The EMECO Datatool: an online assessment and reporting system for co-production of environmental assessments of



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EMECO Datatool: <u>www.emecodata.net</u>

EMECO Datatool

The European Marine Ecosystem Observatory (EMECO) initiative has developed a web-based Datatool. The Datatool automates collation and standardisation of environmental data from many different sources (Fig. 1). In a streamlined process the Datatool enables bespoke outputs and reports to be produced collaboratively.

Outputs

Queries produce bespoke assessment products; maps, Google Earth kml image, time-series plots and the raw data (CSV and XML formats) (Fig. 3). Thresholds representing the ecological health of parameters can be chosen and displayed on graphs and in summary tables; where the value exceeds the threshold a '+' is recorded, values beneath the threshold score '-' (Fig. 3e).

EMECO Datatool (Version 1.2) Total Oxydised Nitrogen







This enables the co-production of knowledge in an open and robust way, promoting transparency and engagement.

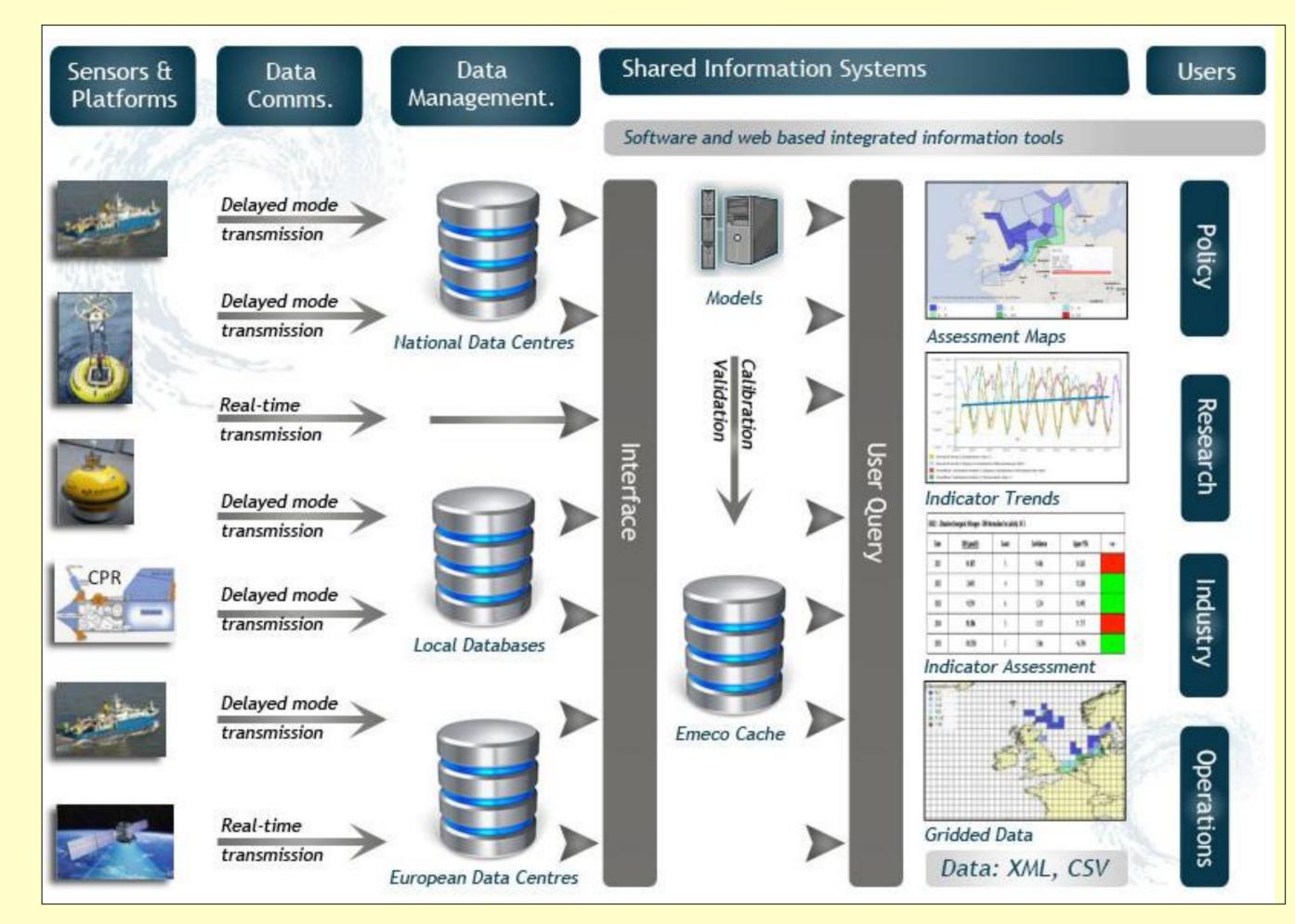
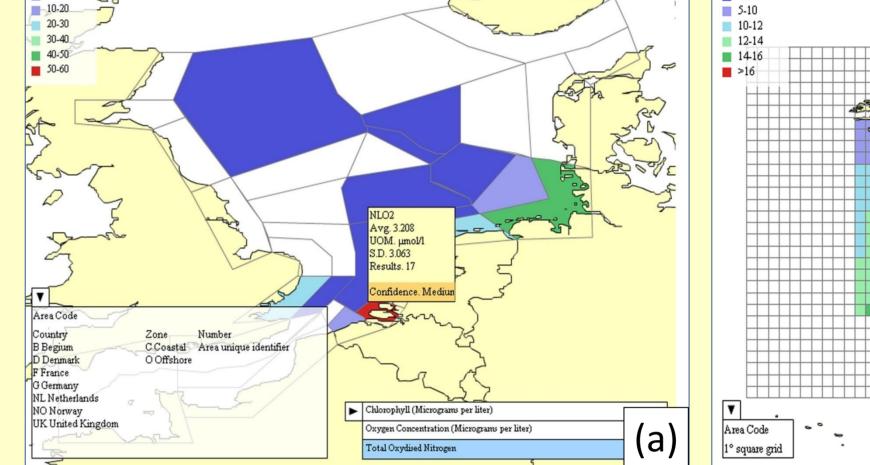
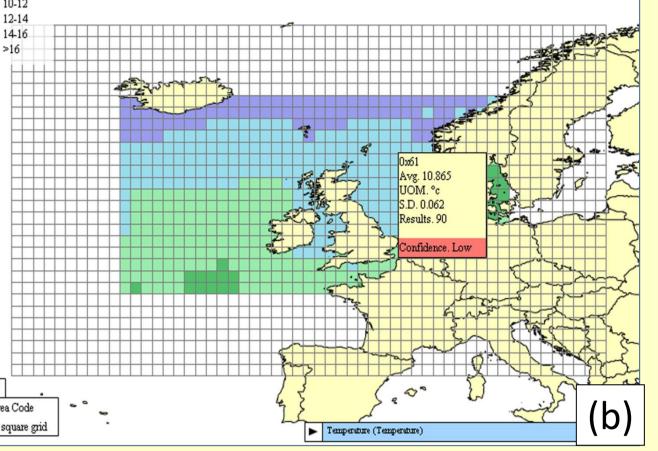
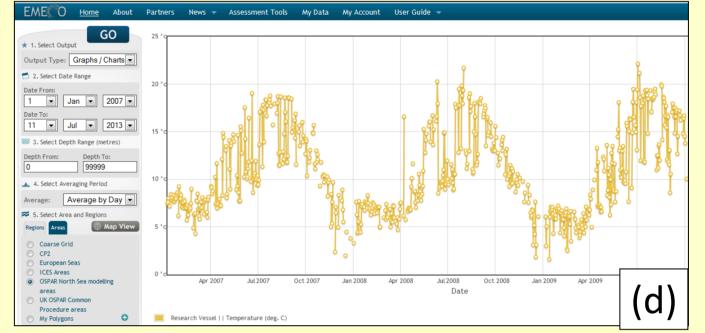


Fig. 1: Data and information flow in the Datatool.









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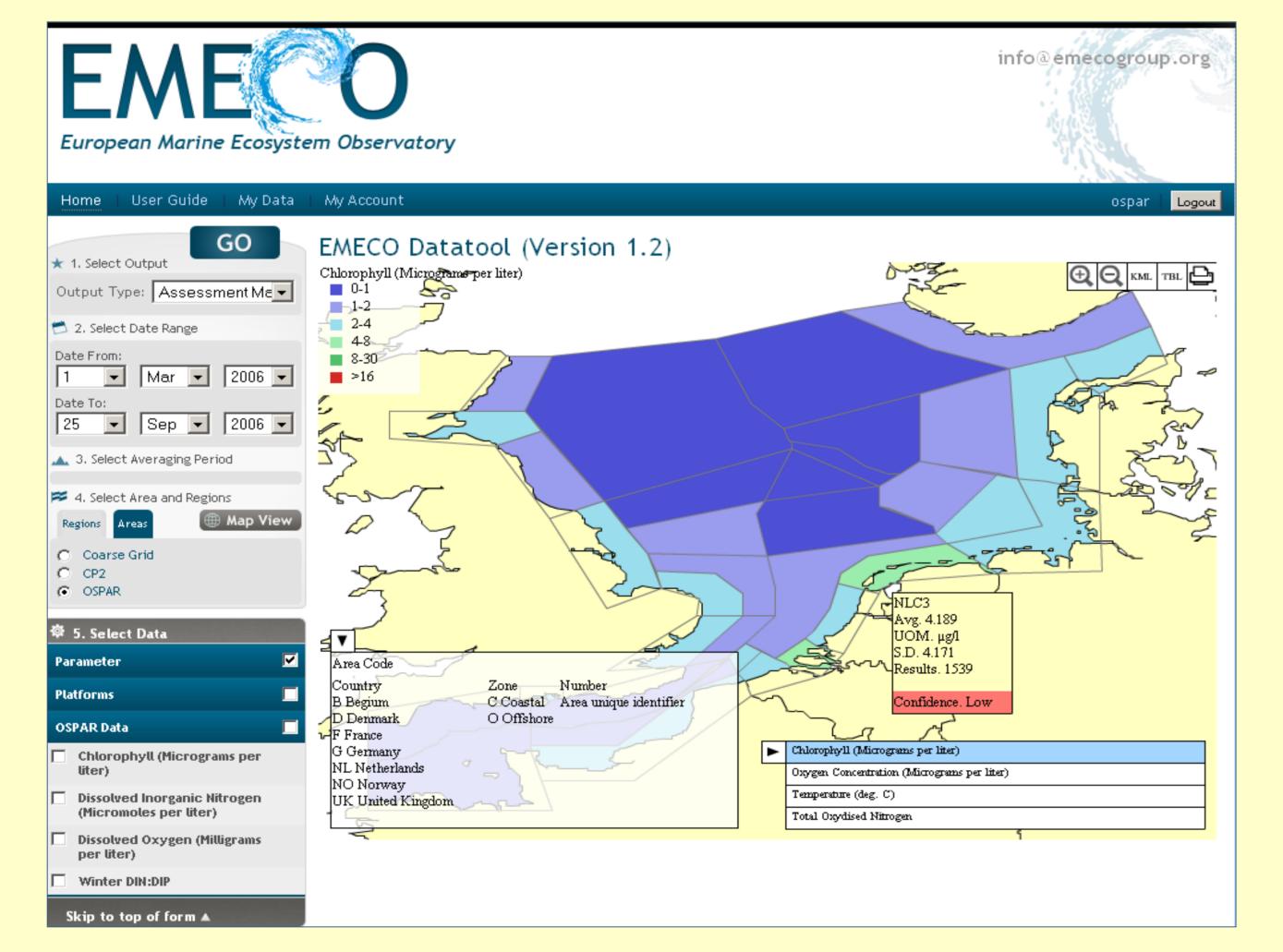
Fig. 3: Examples of EMECO products: assessment maps of (a) total oxidised nitrogen and (b) temperature; (c) Google Earth kml image; (d) time-series graph; and (e) graph and summary table showing a threshold for growing season chlorophyll (90th %ile).

Technology

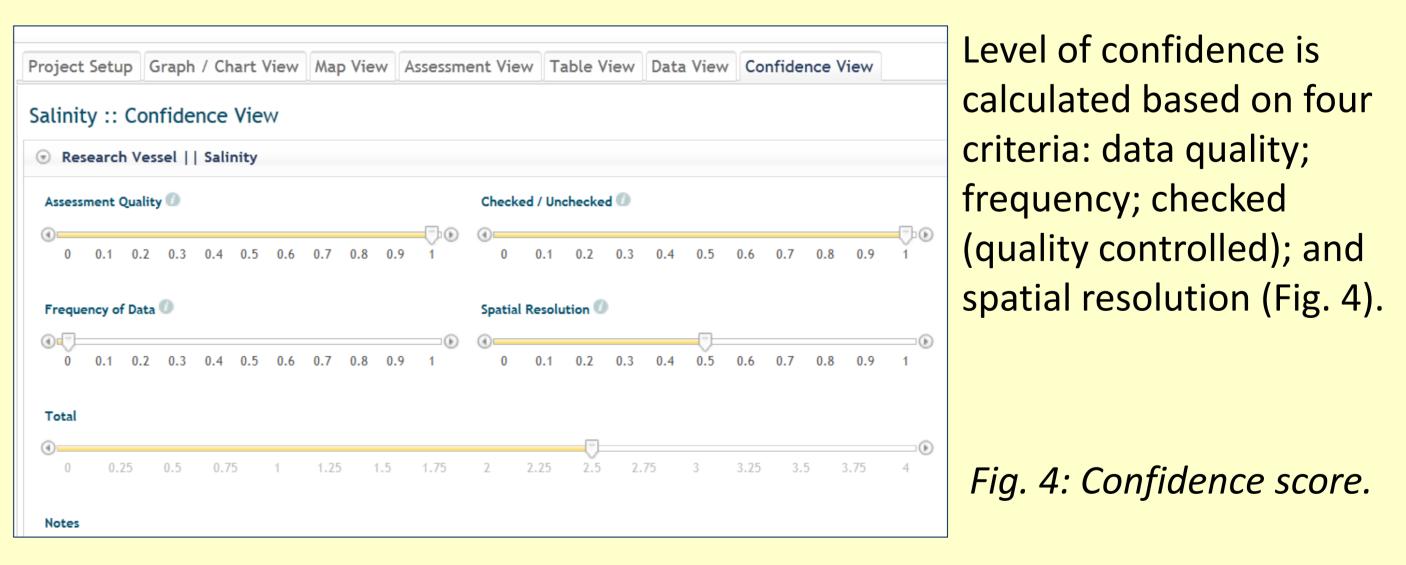
The Datatool is developed using Open Source software and GIS technology. Data may be imported in a large number of common data formats, including: NetCDF, XML, Delimited (CSV), Access, WMS, KML and TXT.

Querying

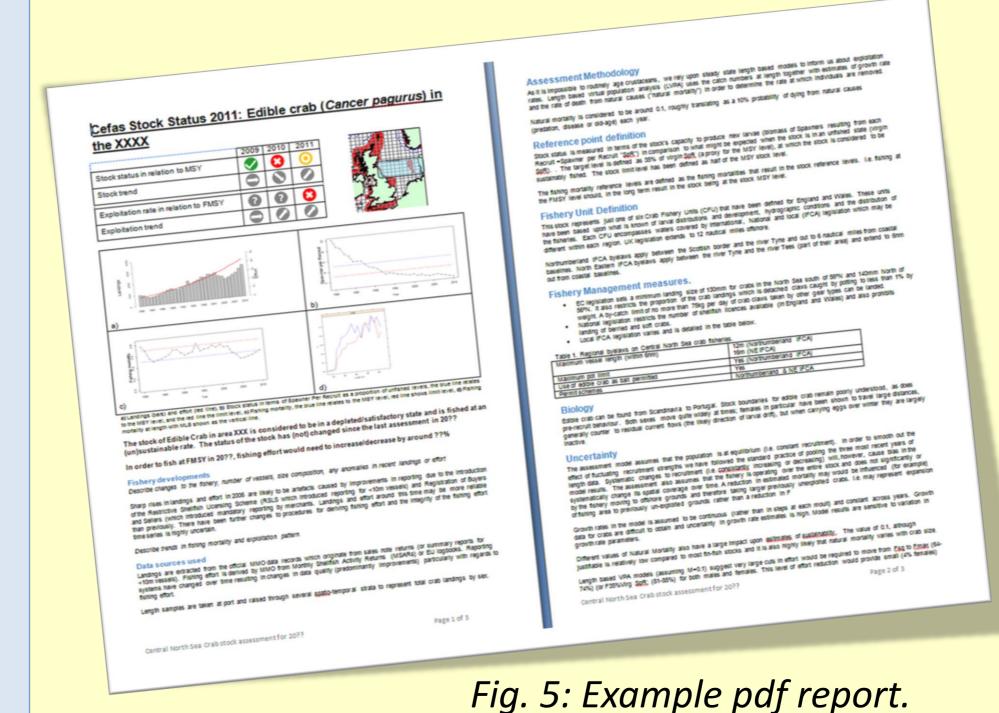
The EDT user interface (Fig. 2, top left-hand side) and data options (lower lefthand side). The results are as an 'assessment map' output. The query is executed and data are combined to provide an assessment product.



Confidence



Report compilation



Reports can be compiled

Fig. 2: Example query in the EDT user interface. Results are mapped onto OSPAR modelling water bodies in the North Sea.



collaboratively in password-protected webpages, using personalised or team log-ins. Graphs, maps and tables are dynamically linked to their source data so that figures automatically update with new queries or data. Reports are exported in pdf format (Fig. 5).

Acknowledgements

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