NOOS PROJECT SUMMARY: **Exchange of Transports**

Date of revision: 12 October 2018

KEYWORDS: data exchange, water transports, salt transports, heat transports

Project title: **Exchange of computed water, salt, and heat transports across selected transects**	
Project Aims	Transports across predefined transects constitute a measure of the hydrodynamic situation. The knowledge of computed transports is important to assess the dispersion of pollutants or the development of ecological parameters. The exchange of computed transports will serve several purposes: 1. Data from different models can be used for a better characterization of the current hydrodynamic situation 2. Data from different models can be used for a model intercomparison and uncertainty assessment 3. Transport data can be used as boundary conditions for models 4. Predicted model data can be compared with transports derived from measurements (if available) and used for model validation
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Participants	• BSH, Stephan Dick, Inga Golbeck • RBINS/OD Nature, Jose Ozer • DMI, Jacob Woge Nielsen, Vibeke Huess • Met.Office, John Siddorn • FCOO, Johan Söderkvist interested NOOS members: Deltares, met.no, SMHI, IMR …
Present status: *Ongoing*	Daily forecasts of computed water, salt, and heat transports across selected transects in the North Sea and transition area to the Baltic are computed by circulation models of BSH, RBINS/OD Nature, DMI, MetOffice and FCOO and provided on ftp servers. Tidal mean transports are calculated for 29 transects (vertical integrated flow and transport in different water layers). Results are presented in the NOOS website http://noos.eurogoos.eu/ which include charts and data of net, positive and negative water transports, vertical profiles as well as the plotting of time series.
Project timescale	• Aug.-Nov. 2003: Definition of project • Jan.-Mar. 2004: Definition of transects and technical details • Mar. 2004: Technical guide for computation of transports • Apr. 2004: BSH data on ftp server • Mar. 2005: Prototype of web page on Model Transports • Aug. 2005: Presentation on NOOS web pages • Mar. 2006: MUMM data on ftp server and NOOS web pages • Nov. 2007: BOOS transports included (on: www.boos.org) • Jan. 2009: DMI data on ftp server and NOOS web pages • 2010: Validation activities of MUMM, BSH, Met.Office and DMI

	in MyOcean project • 2011: Model inter-comparison and validation activities in MyOcean by MUMM, BSH, Met.Office and DMI; production of QUID (Quality Validation Document V1) • 2011: Update of DMI results (pos. and neg. transports) • Apr. 2012: Met.Office data on ftp server and web pages • March 2013: Meeting on NOOS Transport at BSH (08.03.2013), suggestions for new transect (No.0), some small modifications and new output • March 2013: Update of web pages (presentation of mean transports and range of results) • June 2013: FCOO data on ftp server and web pages • July 2013: hourly data of BSH available on ftp server • January 2014: Transports are part of the NOOS Multi-model Ensemble Prediction System (additionally: currents, SST, SSS) • June 2014: Transport time series available without password • Feb. 2015: Paper (Golbeck et al.) on MME (including transports) submitted to Ocean Dynamics • April 2015: Possibility to switch between 'Total Transports' and 'Surface Transports' on NOOS web pages • 2016: Salt transports included in MME and presented on web page
Planned Developments and Activities (2015 - ...)	• Implementation of modifications and new output (exchange format, averaging period …) suggested at March 2013 meeting • Model intercomparison, ensemble representation and assessment of model uncertainties within the NWS MFC of CMEMS (NOWMAPS) • Evaluation of new hourly model output • Presentation of salt and heat transports • Further evaluation of results (statistics, model intercomparison) • ...
Link to project documents (password protected URL ??)	http://noos.eurogoos.eu/ ⇨ Projects => InNOOS => Transports Fact Sheet (this document): http://noos.eurogoos.eu/download/working_group_reports/NOOS-transports-factsheet_2018.pdf Further Documents: How to compute NOOS transports Comparison of transports (Jose Ozer) NOOS Meeting on Transports (Stephan Dick) Evaluation and developments within MyOcean/MyOcean2 (Inga Golbeck) On the computation of volume fluxes: some results and comments (Jose Ozer) Summary of Results and Action List ⇨ Products => Forecasts => Transport http://noos.eurogoos.eu/model-results/transports-fc/ ⇨ Products => Forecasts => Multi Model Ensemble http://noos.eurogoos.eu/community-products/multi-model-ensemble-of-forecast-products/