SeaDataCloud

SWE Ingestion Service and SOS Viewing Services

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3rd Annual Meeting, Brest, 17-18th October 2019

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www.seadatanet.org

SWE Ingestion Service

Objectives

- Facilitating the integration of near-real time sensor data streams into Sensor Web infrastructures
- Enable the publication of the metadata about sensor data streams via the CDI

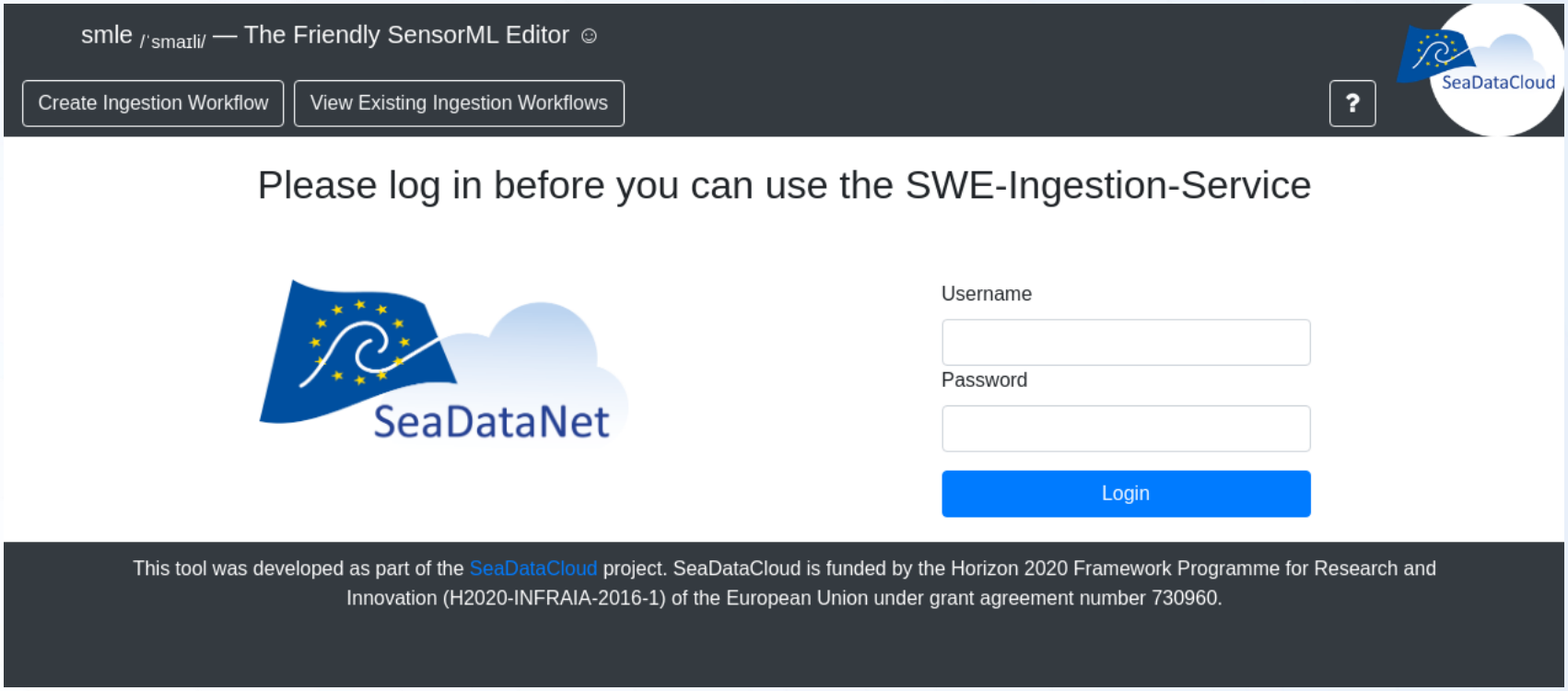
Objectives

- Currently two successfully tested types of data sources
  - MQTT-based data streams
  - File-based CSV data via FTP/HTTP

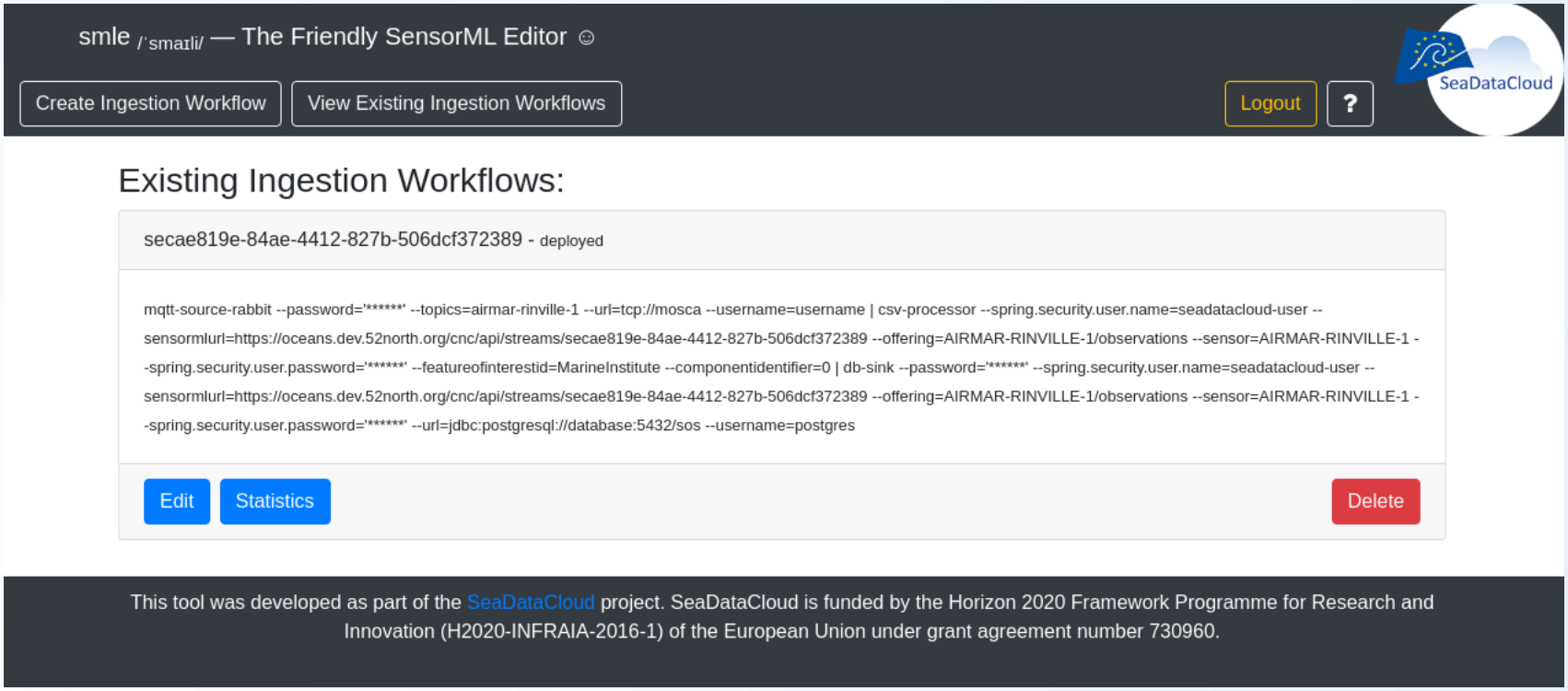
Demo

https://oceans.dev.52north.org/smle/

Demo


smle /ˈsmaɪli/ — The Friendly SensorML Editor ☺
Create Ingestion Workflow
View Existing Ingestion Workflows
?
SeaDataCloud
Please log in before you can use the SWE-Ingestion-Service
SeaDataNet
Username
Password
Login
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.

Demo


smle /ˈsmaɪli/ — The Friendly SensorML Editor ☺
Create Ingestion Workflow
View Existing Ingestion Workflows
Logout
?
SeaDataCloud
Existing Ingestion Workflows:
secae819e-84ae-4412-827b-506dcf372389 - deployed
mqtt-source-rabbit --password='******' --topics=airmar-rinville-1 --url=tcp://mosca --username=username | csv-processor --spring.security.user.name=seadatacloud-user --sensormlurl=https://oceans.dev.52north.org/cnc/api/streams/secae819e-84ae-4412-827b-506dcf372389 --offering=AIRMAR-RINVILLE-1/observations --sensor=AIRMAR-RINVILLE-1 --spring.security.user.password='******' --featureofinterestid=MarineInstitute --componentidentifier=0 | db-sink --password='******' --spring.security.user.name=seadatacloud-user --sensormlurl=https://oceans.dev.52north.org/cnc/api/streams/secae819e-84ae-4412-827b-506dcf372389 --offering=AIRMAR-RINVILLE-1/observations --sensor=AIRMAR-RINVILLE-1 --spring.security.user.password='******' --url=jdbc:postgresql://database:5432/sos --username=postgres
Edit
Statistics
Delete
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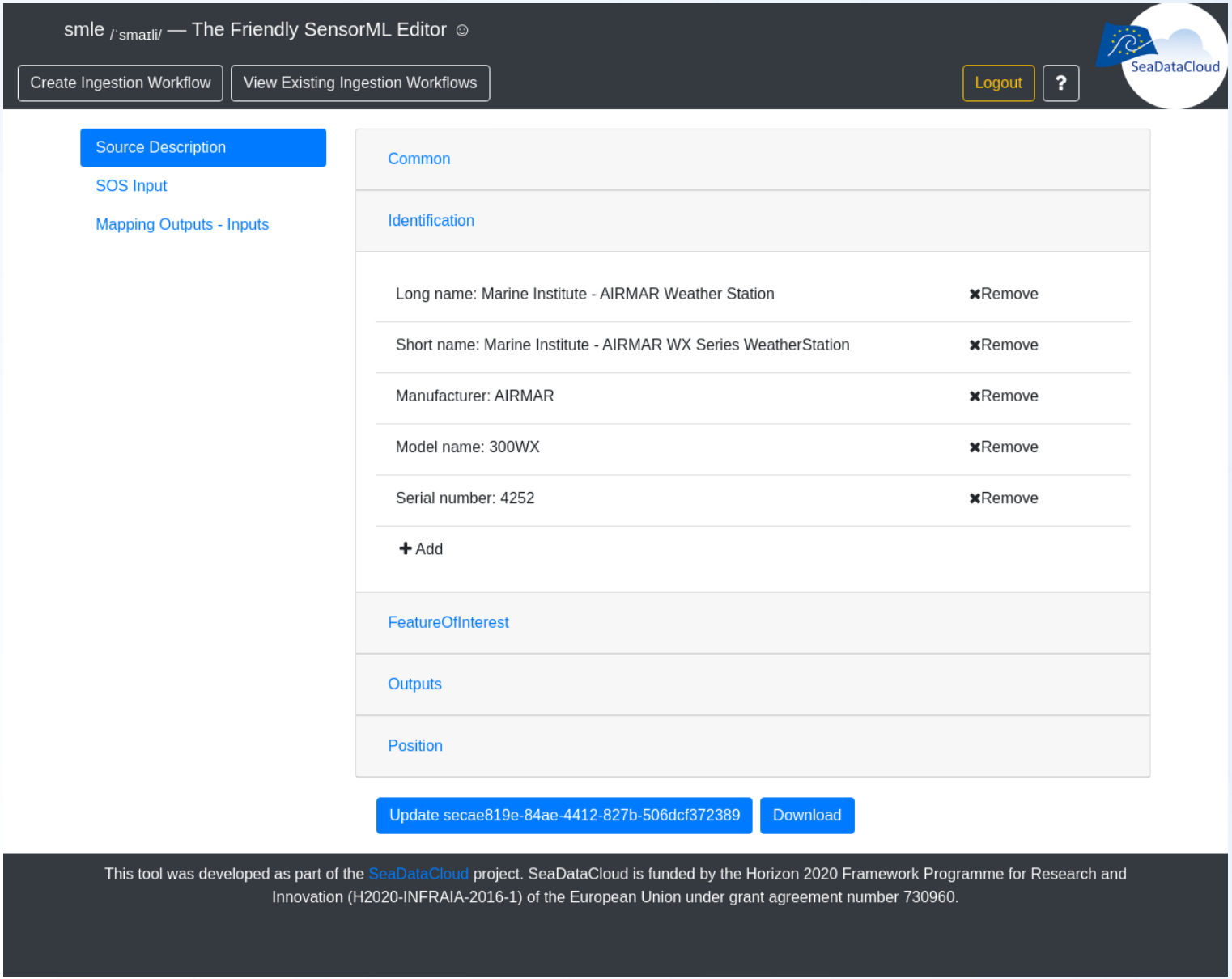
smile /ˈsmaɪli/ — The Friendly SensorML Editor ☺
Create Ingestion Workflow
View Existing Ingestion Workflows
Logout
?
SeaDataCloud
Source Description
SOS Input
Mapping Outputs - Inputs
Common
Identification
Long name: Marine Institute - AIRMAR Weather Station
✖Remove
Short name: Marine Institute - AIRMAR WX Series WeatherStation
✖Remove
Manufacturer: AIRMAR
✖Remove
Model name: 300WX
✖Remove
Serial number: 4252
✖Remove
✚ Add
FeatureOfInterest
Outputs
Position
Update secae819e-84ae-4412-827b-506dcf372389
Download
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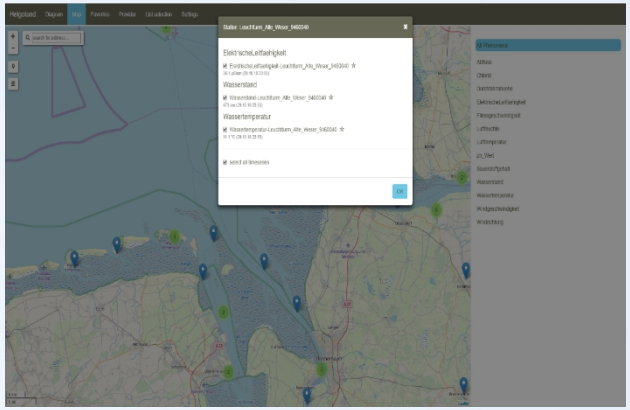
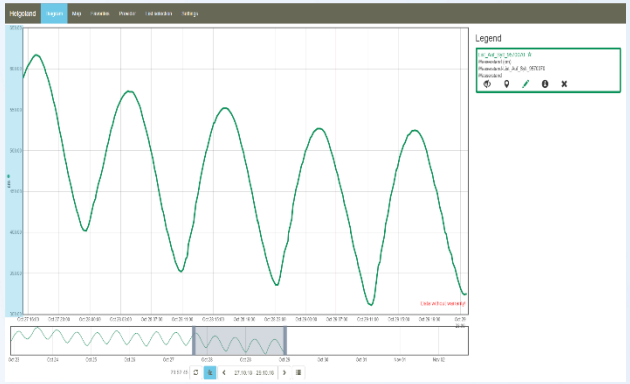
SOS Viewing Services

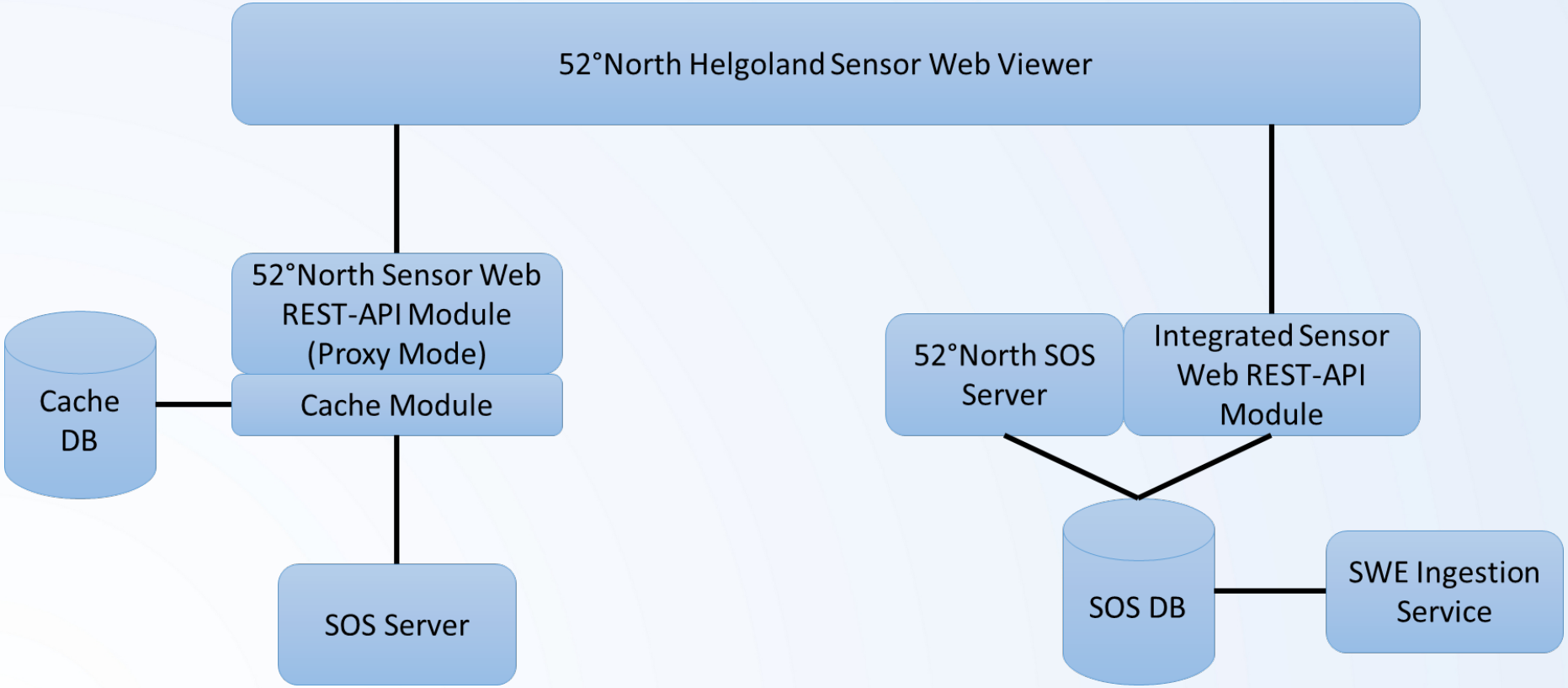
SOS Viewing Services

- SOS for sharing different types of non-validated live streams of observation data
- SWE Ingestion Service -> upstream component for publication of sensor metadata and observation data streams
- SOS Viewing Service -> downstream component to enable user-friendly consumption of observation data
- Based on 52°North Helgoland

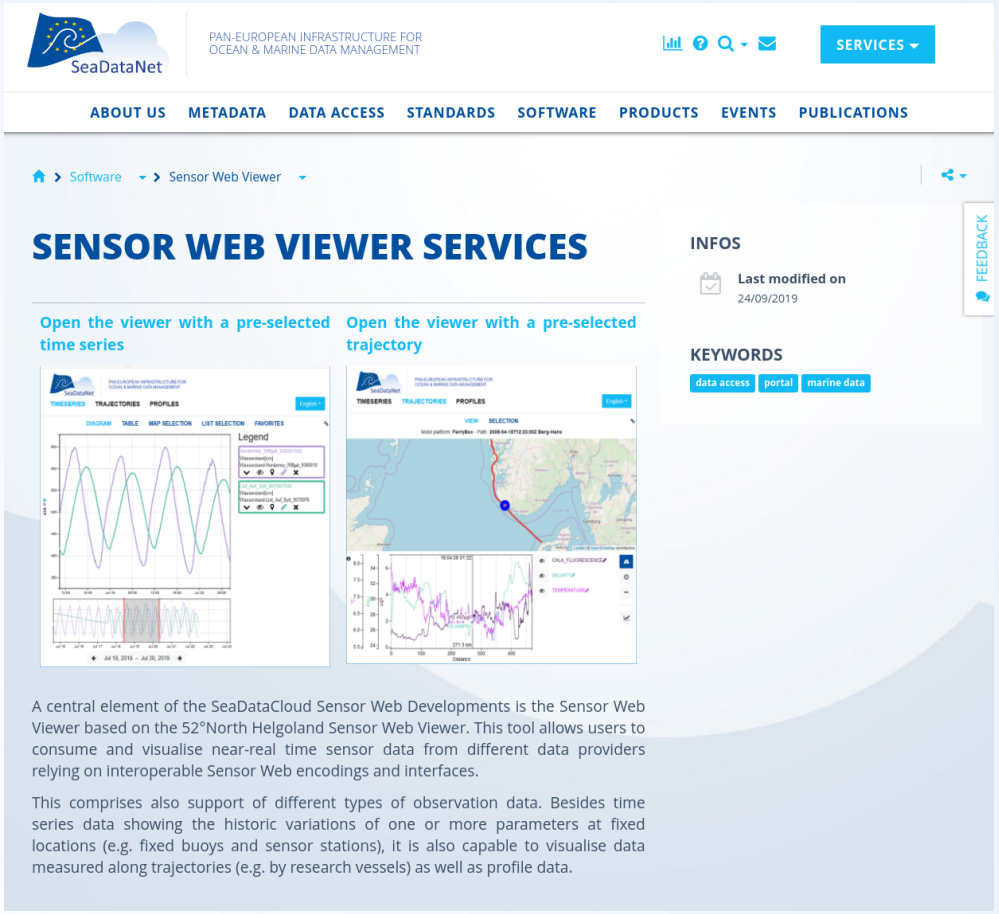




SOS Viewing Services

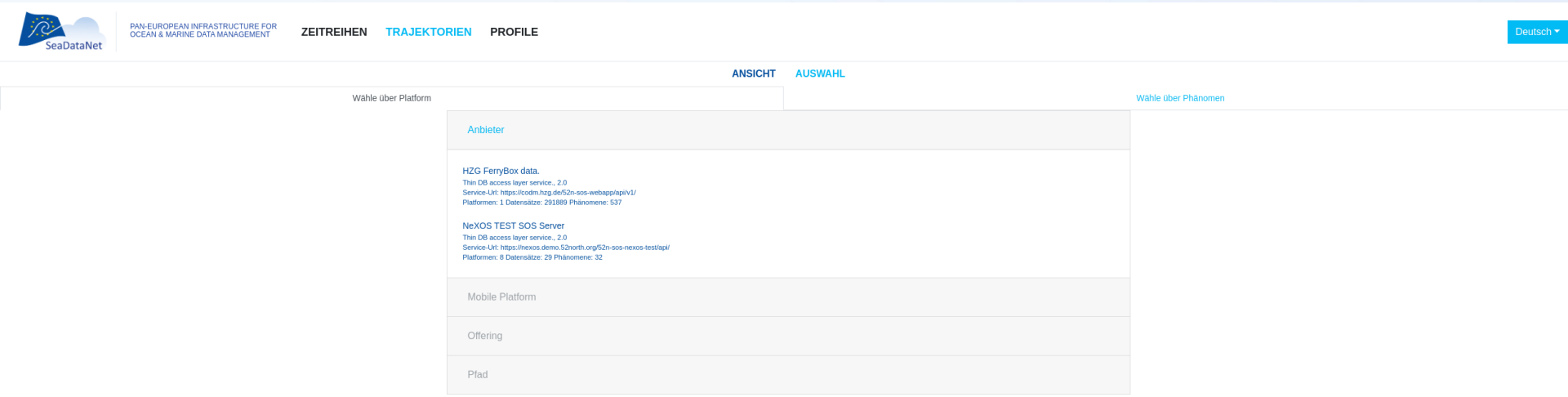


Integration into seadatanet.org



Demo

https://oceans.dev.52north.org/helgoland


SeaDataNet
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ZEITREIHEN
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PROFILE
Deutsch
ANSICHT
AUSWAHL
Wähle über Platform
Wähle über Phänomen
Anbieter
HZG FerryBox data.
Thin DB access layer service., 2.0
Service-Url: https://codm.hzg.de/52n-sos-webapp/api/v1/
Platformen: 1 Datensätze: 291889 Phänomene: 537
NeXOS TEST SOS Server
Thin DB access layer service., 2.0
Service-Url: https://nexos.demo.52north.org/52n-sos-nexos-test/api/
Platformen: 8 Datensätze: 29 Phänomene: 32
Mobile Platform
Offering
Pfad

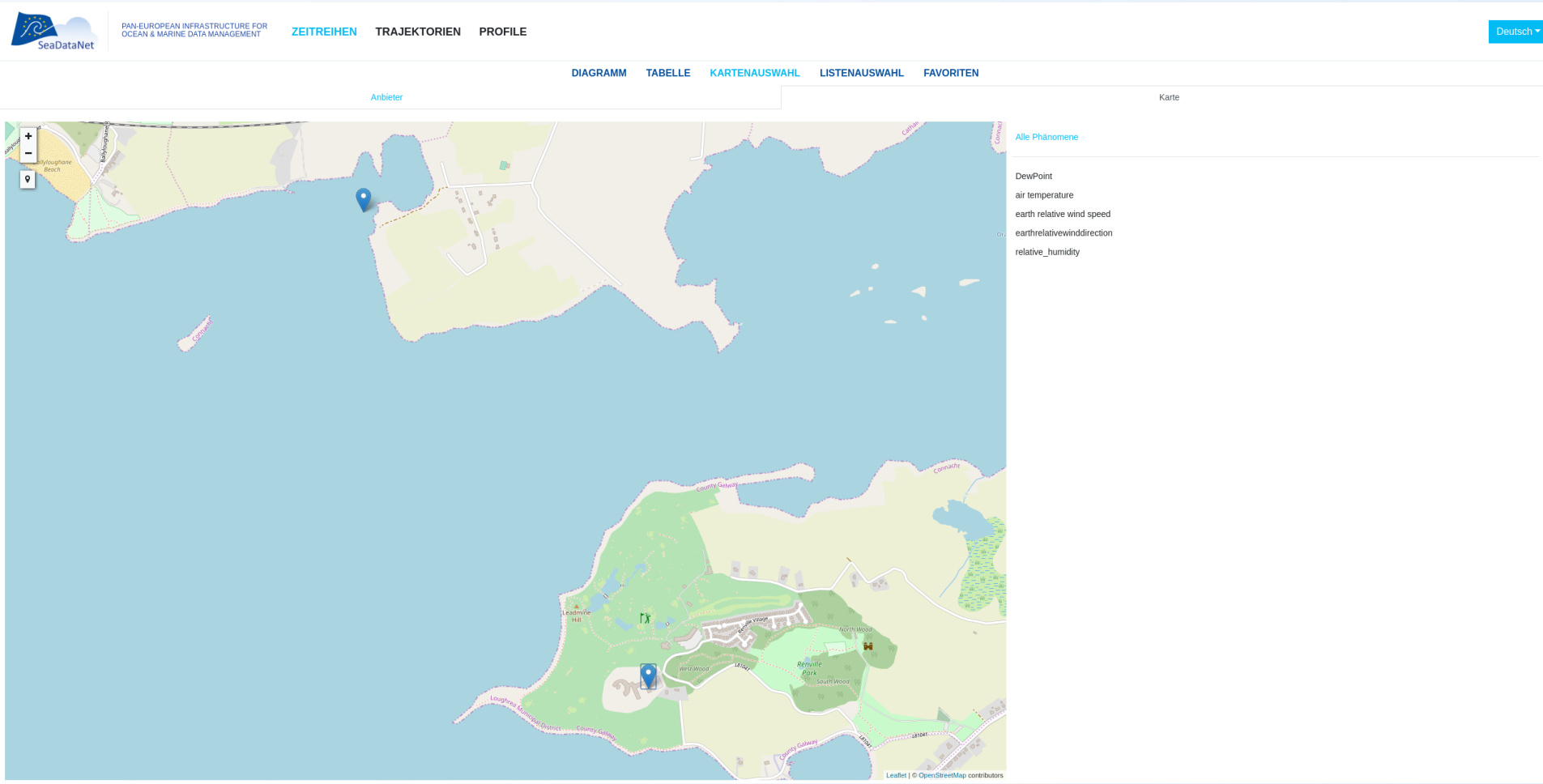
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DIAGRAMM
TABELLE
KARTENAUSWAHL
LISTENAUSWAHL
FAVORITEN
Anbieter
Karte
Alle Phänomene
DewPoint
air temperature
earth relative wind speed
earthrelativewinddirection
relative_humidity
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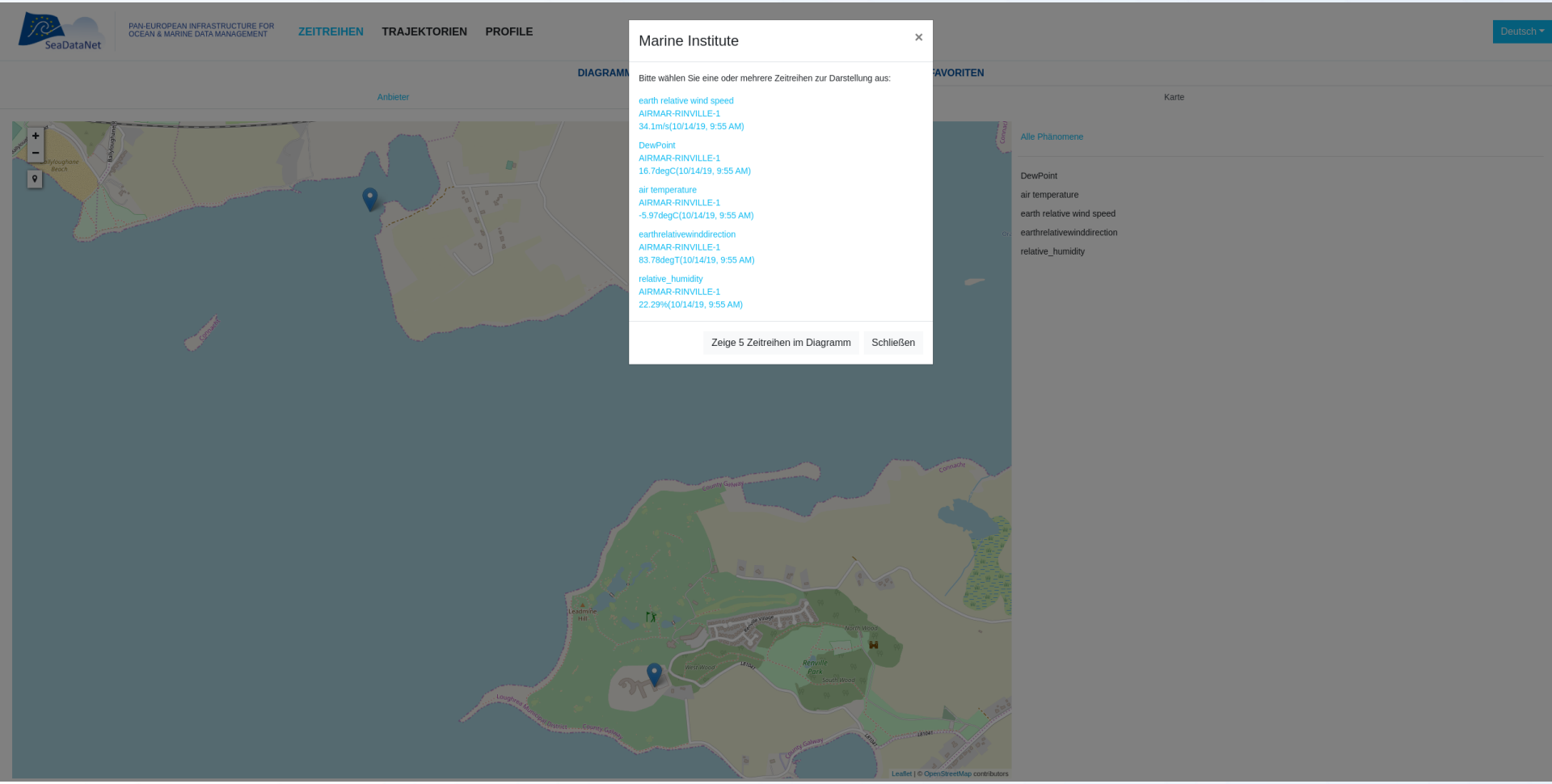
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ZEITREIHEN
TRAJEKTORIEN
PROFILE
Deutsch
Anbieter
Karte
Alle Phänomene
DewPoint
air temperature
earth relative wind speed
earthrelativewinddirection
relative_humidity
Marine Institute
Bitte wählen Sie eine oder mehrere Zeitreihen zur Darstellung aus:
earth relative wind speed
AIRMAR-RINVILLE-1
34.1m/s(10/14/19, 9:55 AM)
DewPoint
AIRMAR-RINVILLE-1
16.7degC(10/14/19, 9:55 AM)
air temperature
AIRMAR-RINVILLE-1
-5.97degC(10/14/19, 9:55 AM)
earthrelativewinddirection
AIRMAR-RINVILLE-1
83.78degT(10/14/19, 9:55 AM)
relative_humidity
AIRMAR-RINVILLE-1
22.29%(10/14/19, 9:55 AM)
Zeige 5 Zeitreihen im Diagramm
Schließen
Leaflet | © OpenStreetMap contributors


SeaDataNet
PAN-EUROPEAN INFRASTRUCTURE FOR OCEAN & MARINE DATA MANAGEMENT
ZEITREIHEN
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PROFILE
Deutsch
DIAGRAMM
TABELLE
KARTENAUSWAHL
LISTENAUSWAHL
FAVORITEN
Legende
Marine Institute
air temperature[degC]
AIRMAR-RINVILLE-1
Marine Institute
earth relative wind speed[m/s]
AIRMAR-RINVILLE-1
Marine Institute
earthrelativewinddirection[degT]
AIRMAR-RINVILLE-1
Marine Institute
DewPoint[degC]
AIRMAR-RINVILLE-1
Marine Institute
relative_humidity[%]
AIRMAR-RINVILLE-1
degC
m/s
degT
%
09:00
09:05
09:10
09:15
09:20
09:25
09:30
09:35
09:40
09:45
09:50
09:55
07:00
07:30
08:00
08:30
09:00
09:30
10:00
10:30
11:00
11:30
Oct 14, 2019 – Oct 14, 2019
Zeitreihen entfernen

SeaDataNet PAN-EUROPEAN INFRASTRUCTURE FOR OCEAN & MARINE DATA MANAGEMENT

ZEITREIHEN TRAJEKTORIEN PROFILE

Deutsch

DIAGRAMM TABELLE KARTENAUSWAHL LISTENAUSWAHL FAVORITEN

Zeit	air temperature AIRMAR-RINVILLE-1, Marine Institute, Offering for sensor AIRMAR-RINVILLE-1 [degC]	earth relative wind speed AIRMAR-RINVILLE-1, Marine Institute, Offering for sensor AIRMAR-RINVILLE-1 [m/s]	earthrelativewinddirection AIRMAR-RINVILLE-1, Marine Institute, Offering for sensor AIRMAR-RINVILLE-1 [degT]	DewPoint AIRMAR-RINVILLE-1, Marine Institute, Offering for sensor AIRMAR-RINVILLE-1 [degC]	relative_humidity AIRMAR-RINVILLE-1, Marine Institute, Offering for sensor AIRMAR-RINVILLE-1 [%]
10/14/19, 8:55 AM	8.54	24.38	101.26	23.87	44.32
10/14/19, 8:55 AM	8.5	24.14	97.9	23.87	43.6
10/14/19, 8:55 AM	8.49	24.4	82.32	23.86	42.77
10/14/19, 8:55 AM	8.47	24.54	75.68	23.86	42.36
10/14/19, 8:55 AM	8.46	24.74	61.07	23.85	41.98
10/14/19, 8:55 AM	8.43	24.79	56.39	23.85	41.09
10/14/19, 8:55 AM	8.42	24.97	55.43	23.84	40.64
10/14/19, 8:55 AM	8.41	25.16	48.62	23.83	39.94
10/14/19, 8:55 AM	8.4	25.23	32.57	23.82	39.07
10/14/19, 8:55 AM	8.38	25.57	25.28	23.82	38.13
10/14/19, 8:56 AM	8.35	25.45	17.38	23.82	37.53
10/14/19, 8:56 AM	8.33	25.15	8.42	23.81	37.21
10/14/19, 8:56 AM	8.3	24.9	1.38	23.79	36.25
10/14/19, 8:56 AM	8.3	24.69	0.3	23.79	35.52
10/14/19, 8:56 AM	8.3	24.45	0.26	23.78	34.82
10/14/19, 8:56 AM	8.29	24.17	0	23.77	34.36
10/14/19, 8:56 AM	8.27	24.07	17.03	23.77	34.21
10/14/19, 8:56 AM	8.25	23.92	26.08	23.77	33.47
10/14/19, 8:56 AM	8.25	23.6	27.19	23.75	32.57
10/14/19, 8:56 AM	8.21	23.49	34.37	23.74	31.64
10/14/19, 8:56 AM	8.17	23.19	19.62	23.73	31.07
10/14/19, 8:56 AM	8.14	22.89	10.86	23.71	30.38
10/14/19, 8:57 AM	8.11	22.72	1.41	23.69	31.23
10/14/19, 8:57 AM	8.11	22.67	1.1	23.68	31.73
10/14/19, 8:57 AM	8.09	22.66	0.91	23.68	32.72
10/14/19, 8:57 AM	8.08	22.33	0.44	23.67	33.03
10/14/19, 8:57 AM	8.07	22.55	0.21	23.67	33.75
10/14/19, 8:57 AM	8.05	22.63	0.15	23.66	33.45
10/14/19, 8:57 AM	8.05	22.74	0.08	23.65	32.66
10/14/19, 8:57 AM	8.03	22.82	0.05	23.63	31.72
10/14/19, 8:57 AM	7.99	22.97	0	23.61	32.33

Oct 14, 2019 – Oct 14, 2019

Legende

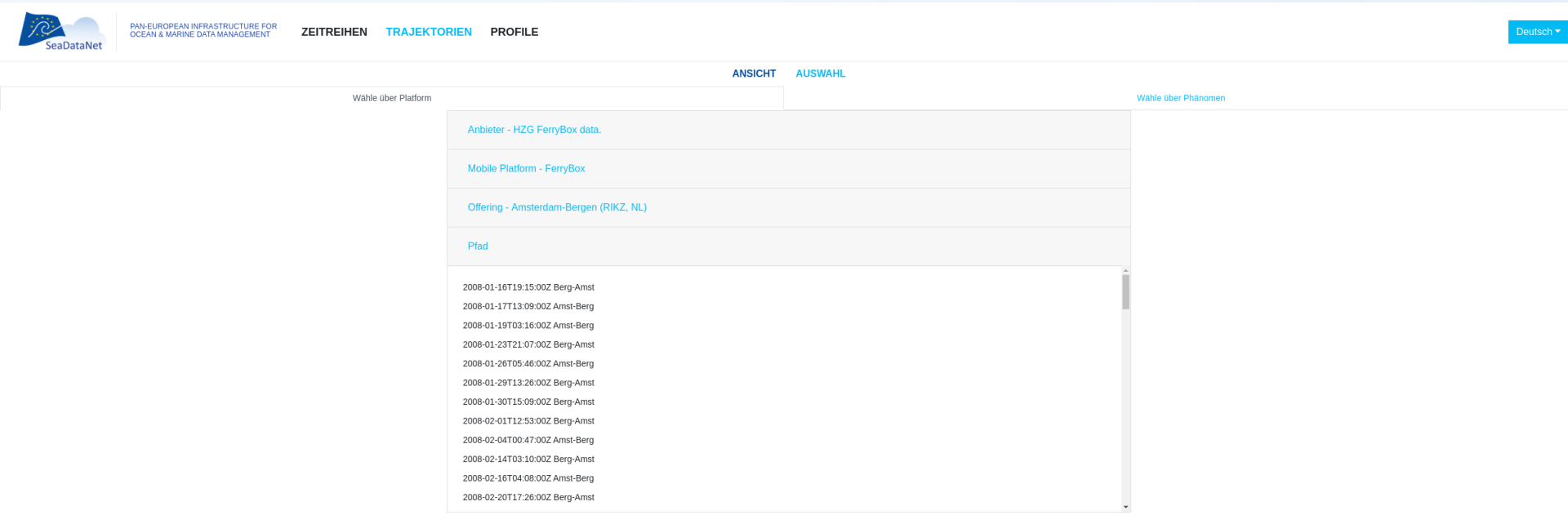
Marine Institute ☆
air temperature[degC]
AIRMAR-RINVILLE-1

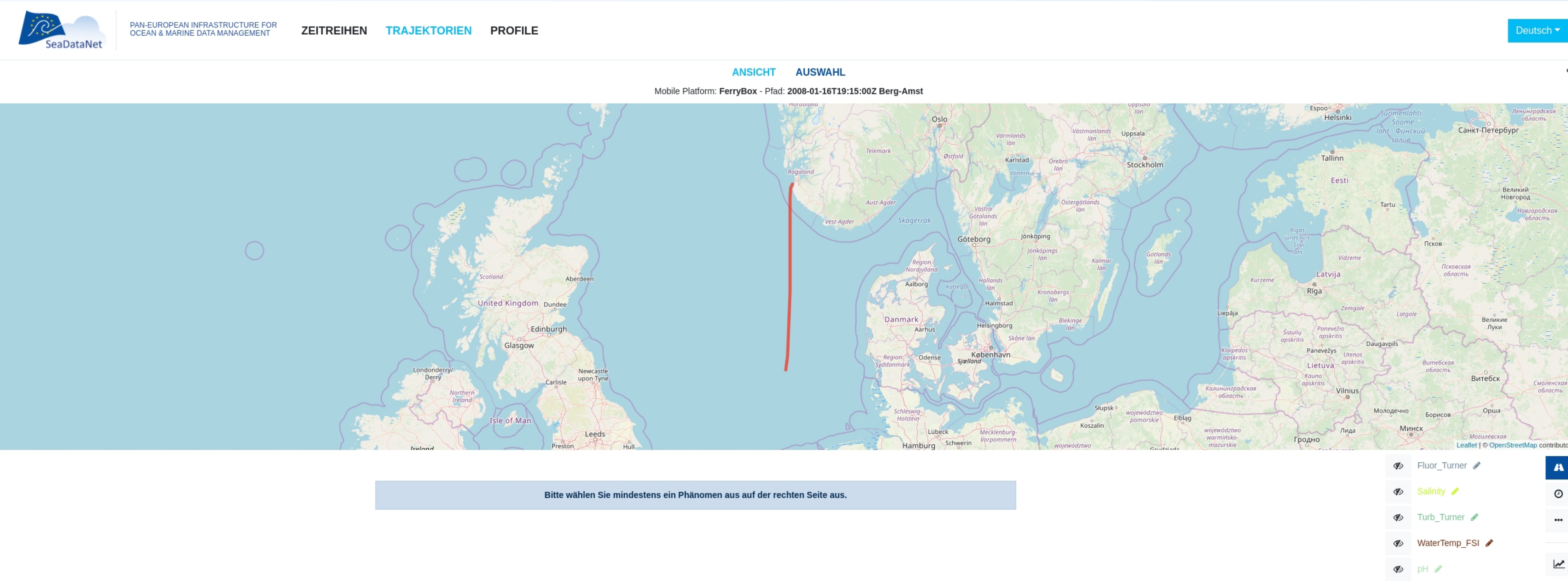
Marine Institute ☆
earth relative wind speed[m/s]
AIRMAR-RINVILLE-1

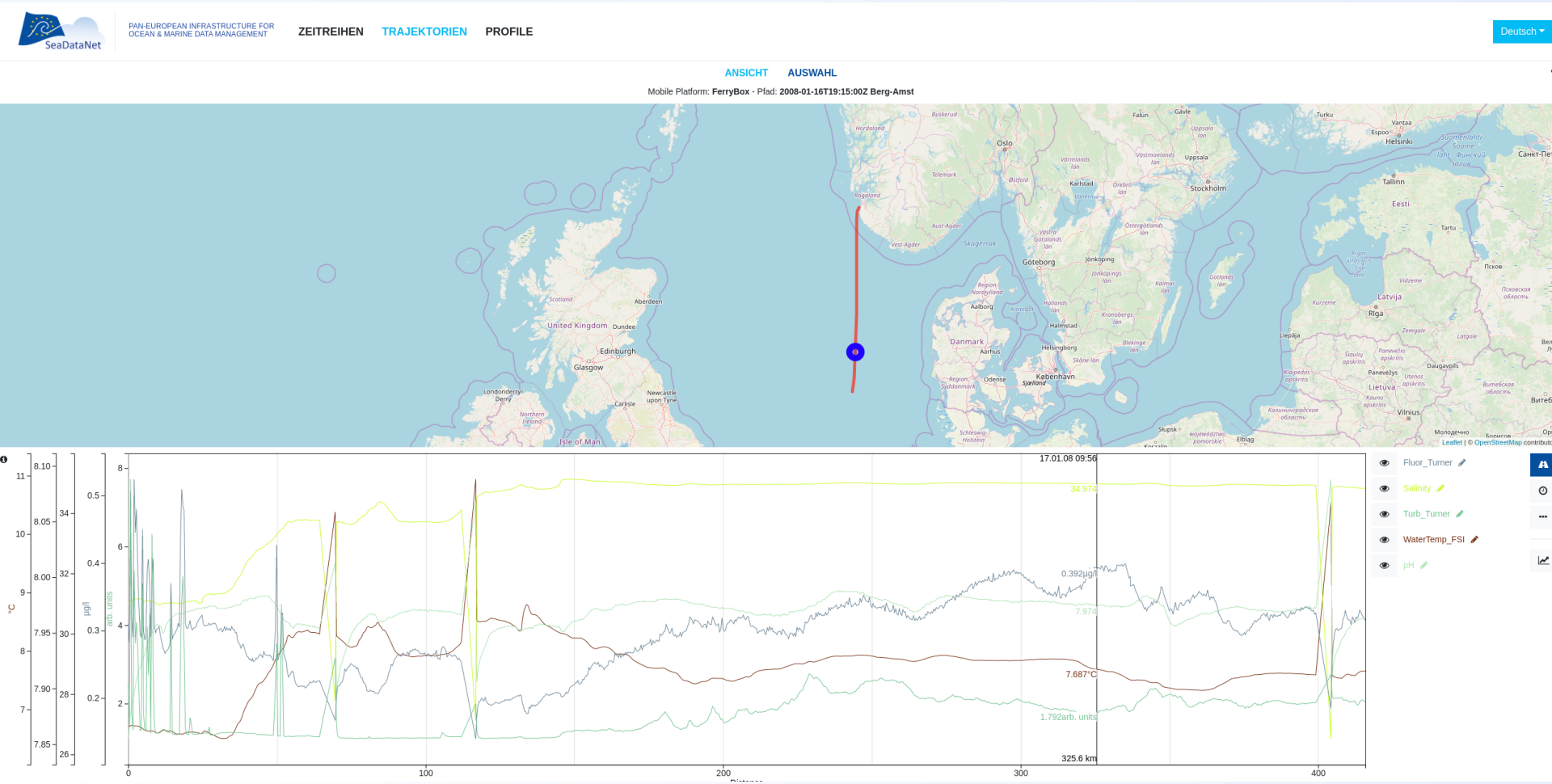
Marine Institute ☆
earthrelativewinddirection[degT]
AIRMAR-RINVILLE-1

Marine Institute ☆
DewPoint[degC]
AIRMAR-RINVILLE-1

Marine Institute ☆
relative_humidity[%]
AIRMAR-RINVILLE-1


SeaDataNet
PAN-EUROPEAN INFRASTRUCTURE FOR OCEAN & MARINE DATA MANAGEMENT
ZEITREIHEN
TRAJEKTORIEN
PROFILE
Deutsch
ANSICHT
AUSWAHL
Wähle über Platform
Wähle über Phänomen
Anbieter - HZG FerryBox data.
Mobile Platform - FerryBox
Offering - Amsterdam-Bergen (RIKZ, NL)
Pfad
2008-01-16T19:15:00Z Berg-Amst
2008-01-17T13:09:00Z Amst-Berg
2008-01-19T03:16:00Z Amst-Berg
2008-01-23T21:07:00Z Berg-Amst
2008-01-26T05:46:00Z Amst-Berg
2008-01-29T13:26:00Z Berg-Amst
2008-01-30T15:09:00Z Berg-Amst
2008-02-01T12:53:00Z Berg-Amst
2008-02-04T00:47:00Z Amst-Berg
2008-02-14T03:10:00Z Berg-Amst
2008-02-16T04:08:00Z Amst-Berg
2008-02-20T17:26:00Z Berg-Amst


SeaDataNet
PAN-EUROPEAN INFRASTRUCTURE FOR OCEAN & MARINE DATA MANAGEMENT
ZEITREIHEN
TRAJEKTORIEN
PROFILE
Deutsch
ANSICHT
AUSWAHL
Mobile Platform: FerryBox - Pfad: 2008-01-16T19:15:00Z Berg-Amst
Bitte wählen Sie mindestens ein Phänomen aus auf der rechten Seite aus.
Fluor_Turner
Salinity
Turb_Turner
WaterTemp_FSI
pH


SeaDataNet
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ZEITREIHEN
TRAJEKTORIEN
PROFILE
Deutsch
ANSICHT
AUSWAHL
Mobile Platform: FerryBox - Pfad: 2008-01-16T19:15:00Z Berg-Amst
Oslo
Stockholm
Helsinki
Tallinn
Göteborg
København
Riga
Vilnius
United Kingdom
Edinburgh
Glasgow
Aberdeen
Dundee
Newcastle upon Tyne
Carlisle
Isle of Man
Danmark
Latvija
Lietuva
Eesti
Leaflet | © OpenStreetMap contributo
17.01.08 09:56
34.974
0.392µg/l
7.974
7.687°C
1.792arb. units
325.6 km
Fluor_Turner
Salinity
Turb_Turner
WaterTemp_FSI
pH
°C
psu
µg/l
arb. units
Distance

PAN-EUROPEAN INFRASTRUCTURE FOR OCEAN & MARINE DATA MANAGEMENT

ZEITREIHEN TRAJEKTORIEN PROFILE

Deutsch

DIAGRAMM KOMBINIERTE ANSICHT AUSWAHL

Wähle Anbieter - NeXOS TEST SOS Server

Wähle Offering - EAF.4 DO (CNR)

Wähle Phänomen - http://mmisw.org/ont/cf/parameter/sea_water_temperature

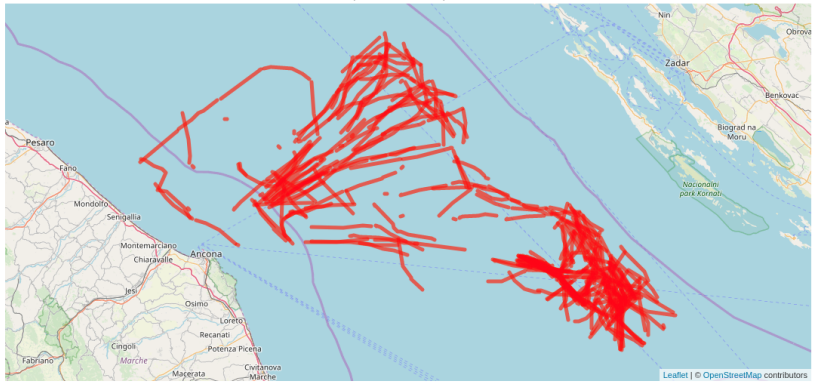
Wähle Sensor - EAF.4 DO

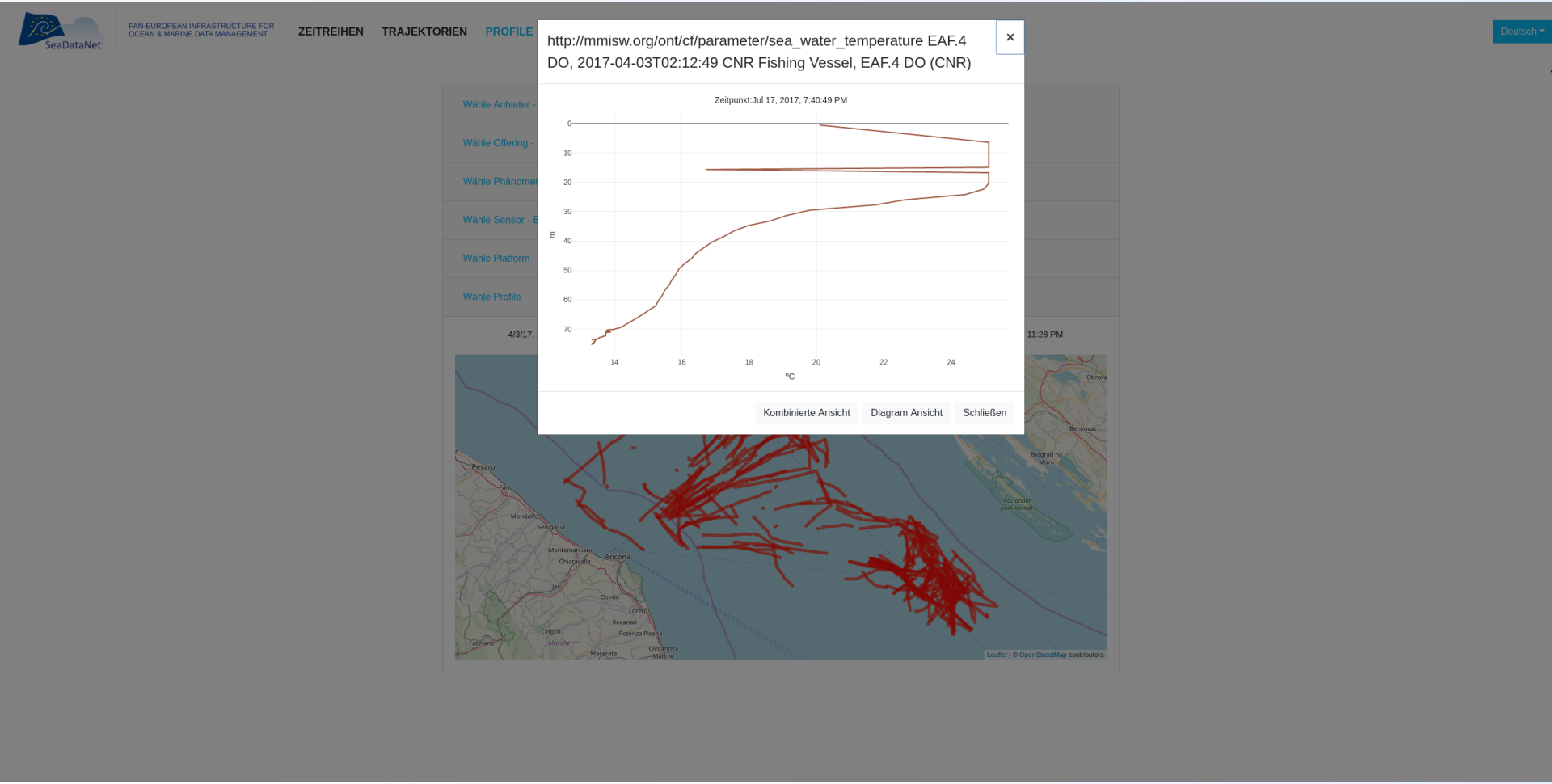
Wähle Platform - 2017-04-03T02:12:49 CNR Fishing Vessel

Wähle Profile

4/3/17, 2:17 AM 7/19/17, 11:28 PM

4/3/17, 2:17 AM - 7/19/17, 11:28 PM




SeaDataNet
PAN-EUROPEAN INFRASTRUCTURE FOR OCEAN & MARINE DATA MANAGEMENT
ZEITREIHEN
TRAJEKTORIEN
PROFILE
Deutsch
Wähle Anbieter -
Wähle Offering -
Wähle Phänomen
Wähle Sensor - E
Wähle Platform -
Wähle Profile
4/3/17,
11:28 PM
http://mmisw.org/ont/cf/parameter/sea_water_temperature EAF.4 DO, 2017-04-03T02:12:49 CNR Fishing Vessel, EAF.4 DO (CNR)
Zeitpunkt:Jul 17, 2017, 7:40:49 PM
m
°C
Kombinierte Ansicht
Diagram Ansicht
Schließen
Pesaro
Fano
Mondolfo
Senigallia
Montemarciano
Chiaravalle
Ancona
Jesi
Osimo
Loreto
Recanati
Potenza Picena
Cingoli
Fabriano
Macerata
Civitanova Marche
Obrovac
Benkovac
Biograd na Moru
Nacionalni park Kornati
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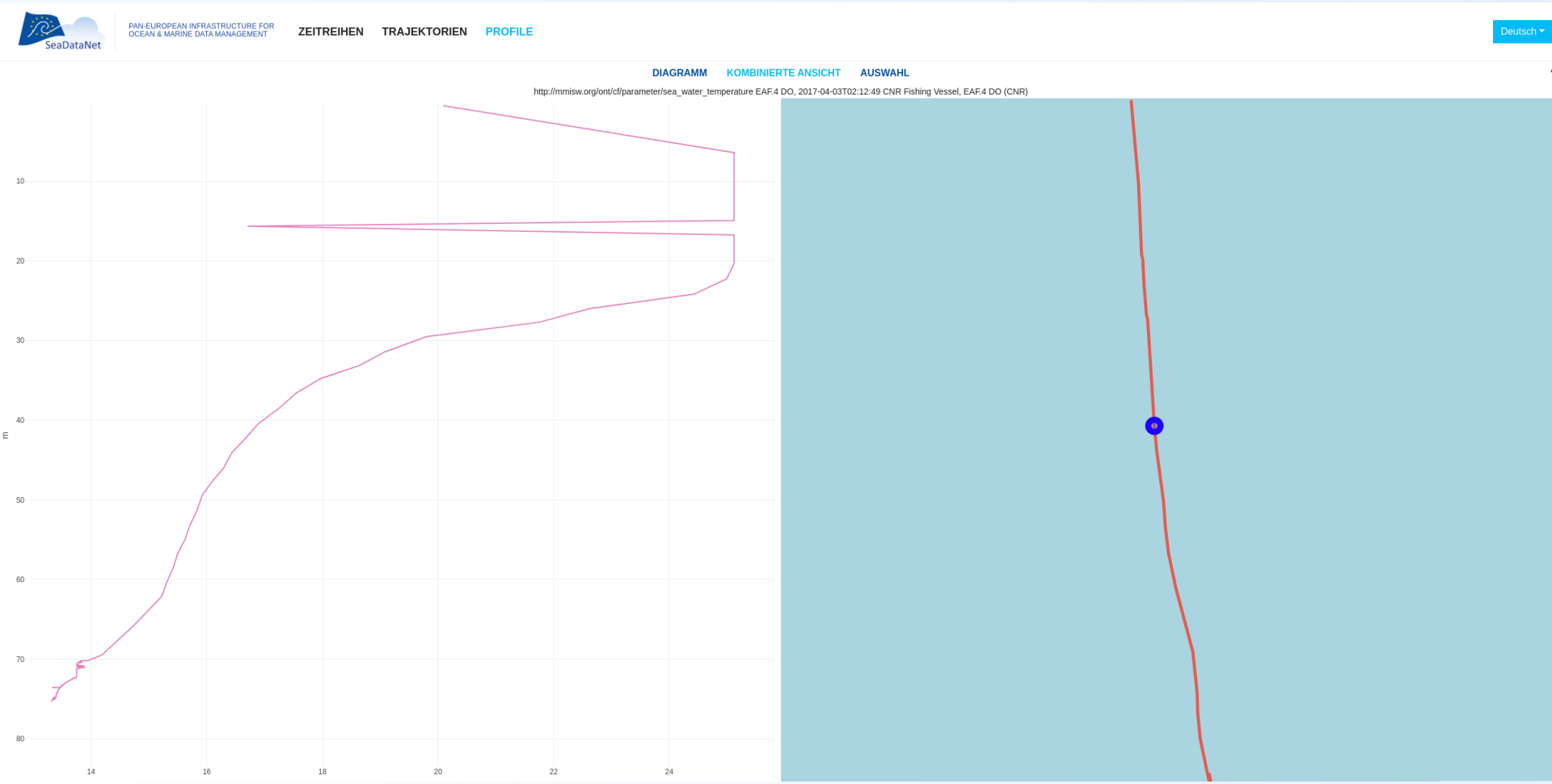
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PROFILE
Deutsch
DIAGRAMM
KOMBINIERTE ANSICHT
AUSWAHL
http://mmisw.org/ont/cf/parameter/sea_water_temperature EAF.4 DO, 2017-04-03T02:12:49 CNR Fishing Vessel, EAF.4 DO (CNR)
m
10
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22
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Upcoming & ongoing developments

- Support of out-of-band observations
- New observation type: spectral data
- Download of profile measurements as CSV files
- Enhanced sensor metadata access and visualization
- Improve handling of trajectory-based observations

Thank you for your attention!

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jirka@52north.org