



Bjerknes Center for Climate Research - Strategic Project 2022-2025

“Sea Level Prediction and Reconstruction (SeaPR)”

Progress Meeting

Bjerknes Center, 21st April 2022

Agenda

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|---------------|--|
| 10:00 – 10:15 | <p>Welcome and Introduction</p> <ul style="list-style-type: none"> - <i>Knowledge Hub Sea-level Rise - North Sea and Arctic Workshop (A. Bonaduce, NERSC)</i> |
| 10:15 – 11:15 | <p>Work Group 1: Sea-level governing processes during present times and predictability (WP1) [Lead: NERSC; Co-lead: IMR; Partners: UiB, NORCE]</p> <ul style="list-style-type: none"> ● Task 1.1 - Multi-platform data collection [NERSC, IMR] ● Task 1.2 - Sea-level budget analysis, atmospheric and oceanic processes (e.g., ocean heat content, SML) [NERSC, NORCE, IMR] <ul style="list-style-type: none"> - <i>Ocean heat content and transport in relation to sea level variability (K.A. Mork, Ø. Skagseth)</i> - <i>Arctic Sea level variability during the past decade (R.P. Raj, A. Bonaduce)</i> ● Task 1.3 - 3D mesoscale contributions [NERSC, IMR, NORCE] <ul style="list-style-type: none"> - <i>Freshening of mesoscale eddies in the Lofoten Basin (R.P. Raj, A. Bonaduce)</i> - <i>Exploitation of enhanced altimetry datasets for investigating ocean mesoscale variability in the Nordic Seas (A. Bonaduce, R.P. Raj)</i> ● Task 1.4 - Seasonal-to-decadal hindcast simulations with NorCPM [UiB, NERSC] |
| 11:15 - 11:30 | <p>Coffee Break</p> |
| 11:30 – 12:30 | <p>Work Group 2 - Reconstruct and attribute sea-level changes during the 20th century (WP2) [Lead: NORCE; Co-lead: UiB; Partners: IMR, NERSC]</p> <ul style="list-style-type: none"> ● Task 2.1 - Reconstructing and attributing contributions to regional sea-level [NORCE, UiB, IMR, NERSC]. |



Connection between open ocean and coastal sea-level change (connections to WP1 and 3) (Kristin Richter)

- *Sea level projections for the Pacific islands region - the Ocean States project (Vandhna Kumar, 5-7 mins)*
- Task 2.1 - Anthropogenic signal and internal variability [NORCE, NERSC, UiB]
- Task 2.3 - Role of model resolution for sea-level projections, weighting scheme for climate models [NORCE, NERSC, UiB]
- *CMIP6 assessment in the Arctic (R.P. Raj, A. Bonaduce) - Initial Discussion*

12:30 - 13:15

Lunch Break

13:15 – 14:15

Work Group 3 - Project sea level with increased confidence (WP3)

[Lead: NORCE; Co-lead: UiB; Partners: NERSC]

- Task 3.1 - Process-based sea-level projections for the Greenland ice sheet [NORCE, NERSC]
 - *New ensemble of Greenland ice sheet sea-level projections (Heiko Goelzer)*
- Task 3.2 - Mass change distributions from the ice sheet model output (sea-level fingerprints) [NORCE, NERSC]
- Task 3.3 - The impact of mesoscale variability in the ocean on sea-level projections [NERSC, NORCE]
- Task 3.4 Shoreline changes and coastal vulnerability [UiB, NERSC, NORCE]
 - *Sea-level change, shoreline type and coastal population: A geoscience approach to vulnerability assessment (W. Helland-Hansen)*

14:15 - 14:30

Coffee Break

14:30 - 15:00

Wrap-up of the meeting and next steps



To do:

1. Start gdoc with data-sources
2. Minutes/Reports
3. Ask for presentations