



eRA17 – Victorian Marine Data Portal (VMMDP)

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THE COLLECTION

Victorian Marine Data Portal (VMDP)

One of the most unique marine ecosystems on Earth

Data is often difficult and costly to gather

New observation techniques enable different data types to be gathered and then modelled together

Providing new insights into marine ecosystems at a time of unprecedented environmental change

Datasets represent a 20 year time-series



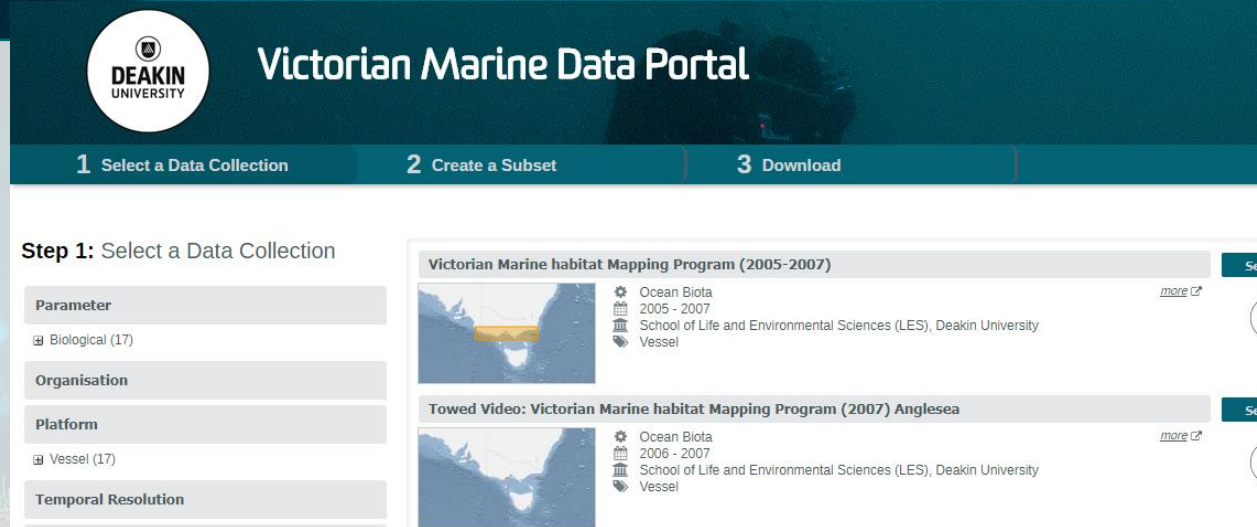
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THE COLLECTION

Collection items

- Victorian Marine Habitat data from various sources
- Deakin University, CSIRO, Victorian Department of Environment, Land, Water and Planning (DELWP), Marine Biodiversity Hub, Parks Victoria

- Data from a variety of instruments
- Underwater video, high resolution SONAR, airborne LiDAR, baited cameras, autonomous gliders, drones and diver observations



The screenshot displays the 'Victorian Marine Data Portal' website. At the top, there is a navigation bar with three steps: '1 Select a Data Collection', '2 Create a Subset', and '3 Download'. The 'Deakin University' logo is in the top left. The main content area is titled 'Step 1: Select a Data Collection'. On the left, there are four filter categories: 'Parameter' (with a sub-option 'Biological (17)'), 'Organisation', 'Platform' (with a sub-option 'Vessel (17)'), and 'Temporal Resolution'. On the right, two data collection entries are shown. The first is 'Victorian Marine habitat Mapping Program (2005-2007)', which includes a map thumbnail, a 'more' link, and details: 'Ocean Biota', '2005 - 2007', 'School of Life and Environmental Sciences (LES), Deakin University', and 'Vessel'. The second entry is 'Towed Video: Victorian Marine habitat Mapping Program (2007) Anglesea', which also includes a map thumbnail, a 'more' link, and the same details as the first entry.



THE COLLECTION

Technology

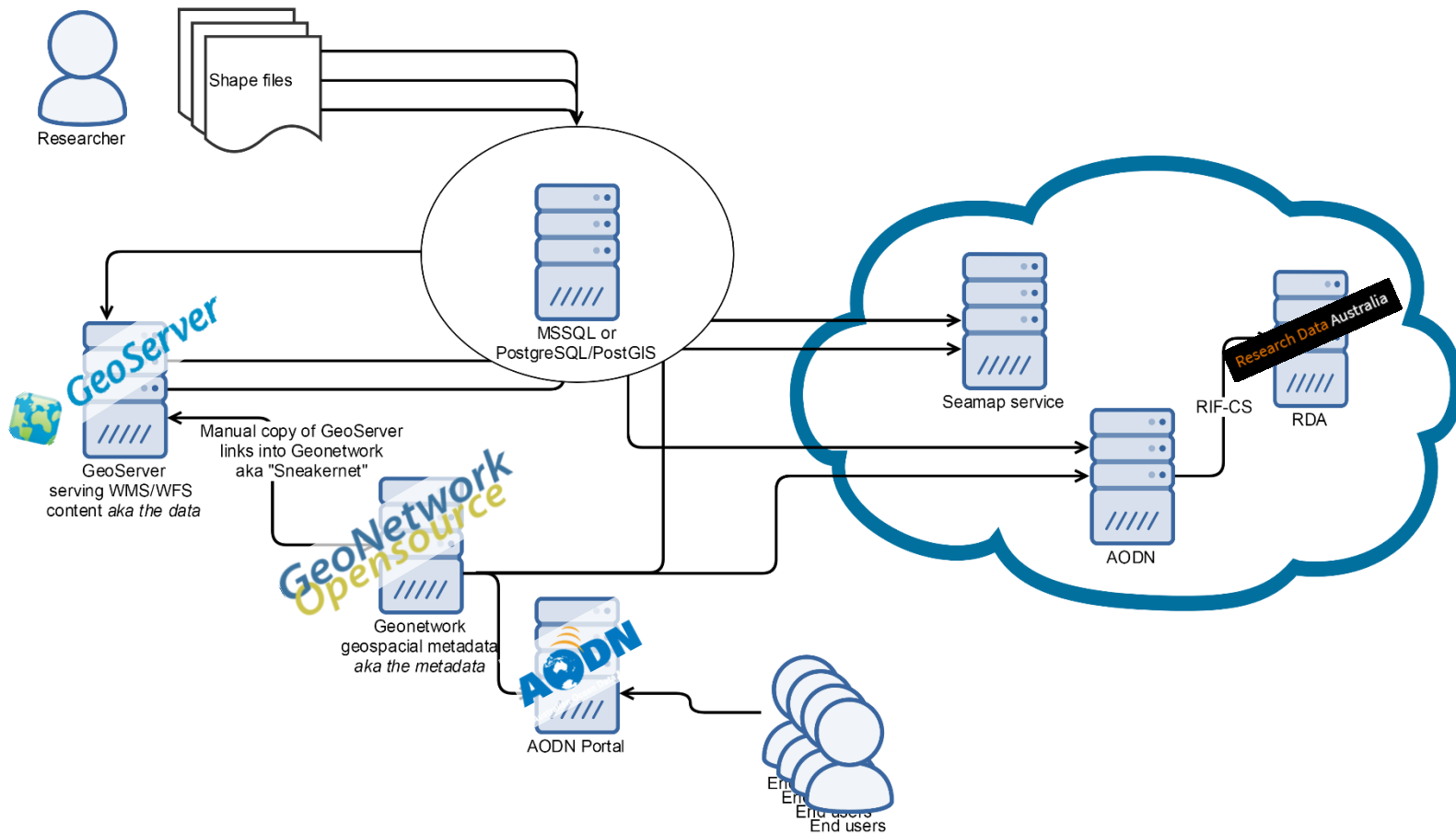
- An instance of the IMOS AODN Portal
- Java Tomcat webapp stack
 - PostgreSQL database with GIS extensions (aka PostGIS)
 - GeoServer
 - GeoNetwork
 - AODN Portal

vmdp.deakin.edu.au



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TECHNICAL ARCHITECTURE



USER WORKFLOW



Victorian Marine Data Portal

1 Select a Data Collection

2 Create a Subset

3 Download

Step 1: Select a Data Collection

Parameter

Biological (17)

Organisation

Platform

Vessel (17)

Temporal Resolution

Victorian Marine habitat Mapping Program (2005-2007)



Ocean Biota
2005 - 2007
School of Life and Environmental Sciences (LES), Deakin University
Vessel

[more](#)

Towed Video: Victorian Marine habitat Mapping Program (2007) Anglesea



Ocean Biota
2006 - 2007
School of Life and Environmental Sciences (LES), Deakin University
Vessel

[more](#)

Step 2: Create a Subset

Spatial Subset

N

Bounding Box



W

E

[Reset](#)

S

Victorian Benthic Habitats - Western Port Bay (CBICS) [x](#)

[Subset](#)

[Info](#)

[Layer](#)

Abstract

The Victorian Benthic Habitats - Western Port Bay (CBICS) is a synthesis of all existing benthic habitat characterisations of the embayment which have been reclassified to conform to the Combined Biotope Classification Scheme (CBICS). Base layers for the synthesised dataset were sourced from data provided by: Marine and Freshwater Resources

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USER WORKFLOW

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Username **shrimc** Password ***** Login

Show map

Default view

- By Group
 - MCP Minimum
 - MCP Core
 - MCP All
- By Package
 - Metadata
 - Identification
 - Temporal Ext.
 - Spatial Extent
 - Maintenance
 - Constraints
 - Spat. Info
 - Ref. system
 - Distribution
 - Data quality
 - App. schema
 - Catalog
 - Content Info
 - Ext. Info
- XML view

VICTORIAN BENTHIC HABITATS - WESTERN PORT BAY (CBICS)

No preview available

IDENTIFICATION INFO

Title: Victorian Benthic Habitats - Western Port Bay (CBICS)
Date: 2017-05-03
Date type: creation: date identifies when the resource was brought into existence

Cited responsible party

Individual name	Daniel Ierodiaconou	Voice	+61 3 55653224
Organisation name	School of Life and Environmental Sciences (LES), Deakin University	Delivery point	Deakin University
Role	coInvestigator: one of the key parties responsible for gathering information and conducting research	Delivery point	P.O. Box 423
		City	Warrnambool
		Administrative area	Victoria
		Postal code	3280

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Username **shrimc** Password ***** Login

Map viewer

Layer tree

- Base Layer
- Overlays
 - VectorLayer
 - Borders

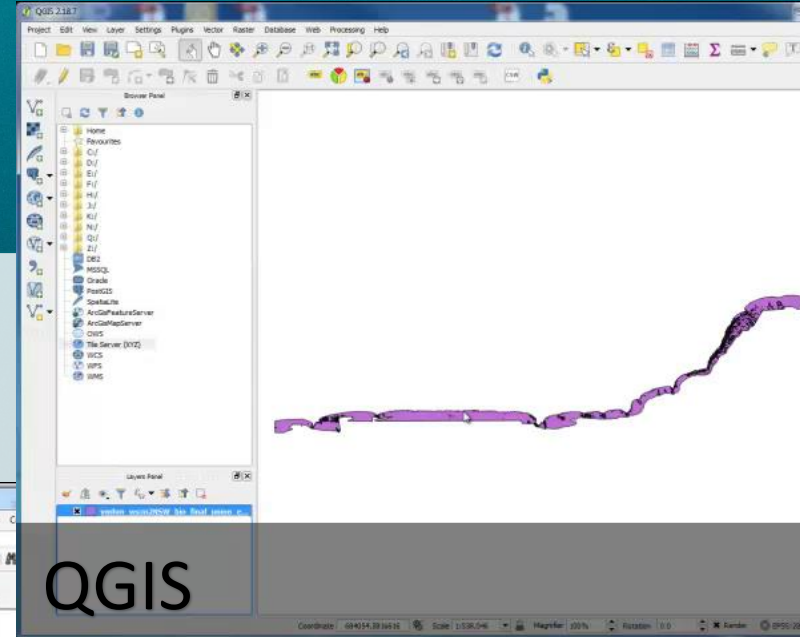
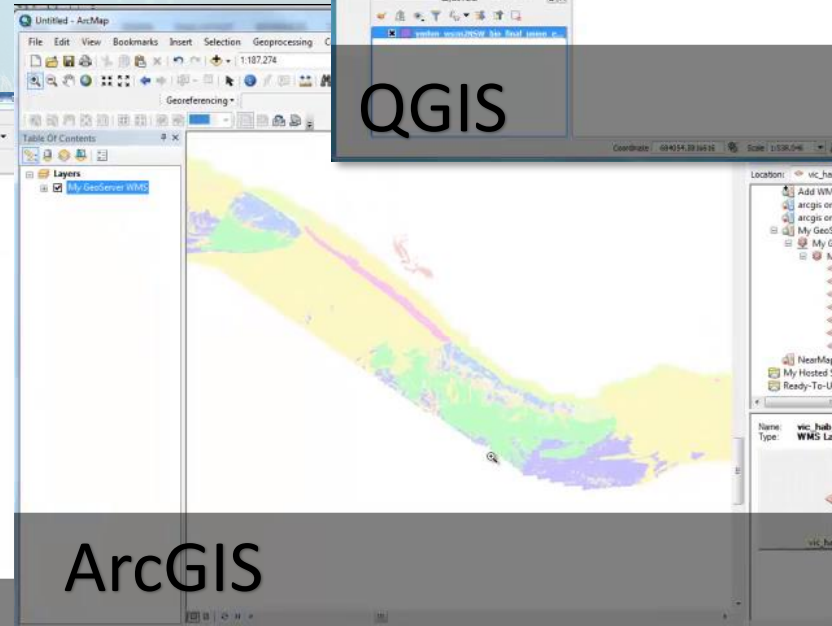
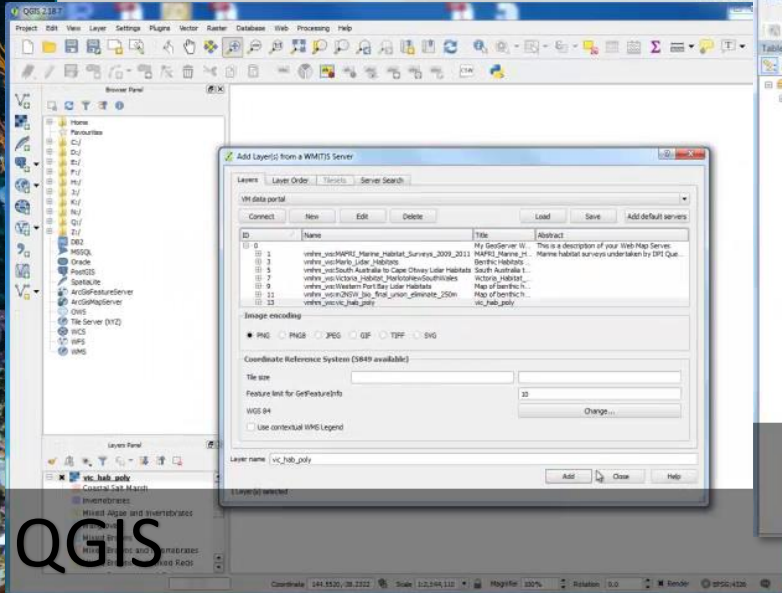
WGS84 (lat/lon)

Legend

URL of vocabulary term: http://vocab.aodn.org.au/def/discovery_parameter/entity/488

RESEARCHER WORKFLOW

Can access the Web Feature Service (WFS) or Web Mapping Service (WMS) directly via GIS software such as QGIS



QGIS

ArcGIS

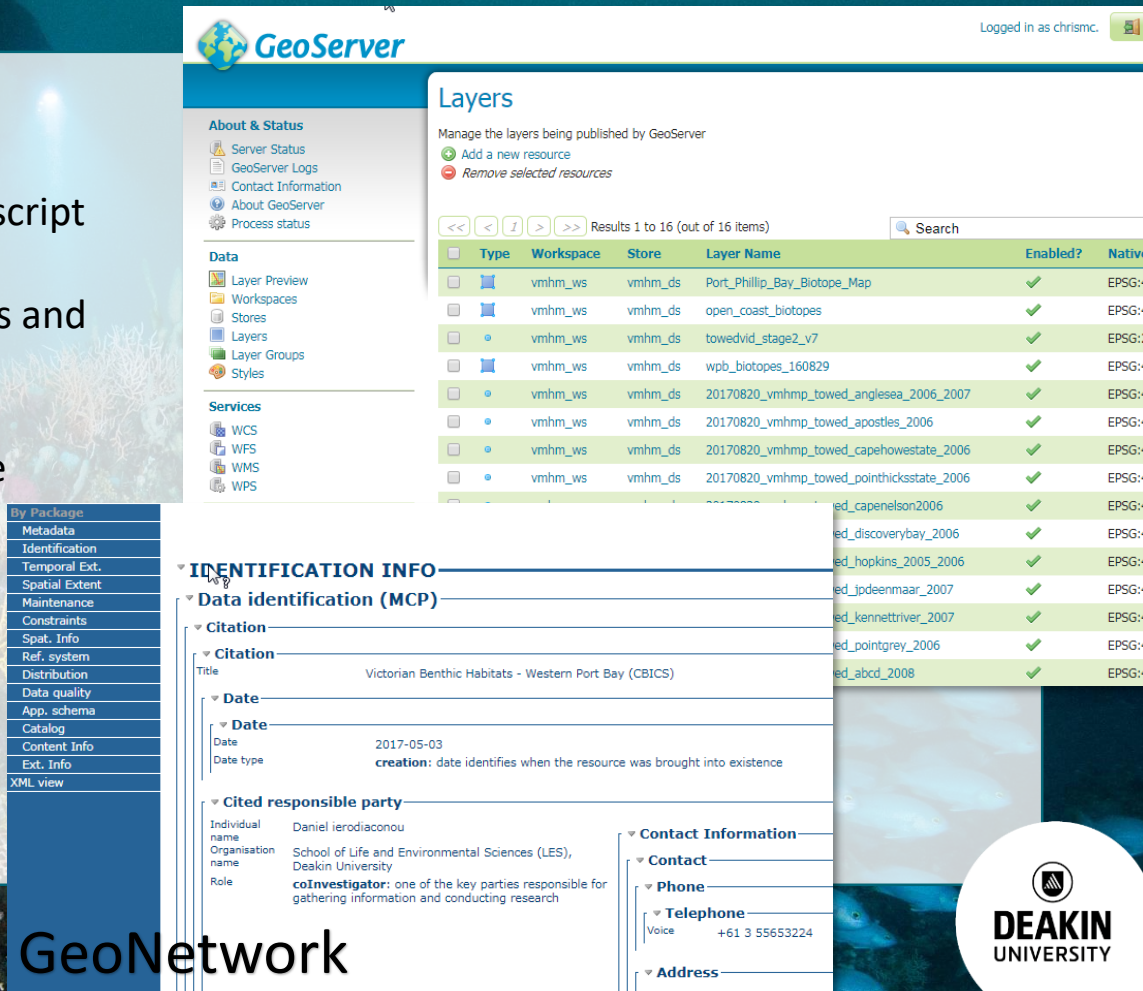
RESEARCHER WORKFLOW

Uploading data

Shapefile to PostGIS via shp2pgsql script

Then GeoServer to create the layers and layer filters (for faceted searching)

Followed by GeoNetwork for all the metadata (GUI or XML heaven!)



The image displays two web-based interfaces used in a research workflow. The top interface is GeoServer, showing the 'Layers' management page. It lists 16 layers, each with a checkbox, type, workspace, store, layer name, enabled status, and native SRS. The bottom interface is GeoNetwork, showing the 'IDENTIFICATION INFO' form for a resource titled 'Victorian Benthic Habitats - Western Port Bay (CBICS)'. The form includes sections for Citation, Date, Cited responsible party, and Contact Information.

GeoServer Layers Table:

Type	Workspace	Store	Layer Name	Enabled?	Native SRS
<input type="checkbox"/>	vmhm_ws	vmhm_ds	Port_Phillip_Bay_Biotope_Map	✓	EPSG:31466
<input type="checkbox"/>	vmhm_ws	vmhm_ds	open_coast_biotores	✓	EPSG:31466
<input type="checkbox"/>	vmhm_ws	vmhm_ds	towedvid_stage2_v7	✓	EPSG:31466
<input type="checkbox"/>	vmhm_ws	vmhm_ds	wpb_biotores_160829	✓	EPSG:31466
<input type="checkbox"/>	vmhm_ws	vmhm_ds	20170820_vmhmp_towed_anglesea_2006_2007	✓	EPSG:31466
<input type="checkbox"/>	vmhm_ws	vmhm_ds	20170820_vmhmp_towed_apostles_2006	✓	EPSG:31466
<input type="checkbox"/>	vmhm_ws	vmhm_ds	20170820_vmhmp_towed_capehowestate_2006	✓	EPSG:31466
<input type="checkbox"/>	vmhm_ws	vmhm_ds	20170820_vmhmp_towed_pointhicksstate_2006	✓	EPSG:31466
<input type="checkbox"/>	vmhm_ws	vmhm_ds	20170820_vmhmp_towed_capenelson_2006	✓	EPSG:31466
<input type="checkbox"/>	vmhm_ws	vmhm_ds	20170820_vmhmp_towed_discoverybay_2006	✓	EPSG:31466
<input type="checkbox"/>	vmhm_ws	vmhm_ds	20170820_vmhmp_towed_hopkins_2005_2006	✓	EPSG:31466
<input type="checkbox"/>	vmhm_ws	vmhm_ds	20170820_vmhmp_towed_jpdeenmaar_2007	✓	EPSG:31466
<input type="checkbox"/>	vmhm_ws	vmhm_ds	20170820_vmhmp_towed_kennettriver_2007	✓	EPSG:31466
<input type="checkbox"/>	vmhm_ws	vmhm_ds	20170820_vmhmp_towed_pointgrey_2006	✓	EPSG:31466
<input type="checkbox"/>	vmhm_ws	vmhm_ds	20170820_vmhmp_towed_abcd_2008	✓	EPSG:31466

GeoNetwork IDENTIFICATION INFO Form:

IDENTIFICATION INFO

Data identification (MCP)

Citation

Title: Victorian Benthic Habitats - Western Port Bay (CBICS)

Date

Date: 2017-05-03
Date type: creation: date identifies when the resource was brought into existence

Cited responsible party

Individual name: Daniel ierodiaconou
Organisation name: School of Life and Environmental Sciences (LES), Deakin University
Role: coInvestigator: one of the key parties responsible for gathering information and conducting research

Contact Information

Contact

Phone

Telephone

Voice: +61 3 55653224

Address

CHALLENGES

Open source configuration without in depth knowledge and light on documentation

On premise installation pros and cons

Never enough resources

Format of data, in particular rasterised image data (GeoTiff) – limitations in the AODN stack

Something new and hadn't been handled before



BENEFITS AND FUTURE

Benefits

Further details at tomorrow's BoF (Moving towards FAIR data)

Huge benefit to the data contributors

Future

Test case for Seamap Connections for each state to share data

More features to handle different data types

Extending metadata to include links to raw baited remote underwater video (BRUV) data

THANK-YOU

A huge thank-you to:

- ANDS for the High Value Collection program
- University of Tasmania (IMAS) for their support with the technology stack in relation to the metadata records
- Integrated Marine Observing System (IMOS) for their support with the AODN portal software stack installation and configuration



QUESTIONS



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