eRA17 – Victorian Marine Data Portal (VMDP)

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DEAKIN UNIVERSITY

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
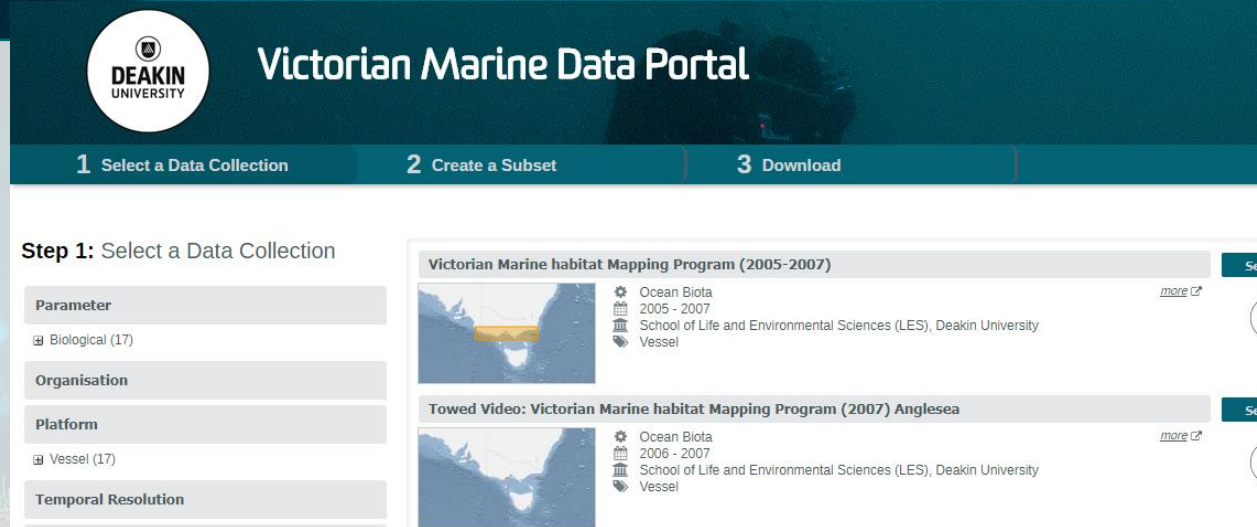
Datasets represent a 20 year time-series

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
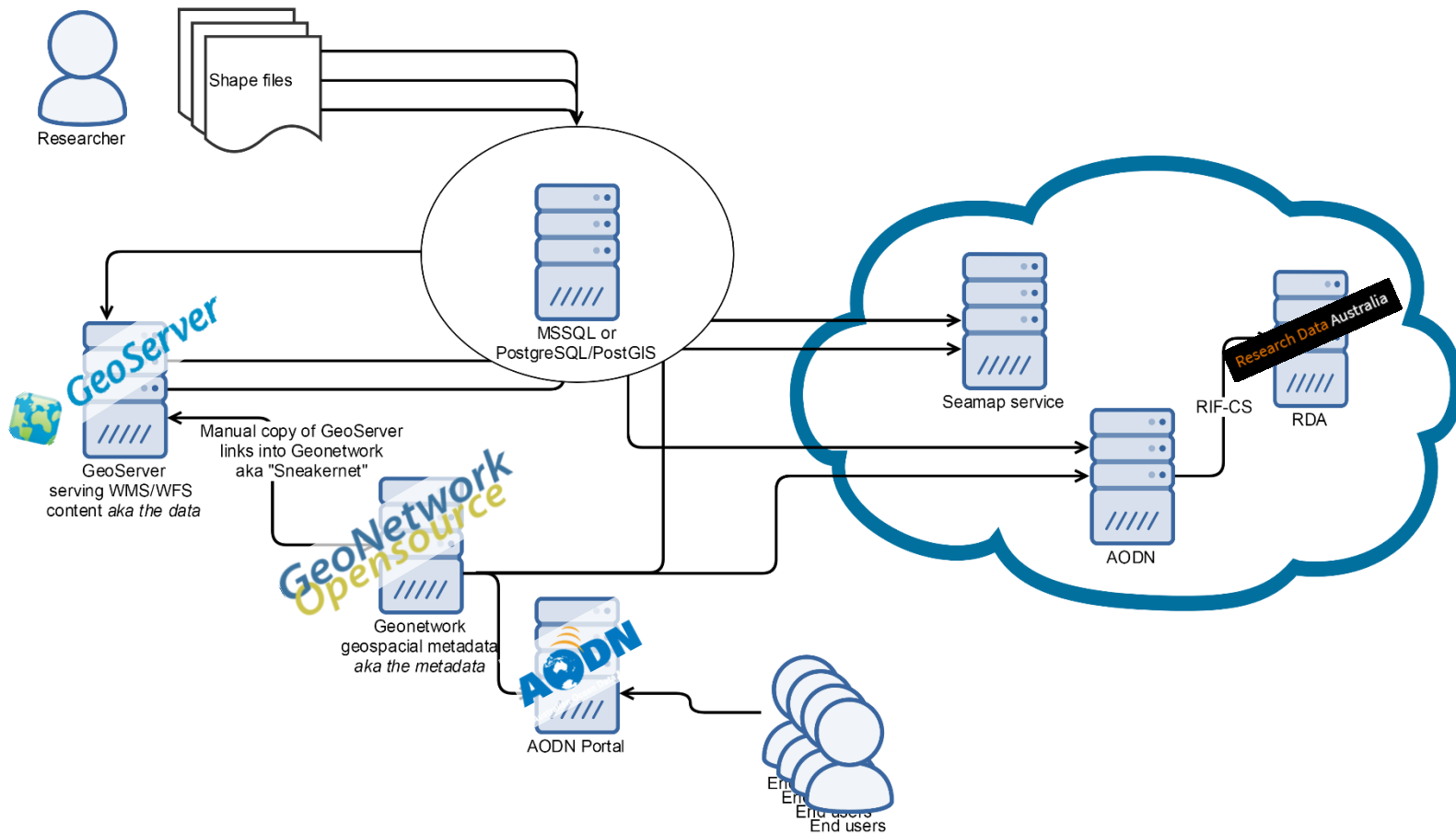
THE COLLECTION

Technology

• An instance of the IMOS AODN Portal

• Java Tomcat webapp stack

  • PostgreSQL database with GIS extentions (aka PostGIS)

  • GeoServer

  • GeoNetwork

  • AODN Portal

vmdp.deakin.edu.au

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 [enter]

[Bounding Box ▾]   W [enter]   E [enter]

↺ Reset   S [enter]

Victorian Benthic Habitats - Western Port Bay (CBICS)   ✕

[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

« Previous   Next »

141.70891, -37.65886

50 km
20 mi

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USER WORKFLOW

RESEARCHER WORKFLOW

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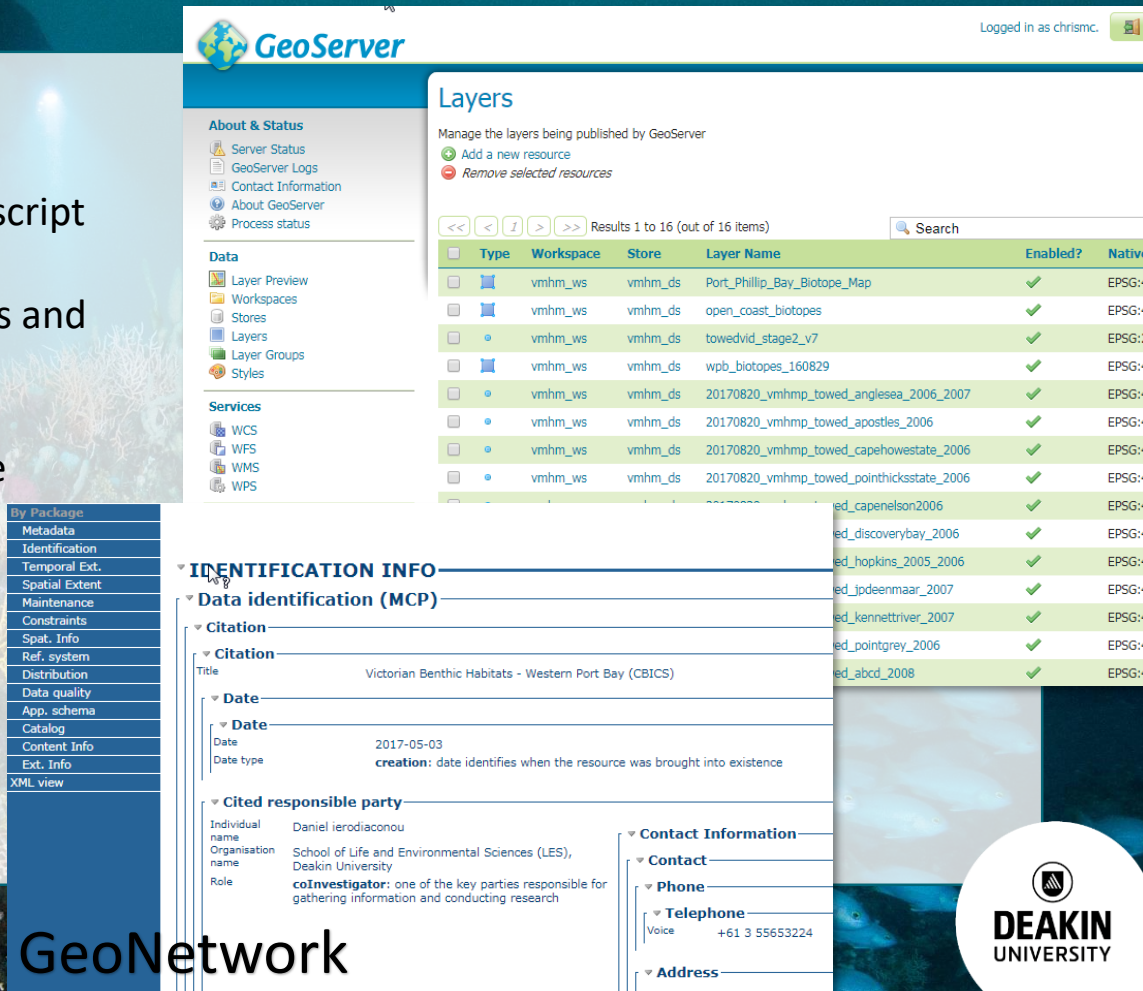GIS software such as QGIS
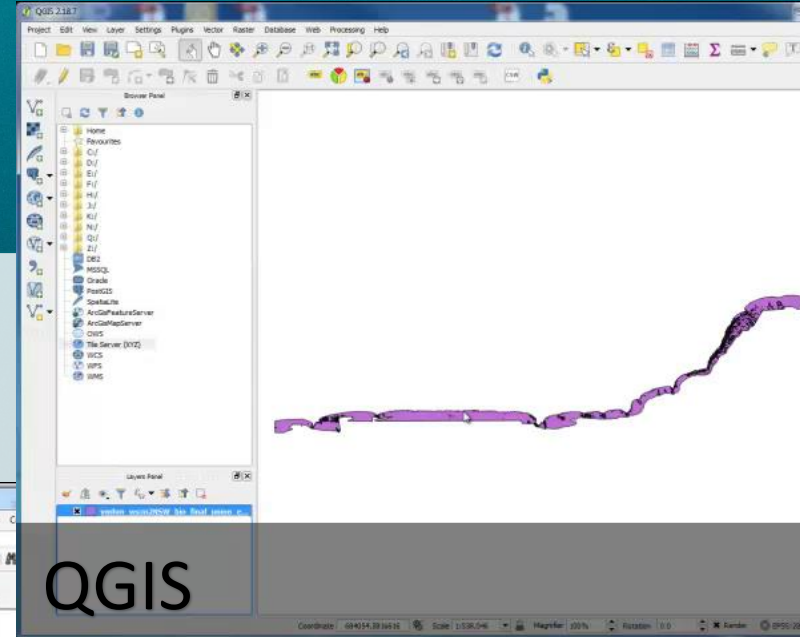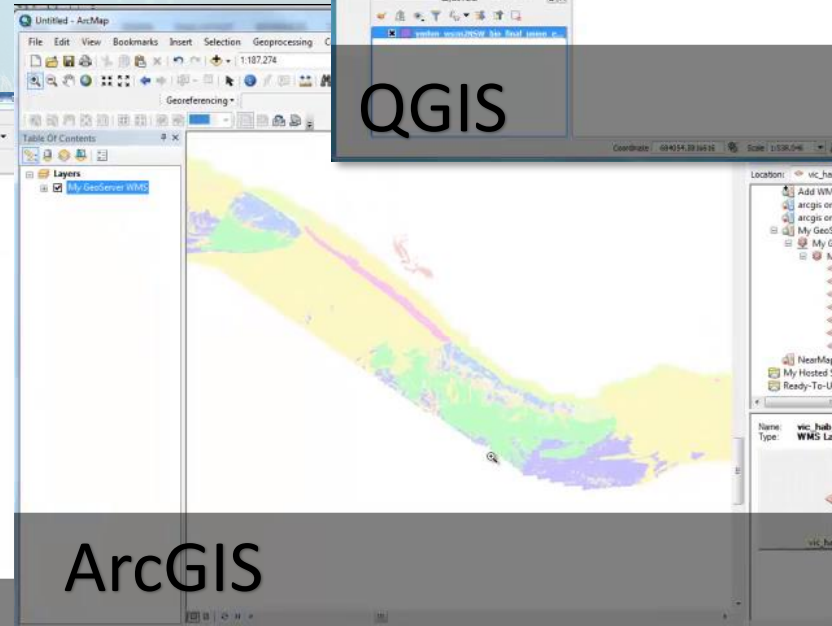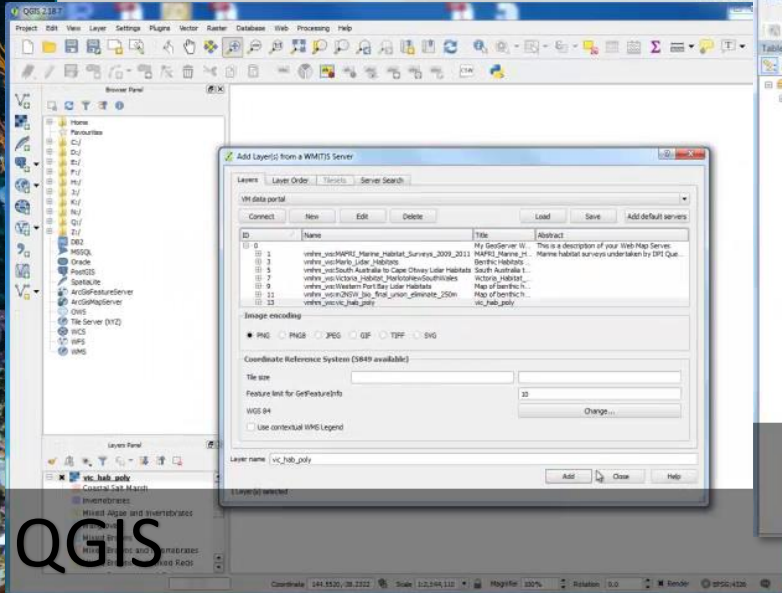
QGIS

ArcGIS

QGIS

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!)

GeoNetwork

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

19.01.2007 01:0

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

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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