Joint European Research Infrastructure network for Coastal Observatories

Development and implementation of suite of web-based interactive tools D6.4

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1. Document description

REFERENCES

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2. Introduction

Deliverable 6.4: “Development and implementation of suite of web-based interactive tools”

The work for Deliverable 6.4 relates to SubTask 6.1.2, *Development of Jerico Datatool*. The nature of Deliverable 6.4 is ‘Demonstrator’. Therefore this written report aims only to provide a simple overview of the Deliverable.

The Jerico Datatool has been designed, developed, and implemented and is available at the Jerico Community Hub; http://www.jerico-fp7.eu. An example dataset has been made available for testing the Datatool; a subset (2010 only) of the UK National Oceanography Centre’s (NOC-Southampton) Pride of Bilbao FerryBox data (http://www.noc.soton.ac.uk/ops/ferrybox_index.php). The Datatool site is currently password-protected as it is being tested. An overview of the functionality of the Jerico Datatool is provided herein.

The user interface is targeted at public and educational sectors, and at scientific and policy users. The tool gives users access to integrated data products and datasets via a user interface.

The Jerico Datatool provides products and services on a pan-European scale. The common data format from WP 5 will also provide data to other EU and National data centres and European initiatives in place (e.g. MyOceans, ECOOP, SeaDataNet) during the course of the Jerico programme.

3. Main Report

3.1. Jerico Datatool design

The Jerico Datatool is based on the existing EMECO marine Datatool architecture (http://www.emecodata.net). The tool has been developed to accept data output from other Work Packages (particularly WPs 3 and 4) in the Jerico project. WP7.2 will provide access to Jerico data via the EMECO Datatool for 1 year.

The Datatool accepts data in a large number of common data formats, including NetCDF, XML, Excel, Access, ASCII, KML, TXT and others, as well as having the ability to display data layers, such as WMS.

3.2. Querying the data

The Jerico Datatool provides a simple user interface with which to query the data (Figure 1). The example data that are currently available for querying in the Datatool are the NOC-Southampton Pride of Bilbao FerryBox data for 2010. The user interface consists of a form for selecting output types (e.g. maps, graphs), date range, depth range, averaging periods, regions and areas, platforms (in this case NOC FerryBox) and parameters of interest. The platforms and parameters are displayed in a drop-down data menu. The user interface is visible at all times when using the Jerico Datatool.

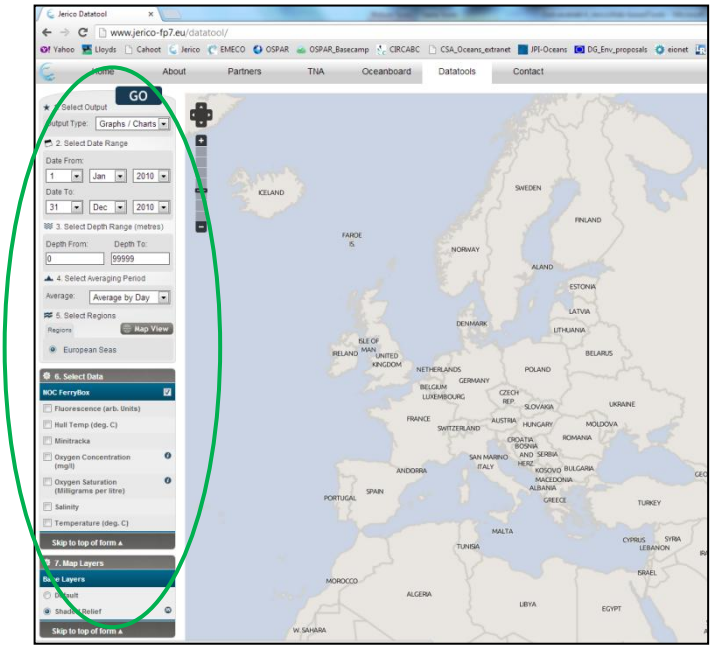


Figure 1: The front page of the Jerico Datatool, with the query function circled in green on the left-hand side.

3.3. Datatool outputs (products)

Integrated data can be output as maps, time series charts, XML, CSV and KML files. The maps, graphs and charts can be downloaded as jpg images. Figure 2 shows the results of a query, displayed on two different base-maps (layers).

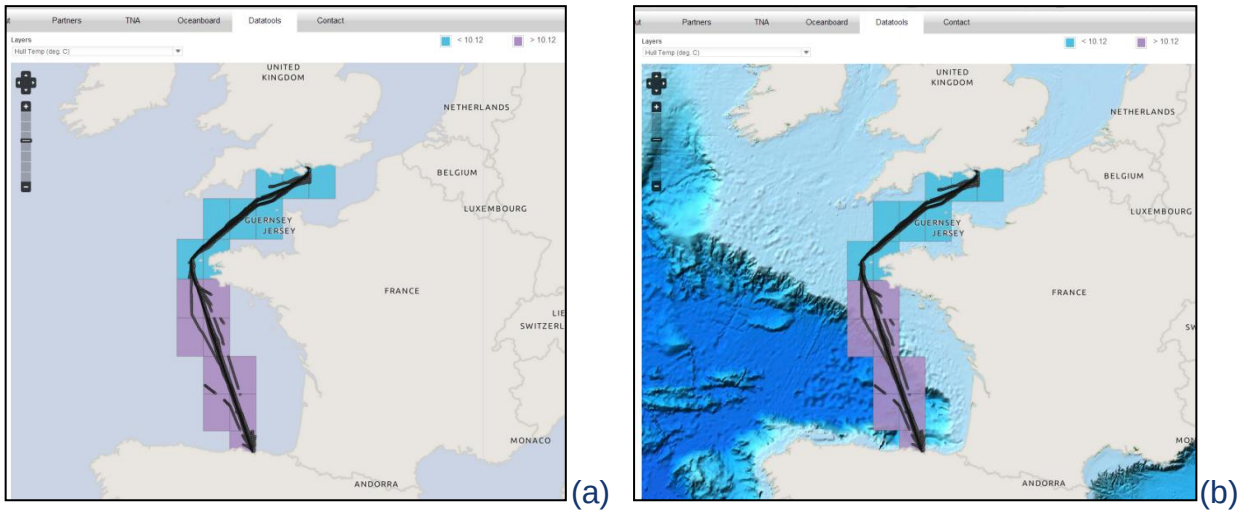
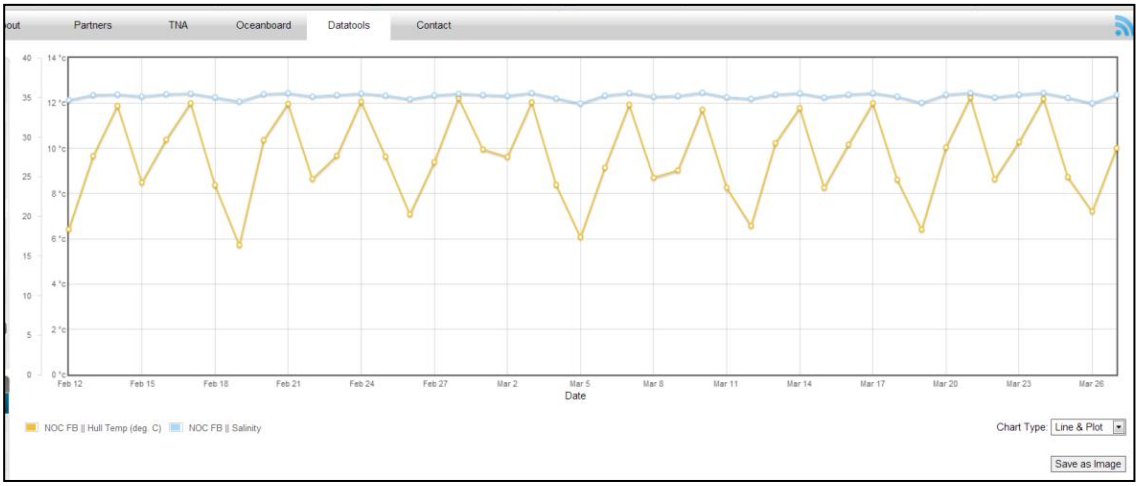
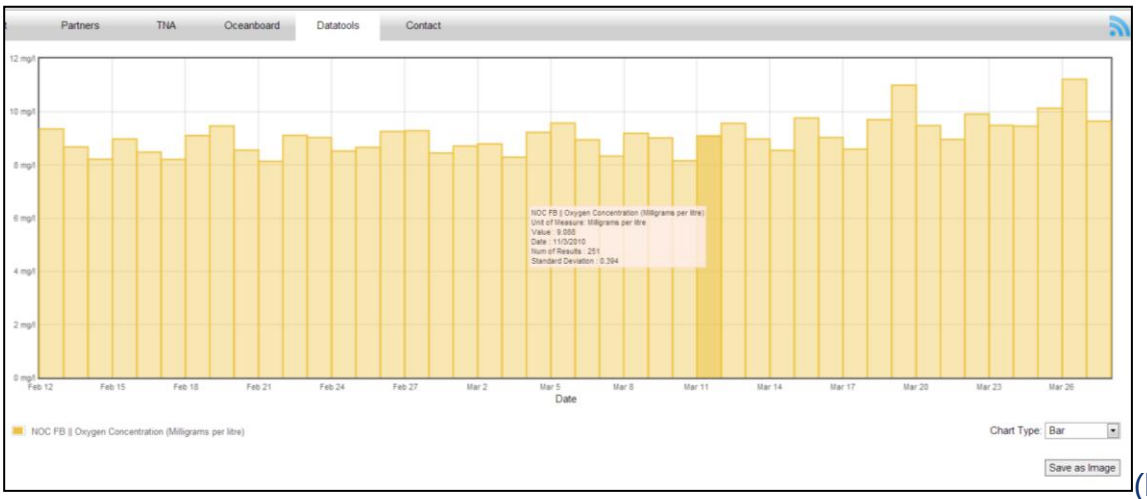


Figure 2: An example Jerico Datatool query of the NOC FerryBox data. Mean hull temperature (^{o}C) for Jan–Mar 2010 displayed on (a) 1^{o} grid, and (b) shaded relief base-map

The Datatool can output a variety of plots and charts (Figure 3), averaged by day, month or year. If the user positions the mouse over a plot or chart a pop-up box appears which summarises the data behind the data point or bar (Figure 3b).



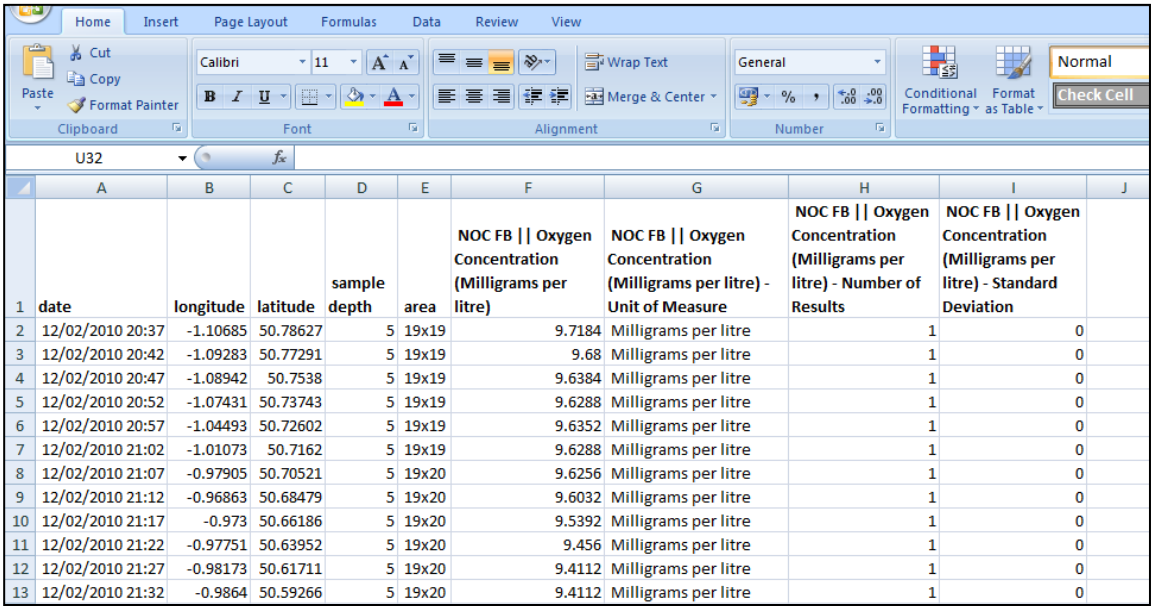
(a)



(b)

Figure 3: Examples of Jerico Datatool graphs; (a) line and point for temperature and salinity, (b) bar graph of oxygen showing a pop-up data information box.

The csv files output the underlying data to any user query. Temporal and spatial information are provided, as well as the measurements of selected parameters and statistics (Figure 4).



	A	B	C	D	E	F	G	H	I	J
1	date	longitude	latitude	sample depth	area	NOC FB || Oxygen Concentration (Milligrams per litre)	NOC FB || Oxygen Concentration (Milligrams per litre) - Unit of Measure	NOC FB || Oxygen Concentration (Milligrams per litre) - Number of Results	NOC FB || Oxygen Concentration (Milligrams per litre) - Standard Deviation	
2	12/02/2010 20:37	-1.10685	50.78627	5	19x19	9.7184	Milligrams per litre	1	0	
3	12/02/2010 20:42	-1.09283	50.77291	5	19x19	9.68	Milligrams per litre	1	0	
4	12/02/2010 20:47	-1.08942	50.7538	5	19x19	9.6384	Milligrams per litre	1	0	
5	12/02/2010 20:52	-1.07431	50.73743	5	19x19	9.6288	Milligrams per litre	1	0	
6	12/02/2010 20:57	-1.04493	50.72602	5	19x19	9.6352	Milligrams per litre	1	0	
7	12/02/2010 21:02	-1.01073	50.7162	5	19x19	9.6288	Milligrams per litre	1	0	
8	12/02/2010 21:07	-0.97905	50.70521	5	19x20	9.6256	Milligrams per litre	1	0	
9	12/02/2010 21:12	-0.96863	50.68479	5	19x20	9.6032	Milligrams per litre	1	0	
10	12/02/2010 21:17	-0.973	50.66186	5	19x20	9.5392	Milligrams per litre	1	0	
11	12/02/2010 21:22	-0.97751	50.63952	5	19x20	9.456	Milligrams per litre	1	0	
12	12/02/2010 21:27	-0.98173	50.61711	5	19x20	9.4112	Milligrams per litre	1	0	
13	12/02/2010 21:32	-0.9864	50.59266	5	19x20	9.4112	Milligrams per litre	1	0	

Figure 4: An extract from a Jerico Datatool csv file showing the results of a query on oxygen concentration.

KML layers are associated with a set of polygons. KML files can be viewed in Google Earth (Figure 5) or other software able to display KML formats.

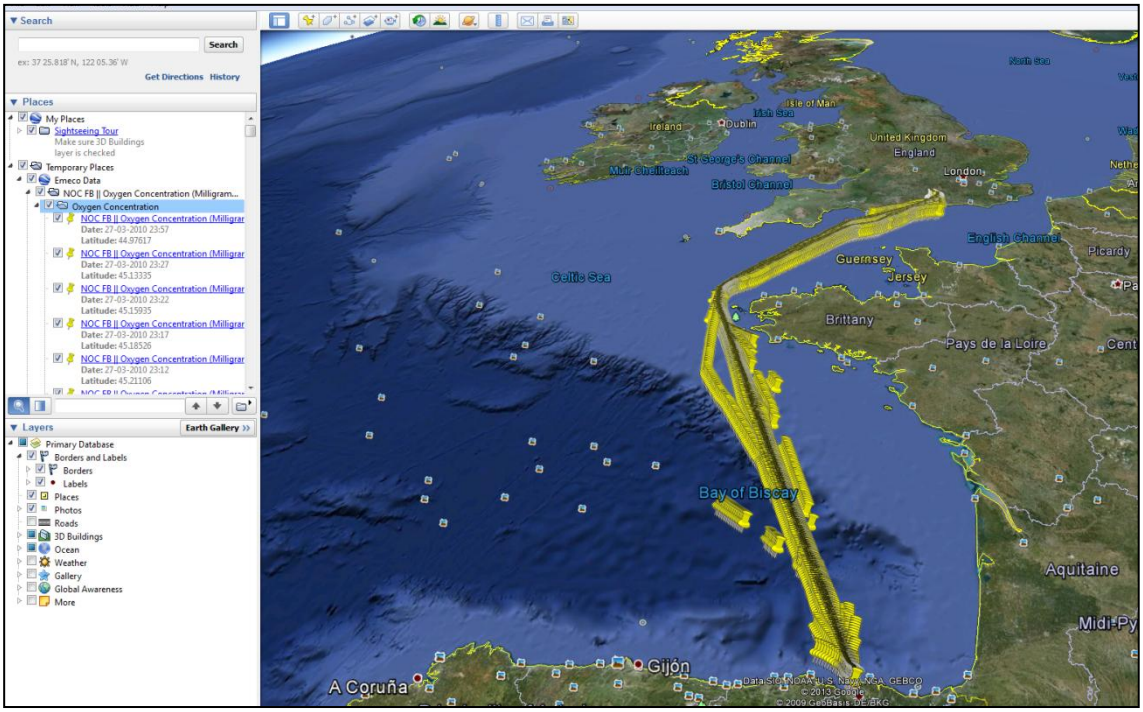


Figure 5: A KML layer from a Jerico Datatool query, displayed in Google Earth.

3.4. Next steps

Data from the Jerico partners will be made available in the Datatool during the course of the project and these will be prioritised for integration in the application. In particular Work Packages 3 and 4, plus 7.2 will provide data. Once data from the Jerico project has been provided, this will be made publicly available.

The Jerico Datatool is capable of providing products and services on a pan-European scale. Data may also be provided to other EU and National data centres and European initiatives already in place (e.g. MyOceans, ECOOP, SeaDataNet).