



Sea Level CCI project

Phase II 2nd annual review





CCN : Regional validation of CCI against models

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Objectives



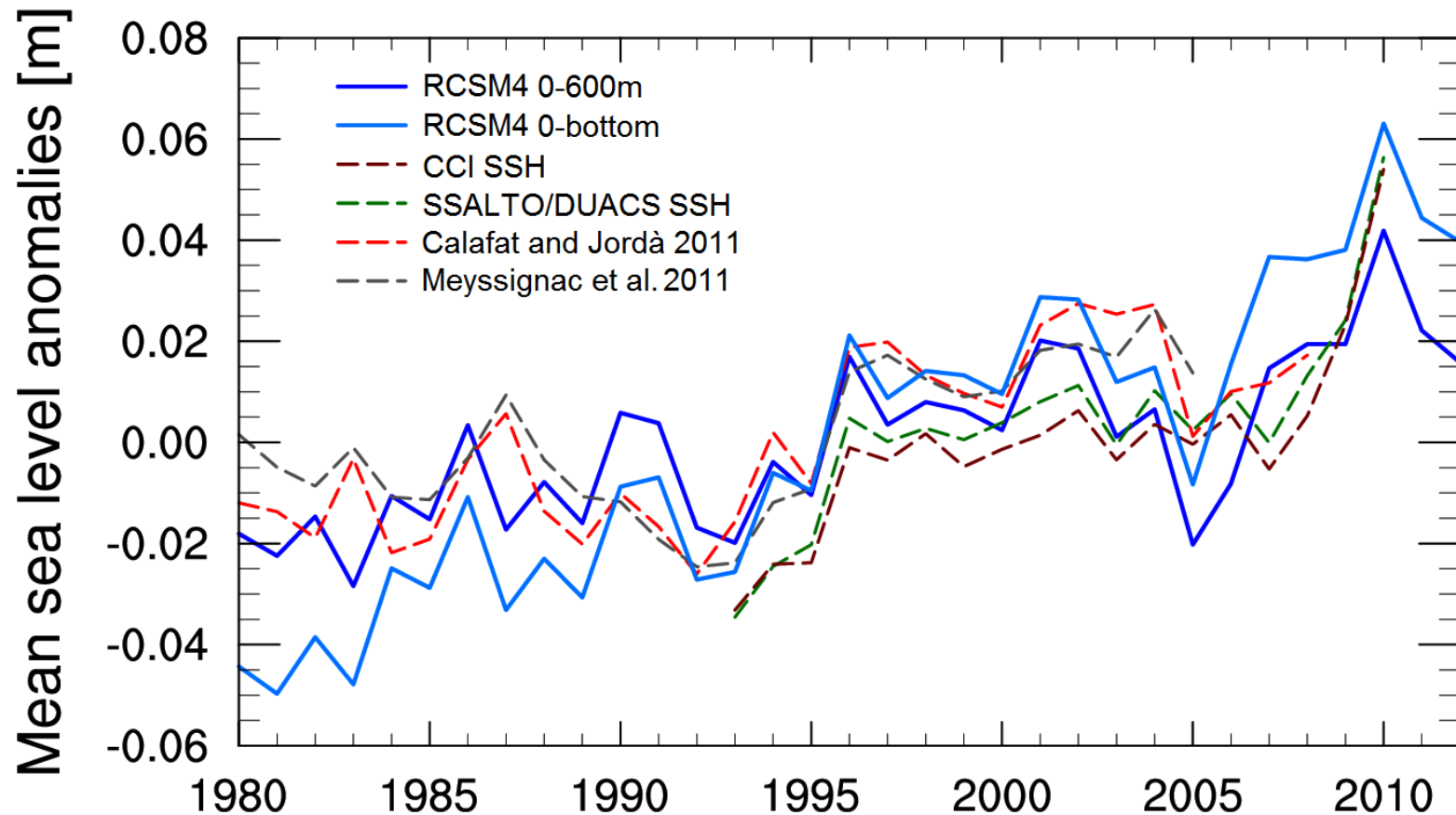
- ❑ **To assess the agreement between CCI products of observed sea level and components and ocean model outputs**

- ❑ **Selection of models:**
 - ❑ CNRM-RCSm4
 - ❑ PROTHEUS
 - ❑ NEDSEA_Reanalysis_Phys_006_004
(1+2 no assimilation, 3 with assimilation)

Objectives



Regional assessment of ocean model simulation



Work Packages



- WP 1310: oceanbottom pressure variability**
- WP 1320: steric component**
- WP 1330: sea level**
- WP 1340: sea level and flow budget closure**

- Equivalent WP 1410, 1420, 1430, 1440 for models with assimilation**

Input data



<u>Data used</u>	<u>Source</u>
<u>salinity</u>	<u>Meteofrance</u> , ENEA, <u>MyOcean</u>
Potential temperature	<u>Meteofrance</u> , ENEA, <u>MyOcean</u>
Surface <u>height above geoid</u>	<u>Meteofrance</u> , ENEA, <u>MyOcean</u>
Surface average water flux into sea water P+R*E	<u>Meteofrance</u> , ENEA, <u>MyOcean</u>
<u>Gibraltar net water flux</u>	<u>Meteofrance</u> , ENEA, <u>MyOcean</u>
Surface average east of Gibraltar	<u>Meteofrance</u> , ENEA, <u>MyOcean</u>
E, P, River <u>Runoff</u>	GPCP, OAFLUX,
<u>Steric (Level 3 data)</u>	CCI Option WP1100
<u>Sea level (Level 3 data)</u>	CCI Option WP1100
<u>Ocean mass (Level 3 data)</u>	CCI Option WP1100
Regional <u>Sea Level Reconstructions</u>	LEGOS (Meysignac et al., 2011) and others available
SSH at TG, SLP	AVISO/OCA/LEGOS/IGN
<u>Sea Level Pressure (SLP)</u>	ECMWF, ERA INTERIM

Table 3: Data used

Deliverables



Data outputs:

- D1: mass component of sea level from model (bottom pressure component)
- D2: steric component from model (direct/indirect as maps and basin average)
- D3: sea level from model (direct/indirect as maps and basin average)
- D4: Flux at Gibraltar
- D5: assessment metrics for model
- D6: final report

Deliverables



ID	<u>Deliverable</u>	Due	Resp.	<u>Expected Contents</u>
D1	Maps and time-series of bottom pressure/ mass	T0+ 27 (WP1301) T0+30 (WP1401)	Uni-Bonn	<u>Estimate of mass</u>
D2	Maps and time-series of steric component	T0+27 (WP1302) T0+30 (WP1402)	Uni-Bonn	<u>Estimate of steric</u>
D3	Maps/time-series of sea level from models	T0+27 (WP1303) T0+30 (WP1403)	Uni-Bonn	<u>Estimate of sea level</u>
D4	Gibraltar net flux	T0+27 (WP1404) T0+30 (WP1404)	Uni-Bonn	<u>Estimate of Net flux</u>
D5	<u>Assessment of models</u>	T0+30	Uni-Bonn	<u>Assessment</u>
D6	Final Report	T0+30	Uni-Bonn	Final Report

Table 4: Deliverables