

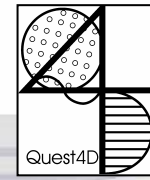
Integrated Monitoring Tools: Ways forward in Operational Oceanography

Sébastien Legrand

s.legrand@mumm.ac.be

Head of MUMM operational modeling team (OPTOS)

SG member of the European North West Shelf Operational Oceanographic System (E-NWS-OOS)

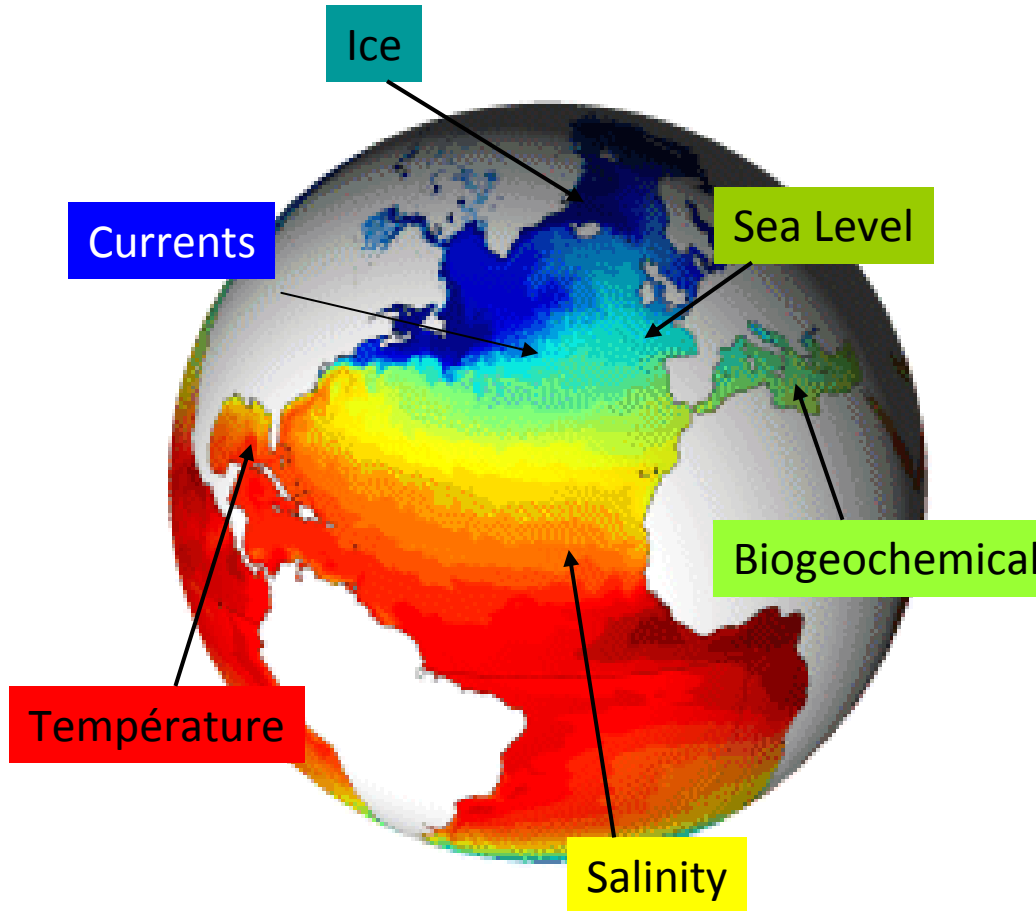


MyOcean – Developing the GMES Marine Core Service 2009-2012 ; 2012-2014



myOcean

Ocean Monitoring and Forecasting



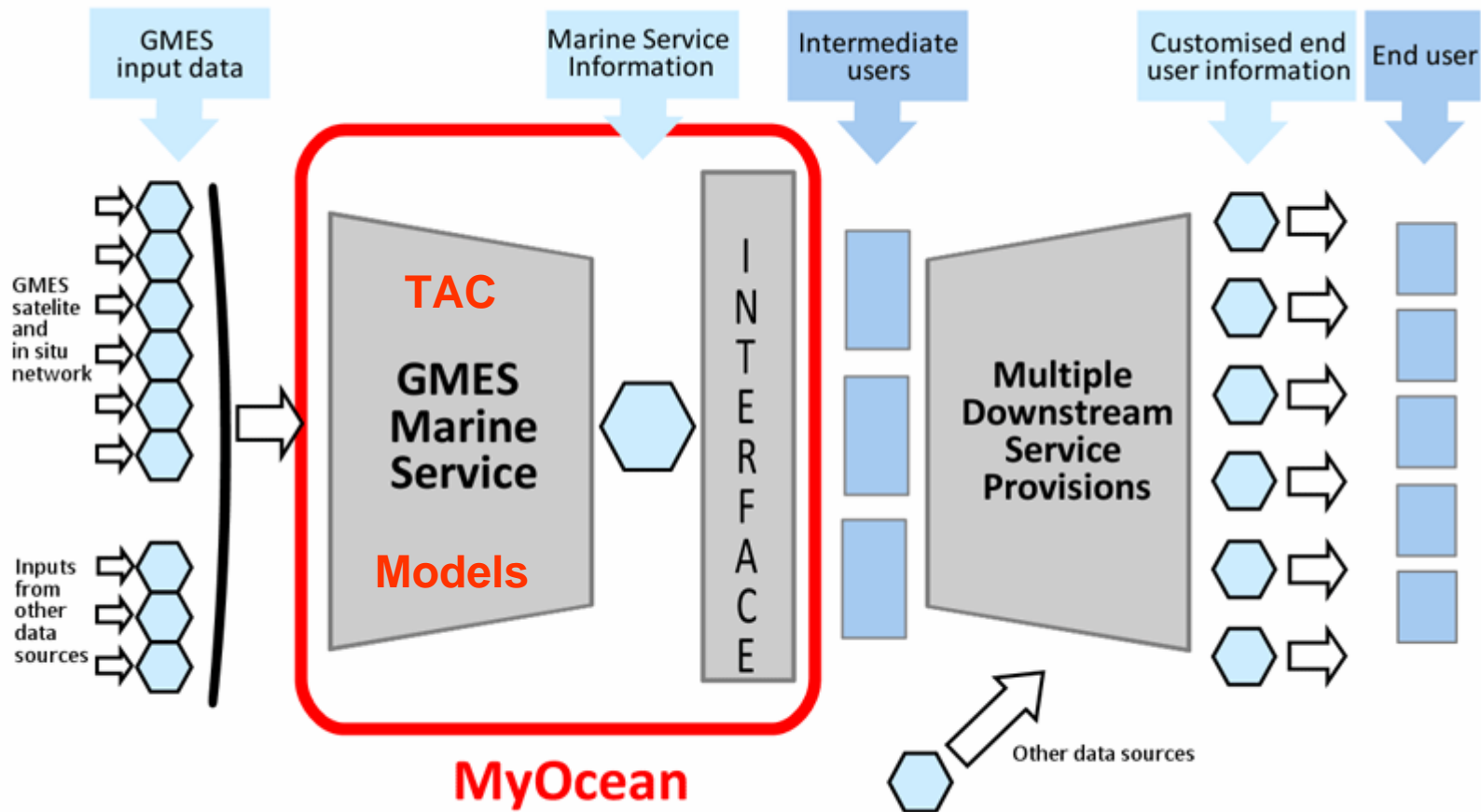
A 3D and dynamic
vision of the ocean

- Currents,
- Temperature,
- Salinity,
- Sea Level,
- Ice,
- Biogeochemistry

- Anywhere (global & 3D)
- At any time (past, present, future)
- Real time & long period

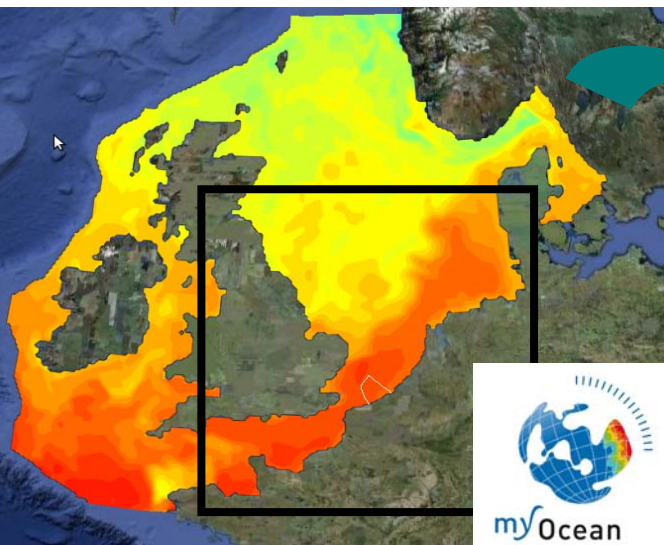
Scope of responsibility :

Delivering generic, medium resolution products to intermediate users

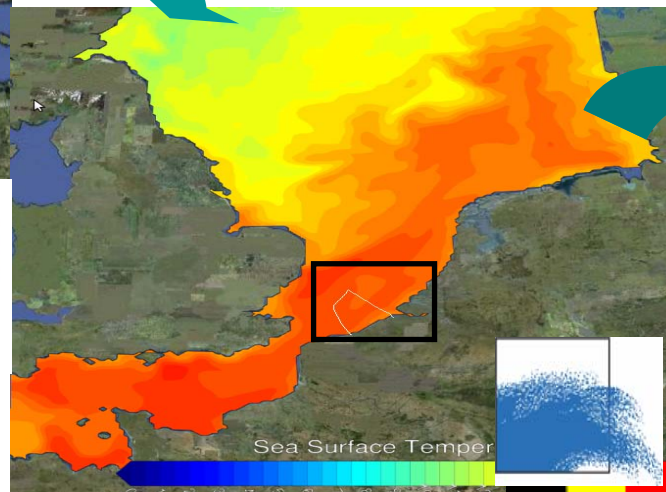


MARINE AND COASTAL ENVIRONMENT

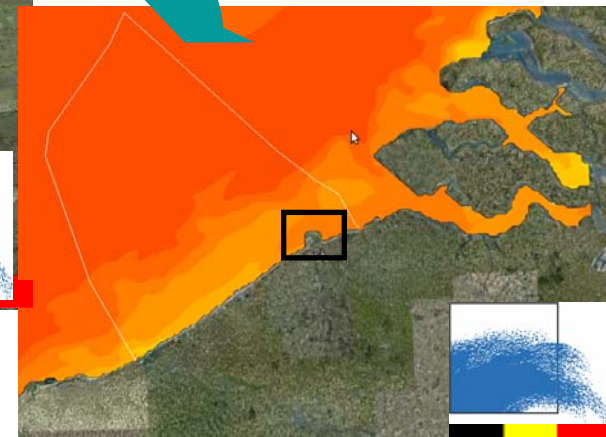
MUMM is downscaling myOcean products to improve its regional, national and local models



Resolution : ~7 nm



Resolution : ~5km



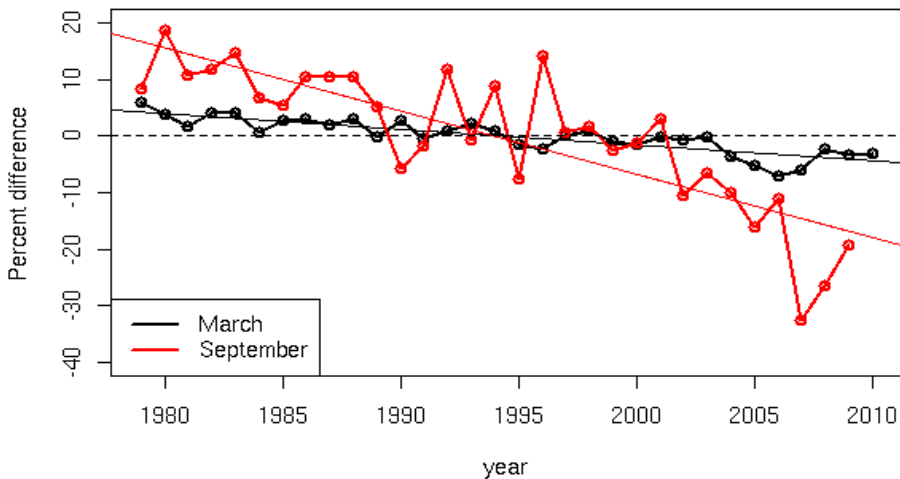
Resolution : 50 - 750 m

Sea Surface Temperature on 28/09/2010, noon

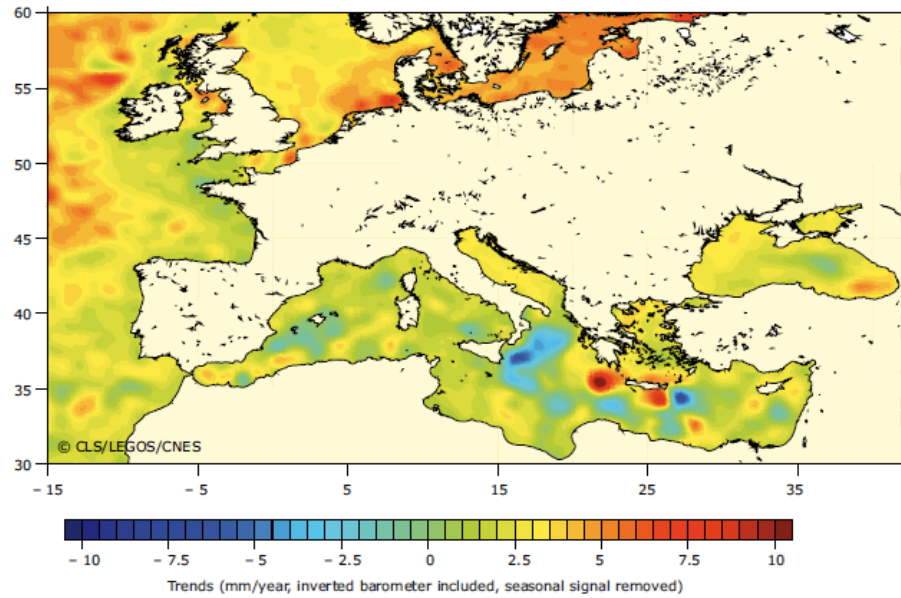
CLIMATE & SEASONAL FORECASTING

EEA is computing indicators from MyOcean products

Arctic Sea Ice Extent (SIE) for March and September

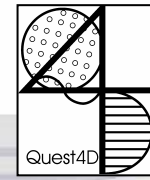


Map 2.4 Change in sea level in Europe, October 1992–June 2009



Note: Based on satellite data; trends in mm/year; inverted barometer included, seasonal signal removed. This map is produced at the CLS/CNES/LEGOS group and is also available through MyOcean.

Source: Ablain, M. et al., 2009; Cazenave, A. et al, 2009.



Take-home messages

- Operational oceanography can provide a 3D and dynamic vision of the oceans, seas and/or marine environment.
- Operational oceanography products also include long time series useful to support integrated monitoring.
- MyOcean just 1 example out of many others...
European level : Marcoast, Emodnet, SeaDataNet, EMECO...
Belgian level : OPTOS, AMORE, BELCOLOUR ...
- Dedicated services are being developed to meet end-users specific needs, including those of the integrated monitoring.