centre - File Archive Centre - BRUVS Centre - LTMP Centre - Water Qualif Centre - Sensor Syst Centre - TowedVideo Centre - Temperature hent Management Syst Archive Cook Registry fo Management Syste se specify	ty ems e Logger ystem stem			
Internal Link					
					Ormal

Add information into the following fields that appear: Other details, Locations (URL) and Description. When adding a publication, please use the full citation of the paper in the description, and full DOI link to direct viewers to the Journal directly. You should also change the internal link marker to public, to ensure this link appears on the public record.





Related Information	~
Repository	
Other - please specify	~
Select a repository from the list. Use Other if unsure. Other Details	
Publication	
Describe the repository you are using, example may include file systems, database, external hard drives, hardcopy, or related information like URLS, publications and journals.	
Location	
https://doi.org/10.1016/j.scitotenv.2021.146676	
Location is the repository, can be path, URL, schema or tables in a database Description	
Nordborg, F. M., Brinkman, D. L., Ricardo, G. F., Agustí, S., & N	Negri, A. P. (2021). (
Enter a brief description of the related information, e.g. SOPs, Publications, QA/QC Accessibility	C processes, etc.
Public Link	
○ Internal Link	
	Add Cancel

The above link, set to 'Related Information' will separate this link from the Data Downloads. For example:

GitHub Repository for .rmd-scripts https://githu	ub.com/MNordborg/Nordborg-et-al2021-HFO
Nordborg_2021_HFO_early_LS.zip [size:20kB]	
elated Information	
Nordborg, F. M., Brinkman, D. L., Ricardo, G. F., coral to heavy fuel oil and UV radiation. Science	Agustí, S., & Negri, A. P. (2021). Comparative sensitivity of the early life stages of a e of The Total Environment, 146676.

See record: <u>https://apps.aims.gov.au/metadata/view/7b882ea1-f70a-4a02-9b20-02f9d7db9b2c</u>





Public Data Considerations:

Public data will generally be an uploaded file or a linked paper. When a data file has been marked with "Public Link" during the upload (see section "*Uploading Data Files*"), a number of processes are applied to enable public access in addition to storing the data in the AIMS Repository. A copy of the file is sent to AWS to an S3 bucket and linked through the API.

Related information links are added and will appear on the metadata page as a hyperlink, to direct the user to the url entered into the tool.

Adding a public link or public data file on a metadata records that is either published or intending to be published, will enable the link or data file to be public for all users.

Embargoed Data

Data with an embargo can be added and made available on the AIMS Data Repository using the Core Fields tab in the Data Restrictions section:

Data Restrictions				
Constraints		Is this dataset subject to an ex	clusivity period?	
Creative Commons - Attribution-NonCommercial Australia	٥	no	2	٥
-		no yes		
Temporal Extent				
From Date		Thru Date		
1-Aug-2020		17-Aug-2020		

When 'Yes' is selected, an embargo end date will appear that is automatically 1 year from the thru date.

Data Restrictions			
Constraints		Is this dataset subject to an exclusivity period?	
Creative Commons - Attribution-NonCommercial Australia	٥	yes	٥
		When 'yes', this is automatically processed using 'thru date'.	
Embargo Ends			
17-Aug-2021			
Temporal Extent			
From Date		Thru Date	
1-Aug-2020		17-Aug-2020	

In cases where projects have been granted permission to extend the embargo for greater than one year, a manual process must be applied:

1. Data files should be added as internal only documents and include a note in the file description when the embargo can be lifted and the file made public.



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2. Notify the data curator if you want ADC to update the datafiles to be public automatically (i.e. the data curator will re-upload the data at the embargo extension date)

Please note that embargoes greater than one year should be approved by the Research Manager or CEO as required by the AIMS Data Access Policy

Spatial Extent

Most records will be able to use the embedded map feature to create a map on the metadata record. This map uses points, bounding boxes or polygons to represent the spatial extent of a dataset or project. This can usually be achieved through the 'Spatial' tab on the metadata entry form. To know more about the usefulness of the Spatial Extent, please see the Help Video available on the intranet.



Example Point on the Spatial Tab, where a unique name has been added to the point:



The following tools are available on the Spatial tab for map editing:







CSV Upload

Where multiple points should be visualised on the map, the Import csv File tool can be useful. For this, you may provide the points in three columns showing the name, longitude and latitude in decimal degrees. The csv must be structured specifically in this format, and care should be taken not to use special characters in the name of each point.

Select a csv file to import. The file should have the following columns: name,longitude, latitude (in decimal degrees)
File Input Choose file No file chosen
Upload Cancel

WMS

Spatial data can also be presented on the metadata record using a layer linked on GeoServer. For this, you are required to provide an existing spatial layer in either of the following formats: geopackage (gpk), shapefile (shp), raster (tiff) file, which can be then used as the map visualisation instead of the tool on the Spatial tab. On occasion, the DSE team can create specialised visualisations when needed to

Instructions for DSE officer for adding a WMS map layer to a metadata record

Creating a layer in GeoServer

Server name is: <u>https://geoserver.data.aims.gov.au/wms</u> or other server i.e. <u>https://geoserver-123.aodn.org.au/geoserver/wms</u>

or can also be found on the GeoServer when previewing the layer

Name of layer can be found at the bottom of the layer on maps.aims.au (but remove the aims_ from the name: i.e. where aims_aims:AIMS_TRIP_5938, names is aims:AIMS_TRIP_5938)

Or if viewing on geoserver, this will be included in the preview layer url after "&request=GetMap&layers=aims:AIMS_TRIP_5938"

Layer_id: aims_aims:reefmon_reefs

Layer_id: imos:aims_mmp_ctd_profiles_map

And layer description can be a brief description of the layer





A map layer may be added to the record using the data tab, and clicking '+Add', and selecting WMS Map Layer:

Jpload a File	~
Ipload a File	
Description of Data Location	
Related Information	
VMS Map Layer 💦 💦	
VFS Map Layer	

Enter the relevant information as directed by the helper text:

Add What?	
WMS Map Layer ~	
Add WMS Map Layer	
dd WMS Map Layers for the dataset WMS Map Layer Server URL	
WMS Map Layer Server URL	
Enter a URL for target WMS Map Layer Server VMS Map Layer Name	
WMS Map Layer Name	
Enter the name of the layer, including the namespace/workspace VMS Map Layer Description	
WMS Map Layer Label	
Enter a brief description for the WMS Map Layer Accessibility	
O Public Link	
Internal Link	
	Add Cancel





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For example, adding a voyage track to a map layer:

WMS Map Layer	-		
Add WMS Map Layer			
Add WMS Map Layers for the dataset			
WMS Map Layer Server URL			
https://maps.aims.gov.au/geoserver/aims/wms			
Enter a URL for target WMS Map Layer Server			
WMS Map Layer Name			
aims:AIMS_TRIP_5938			
Enter the name of the layer, including the namespace/workspace			
WMS Map Layer Description			
Trip 5938			
Enter a brief description for the WMS Map Layer			
Accessibility			
¶ Public Link			
○ Internal Link			
	_		
		Add Cance	1

Layers will appear in the data table of items related to the data:

Repository	Description	Туре	Visibility Order
	Trip 5938 (aims:AIMS_TRIP_5938)	WMS Map	Public 🔶 🖍
	https://maps.aims.gov.au/geoserver/aims/wms	Layer	

And the layer will show the voyage tracks from the Trip 5938 on the spatial map of the data record:





HINT: if the map does not give a good zoom function to the layer, you can add a bounding box on the spatial tab in the metadata submission tool to focus the map view.

Database 1.0 Draft

Temporal Range: From 01-Aug-2020 To 17-Aug-2020



Accessing 'My Records'

Once a record in the Data Repository online submission tool has been started, progress will be saved on the various tabs until the record is complete. Rights to edit a record are determined by the record owner. To access your records, first sign into the Data Repository (AIMS Users only) <u>http://tsv-apps.aims.gov.au/metadata/search</u> via the log in button on the top right-hand corner:







You cannot access the 'My Records' button without logging in; a no access \bigotimes sign will be applied should you attempt this, and you will be prompted to log in.



Once logged you are able to access "My Records" and the page will redirect to a table view of key information about your metadata records.





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Title		Search	lear							+ Nev	w Record
AIMS User	-	Task Code		Parame	ter		Complete	¢			
From Date		Thru Da	ate		🗆 Editab	le Only					
Record Status	Title		Owner	From Date	Thru Date	Program	n	Source	Created	Acti	ons
Complete	Mangrove fish forest epifaun Port Douglas,	n, zooplankton and a at Dickson Inlet, north Queensland	AIMS User	16-Mar-1989	27-Oct-1989	Historic/	/Unknown	AIMS Data Catalogue	18-Apr- 2013		
Complete	Davies Reef Ba	ase Station	AIMS User	07-May-2011		Historic/	/Unknown	AIMS Data Catalogue	03-May- 2012		
Complete	Impact assess oil spill near Ye north Queens	ment following an orkeys Knob, land	AIMS User	01-Jan-1994	31-Dec-1995	Historic/	/Unknown	AIMS Data Catalogue	02-Nov- 2011	6	

How to change the record owner:

Access the AIMS Data Repository internal system and log in. Search for the record you wish to edit - either open the preview of the record or access the record through the 'My Records' tab via the pencil action icon. Once located, open the record into 'Edit Mode' at which point you may change the owner in the Core Fields Tab.

Core Fields	Spatial	Credits	Parameters	Data	Publish
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Title					
Database 1.0					
The name of the resource/dataset					
Creation Date			Owner		
2018,5,9			AIMS User 1		¢
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NOTE: once the owner has been changed and saved when you preview the record once more, you will no longer have access to the Edit function of the record. Do not change the owner unless you have already let the user know. If you accidently change the owner, please contact DSE <u>adc@aims.gov.au</u>

Data Validation checklist for Scientists and Data Curator

Use the following checklist to improve the data files uploaded to the metadata record. The DSE Metadata Curator spot-checks the following at a minimum:

- Can the file be opened?

- Format of file in open source or suitable for long term storage formats (csv, pdf, txt, shp, tif).

- Able to be understood? Is there enough information describing what the data is, are any abbreviations or acronyms that need to be explained, along with units of measurement or time zones? A data dictionary is a good option to explain column headings. See notes about tabular data in the 'Formats' section of this document (or Factsheet Archiving File Formats).

If there are any inconsistencies or questions, the research data curator will contact the researcher for additional information that will be used to improve the metadata descriptions.

CURE-FAIR

AIMS support the FAIR data principles which should be reflected in the metadata and data products made available to the public by the institute. A recent initiative by the Research Data Alliance CURE-FAIR working group gives some guidance on the best practices for published and archiving computationally reproducible studies.

Some definitions:

Computational Reproducibility: The ability to recreate computational results from the data and code used by the original researcher.

Curation: The management and preservation of digital data of the ling-term; involves a set of actions, guided by FAIR principles, to determine what research outputs are worthy of sharing and preservice, why, for whom, by whom, and for how long.

Research Compendium: The collection of the research artifacts necessary to independently understand and repeat the entirety of the analysis workflow from data processing and transformation to producing results. Also referred to as a "reproducible file bundle".

Curating for Reproducibility (CURE-FAIR): The object of the curation is the research compendium; the goal of curating for reproducibility is to enable continued access to the compendium and its component parts which are necessary to independently reproduce the associated results.





10 Things for Curating Reproducible and FAIR Research (1.1).



*Arguillas, Florio, Christian, Thu-Mai, Gooch, Mandy, Honeyman, Tom, Peer, Limor, & CURE-FAIR WG. (2022). 10 Things for Curating Reproducible and FAIR Research (1.1). https://doi.org/10.15497/RDA00074





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What at AIMS' requirements for data management?

AIMS' policies outline data management requirements

Key points are found below:







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Why should you contribute data to ADC?

Aside from policies, why is it important to contribute data to the AIMS Data Repository?

Public Data Policy Statement	 In 2015, The Australian Government released its Public Data Policy Statement. This statement formalizes the Government's commitment to open data and data-driven innovation. This means AIMS has an obligation to the Australian public to make non-sensitive publicly funded research data openly available for use and reuse The AIMS Data Repository enables you to publish datasets with good descriptions (metadata) and securely share data
Supporting FAIR data	 AIMS Data Repository supports discoverability, interoperability and data information accessibility with records that are: > on or linked through data.gov.au for discoverability and availability > in a machine-readable, spatially-enabled format > with high quality, easy to use and freely available API access > with descriptive metadata > using agreed open standards > kept up to date in an automated way > under a Creative Commons By Attribution license
Good Data Management Practice	 And finally, it is good data management practice to archive data in ADC. Often in research, alternative future uses of data may not be envisaged until many years down the track. By keeping data records and archiving the data with accurate and detailed descriptions, you can easily recall the files and methodology when required. ➢ To put it in perspective, ask yourself what you were working on 5 or 10 years ago, and try to recall accurate processes or details. ➢ A record was made at the time of the project not only provides reliable information, but it is also much easier to collect details of a project or dataset when it is current.

How long will my data be stored for?

When stored in the AIMS Data Repository or on Pearl, data are handled in the following manner:

- Files are immediately backed up through replication to a different site
- Files are checkpointed (snapshotted) nightly around 7pm. These read-only checkpoints are retained for 56 days (8 weeks).
- Files are written to tape at the end of each month and tapes are retained indefinitely





I am leaving AIMS – what should I do with my metadata records?

We will be sorry to see you leave, but before you go please let DSE know and consider transferring the ownership of these metadata records to a custodian.

Data are living information packages and can have value beyond the life of an experiment or project that is sometimes not connected with the original area of study. Don't underestimate the value of the information that you provide with your data, in the future there maybe uses for that data that are initially not envisioned.

A custodian should be someone who is familiar with the topic of data, or someone who has knowledge of the project. They will take the responsibility who could answer additional questions about the dataset or help with any data requests, or collaborate with interested parties on behalf of AIMS if the opportunity arises. If there is no suitable custodian, you may pass that responsibility to DSE, who will essentially act as the data steward, ensuring the data are preserved. In this case, it is important that the data are well described including data dictionaries, and any access restrictions or scenarios for which data access agreements would need to be made, very well documented. This is to ensure the data have use and value over the long term.

If you have any questions please contact DSE <u>adc@aims.gov.au</u> or your data manager.