

# Curriculum vitae with track record

## Personal information

|                                  |   |      |        |
|----------------------------------|---|------|--------|
| First name, Surname:             | Helene Reinertsen Langehaug   |      |        |
| Date of birth:                   | 05.07.1983  | Sex: | Female |
| Nationality:                     | Norwegian   |      |        |
| Researcher unique identifier(s): | <a href="https://orcid.org/0000-0001-9010-5401">https://orcid.org/0000-0001-9010-5401</a> , ResearcherID: A-2445-2015 |      |        |
| URL for personal website:        | <a href="https://nersc.no/en/ansatt/helene-r-langehaug/">https://nersc.no/en/ansatt/helene-r-langehaug/</a>           |      |        |

## Education

| Year | Faculty/department - University/institution - Country   |
|------|---|
| 2011 | Ph.D. in physical oceanography, <b>Disputation date: 09.12.2011</b> , Geophysical Institute, University of Bergen (UiB), Norway |
| 2008 | Master in physical oceanography, Geophysical Institute, UiB, Norway   |

## Positions - current and previous

| Year      | Job title – Employer - Country  |
|-----------|---|
| 2022-     | Project Manager, Nansen Environmental and Remote Sensing Center (NERSC), Norway |
| 2021-     | Senior Researcher, NERSC, Norway  |
| 2021-     | Adjunct associate professor, Geophysical Institute, UiB, Norway                 |
| 2011-2020 | Research scientist, NERSC, Norway   |
| 2008-2011 | PhD candidate, NERSC, Norway  |
| 2005-2008 | Meteorological assistant (25%), StormGeo, Bergen, Norway                        |

## Career breaks

| Year                 | Reason                         |
|----------------------|--------------------------------|
| 2013/2014, 2016/2017 | Maternity leave (8 months x 2) |

## Project management experience

| Year      | Project owner - Project - Role - Funder  |
|-----------|--|
| 2026-     | UiT, <b>Arctic Ocean 2050</b> , Deputy leader and PI at NERSC, RCN                     |
| 2025-2027 | Simula, <b>FAIR2Adapt</b> , Responsible for a use case on marine heatwaves, EU project |

|           |  |
|-----------|--|
| 2023-     | NORCE, <b>SFI Climate Futures, Leading an innovation area</b> : Sustainable food production - ocean, RCN   |
| 2023-2026 | UiB, <b>ArMOC</b> – Overturning circulation in the new Arctic, RCN   |
| 2022-2025 | UiB, <b>MAPARC</b> – Mechanism and prediction of the new Arctic climate system, <b>WP leader and PI at NERSC</b> , RCN   |
| 2020-2023 | MPI, <b>ROADMAP</b> – The role of ocean dynamics and ocean-atmosphere interactions, <b>PI at NERSC</b> , JPI Climate   |
| 2018-2023 | UiB, <b>BCPU</b> - Bjerknes Climate Prediction Unit, <b>Research Activity leader</b> , Trond Mohn Foundation   |
| 2018-2022 | NERSC, <b>CAATEX</b> - Coordinated Arctic Acoustic Thermometry Experiment, <b>WP leader</b> , RCN  |
| 2016-2021 | DMI, <b>Blue-Action</b> - Arctic Impact on Weather and Climate, <b>reporting milestone + deliverable</b> , EU project  |
| 2014-2018 | NORCE, <b>VENTILATE</b> - Ventilation age and remineralisation rates in polar and sub-polar regions as indicators for climate change, <b>WP leader and PI at NERSC</b> , RCN |
| 2014-2017 | UiB, <b>EPOCASA</b> - Enhancing seasonal-to-decadal prediction of climate for the North Atlantic sector and Arctic, <b>WP co-leader</b> , RCN                                |
| 2014-2017 | UiB, <b>NORTH</b> - Northern constraints on the Atlantic thermohaline circulation, <b>WP leader</b> , RCN  |

### Supervision of students

| Master's students | Ph.D. students | University/institution - Country  |
|-------------------|----------------|---|
| 2                 | 2              | <b>PhDs:</b> main supervisor for 1 ongoing (2024-2026) and 1 completed (2019-2023),<br>UiB. <b>Master:</b> co-supervisor (2021-2022) and main supervisor (2020-2022), UiB |

### Teaching activities

| Year  | Description - Role   |
|-------|--|
| 2021- | Lecturer in GEOF339: Advanced Dynamical Oceanography, Geophysical Institute, UiB |

### Institutional responsibilities

| Year      | Description - Role  |
|-----------|---|
| 2021-2025 | NERSC representative in the leader group of the Bjerknes Centre for Climate Research  |
| 2020-2021 | Committee on gender equality at NERSC   |
| 2017-2021 | Second deputy for the research group Climate Dynamics and Prediction at NERSC (interim research group leader in the period Oct 2020 – Jan 2021) |
| 2017-2020 | NERSC Relocation working group  |
| 2016-2019 | Safety representative at NERSC  |
| 2014-2019 | Representative for employees in the Working Environment Committee at NERSC  |

## Organisation of meetings

| Year      | Description - Role   |
|-----------|--|
| 2026      | Co-organizing Arctic-Subarctic Ocean Fluxes (ASOF) workshop at UiB, Bergen           |
| 2023      | Co-organizing Arctic CMIP6 workshop at NERSC, Bergen                                 |
| 2017-2022 | Convener of the NERSC internal seminars (once every second week)                     |
| 2019      | Co-organizing climate prediction workshop, Bergen (by BCPU and EU Modelling Cluster) |

## Commissions of trust in academic, public or private organisations

| Year  | Description - Role   |
|-------|--|
| 2014- | Member of different committees at UiB (thesis evaluation, hiring new candidates)   |
| 2011- | Reviewer of scientific journals: Nature Geoscience, Geophysical Research Letters, Journal of Climate, Climate Dynamics, Ocean Dynamics, Advances in Atmospheric Sciences |

## Memberships of academies/Scientific societies/Networks

| Year  | Description   |
|-------|---|
| 2023- | Membership in the Norwegian Scientific Academy for Polar Research   |
| 2022- | Affiliated Membership of the WCRP Explaining and Predicting Earth System Change (EPESC) Lighthouse Activity |

## Track record

The total number of publications in peer reviewed journals: 23.

- 1) Williams-Kerslake M, **Langehaug** HR, Samuelsen A, Keenlyside NS, Skogseth R, Nilsen F, Gonzalez S. *Characterising Marine Heatwaves in the Svalbard Archipelago and Surrounding Seas*, accepted, **2026**;
- 2) Devilliers M, Olsen SM, **Langehaug** HR, Guo C, Mahmood R, Tian T, Yang S. *Constraining CMIP6 simulations for Atlantic Water in the Arctic using an AMOC-SST index*, *Front. Clim.* **2025**;
- 3) Passos LG, **Langehaug** HR, Årthun M, Straneo F. *On the Relation between Thermohaline Anomalies and Water Mass Transformation in the Eastern Subpolar North Atlantic*. *Journal of Climate*. **2024**;
- 4) **Langehaug** HR, Sagen H, Stalleemo A, Uotila P, Rautiainen L, Olsen SM, Devilliers M, et al. *Constraining CMIP6 estimates of Arctic Ocean temperature and salinity in 2025-2055*. *Front. Mar. Sci.* **2023**;
- 5) Passos LG, **Langehaug** HR, Årthun M, Eldevik T, Bethke I, Kimmritz M. *Impact of initialization methods on the predictive skill in NorCPM: an Arctic-Atlantic case study*. *Climate Dynamics*. **2022**;
- 6) **Langehaug** HR, Ortega P, Counillon FS, Matei D, Maroon EA, et al. *Propagation of Thermohaline Anomalies and their predictive potential along the Atlantic water pathway*. *Journal of Climate*. **2022**;
- 7) **Langehaug** HR, Sandø AB, Årthun M, Ilicak M. *Variability along the Atlantic water pathway in the forced Norwegian Earth System Model*. *Climate Dynamics*. **2019**;
- 8) **Langehaug** HR, Matei D, Eldevik T, Lohmann K, Gao Y. *On model differences and skill in predicting sea surface temperature in the Nordic and Barents Seas*. *Climate Dynamics*. **2017**;48(3-4).
- 9) Sandø AB, Gao Y, **Langehaug** HR. *Poleward ocean heat transports, sea ice processes, and Arctic sea ice variability in NorESM1-M simulations*. *Journal of Geophysical Research: Biogeosciences*. **2014**;119(3).

- 10) **Langehaug HR**, Geyer F, Smedsrød LH, Gao Y. *Arctic sea ice decline and ice export in the CMIP5 historical simulations*. Ocean Modelling. **2013**;71.
- 11) **Langehaug HR**, Falck E. *Changes in the properties and distribution of the intermediate and deep waters in the Fram Strait*. Progress in Oceanography. **2012**;
- 12) **Langehaug HR**, Medhaug I, Eldevik T, Otterå OH. *Arctic/Atlantic exchanges via the Subpolar Gyre*. Journal of Climate. **2012**;25(7).

#### INVITED PRESENTATIONS

2026 Invited talk to a seminar on 'Bærekraftig sjømat i et fremtidig endret klima', organized by the Directorate of Fisheries in Norway. Talk about marine heatwaves. Bergen, Mar 18.

2025 Invited talk to the Pharmaq conference on future fish health: 'Fremtidens fiskehelse: Innsikt, innovasjon og handling'. Talk about prediction of marine heatwaves in Norwegian waters. Trondheim, Aug 19, <https://pharmaq.com/no/pharmaq/arrangementer/pharmaqacademy-2025>

2025 Invited talk to Stiim Aqua Cluster's Conference for aquaculture. Talk about increased temperatures and marine heatwaves. Sola, Jan 8, <http://bluetalk.no/>

2024 Invited talk to industry (Cargill Aqua Nutrition North Sea). Talk on 'Let's talk about Climate predictions and Marine heatwaves'. Bergen, Nov 22.

2018 Invited lecture to the Summer School 'Climate Teleconnections and Predictions: Past, Present and Future. Norheimsund, Jul 5.

2015 Invited talk to fisheries ('Forecasting sea surface temperatures'), organised by Fish Pool. Bergen, Nov 25.

#### MAJOR RESEARCH COMMUNICATION, DISSEMINATION OR OUTREACH ACTIVITIES

2026 Interview by NRK about record warm water in Norwegian waters in 2025: <https://www.nrk.no/vestland/rekordvarmt-i-sjoenlangs-norskekysten-i-2025-1.17711908>, Jan 5.

2025 Popular science article on **marine heatwaves**: <https://www.forskersonen.no/havet-hetebolge-meninger/hva-er-forskjellen-pa-en-hetebolge-pa-land-og-en-hetebolge-i-havet/2535359>, Jul 24.

2025 Contributed to a chapter on climate prediction in the report about climate in Norway: <https://klimaservicesenter.no/kss/rapporter/kin-2025>

2025 Interview by kyst.no about prediction of marine heatwaves: <http://www.kyst.no/barentshavet-nansensenteret-nord-norge/kan-gi-store-utfordringer-for-havbruket/1923890>, Apr 15.

2024 Popular science article on **marine heatwaves**: [www.forskersonen.no/dyreverden-havet-havforskning/hvorfor-er-det-sa-mye-ekstreme-temperaturer-i-nordsjoen/2385644](http://www.forskersonen.no/dyreverden-havet-havforskning/hvorfor-er-det-sa-mye-ekstreme-temperaturer-i-nordsjoen/2385644), Jul 4.

2024 Bjerknes fact sheet **marine heatwaves**: <https://www.bjerknes.uib.no/laer-om-klima-2/faktasider/marine-hetebolger>

2024 Visit by Norwegian Minister of Research and Higher Education to Bjerknes Centre for Climate Research, Talk about **marine heatwaves** in Norwegian and Arctic waters, Jun 6.

2023 **Havstrømmer og klima i et makroperspektiv**, Talk at a seminar organized by the Norwegian Scientific Academy for Polar Research, Svalbard, Nov 29, [www.polar-academy.com/events-list/draft-5pt3l](http://www.polar-academy.com/events-list/draft-5pt3l)

2023 **Framtidens polhav**, Talk at the climate festival in Bergen, Mar 17, [www.varmerevaterevillere.no/programoversikt-2023/kloden-rundt-med-klimaforskning](http://www.varmerevaterevillere.no/programoversikt-2023/kloden-rundt-med-klimaforskning)

2022 **Klimastatus: Hvordan står det til med områdene i Barentshavet og Arktis?**, Presentation at an event organized by Norwegian Society for the Conservation of Nature, Nov 3.

2022 **Klimavarsling**, Talk about climate prediction to the Norwegian Minister of Climate and Environment when visiting the Bjerknes Centre for Climate Research, Jan 31.

2022 **Klima i Arktis**, Presentation at NERSC for high school about Arctic climate, Jun 3.

2020 **Outreach on climate prediction**, [YouTube video](#)

2020 **Contributions to the Arctic Yearbook**, *Decadal Predictions to Climate Services: How Understanding Climate Change in the Arctic Can Support Climate Adaptation Decision-Making across the Northern Hemisphere*, <https://arcticyearbook.com/arctic-yearbook/2020>

2020 **Policy briefing to two members of the European Parliament** on Blue-Action research, Oct 14, <https://ebcd.org/events/online-event-tipping-points-extreme-events-and-uncertainty-how-can-studying-the-arctic-help-us-predict-future-european-climate-beyond-the-mean/>

2019 **The push for predicting the future climate**, [Bjerknes Centre Podcast](#), Aug 16.

2018 **Et hav av ulike vannmasser**, popular science article on water masses, *forskning.no*, Oct 7.

2017 **Klimamodellen er forskerens lego**, popular science article in a newspaper, about climate models, *Bergensavisen*, Oct 23.