

WCRP/IOC Workshop on Regional Sea Level Change

Venue:

UNESCO Headquarters Building

7 Place Fontenoy, F-75352 PARIS 07,

Room IX

Dates: Feb. 7 – 9, 2010 (Mo-Wed)

Start: 9:00, Mo, Febr. 7 2011; End: 4pm Wedn., Febr. 9 2011

Each speaker should prepare for a 15 min. talk, to leave 10 min for discussion.

For logistics, hotel information, etc: see separate file.

Draft Agenda:

Day 1 and 2: Session 1-3

Day 3: Session 3 and 4

Coffee Breaks: 10:30am – 11am; 3:30 – 4pm

Lunch breaks: 12:30pm – 2pm

Day 1:

Registration: 8am – 9am

Opening: 9:00: Charge to meeting, logistics, etc.: (10 min.)

Adjourn for the day 6pm and reception

Session 1: Observed regional sea level variability and change (6h)

The session will discuss observations (palaeo./proxy tide gauges, altimeters and GRACE) of regional variability and change in sea level and the interpretation of its patterns.

Chair: TBD

Speakers (not in order):

1. Don Chambers: Decadal-Scale Non-Steric Sea Level Changes in the North Pacific
2. Catia Domingues: Observed and simulated regional patterns of thermosteric sea-level rise
3. Paul Durack: Revisiting Halosteric and Thermosteric Sea Level Rise 1950-2000
4. Weiqing Han: Indian Ocean Sea Level Change in a Warm Climate
5. K. Lambeck: **TBD**
6. Leuliette: Regional sea level budgets and ocean mass transport estimates from GRACE, altimetry, and Argo
7. Parluhutan Manurung: **TBD**
8. Mark Merrifield: Recent regional sea-level trends in the Pacific
9. Dean Roemmich: A global view of regional steric sea level variability, 2004 – 2010, from the Argo Program
10. J. Schroeter: Reconstruction of global and regional sea level from tide gauge records since 1900
11. H. v. Storch: Regional Mean Sea Level Changes in the German Bight in the 20th Century
12. Mark Tamisiea: Contribution of Glacial Isostatic Adjustment to GRACE Estimates of Sea Level Change
13. Josh Willis: Explaining regional sea level variations during the satellite altimeter era
14. Phil Woodworth: Identifying and Understanding Changes in Sea Level around the North Atlantic

Day 2:

Re-adjourn: 9:00.

Adjourn for the day 6pm and dinner

Session 2: Dynamics and kinematics of regional sea level variability (6h)

This session will discuss the natural variability of sea level varies and the processes responsible, on all time scales. The discussion will draw heavily on models (ocean-only and coupled) and ocean syntheses, but also use observations to define modes of variability, like ENSO, PDO, SAM, or NAO.

Chair: TBD

Speakers (not in order):

1. Mark Carson: Low-frequency variability of regional sea level in millennium climate model simulations
2. Anny Cazenave: Spatial Trend Patterns in Sea Level from Altimetry, Past Sea Level Reconstructions and CNRM-CMIP3 Coupled Climate Model
3. Fukumori: Distinguishing Sea Level Change due to Heating and Freshwater Input from Redistribution by Ocean Circulation
4. Steve Griffies: Ocean model algorithms directly impacting sea level simulations, and analysis methods used to characterize sea level change
5. Chris Hughes: Towards a separation of the physical processes behind sea level change
6. Jason Lowe: **TBD**
7. Shayne McGregor: Wind effects on past and future regional sea-level trends in the southern Indo-Pacific
8. Laury Miller: Gyre-scale atmospheric pressure variations and their relation to 19th and 20th century sea level rise
9. Gary Mitchum: Low frequency sea level variations on the boundaries of the North Atlantic
10. R. Ponte: Some challenges in the study of regional sea level variability
11. Bo Qiu: Regional Sea Level and Circulation Variability in the Tropical Western Pacific Ocean
12. Rory Bingham: The impact of interannual ocean density variations on regional and global mean sea level as revealed by Argo
13. Carl Wunsch: **TBD**

Session 3: Causes and mechanisms for recent and future regional sea level changes (6h)

This session will discuss the hindcasting of past and the projection of future regional sea level change by climate, ocean, ice-sheet and solid-Earth models, including attribution of changes to radiative forcing agents.

Chair: TBD

Speakers (not in order):

1. Krishna Mirle ACHUTARAO: Testing the skill of (CMIP3) models in simulating observed Northern Indian Ocean sea-level changes
2. John Church: Regional Fingerprints of Radiative Forcing of Sea-level Rise
3. P.J. Glecklera: Exploring the impact of model and data uncertainties in the detection and attribution of upper-ocean warming
4. Natalya Gomez: Sea Level as a Stabilizing Factor for Marine Ice Sheets

5. Carling Hay: Detecting the Sea-Level Fingerprint of Polar Ice Mass Changes
6. Caroline Katsman: Regional projections of twenty-first century sea-level change
7. Birgit Klein: Requirements on regional sea level analysis from the perspective of an operational marine service provider
8. Till Kuhlbrodt: The regional structure of ocean heat uptake and its causes
9. Felix Landerer: **TBD**
10. Anne Paradaens: A model study of factors influencing projected changes in regional sea level over the twenty-first century
11. CK Shum: On the Geophysical Causes of Present-Day Sea-Level Rise
12. Detlef Stammer: Response of the Coupled Ocean-Atmosphere System to Greenland Ice Melting
13. Tatsuo Suzuki: Regional distribution of sea level changes resulting from enhanced greenhouse warming in the Model for Interdisciplinary Research on Climate version 3.2 (MIROC 3.2)
14. Jianjun Yin: Regional Sea Level Rise Projections on the Northeast Coast of the United States

Day 3:

Re-adjourn: 9:00.

Closing of the meeting: 4pm

Session 4: Initiation of studies for AR5

Final section of summary talks addressing current challenges and possible ways forward in observing, modeling and predicting regional sea level. Possibly these could include:

- observed variability and trends and whether models can account for them
- uncertainties in making prediction and projections and perhaps there are other orthogonal angles as well.

The session would pick up issues raised during the previous sessions that will be built upon in more detail. Especially addressing particular areas and identifying issues raised, which imply what science would be useful for AR5.

Chair: TBD

D. Stammer: Opening summary of issues, raised during the workshop and presentation of strawman for AR5 studies.

Subsequently: Discussion of all open issues and initiation of research activities.