

# Sea Data Cloud: Tunisian marine data management

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## Abstract:

Access to oceanographic data is of vital importance for marine research. Data acquired from various observational activities and techniques have problems of heterogeneous data sources, accessibility and standardization. SeaDataNet and now SeaDataCloud project is a leading infrastructure for marine and ocean data management. It is a Pan-European infrastructure for managing, indexing and providing access to marine data and metadata in compliance with the INSPIRE directive (ISO 19139 standards).

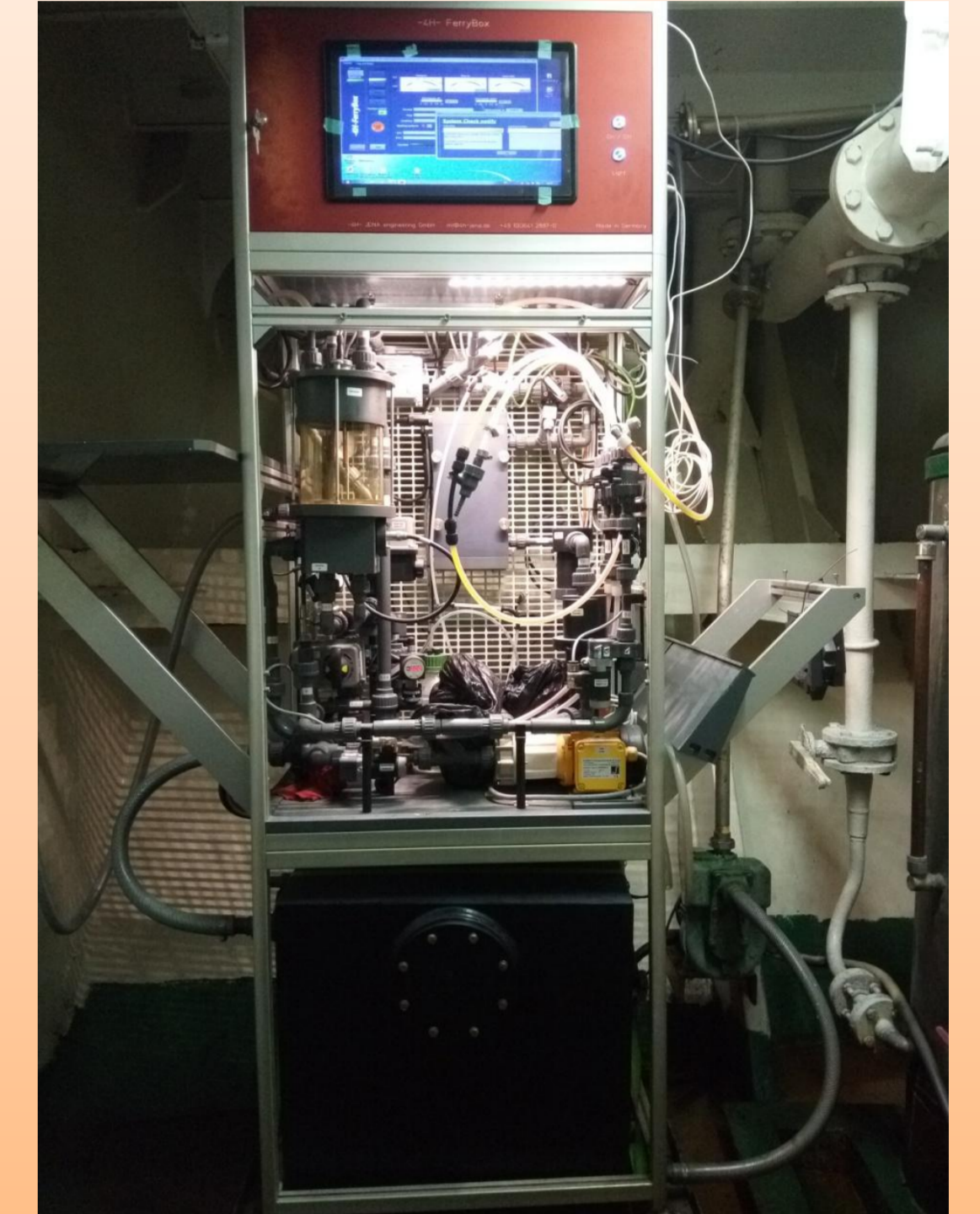


A pan-European infrastructure set up and operated for managing marine and ocean data in cooperation with the NODCs and data focal points of 34 countries bordering the European seas

90s	Metadata directories Medar/MedAtlas
2002-2005	Sea-Search (FP5)
2006-2011	SeaDataNet (FP6)
2011-2015	SeaDataNet II (FP7)
2016-2020	SeaDataCloud (H2020)

## Introduction:

We have set up a Tunisian marine observation and monitoring system based on very high frequency and long-term surface data from automatic sensors of physico-chemical (T, S) and biological parameters (Chla, ph, Turbidity, ..). This is done using a new means of measurement "The FerryBox" installed in February 2016 aboard the Tunisian C/f Carthage of the Tunisian Company of Navigation (CTN). The latter makes two weekly trips Tunis-Marseille and Tunis-Genoa. Following the installation and validation of data collected by the Ferrybox. We are working on preparing a new data stream for integration into the SeaDataNet infrastructure as part of the SeadataNetCloud project.



## STANDARDIZED MANAGEMENT STAGES OF CONTINUOUS OBSERVATION DATA FROM THE FERRYBOX :

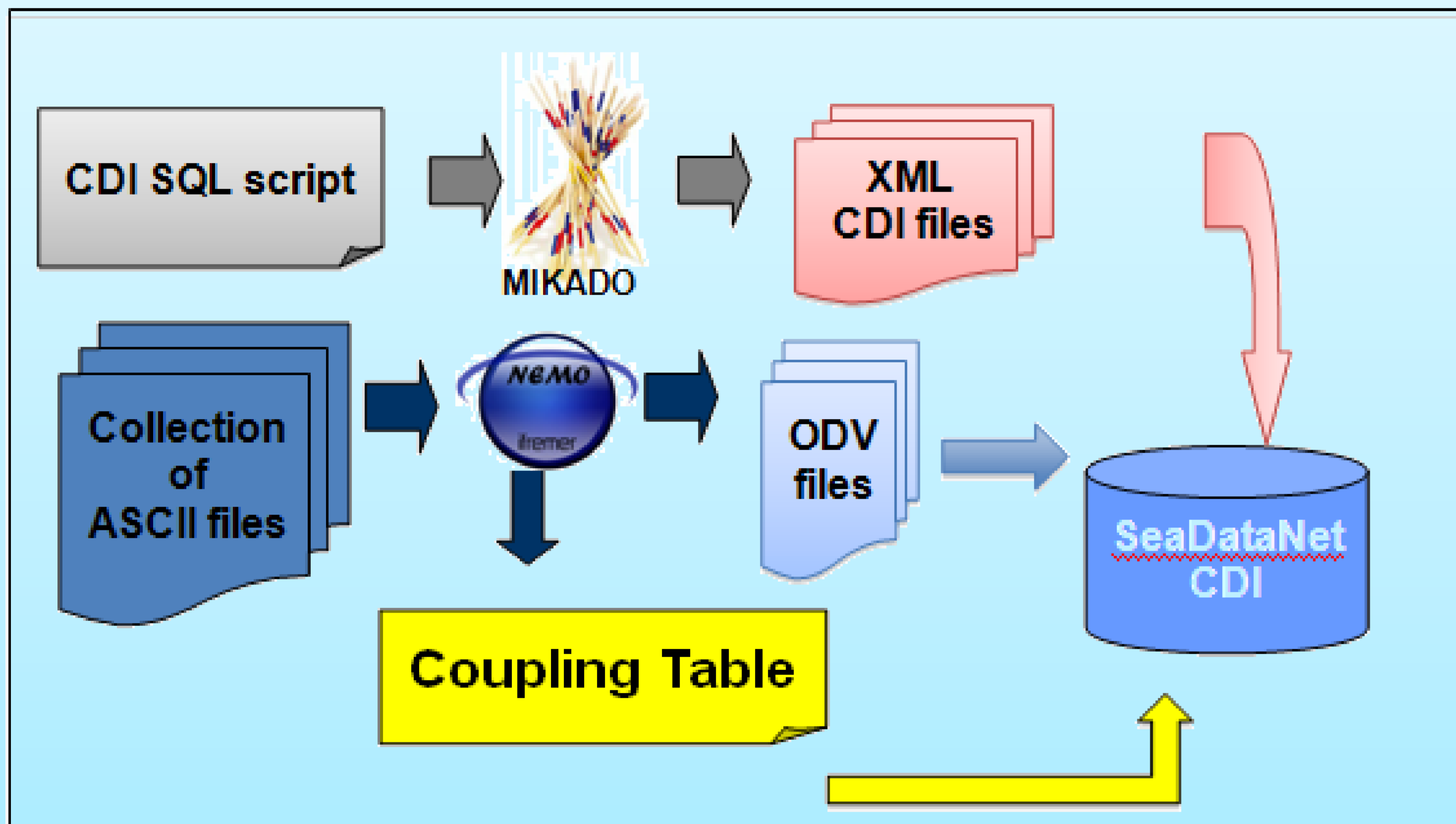
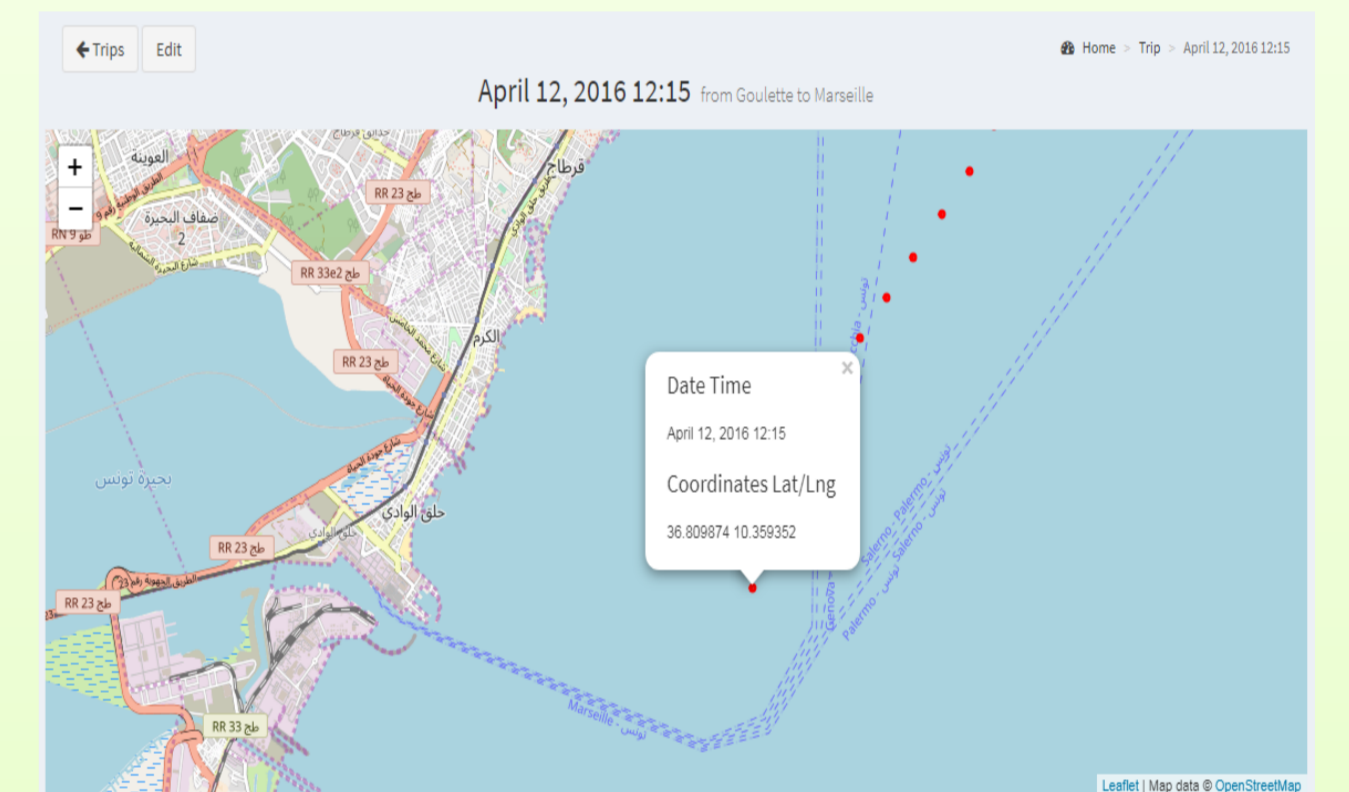
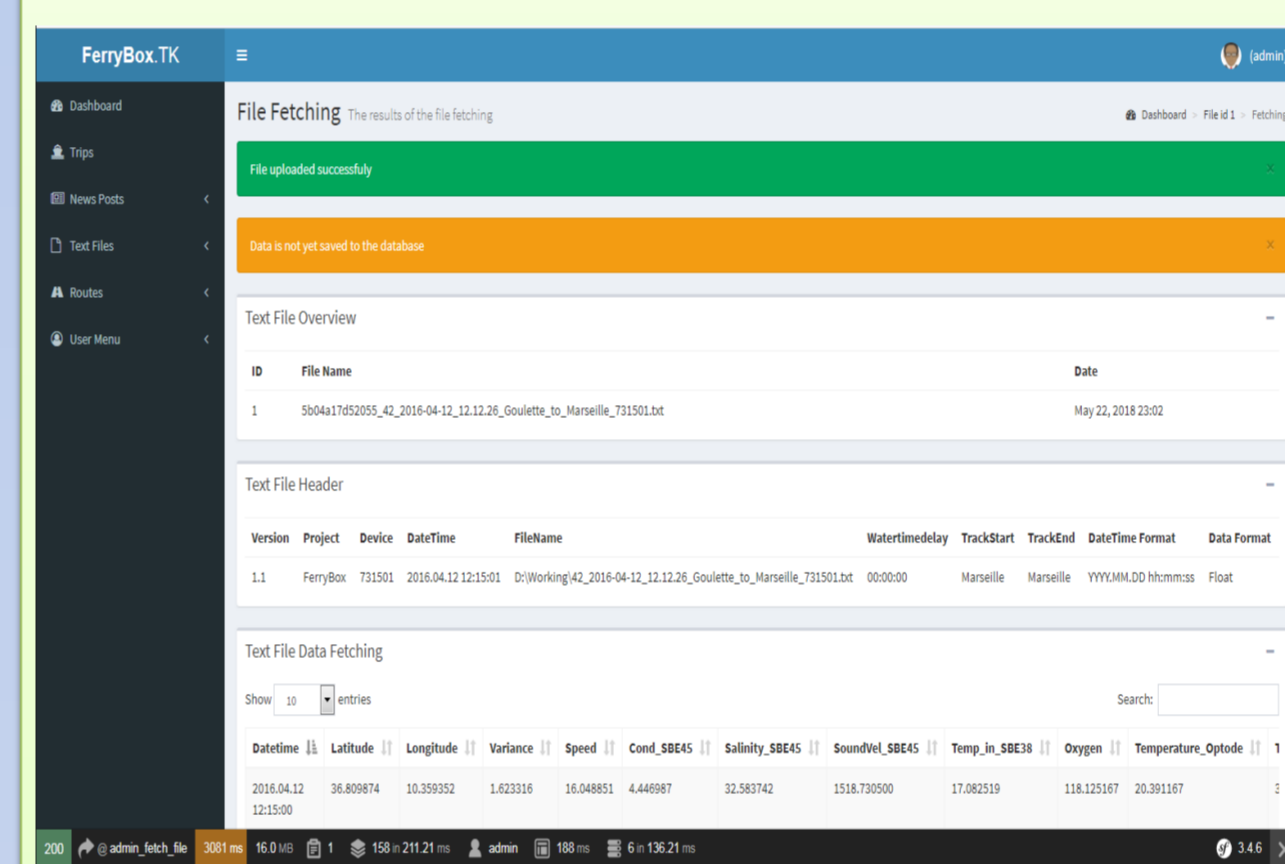


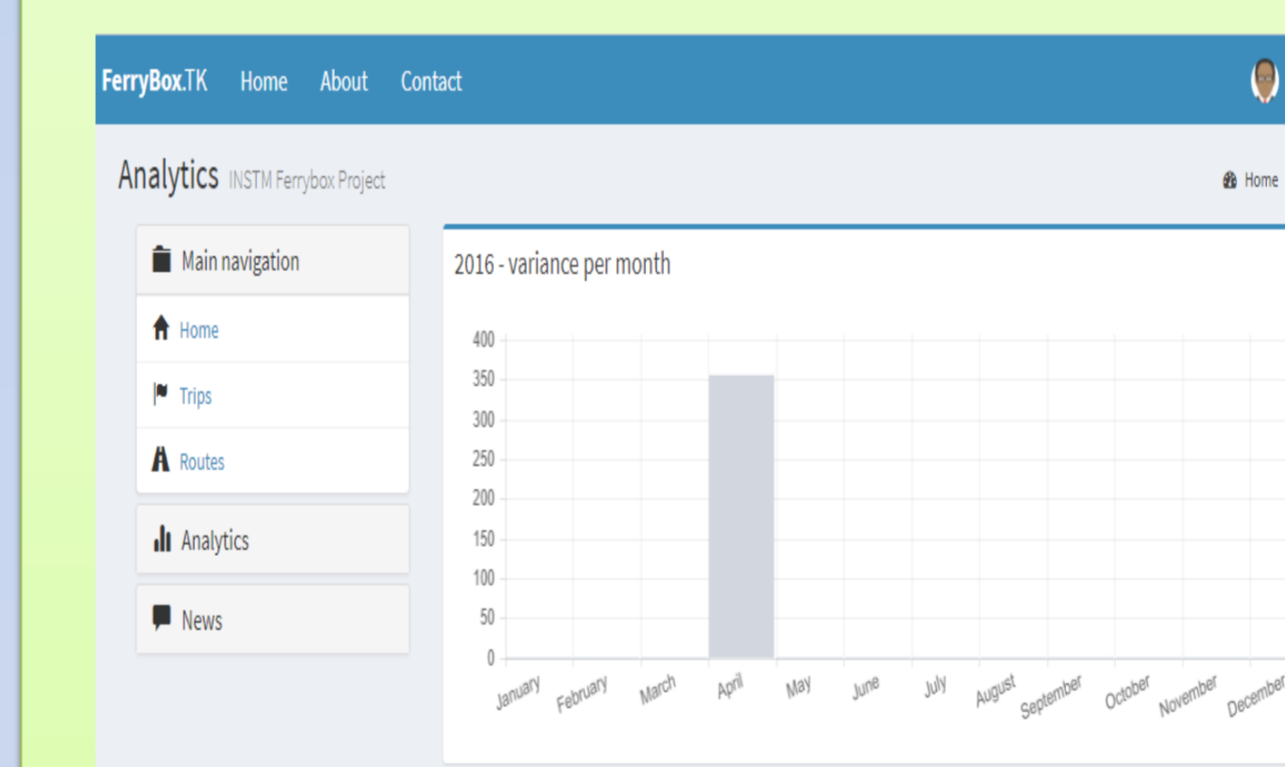
Figure 1: INSTM Methodology for setting up CDI, ODV and coupling table

## FerryBox Database:

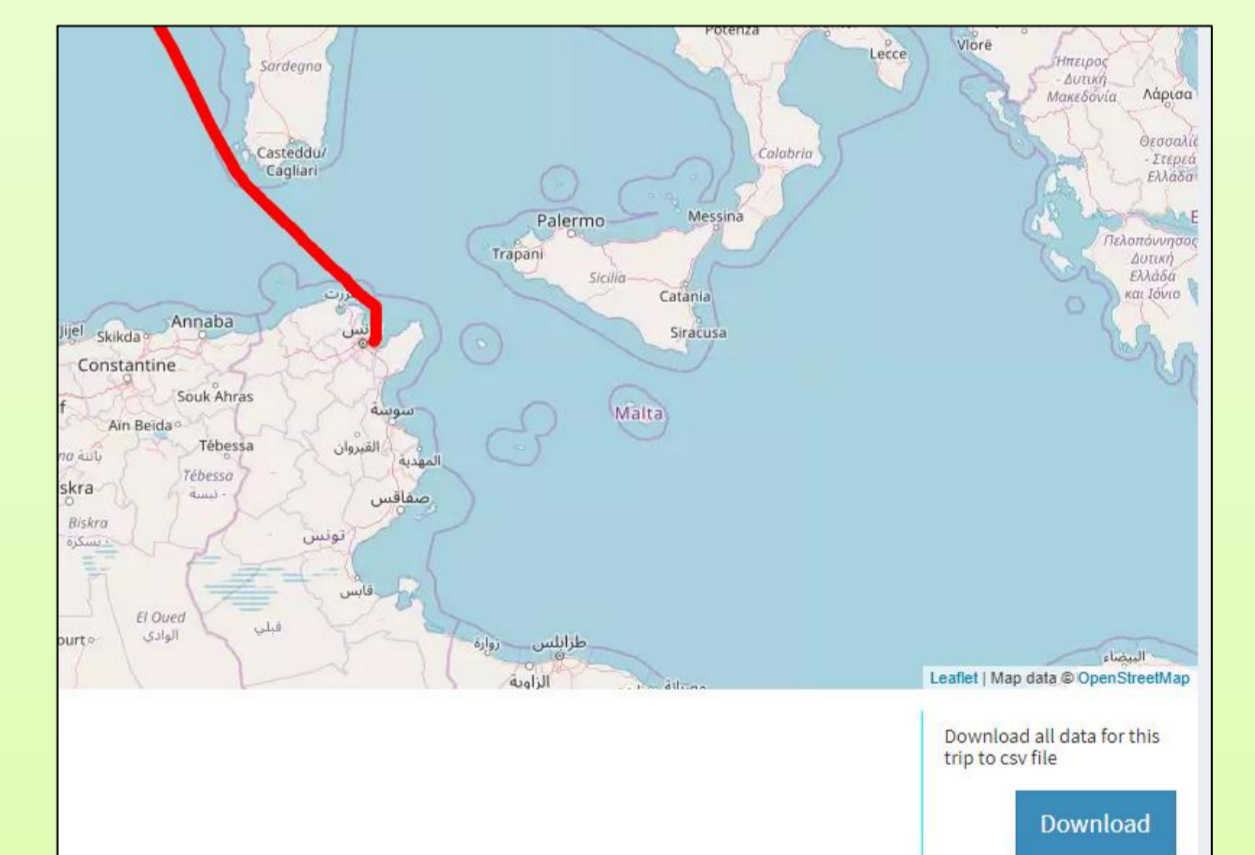


Data visualisation

## Data storage

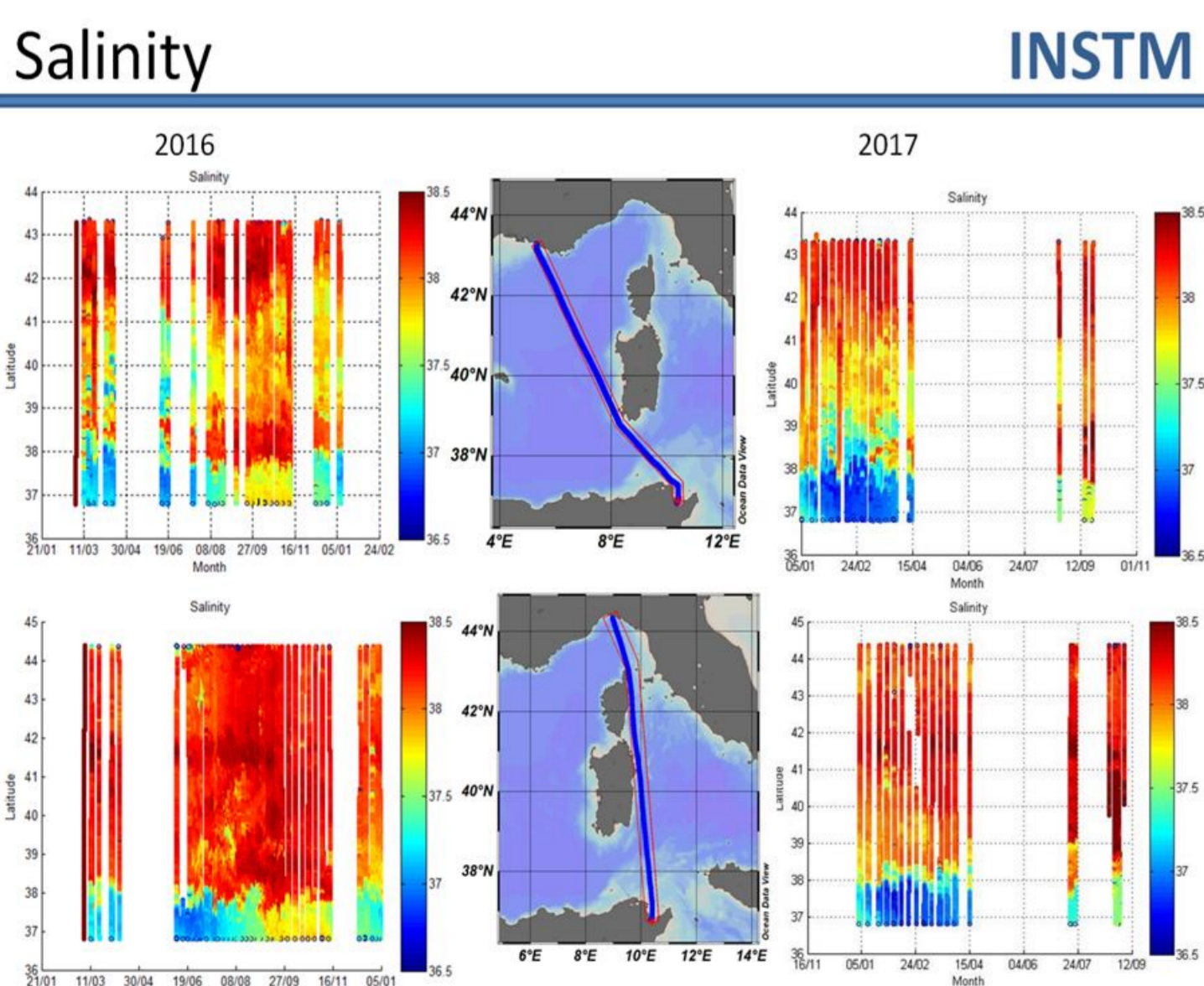


## Statistics

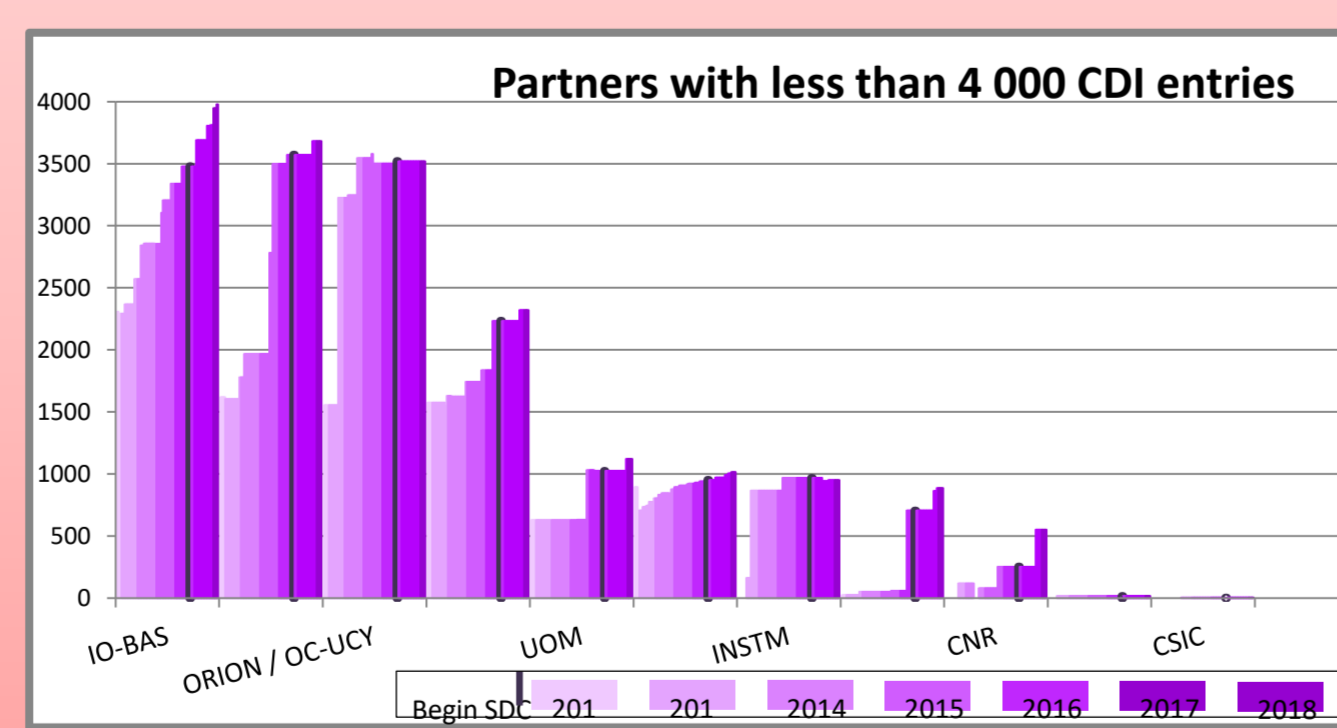


## Data download

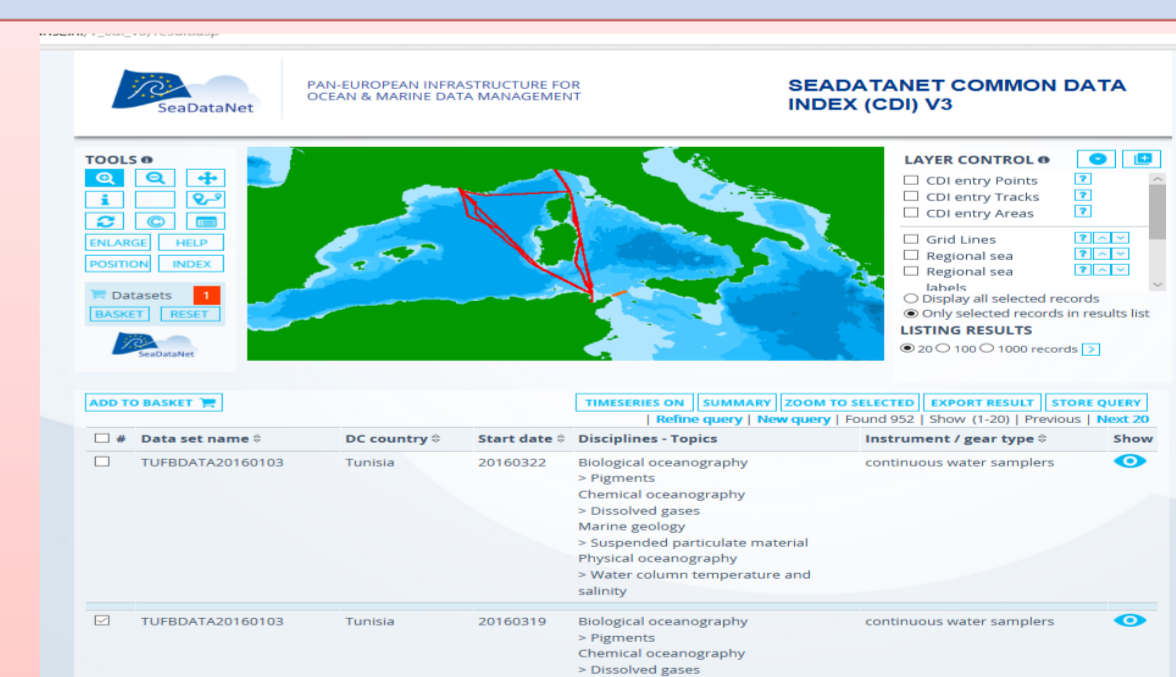
## Results:



Currently, we have processed more than 500 FerryBox transects. Only 18 examples were used to test the next steps regarding Download Manager (DM) and Request Management System (RMS)



CDI partner	Country	Last Increase
AU-DMU	Denmark	1 165
IEO	Spain	555
IFREMER	France	3 369
IMR	Norway	24
INSTM	Tunisia	10
MRI	Iceland	271
UKRI-BODC	United Kingdom	1 743
OGS	Italy	-169
SIO-RAS	Russian Federation	24
TSU-DNA	Georgia	36
<b>TOTAL</b>		<b>7 028</b>



## Conclusion:

INSTM oceanographic data play a central role in Euro-Mediterranean and African projects. Because the gaps still important along the southern coast of Mediterranean Sea.

Our involvement within the Seadatanet 1 and 2 and SeaDataCloud projects has been successfully completed and we intend to add the time series of the Ferry Box data as well as the few missing CTD stations along the Tunisian coast and develop a new CSR products during the next year .