SeaDataCloud

SWE ingestion service
SOS Viewing service

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Second annual meeting, Barcelona, Spain, 8-9 November 2018
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SeaDataCloud

SWE Ingestion Service

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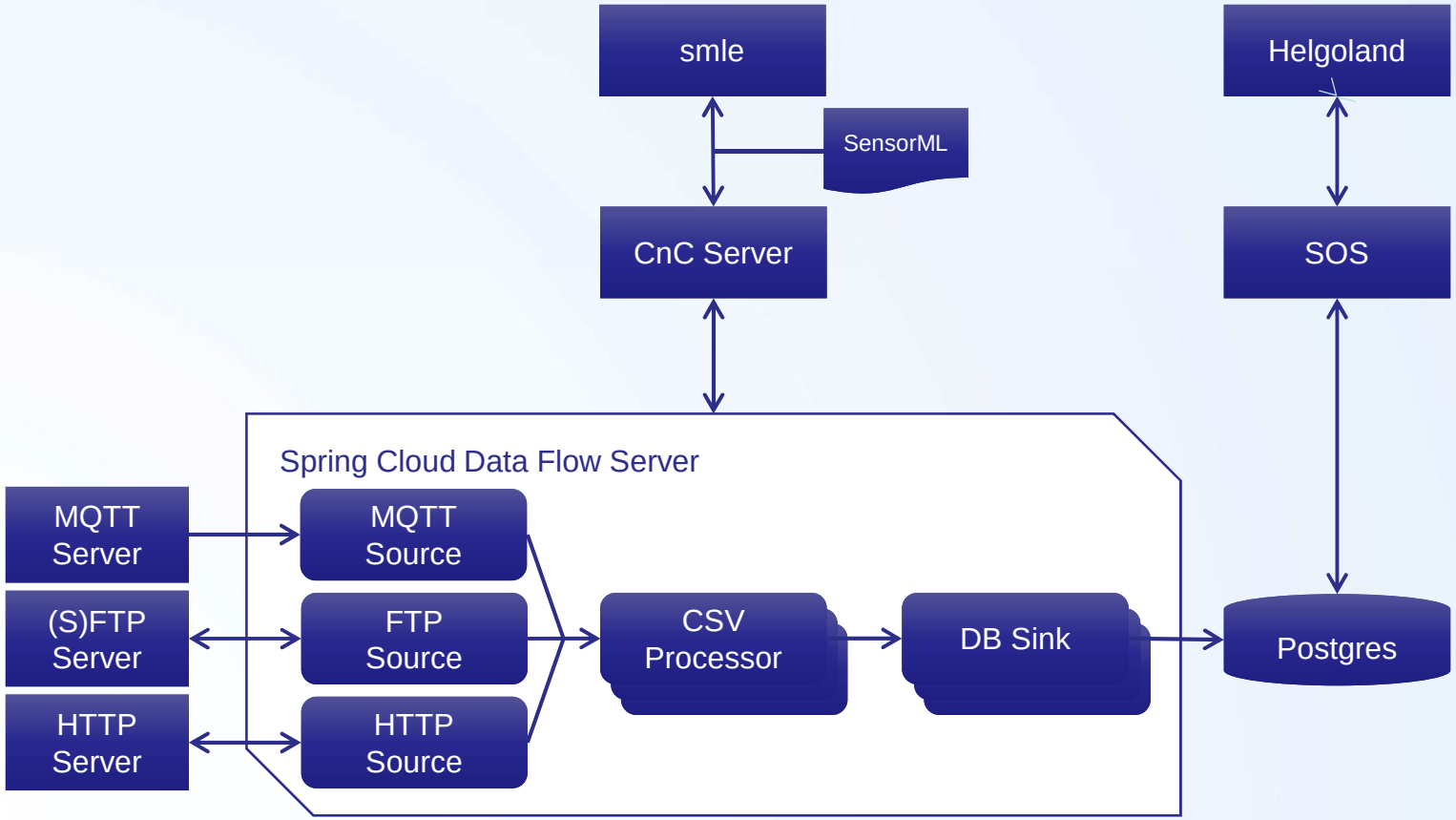
Objectives

- Facilitate the publication of observation data (streams)
  - Operate under the supervision of the PI of the observatories
  - Link from CDIs to (possibly unvalidated) near-real-time data
- Describe observatories (or networks of observatories) to
  - Be able to receive, decode and check data
  - Enrich CDI metadata with detailed information about sensors

Deliverables

- D9.9 – Specification of the SWE ingestion service, including SWE profiles and architecture – (M10, End of August 2017)
- D9.10 – SWE ingestion service and user interfaces operational – (M19, End of May 2018)

Architecture

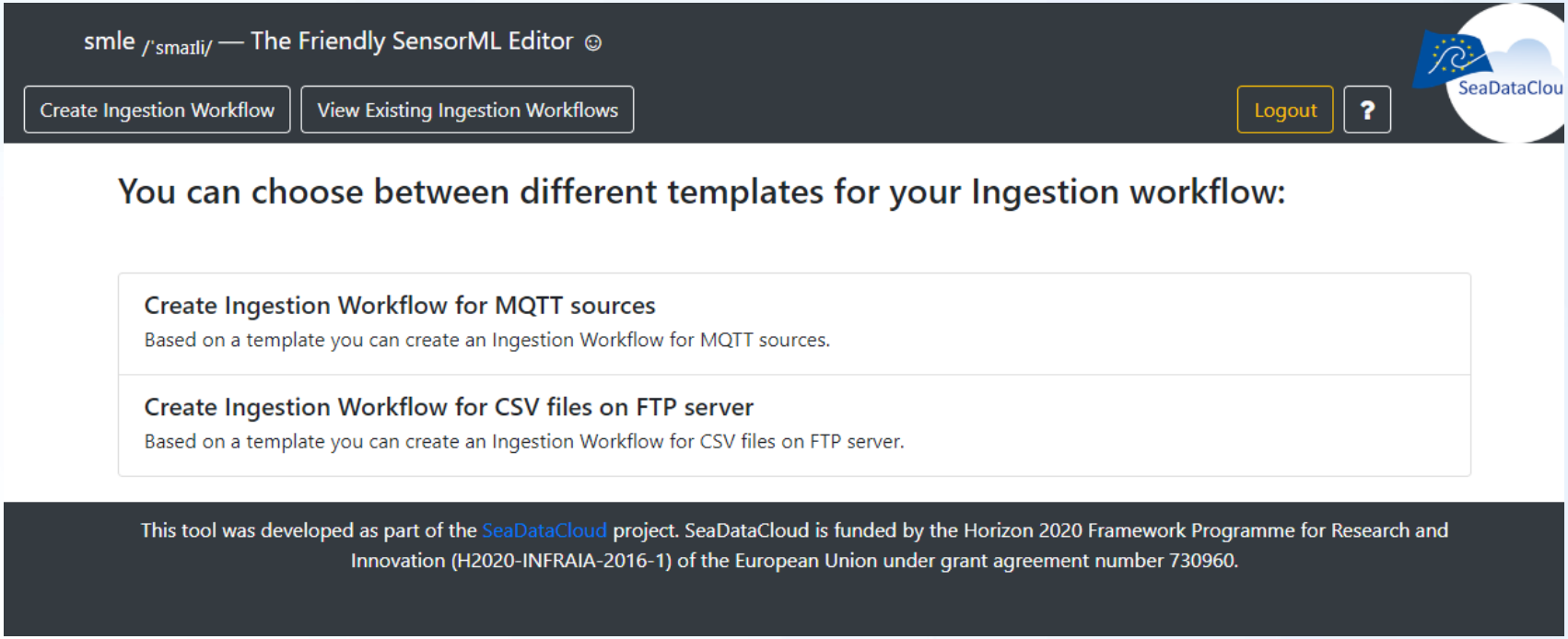


SWE Ingestion Service

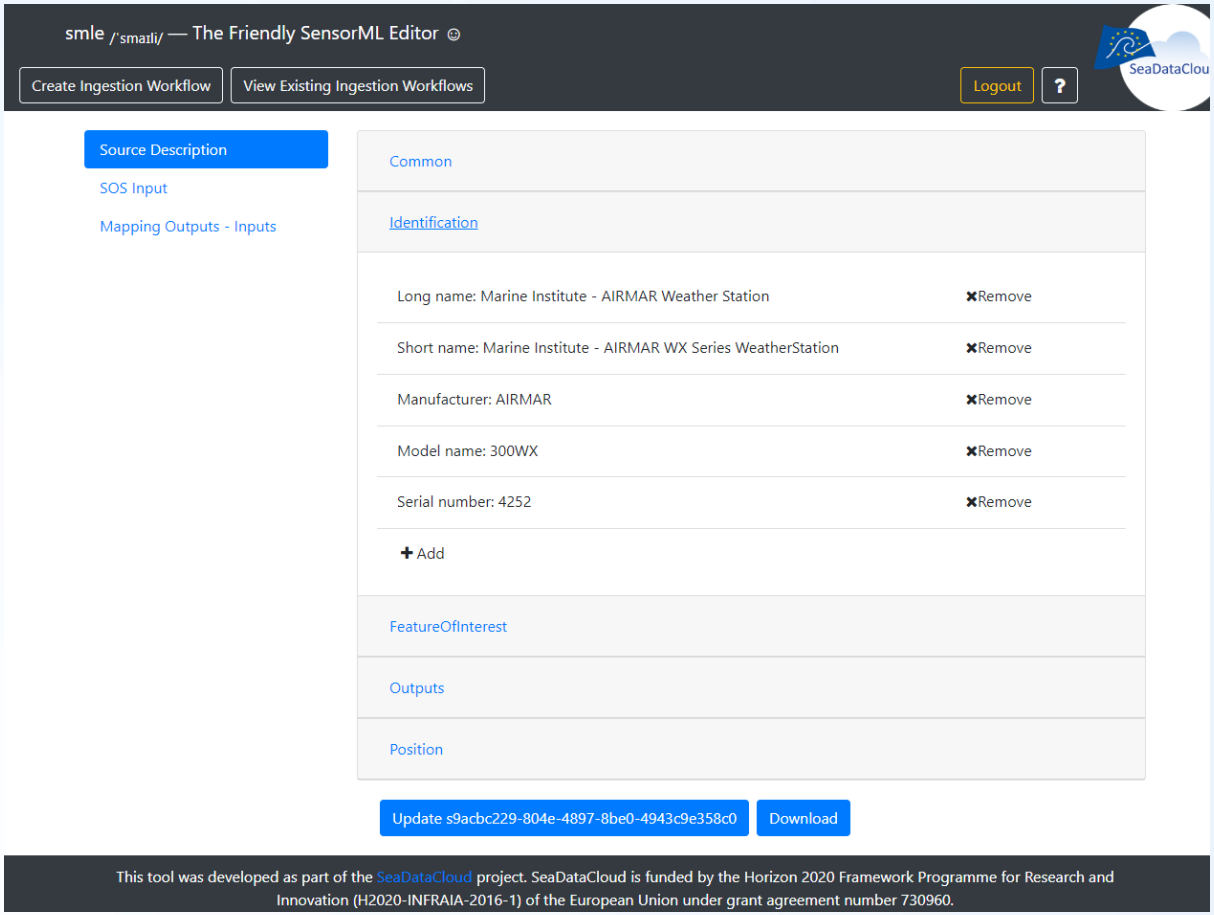
```
<sml:SimpleProcess>
    <sml:inputs>
        <sml:InputList>
            <sml:input name="csv-input" xlink:href="#outputStreamStructure"/>
        </sml:InputList>
    </sml:inputs>
    <sml:outputs>
        <sml:OutputList>
            <sml:output name="csv-output" xlink:href="#outputStreamStructure"/>
        </sml:OutputList>
    </sml:outputs>
    <sml:parameters>
        <sml:ParameterList>
            <sml:parameter name="file-filter-config">
                <swe:Count definition="https://52north.org/swe-ingestion/csv-file-filter#header-line-count">
                    <swe:label>Header Line Count</swe:label>
                    <swe:description>The number of lines to strip from the csv file</swe:description>
                    <swe:value>3</swe:value>
                </swe:Count>
            </sml:parameter>
        </sml:ParameterList>
    </sml:parameters>
    <sml:method xlink:href="https://52north.org/swe-ingestion/csv-file-filter"/>
</sml:SimpleProcess>
```

smle

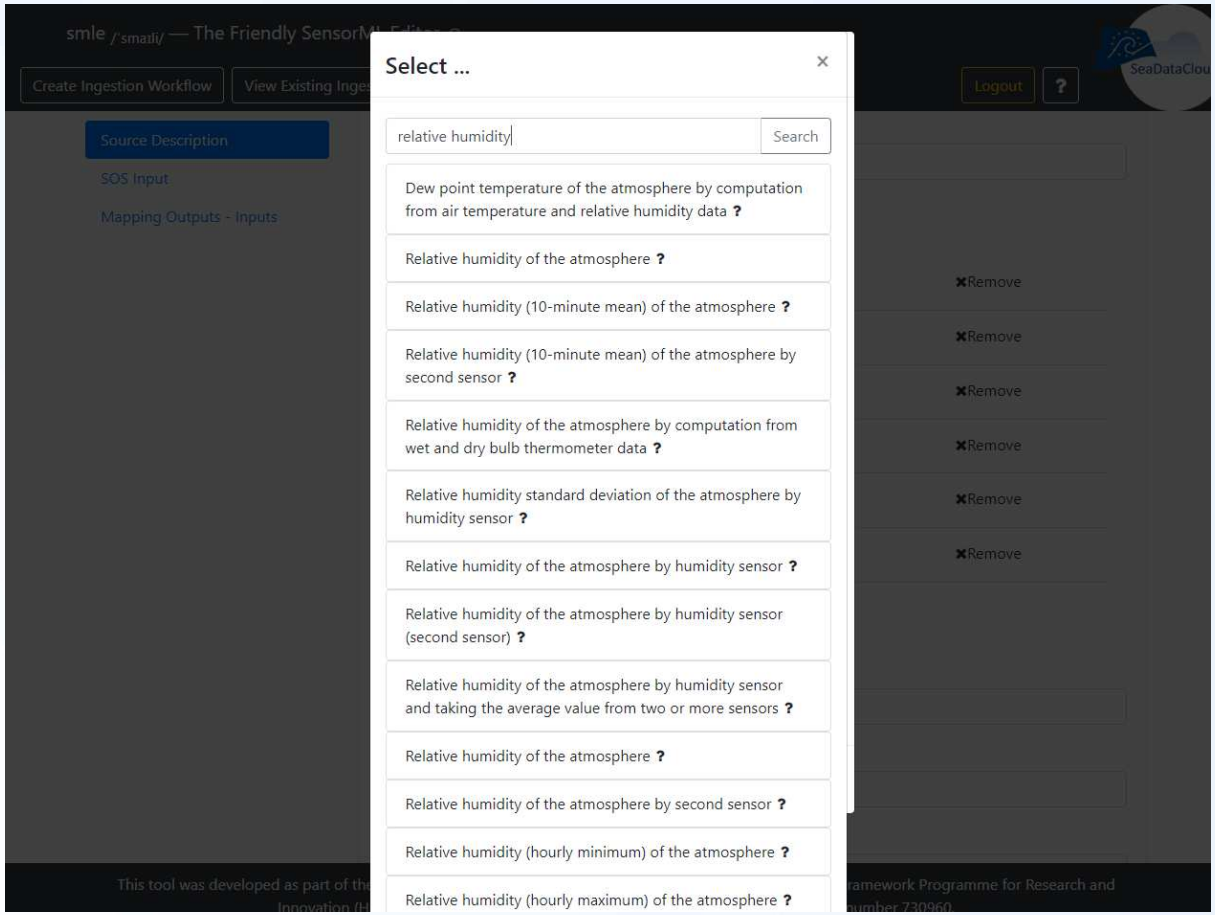
smle


smle /'smaɪli/ — The Friendly SensorML Editor ☺
Create Ingestion Workflow
View Existing Ingestion Workflows
Logout
?
SeaDataClou
You can choose between different templates for your Ingestion workflow:
Create Ingestion Workflow for MQTT sources
Based on a template you can create an Ingestion Workflow for MQTT sources.
Create Ingestion Workflow for CSV files on FTP server
Based on a template you can create an Ingestion Workflow for CSV files on FTP server.
This tool was developed as part of the SeaDataCloud project. SeaDataCloud is funded by the Horizon 2020 Framework Programme for Research and Innovation (H2020-INFRAIA-2016-1) of the European Union under grant agreement number 730960.

smle

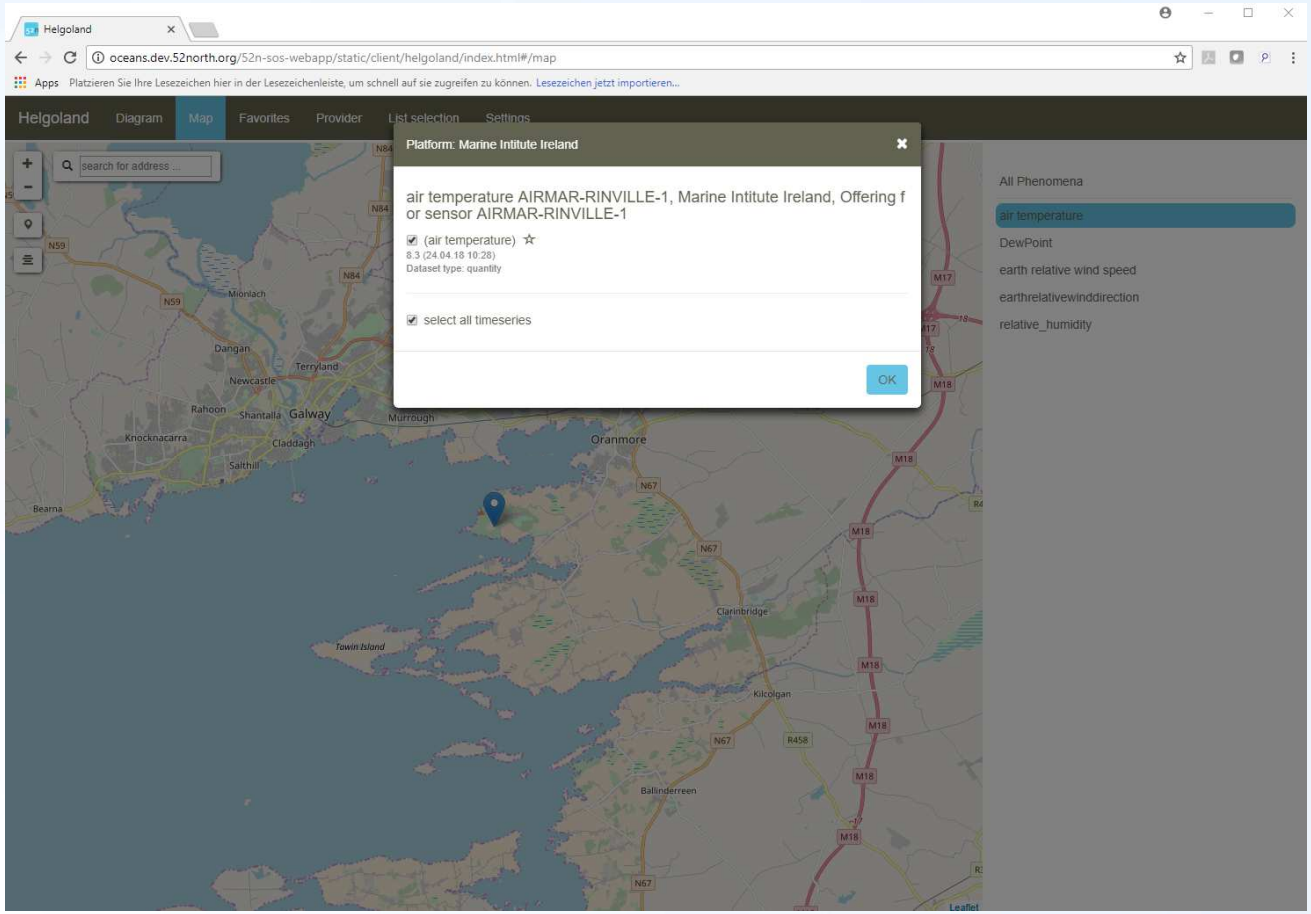

smle /'smaɪli/ — The Friendly SensorML Editor
Create Ingestion Workflow
View Existing Ingestion Workflows
Logout
?
SeaDataClou
Source Description
SOS Input
Mapping Outputs - Inputs
Common
Identification
Long name: Marine Institute - AIRMAR Weather Station
Remove
Short name: Marine Institute - AIRMAR WX Series WeatherStation
Remove
Manufacturer: AIRMAR
Remove
Model name: 300WX
Remove
Serial number: 4252
Remove
Add
FeatureOfInterest
Outputs
Position
Update s9acbc229-804e-4897-8be0-4943c9e358c0
Download
This tool was developed as part of the SeaDataCloud project. SeaDataCloud is funded by the Horizon 2020 Framework Programme for Research and Innovation (H2020-INFRAIA-2016-1) of the European Union under grant agreement number 730960.

smle

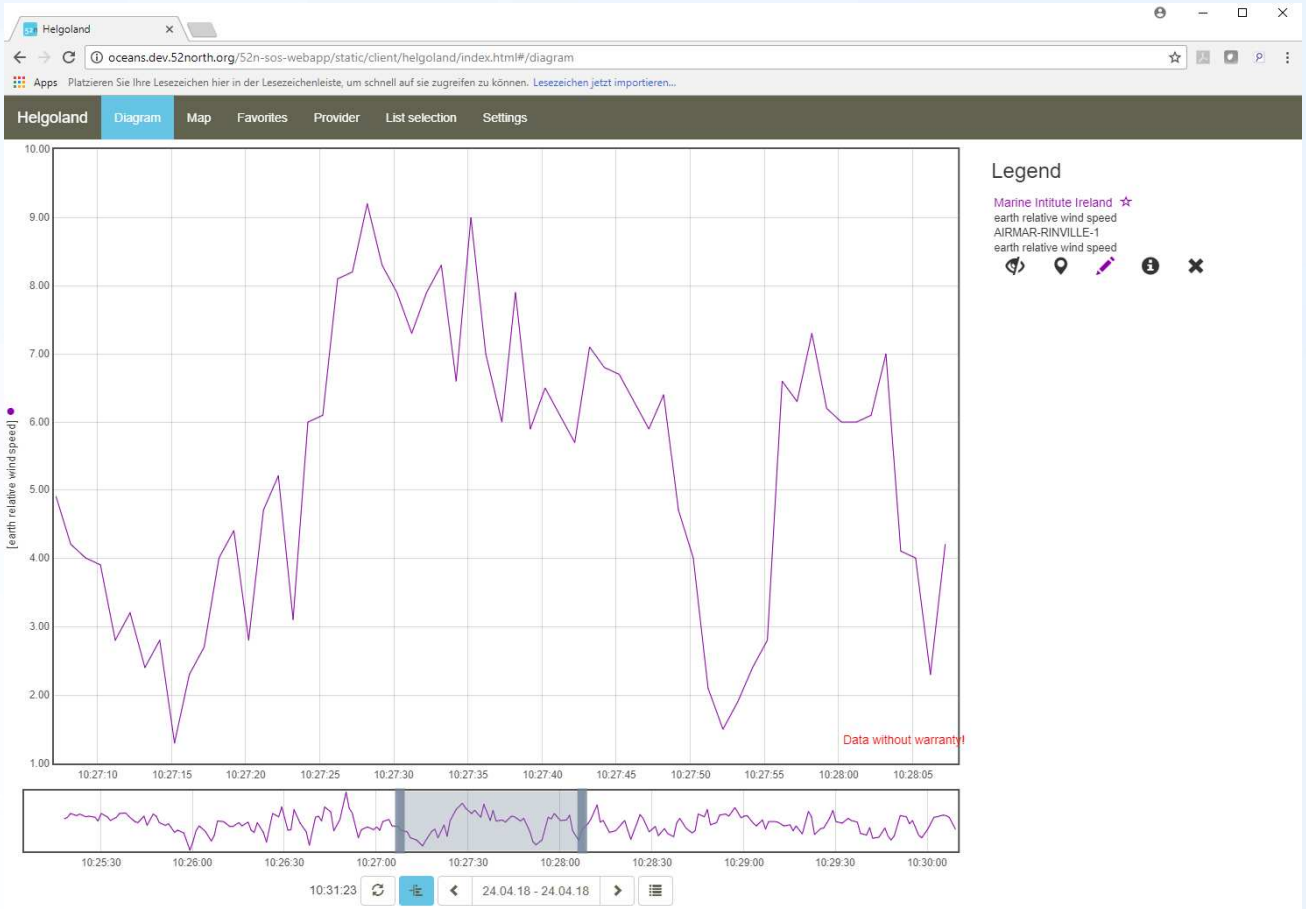

Select ...
relative humidity
Search
Dew point temperature of the atmosphere by computation from air temperature and relative humidity data ?
Relative humidity of the atmosphere ?
Relative humidity (10-minute mean) of the atmosphere ?
Relative humidity (10-minute mean) of the atmosphere by second sensor ?
Relative humidity of the atmosphere by computation from wet and dry bulb thermometer data ?
Relative humidity standard deviation of the atmosphere by humidity sensor ?
Relative humidity of the atmosphere by humidity sensor ?
Relative humidity of the atmosphere by humidity sensor (second sensor) ?
Relative humidity of the atmosphere by humidity sensor and taking the average value from two or more sensors ?
Relative humidity of the atmosphere ?
Relative humidity of the atmosphere by second sensor ?
Relative humidity (hourly minimum) of the atmosphere ?
Relative humidity (hourly maximum) of the atmosphere ?
Create Ingestion Workflow
Source Description
SOS Input
Mapping Outputs - Inputs
Logout
Remove

Helgoland

Helgoland


Helgoland
oceans.dev.52north.org/52n-sos-webapp/static/client/helgoland/index.html#/map
Helgoland
Diagram
Map
Favorites
Provider
List selection
Settings
Platform: Marine Intitute Ireland
air temperature AIRMAR-RINVILLE-1, Marine Intitute Ireland, Offering for sensor AIRMAR-RINVILLE-1
(air temperature)
8.3 (24.04.18 10:28)
Dataset type: quantity
select all timeseries
OK
search for address ...
All Phenomena
air temperature
DewPoint
earth relative wind speed
earthrelativewinddirection
relative_humidity
Galway
Oranmore
Clarinbridge
Kilcolgan
Ballinderreen
Leaflet

Helgoland


Helgoland
oceans.dev.52north.org/52n-sos-webapp/static/client/helgoland/index.html#/diagram
Helgoland
Diagram
Map
Favorites
Provider
List selection
Settings
Legend
Marine Intitute Ireland
earth relative wind speed
AIRMAR-RINVILLE-1
earth relative wind speed
[earth relative wind speed]
Data without warranty!
24.04.18 - 24.04.18

Future work – Within SeaDataCloud

- Prototype is ready
- Continue to different integrate data sources
- Support data providers

Future work – Beyond SeaDataCloud

- Integration of QA/QC mechanisms
- Event detection
  - In other projects: analysis of insitu and COPERNICUS data using ML for flooding area detection, element inputs in streams of water

SeaDataCloud

SOS Viewing Services

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SOS Viewing Services

- Integration of SensorML metadata
- Support for new observation types: out-of-band, spectral data
- Improvements regarding
  - (Near-) real-time data
  - Performance
  - User experience
  - Discovery (facet search, free-text search)
  - Vocabularies

Deliverables

- D10.17 – Specification of SOS Viewing Services and Development Plan – (M24, End of October 2018)
- D10.18 – SOS viewing services for data streams operational – (M31, End of May 2019)

Thank you for your attention!

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