



COASTAL OBSERVATIONS
& FORECASTS

PREVIMER - What's new ? - IBI-ROOS meeting, February 2012

PREVIMER

A coastal operational forecasting system

Model Downscaling

What's new in 2011 ?

Lucia PINEAU-GUILLOU (Ifremer) IBIROOS meeting – San Sebastian
14-16 February 2012



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❖ Contents

What's new in PREVIMER about:

1. Monitoring in situ networks
2. Model Downscaling
3. Products



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1

Monitoring in situ networks What's new ?

❖ Web interface

Objective:

- To visualize all the platforms of the networks archived in the Coastal Operational Oceanography DataBase
- To have synthetic informations on measurements : platform code, platform name, institution, available data...
- To download data





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All Eulerian Networks - Mozilla Firefox : Ifremer

Fichier Édition Affichage Historique Marque-pages Outils ?

http://www.ifremer.fr/co-en/allEulerianNetworks

Les plus visités Ifremer PREVIMER - Observati... Annuaire de l'Ifremer Intranet PREVIMER All Eulerian Networks

All Eulerian Networks

Network label	Platforms
Bouées météo	28
Candhis	20
Débits	96
ESONET Antares seafloor observatory	1
ESONET Momar seafloor observatory	3
MareI	14
Mesurho	1
MyOcean eulerian platforms	3639
OceanSITES moorings	64
Pluviométrie	16
Réseau des îles	9
Shom-Ronin	35
Shom-Sonel-Reymar	40
Smatch Conchylicole	11

River Flow

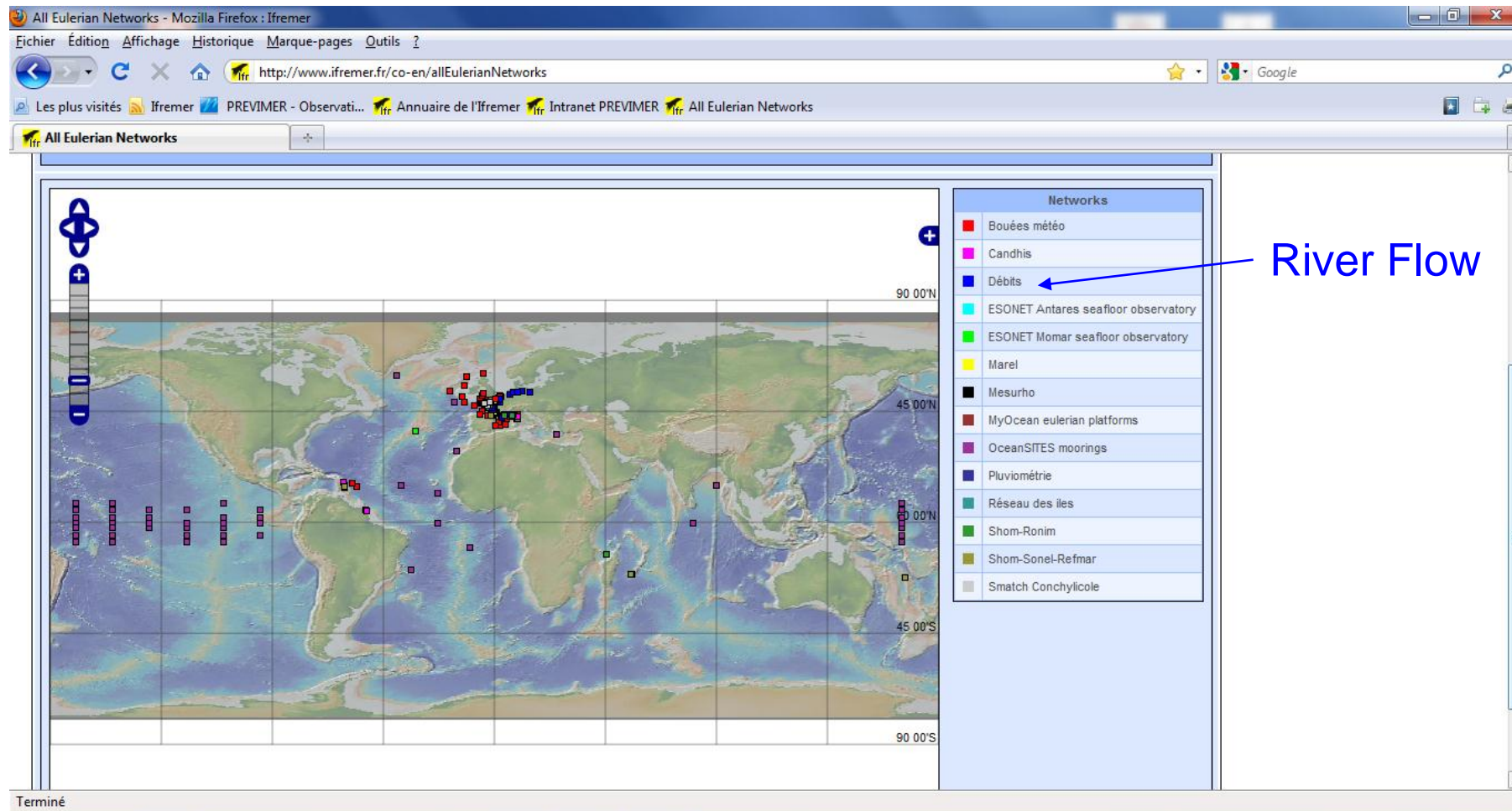
Terminé

Networks	
■	Bouées météo
■	Candhis
■	Débits
■	ESONET Antares seafloor observatory
■	ESONET Momar seafloor observatory
■	MareI
■	Mesurho
■	MyOcean eulerian platforms
■	OceanSITES moorings



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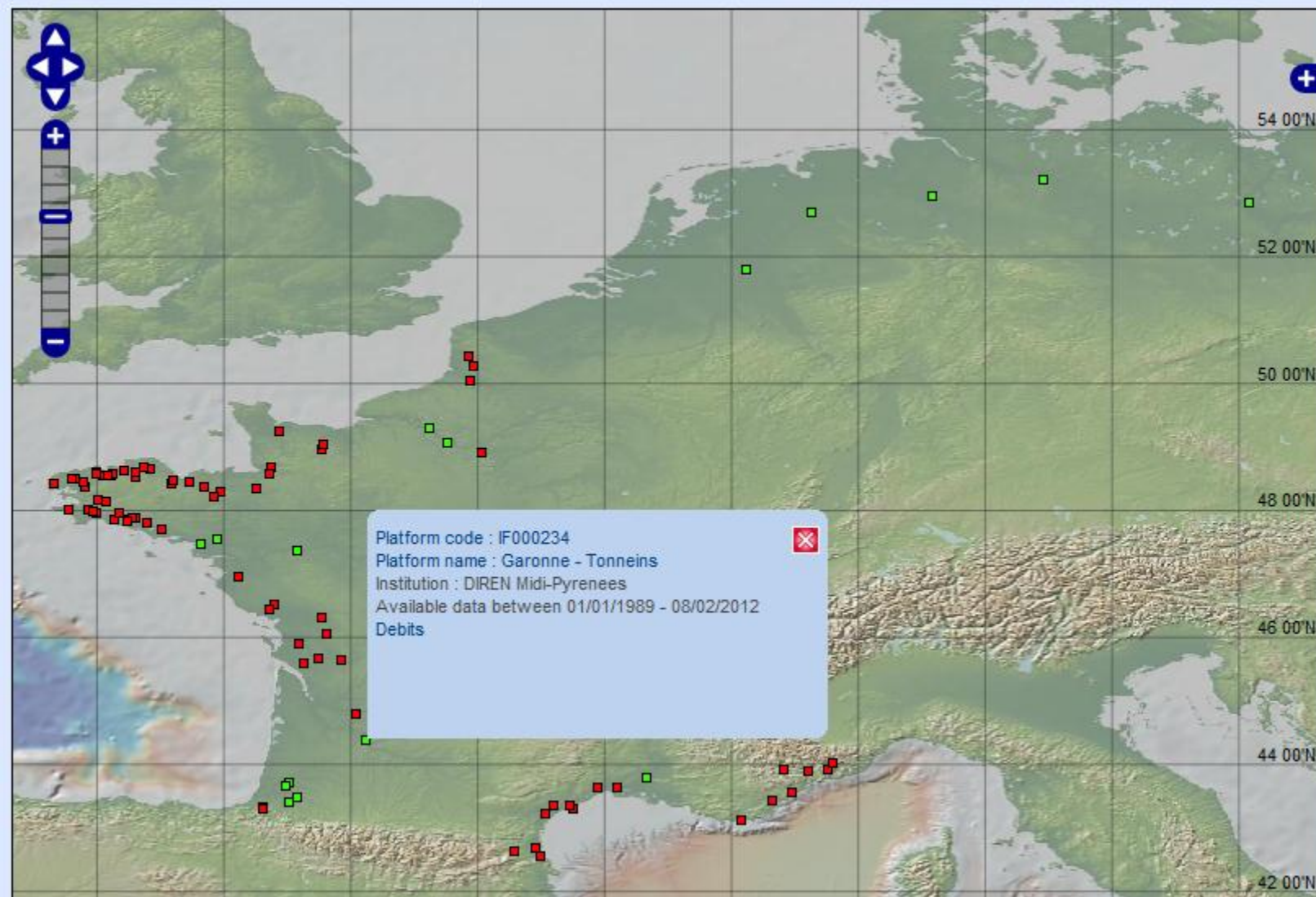
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River Flow



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Platform activity	
■	Active
■	Inactive

2

Data can be downloaded (if free access)

Platform code	IF000234
Platform name	Garonne - Tonneins
Description	Débit de fleuve Garonne à Tonneins
Institution	DIREN Midi-Pyrénées
Nominal Latitude	44.4119
Nominal Longitude	0.2222
Sandre Platform	O9000010
Eulerian networks	Débites
Available data	From 01/01/1989 to 08/02/2012
Selected data	From <input type="text" value="09/01/2012"/> ... to <input type="text" value="08/02/2012"/> ... <input type="button" value="Refresh"/>
Filters	<input checked="" type="checkbox"/> Good measures only <input checked="" type="checkbox"/> Physical parameters only <input checked="" type="checkbox"/> One color by quality code <input type="checkbox"/> One color by immersion level
Download data	in csv-oco, in netcdf-oco, in netcdf-argo
Physical parameters	<input checked="" type="checkbox"/> River flow rate
River flow rate	<input checked="" type="checkbox"/>

<http://www.ifremer.fr/co-en/>



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❖ Observations are online

www.previmer.org/observations

2

Model Downscaling

❖ 2D sea level and surge operational modelling

- Spatial Resolution
 - Rank 0 : 2000 m over IBI domain, instead of 5600 m
 - Rank 1 : 700 m
 - **Rank 2 : ~200m**



❖ 2D sea level and surge operational modelling

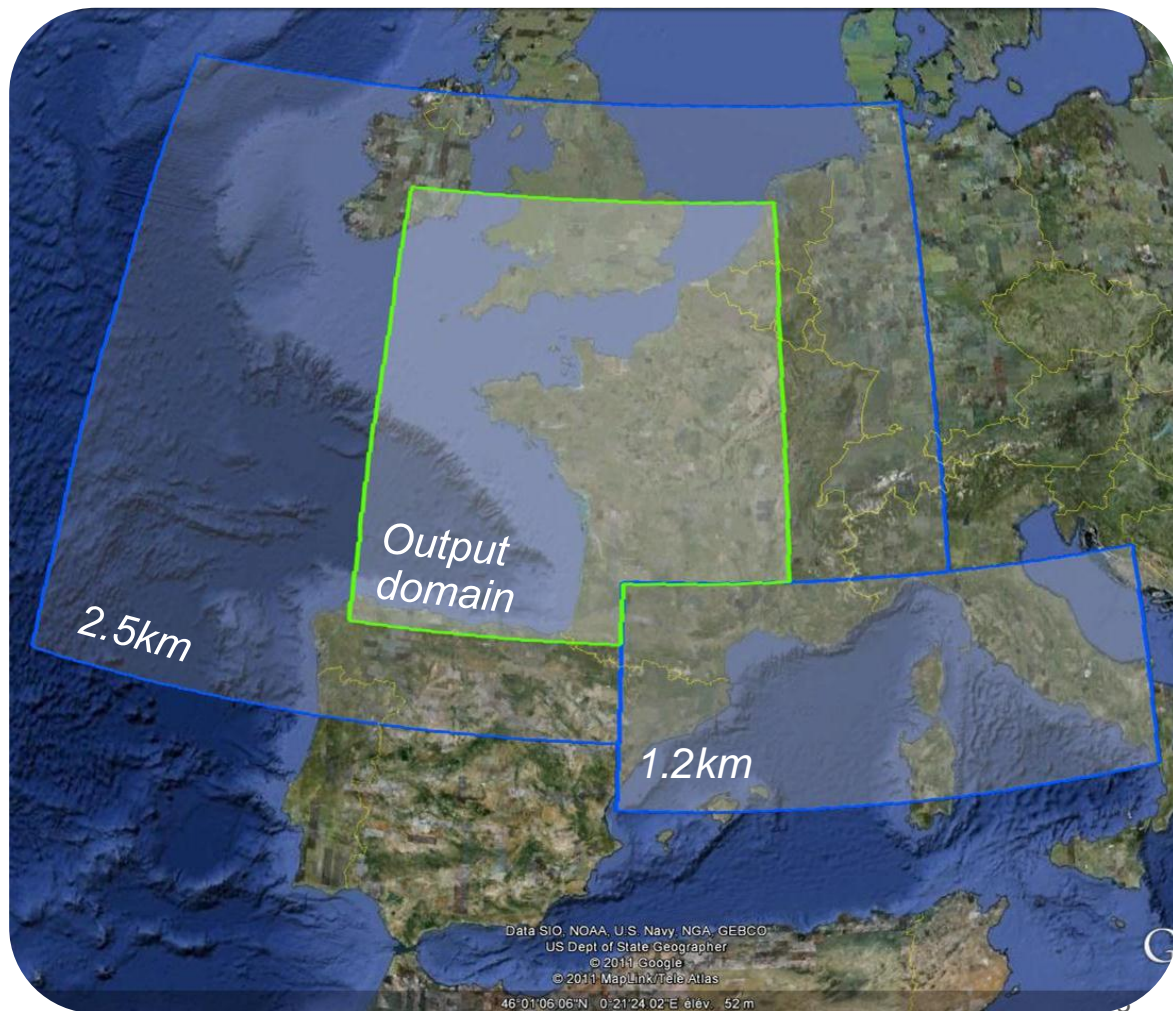
- Output : 15 mn
- Taking into account wave effect on drag coefficient parametrisation
- Wave set-up under development
- Hourly meteo forecast (Arpege+Arome)
- Operational : mid 2012



❖ 3D Bay of Biscay model

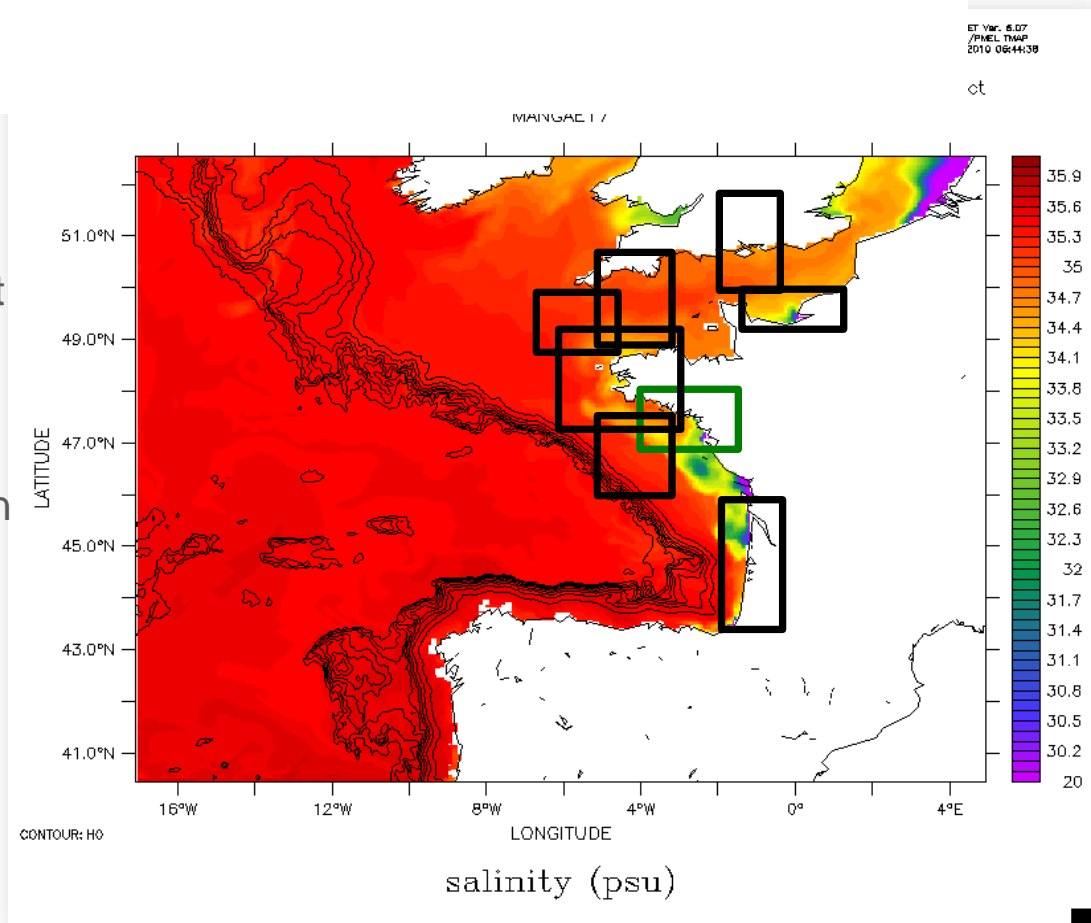
Under development

- Extension of 3D Bay of Biscay grid
- 4 km to 2.5 km
- 30 to 72 vertical levels
- Hourly outputs in the Bay of Biscay
- Under development : towards a common grid with Mercator IBI36



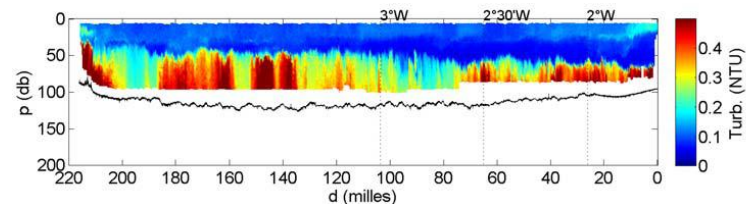
❖ Evolution of the Bay of Biscay configurations

- Toward 3D local zooms (~500 m)
- Two-way nested models
- AGRIF: Adaptive grid mesh refinement in Fortran
(*Debreu et al., 2008*)
- Full overlapping domain decomposition method
- Experience in 2011 over Loire estuary and Vilaine Bay, 800 m, physic&bio (EASYCO project)

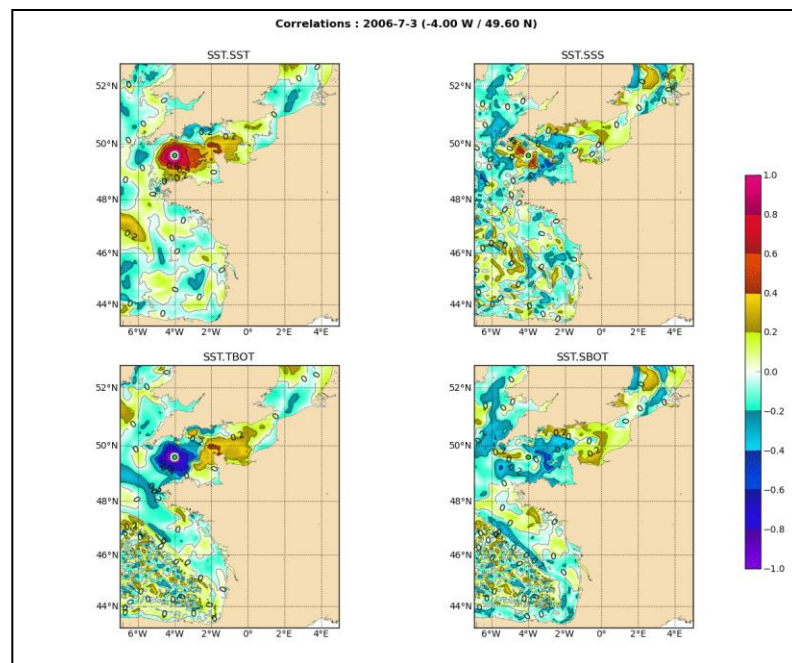


❖ R&D Developments

- Towards turbidity modelling
- Data Assimilation
 - First global assimilation experiment with restart
 - CPU time : 50 times without assimilation
- Spectral Nudging : to match large scale/intermediate resolution simulations and local/high resolution simulations



Turbidity along red profile- ASPEX campaign, August 2009



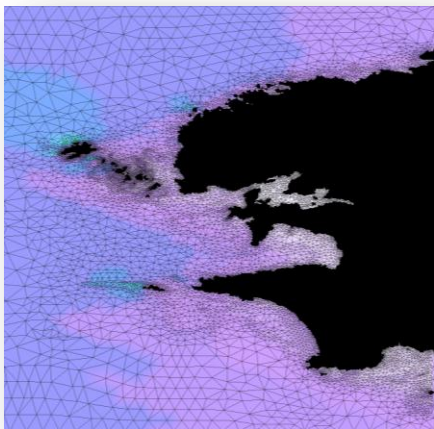


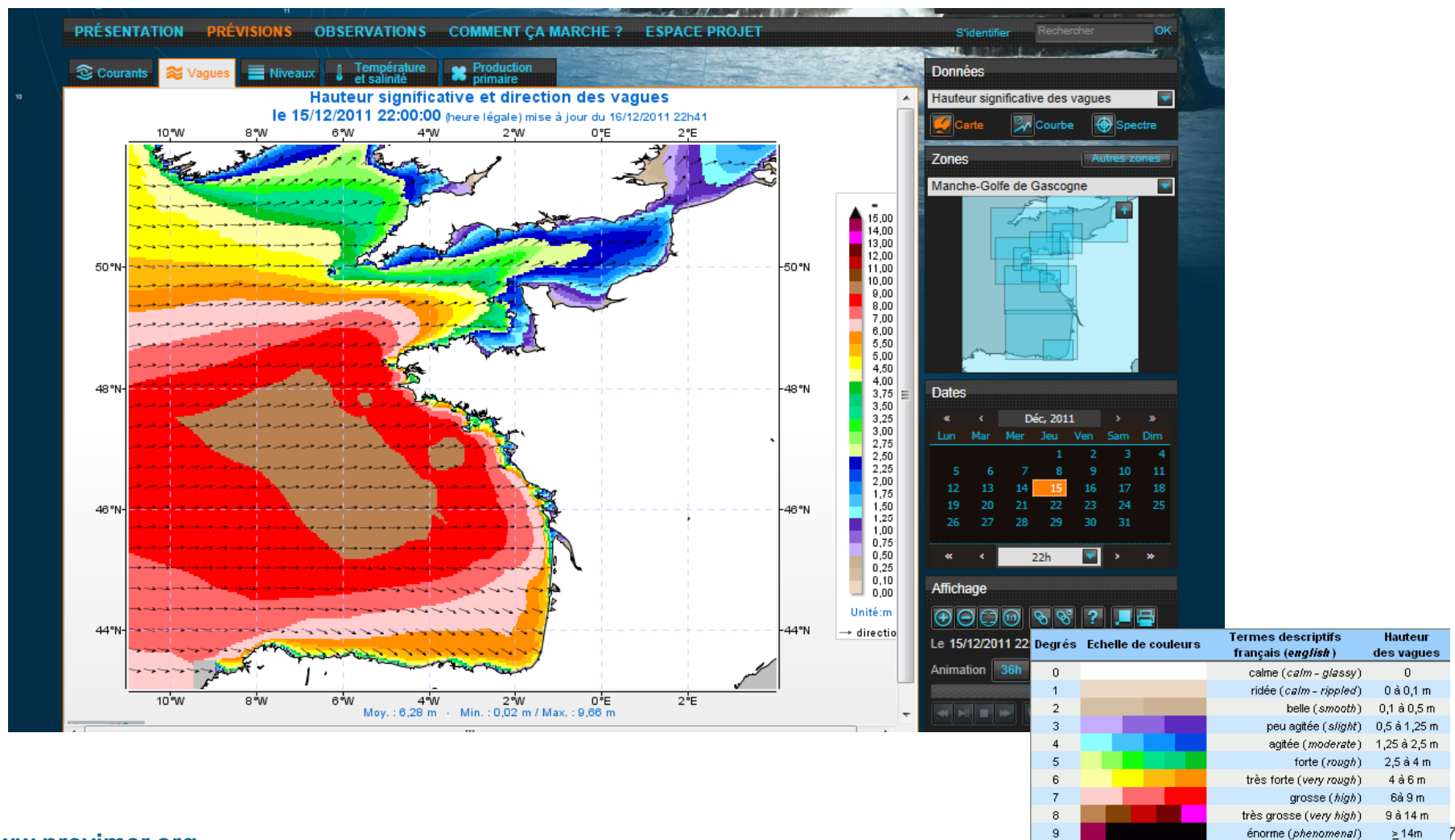
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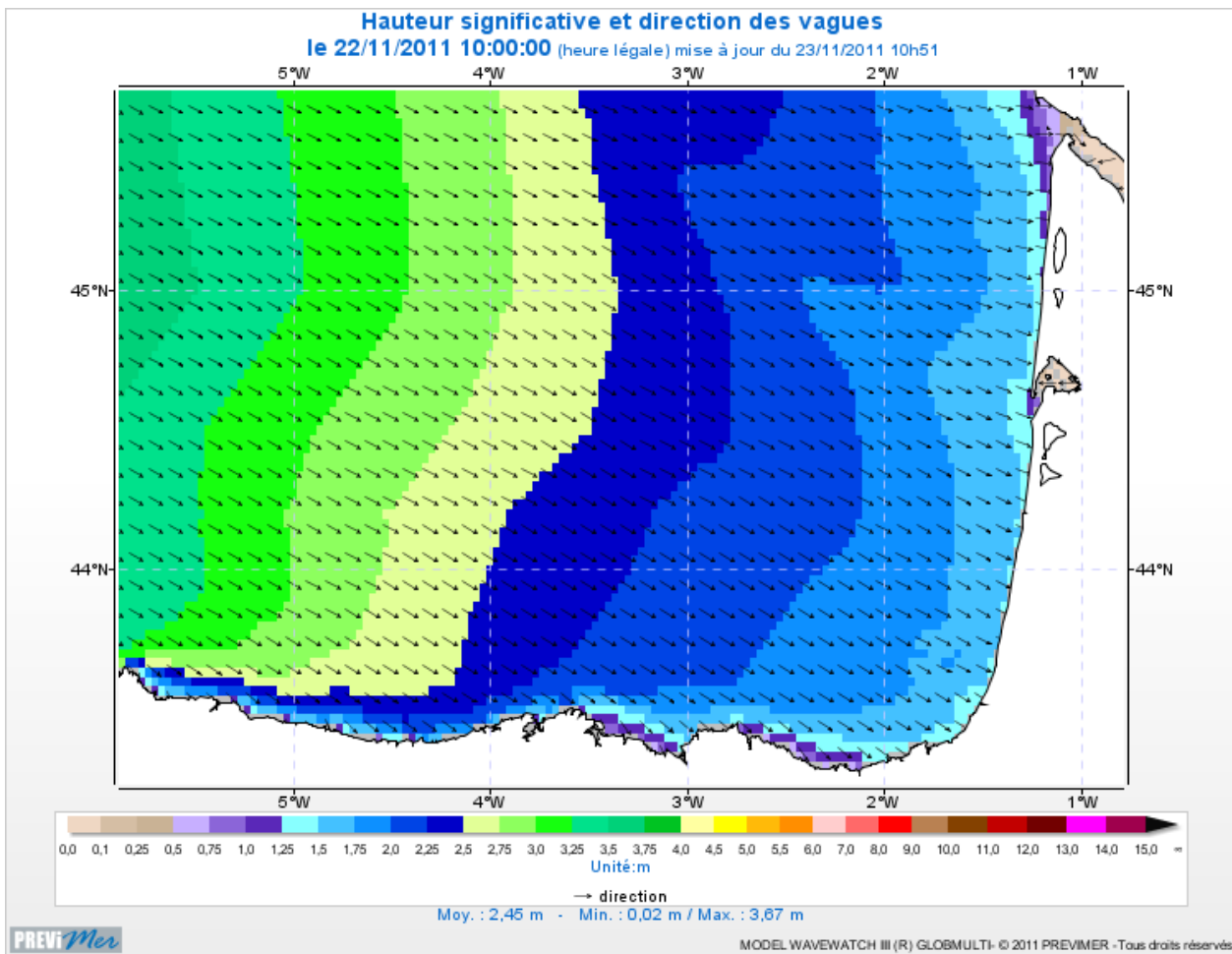


Wave Model

- Wave Watch III model
- Full coverage of Bay of Biscay and Channel with an Unstructured Grid up to 200m of spatial resolution
- Hourly outputs
- Atmospheric forcings: wind only
- 2D currents forcing
Towards 2D currents/wave coupling







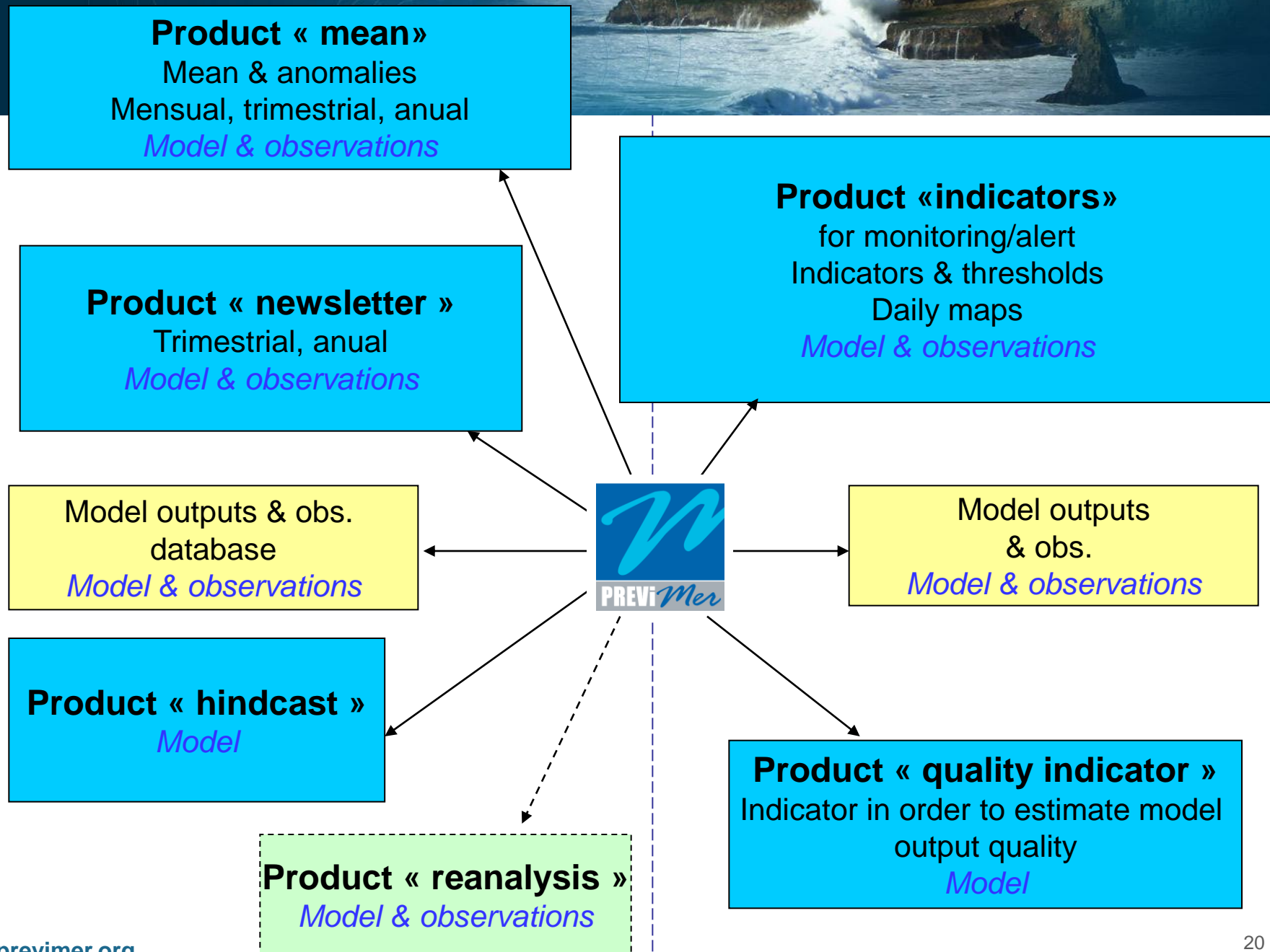


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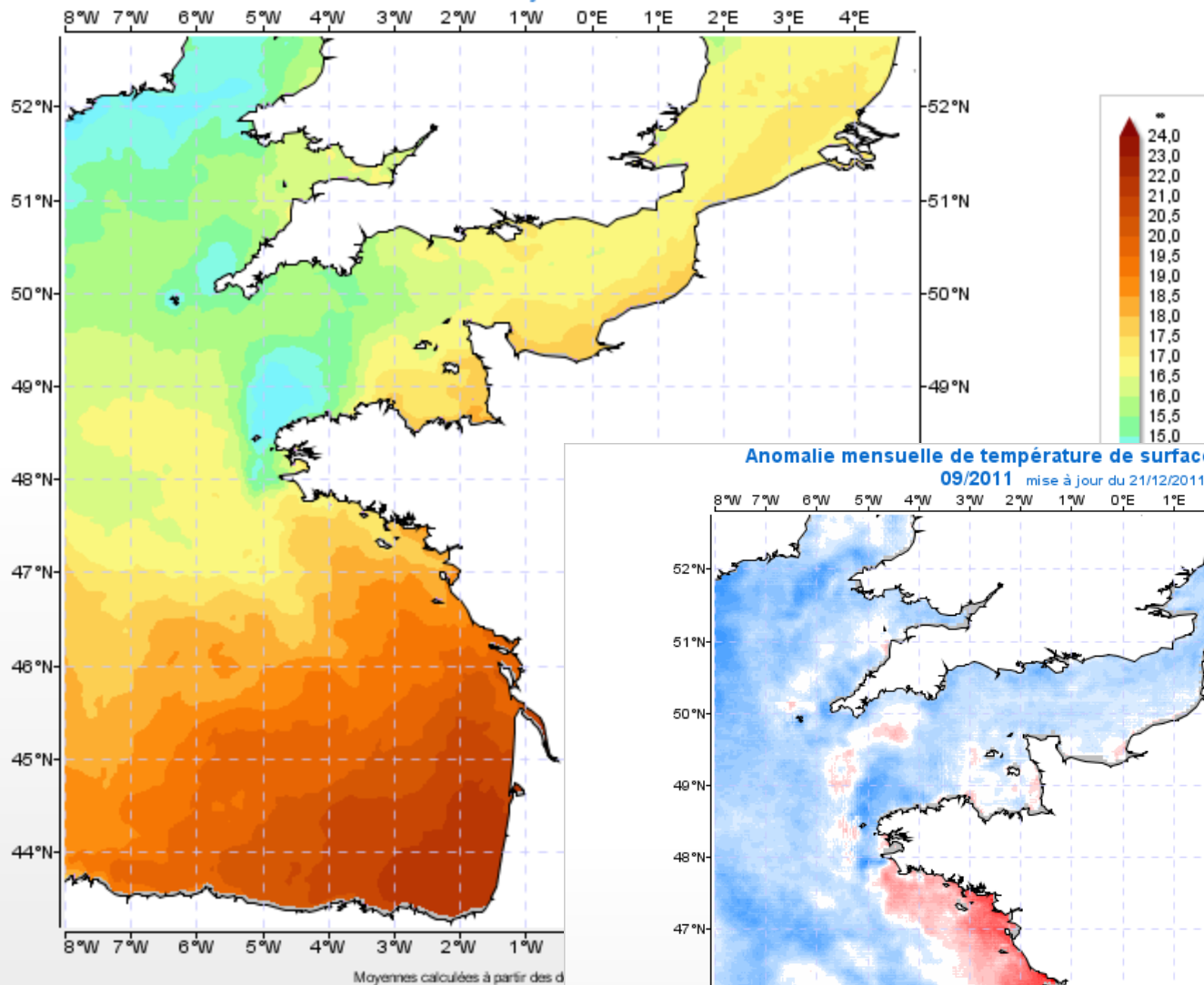
3

PREVIMER products What's new ?



Température de surface mensuelle observée par satellite

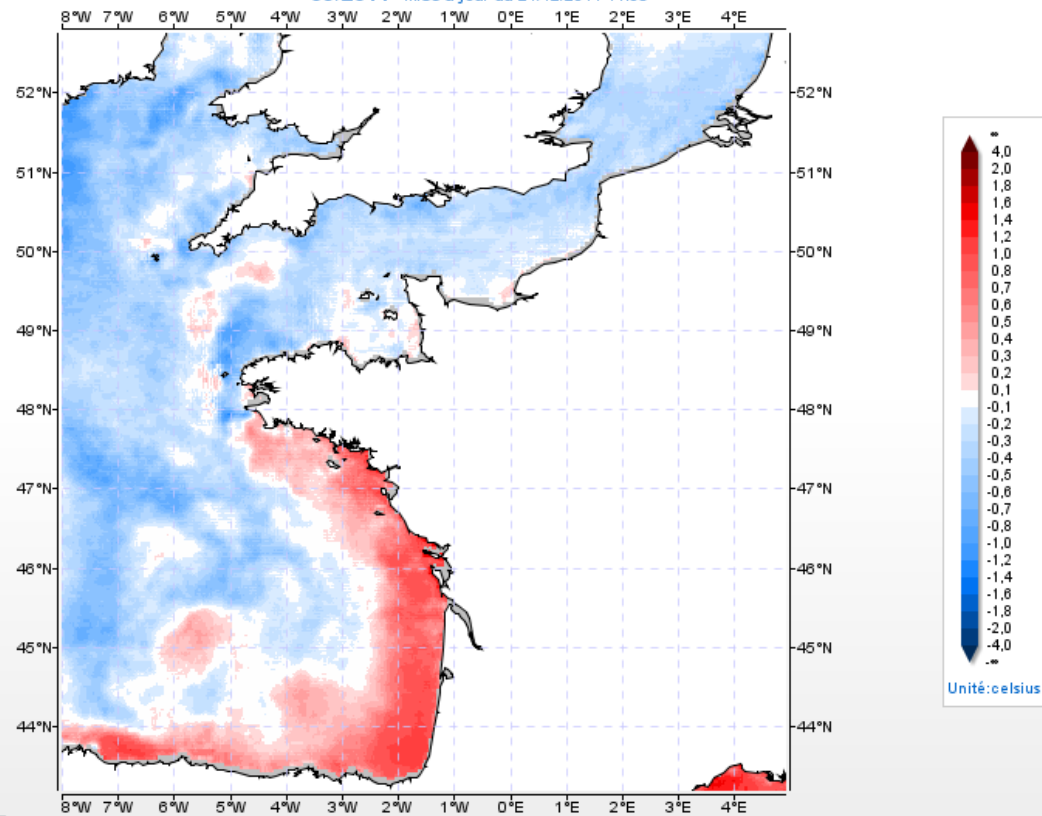
09/2011 mise à jour du 21/12/2011 14:58



OS meeting, February 2012

Anomalie mensuelle de température de surface observée par satellite

09/2011 mise à jour du 21/12/2011 14:58



PREViMer

Moyennes calculées à partir des d

Unité: celsius

PREViMer

Anomalies calculées à partir des données ODYSSEA (Ifremer/CERSAT) distribuées par MyOcean et de la climatologie Ifremer-AVHRR (1986-2009) - © 2011 PREVIMER - Tous droits réservés

Synthetic description of physical and biological state of coastal ocean



BULLETIN PREVIMER

Informations et analyses des eaux côtières

Sommaire

- ❖ Météo et débits des fleuves 2
- ❖ Caractéristiques des masses d'eau côtières..... 7
- ❖ Production biologique 12
- ❖ Rappel des objectifs du bulletin PREVIMER..... 16
- ❖ Glossaire..... 17

L'ETE 2011 EN BREF

■ Eté maussade

Les conditions estivales n'arrivent qu'en septembre page 2

■ Eaux plus froides en juillet et août

Les anomalies de température dépassent 1° le long des côtes page 7

■ Eaux de surface plus salées

que la normale, à l'exception de la baie de Seine page 8

■ Augmentation de la turbidité

en septembre, due aux coups de vent page 11

L'IMAGE



Des posters de présentation de PREVIMER sont accessibles sur le site

TOUTE L'INFO SUR WWW.PREVIMER.ORG

- Observations et prévisions côtières
- Courants
- Températures et salinité
- Vagues
- Niveaux de la mer
- Production primaire

Projet cofinancé par l'Union Européenne et coordonné par l'Ifremer et le SHOM



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www.previmer.org

Contact : info@previmer.org