QGIS MetaSearch

Lowering the barrier to geospatial data discovery in the desktop

Tom Kralidis (@tomkralidis)
Paul van Genuchten

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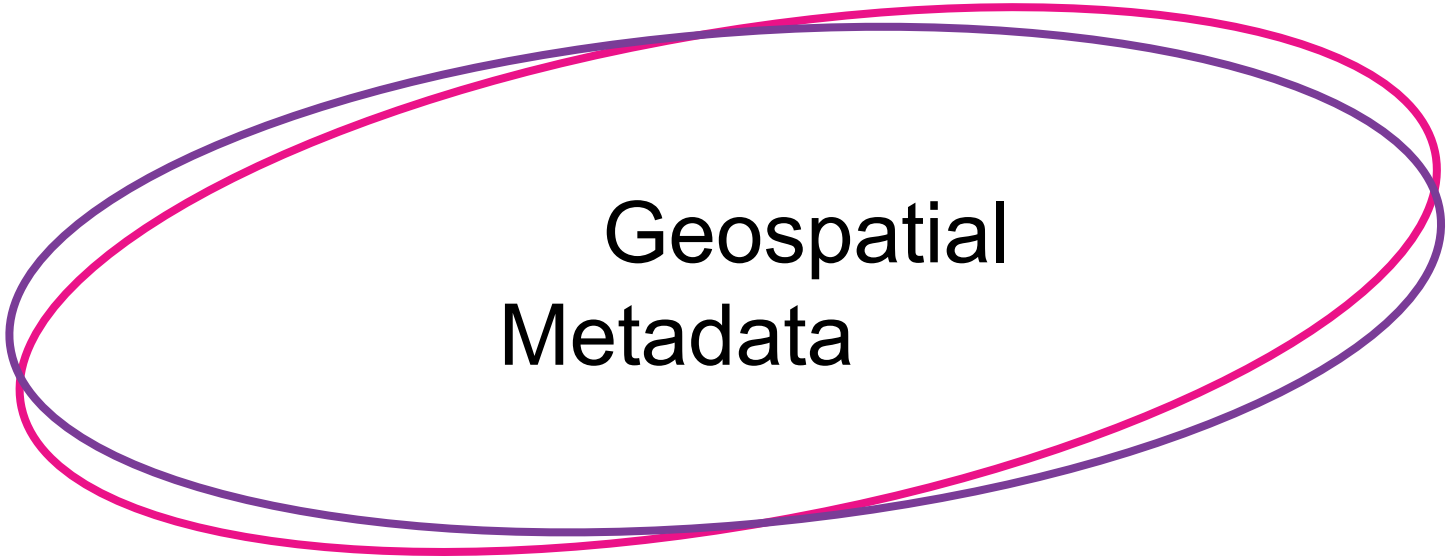
BUENOS AIRES 2021



Definition of common dataset properties

...

Dublin Core

FGDC

ISO19115

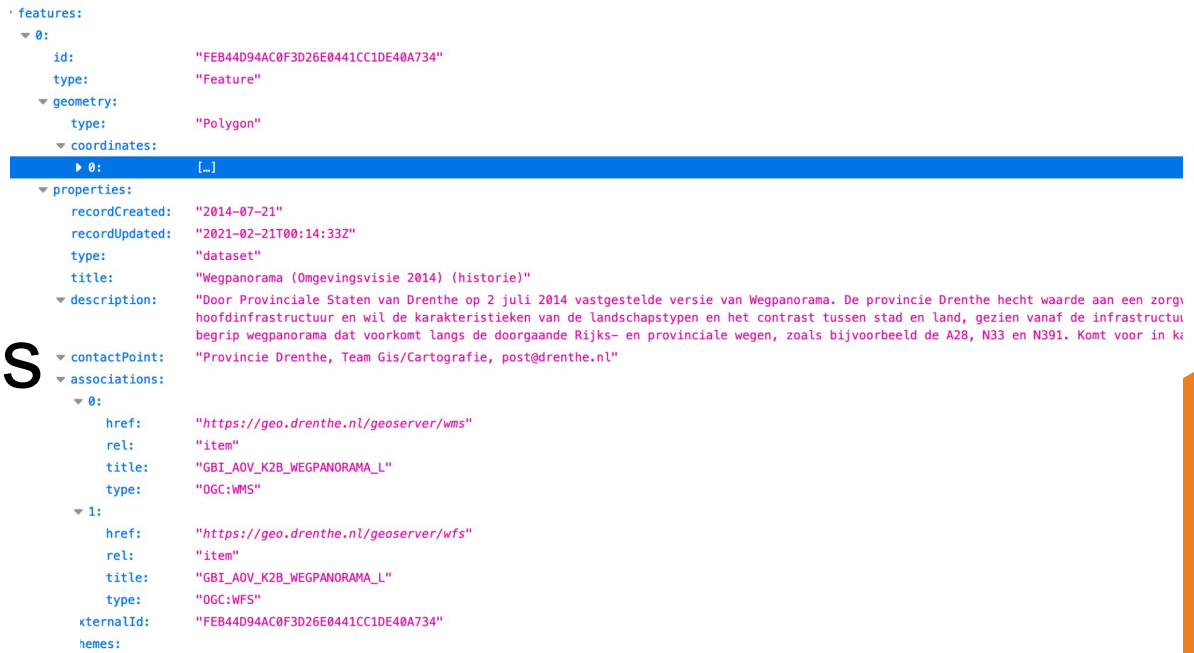
GeoDCATap

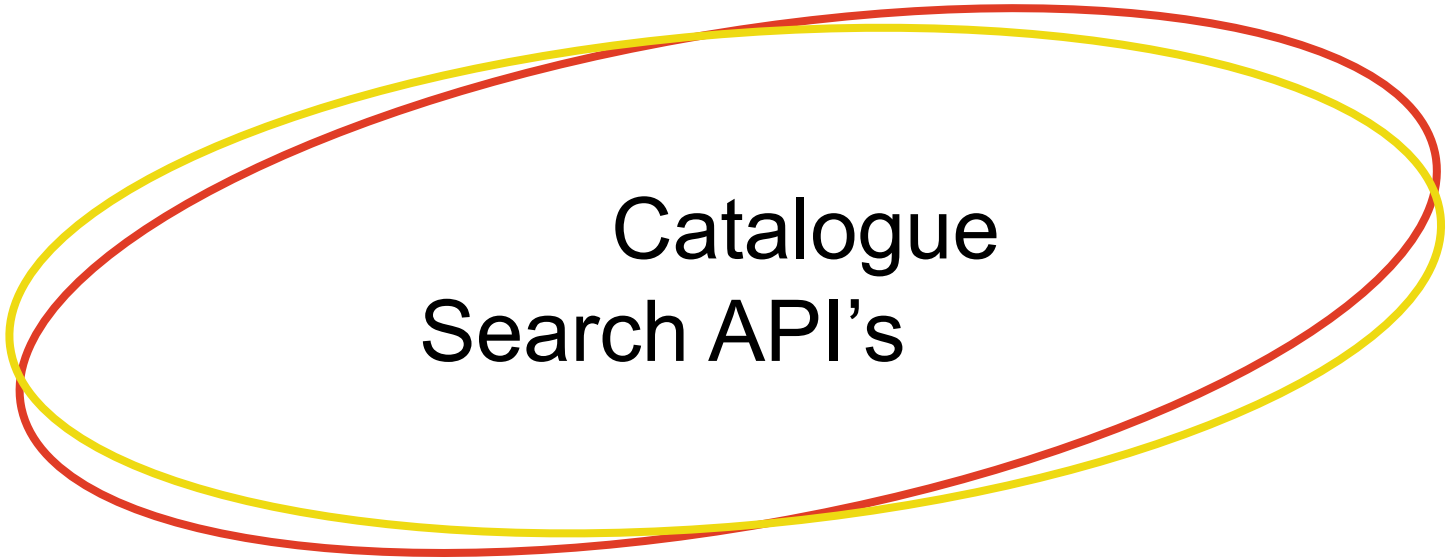
...

...

OGC API - Records

STAC





Catalogue Search API’s

Definition of common protocols for metadata exchange

CSW

https://example.org/csw?service=CSW&version=2.0.2&request=GetRecords&typenames=csw:Record&resulttype=results

OpenSearch

https://example.org/api/search?bbox={geo:box?}&q={searchTerms}

OAI-PMH

https://example.org/oai?verb=Identify

SRU

https://example.org/sru?operation=searchRetrieve&query=birds

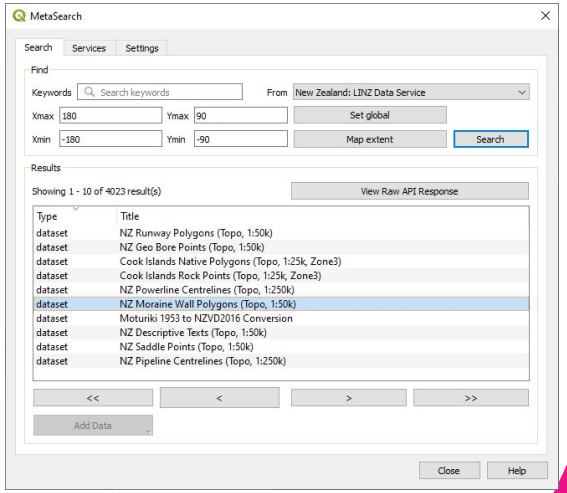
OGC API - Records

https://example.org/ogcapi/collections/catalogue/items?q=birds&datetime=2021-09-30

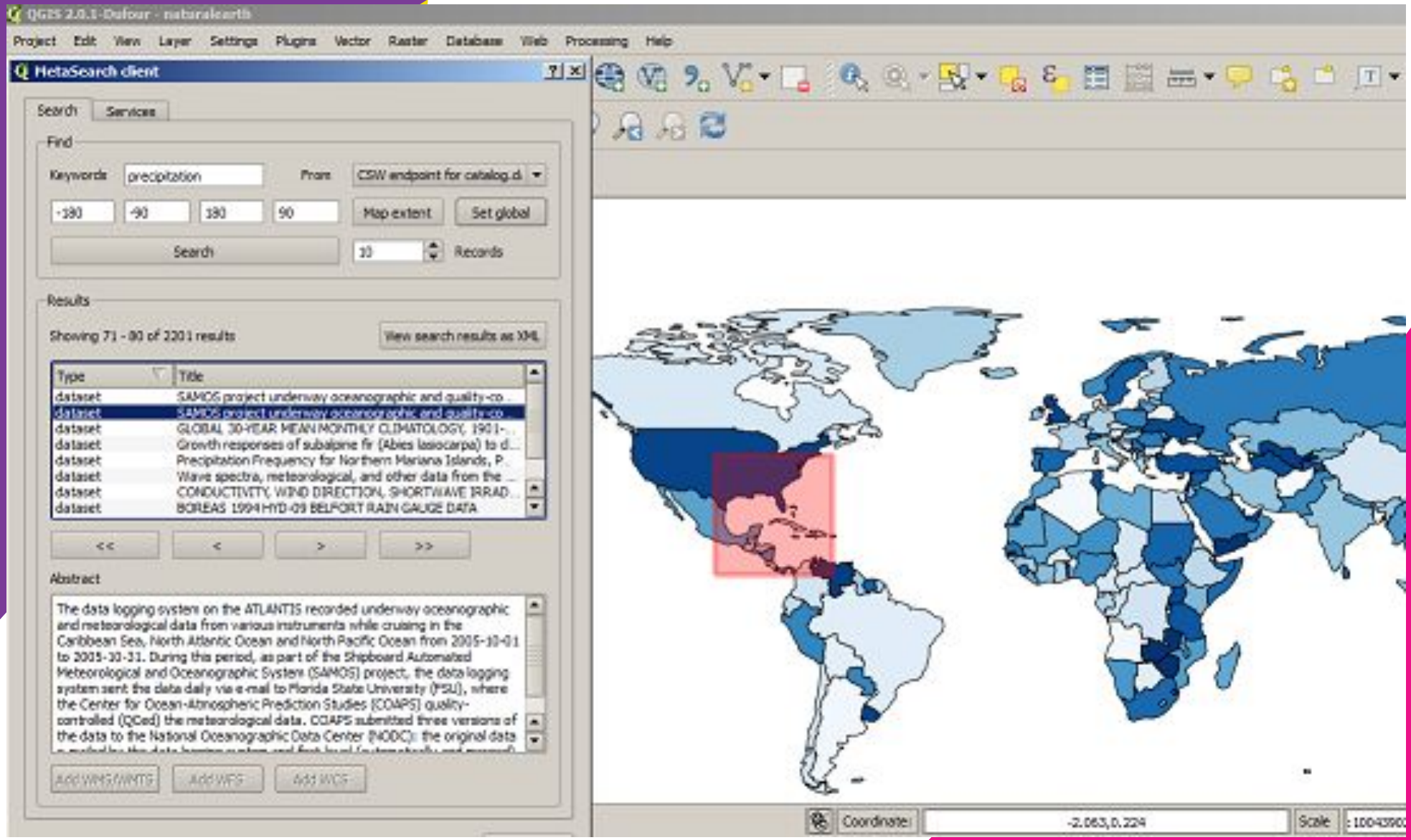
QGIS and MetaSearch

Beyond the huge tables of content

QGIS MetaSearch Plugin



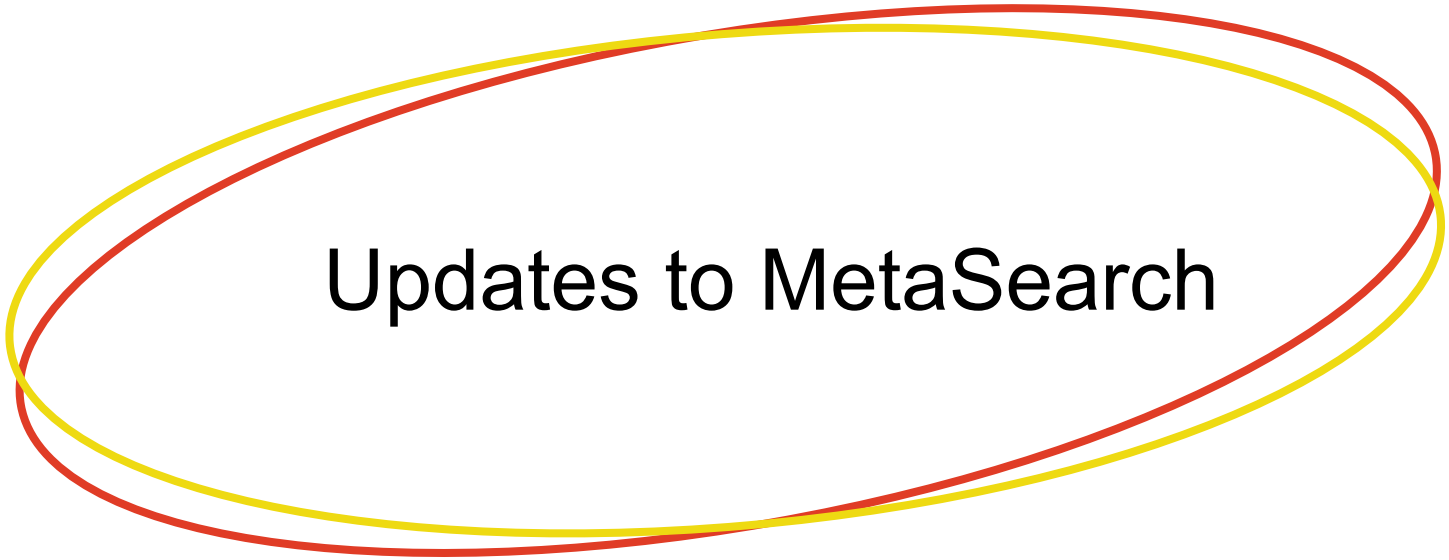
- 2010: Initially developed by NextGIS (cswclient)
- 2013: Forked by Geopython/Tom Kralidis
- **2014: Accepted as core QGIS plugin**
- Query any catalogue using CSW for data
- Add common protocols to the map (WMS, WFS, ArcGIS, direct data download)
- View footprints on the map


QGIS 2.0.1-Dufour - naturalearth
Project Edit View Layer Settings Plugins Vector Raster Database Web Processing Help
MetaSearch client
Search Services
Find
Keywords precipitation
From CSW endpoint for catalog.d
-180 -90 180 90
Map extent
Set global
Search
10 Records
Results
Showing 71 - 80 of 2201 results
View search results as XML
Type Title
dataset SAMOS project underway oceanographic and quality-co
dataset SAMOS project underway oceanographic and quality-co
dataset GLOBAL 30-YEAR MEAN MONTHLY CLIMATOLOGY, 1901-
dataset Growth responses of subalpine fir (Abies lasiocarpa) to d
dataset Precipitation Frequency for Northern Mariana Islands, P
dataset Wave spectra, meteorological, and other data from the
dataset CONDUCTIVITY, WIND DIRECTION, SHORTWAVE IRRAD
dataset BOREAS 1994 HYD-09 BELFORT RAIN GAUGE DATA
<< < > >>
Abstract
The data logging system on the ATLANTIS recorded underway oceanographic and meteorological data from various instruments while cruising in the Caribbean Sea, North Atlantic Ocean and North Pacific Ocean from 2005-10-01 to 2005-10-31. During this period, as part of the Shipboard Automated Meteorological and Oceanographic System (SAMOS) project, the data logging system sent the data daily via e-mail to Florida State University (FSU), where the Center for Ocean-Atmospheric Prediction Studies (COAPS) quality-controlled (QCed) the meteorological data. COAPS submitted three versions of the data to the National Oceanographic Data Center (NODC): the original data
Add WMS/WMTS
Add WFS
Add WCS
Coordinate
-2.063,0.224
Scale

OGC API - Records

Discovery representation in the OGC API Suite

- OGC API - Records Standards Working Group (SWG) works on the new standard based on OGC API - Common and OGC API - Features
- Offers a unified, RESTful, OpenAPI, JSON powered query experience to query catalogues
- Server implementations in pygeoapi, pycsw, geonetwork, ldproxy



Updates to MetaSearch

Adding OGC API Records and refactor

- MetaSearch tool is extended and refactored to support OGC API - Records
  - Currently a PR to QGIS repo
  - Should we merge if standard is not yet formal?
  - MetaSearch is handy while implementing OGC API - Records server
- Internally MetaSearch uses OWSLib for client/server interaction
- Service type is abstracted, other protocols can be easily added later
- Binding to data still needs work
  - Link types!

Nothing beats a live demo at FOSS4G