

CV Karin Margretha H. Larsen

Faroe Marine Research Institute
Nóatún 1, P.O. Box 3051
FO 110 Tórshavn
Faroe Islands
Tel. +298 35 39 00 Mobile +298 79 39 30
E-mail: karinl@hav.fo
[ORCID: 0000-0001-7033-9139](https://orcid.org/0000-0001-7033-9139)



Profession Oceanographer, Ph.D.

Current position Head of Environmental Department, Faroe Marine Research Institute

Education

2009	Ph.D. in oceanography, University of Bergen, Norway
2003	Cand. scient. in oceanography, University of Bergen, Norway
1995	B.S. in electroengineering, University of the Faroe Islands

Employments

2003 - present	Oceanographer at the Faroe Marine Research Institute
1997 - 2003	Engineer at the Faroe Marine Research Institute
1995 - 1997	Engineer at Sp/f Datronik

Main work fields

- Research interests: North Atlantic thermohaline circulation, Greenland-Scotland Ridge exchanges. Coastal waters, exchange between on-shelf and off-shelf waters and physical-biological coupling.
- Oceanographic instrumentation. Data quality and processing.

Other assignments

2021 -	Member of the scientific panel for the Danish National Center for Climate Research
2017 -	Lead in Danish Dancea projects on Faroese Monitoring (p.t. FARMON 2022)
2016 - 2021	Partner and WP2 lead in EU H2020 project Blue-Action
2016 - 2018	Lead in Danish Dancea project on Western Valley OverfloW (WOW)
2015 - 2019	Partner in EU Horizon2020 project (AtlantOS)
2014 -	Member of OceanSITES Steering Team
2012 - 2016	Partner and WP lead (since 2014) in EU FP7 project on North Atlantic Climate (NACLIM)
2010 -	Adj. Lector at the University of the Faroe Islands
2004 -	Member of the ICES Working Group on Oceanic Hydrography (Co-Chair in the period 2015-2017)

Language capacity

Faroese	Mother tongue
Scandinavian	Fluent
English	Good

Peer-reviewed publications

- Skagseth, Ø., Broms, C., Gundersen, K., Hátún, H., Kristiansen, I., Larsen, K. M. H., Mork, K. A., Petursdottir, H., Søliland, H. 2022. Arctic and Atlantic Waters in the Norwegian Basin, Between Year Variability and Potential Ecosystem Implications. *Front. Mar. Sci.* 9:831739. doi: 10.3389/fmars.2022.831739
- Hátún, H., Larsen, K. M. H., Eliassen, S. K., Mathis, M. 2021. Major Nutrient Fronts in the Northeastern Atlantic: From the Subpolar Gyre to Adjacent Shelves. In: *The Handbook of Environmental Chemistry*. Springer, Berlin, Heidelberg. https://doi.org/10.1007/698_2021_794

- Hátún H., Chafik L., Larsen K. M. H. 2021. The Norwegian Sea Gyre – A Regulator of Iceland-Scotland Ridge Exchanges. *Front. Mar. Sci.* 8:694614. <https://doi.org/10.3389/fmars.2021.694614>
- Cisewski, B., Hátún, H., Kristiansen, I., Hansen, B., Larsen, K. M. H., Eliassen, S. K., Jacobsen, J. A. 2021. Vertical Migration of Pelagic and Mesopelagic Scatterers From ADCP Backscatter Data in the Southern Norwegian Sea. *Front. Mar. Sci.* 7:542386. <https://doi.org/10.3389/fmars.2020.542386>
- Chafik, L., Hátún, H., Kjellsson, J. Larsen, K. M. H., Rosaby, T., Berx, B. 2020. Discovery of an unrecognized pathway carrying overflow waters toward the Faroe Bank Channel. *Nat Commun* 11, 3721 (2020). <https://doi.org/10.1038/s41467-020-17426-8>
- Holliday, N. P., Bersch, M., Berx, B., Chafik, L., Cunningham, S., Florindo-López, C., Hátún, H., Johns, W., Josey, S. A., Larsen, K. M. H., Mulet, S., Oltmanns, M., Reverdin, G., Rosaby, T., Thierry, V., Valdimarsson, H., Yashayaev, I. 2020. Ocean circulation causes the largest freshening event for 120 years in eastern subpolar North Atlantic. *Nat Commun* 11, 585 (2020). <https://doi.org/10.1038/s41467-020-14474-y>
- McCarthy, G. D., Brown, P. J., Flagg, C. N., Goni, G., Houpert, L., Hughes, C. W., Hummels, R., Inall, M., Jochumsen, K., Larsen K. M. H., Lherminier, P., Meinen, C. S., Moat, B. I., Rayner, D., Rhein, M., Roessler, A., Schmid, C., Smeed, D. A. 2020. Sustainable observations of the AMOC: methodology and technology. *Reviews of Geophysics*, 58, e2019RG000654. <https://doi.org/10.1029/2019RG000654>
- Semper, S., Pickart, R. S., Våge, K., Larsen, K. M. H., Hátún, H., Hansen, B. 2020. The Iceland-Faroe Slope Jet: a conduit for dense water toward the Faroe Bank Channel overflow. *Nat Commun* 11, 5390 (2020). <https://doi.org/10.1038/s41467-020-19049-5>
- Tsubouchi, T., Våge, K., Hansen, B., Larsen, K. M. H., Østerhus, S., Johnson, C., Jónsson, S., Valdimarsson, H. 2020. Increased ocean heat transport into the Nordic Seas and Arctic Ocean over the period 1993-2016. *Nat. Clim. Chang.* 11, 21-26 (2021). <https://doi.org/10.1038/s41558-020-00941-3>
- Eliassen, S. K., Hátún, H., Larsen, K. M. H., Vang, H. B. M. and Rasmussen, T. A. S. 2019. The Faroe shelf spring bloom onset explained by a 'Critical Volume Hypothesis'. *Journal of Marine Systems* 193. <https://doi.org/10.1016/j.jmarsys.2019.02.005>
- González-Pola, C., Fratantoni, P., Larsen, K. M. H., Holliday, N. P., Dye, S., Mork, K-A., Beszczynska-Möller, A. Valdimarsson, V., Trofimov, A., Parner, H., Klein, H., Cisewski, B., Fontán, A., Lyons, K., Kolodziejczyk, N., Graña, R., Linders, J., Wodzinowski, T., Goszczko I., Cusack, C. 2019. The ICES Working Group on Oceanic Hydrography: A Bridge From In-situ Sampling to the Remote Autonomous Observation Era. *Front. Mar. Sci.* 6:103. <https://doi.org/10.3389/fmars.2019.00103>
- Jacobsen, S., Gaard, E., Hátún, H., Steingrund, P., Larsen, K. M. H., Reinert, J., Ólafsdóttir, S. R., Poulsen, M., Vang, H. B. M. 2019. Environmentally Driven Ecological Fluctuations on the Faroe Shelf Revealed by Fish Juvenile Surveys. *Front. Mar. Sci.* 6:559. <https://doi.org/10.3389/fmars.2019.00559>
- Østerhus, S., Woodgate, R., Valdimarsson, H., Turrell, B., de Steur, L., Quadfasel, D., Olsen, S. M., Moritz, M., Lee, C. M., Larsen, K. M. H., Jónsson, S., Johnson, C., Jochumsen, K., Hansen, B., Curry, B., Cunningham, S., Berx, B. 2019. Arctic Mediterranean exchanges: a consistent volume budget and trends in transports from two decades of observations. *Ocean Sci.*, 15, 379-399, 2019. <https://doi.org/10.5194/os-15-379-2019>
- Hansen, B., Húsgarð Larsen, K. M., Malskær Olsen, S., Quadfasel, D., Jochumsen, K., & Østerhus, S. 2018. Overflow of cold water across the Iceland-Faroe Ridge through the Western Valley. *Ocean Sci.*, 14, 871-885, <https://doi.org/10.5194/os-14-871-2018>
- Eliassen, S. K., Hátún, H., Larsen, K. M. H., Hansen, B. and Rasmussen, T. A. S. 2017. Phenologically distinct phytoplankton regions on the Faroe Shelf - identified by satellite data, in-situ observations and model. *Journal of Marine Systems*, 169, pp. 99-110. <https://doi.org/10.1016/j.jmarsys.2017.01.015>
- Eliassen, S. K., Hátún, H., Larsen, K. M. H., Jacobsen, S. 2017. Faroe shelf bloom phenology – The importance of ocean-to-shelf silicate fluxes. *Continental Shelf Research* 143 (2017) 43-53. <https://doi.org/10.1016/j.csr.2017.06.004>
- Hansen, B., Poulsen, T., Húsgarð Larsen, K. M., Hátún, H., Østerhus, S., Darelius, E., Berx, B., Quadfasel, D., Jochumsen, K. 2017. Atlantic water flow through the Faroese Channels. *Ocean Sci.*, 13, 873-888, <https://doi.org/10.5194/os-13-873-2017>
- Jacobsen, S., Gaard, E., Larsen, K. M. H., Eliassen, S. K. & Hátún, H., 2018. Temporal and spatial variability of zooplankton on the Faroe shelf in spring 1997-2016. *J. Mar. Syst.* 177, 28-38. <https://doi.org/10.1016/j.jmarsys.2017.08.004>

- Jochumsen, K., M. Moritz, N. Nunes, D. Quadfasel, K. M. H. Larsen, B. Hansen, H. Valdimarsson, and S. Jonsson. 2017. Revised transport estimates of the Denmark Strait overflow. *J. Geophys. Res. Oceans*, 122, 3434-3450. <https://doi.org/10.1002/2017JC012803>
- Hansen, B., Larsen, K. M. H., Hátún, H., Østerhus, S. 2016. A stable Faroe Bank Channel overflow 1995–2015. *Ocean Sci.*, 12, 1205-1220, 2016. <https://doi.org/10.5194/os-12-1205-2016>
- Eliassen, S. K., Hansen, B., Larsen, K. M. H., Hátún, H. 2016. The Exchange of Water between the Faroe Shelf and the Surrounding Waters and its Effect on the Primary Production. *Journal of Marine Systems*, 153, 1-9. <https://doi.org/10.1016/j.jmarsys.2015.08.004>
- B. Hansen, K. M. H. Larsen, H. Hátún, R. Kristiansen, E. Mortensen, and S. Østerhus. 2015. Transport of volume, heat, and salt towards the Arctic in the Faroe Current 1993-2013. *Ocean Sci.*, 11, 743-757, <https://doi.org/10.5194/os-11-743-2015>
- E. Darelius, I. Fer, T. Rasmussen, C. Guo, and K. M. H. Larsen, 2015. On the modulation of the periodicity of the Faroe Bank Channel overflow instabilities. *Ocean Sci.*, 11, 855-871, 2015, www.ocean-sci.net/11/855/2015/ <https://doi.org/10.5194/os-11-855-2015>
- Till A. S. Rasmussen, Steffen M. Olsen, Bogi Hansen, Hjálmar Hátún, Karin M. H. Larsen. 2014. The Faroe shelf circulation and its potential impact on the primary production. *Continental Shelf Research* 88 (2014) 171-184. <http://dx.doi.org/10.1016/j.csr.2014.07.014>
- Berx, B., Hansen, B., Østerhus, S., Larsen, K. M., Sherwin, T. and Jochumsen, K. 2013. Combining in situ measurements and altimetry to estimate volume, heat and salt transport variability through the Faroe-Shetland Channel. *Ocean Sci.*, 9, 639-654, www.ocean-sci.net/9/639/2013/ <https://doi.org/10.5194/os-9-639-2013>
- Larsen, K. M. H., Hatun, H., Hansen, B., and Kristiansen, R., 2012. Atlantic water in the Faroe area: sources and variability. <https://doi.org/10.1093/icesjms/fss028>
- Larsen, K. M. H., Hansen, B., and Svendsen, H., 2009. The Faroe Shelf Front: Properties and exchange. *Journal of Marine Systems* 78: 9-17. <https://doi.org/10.1016/j.jmarsys.2009.02.003>
- Larsen, K. M. H., Hansen, B., and Svendsen, H., 2008. Faroe Shelf Water. *Continental Shelf Research* 28 (14): 1754-1768. <https://doi.org/10.1016/j.csr.2008.04.006>
- Hansen, B., Eliassen, S. K., Gaard, E., and Larsen, K. M. H. 2005. Climatic effects on plankton and productivity on the Faroe Shelf. *ICES Journal of Marine Science* 62: 1224-1232. <https://doi.org/10.1016/j.icesjms.2005.04.014>
- Eliassen, S. K., Gaard, E., Hansen, B., and Larsen, K. M. H. 2005. A “horizontal Sverdrup mechanism” may control the spring bloom around small oceanic islands and over banks. *Journal of Marine Systems*, 56: 352-362. <https://doi.org/10.1016/j.jmarsys.2005.03.005>
- Hansen, B., Østerhus, S., Hátún, H., Kristiansen, R., Larsen, K. M. H.. 2003. The Iceland-Faroe inflow of Atlantic water to the Nordic Seas, *Prog. in Oceanogr.*, 59: 443-474. <https://doi.org/10.1016/j.pocean.2003.10.003>

Other publications

- Berx, B., Volkov, D., Baehr, J., Baringer, M. O., Brandt, P., Burmeister, K., Cunningham, S., de Jong, M. F., de Steur, L., Dong, S., Frajka-Williams, E., Goni, G. J., Holliday, N. P., Hummels, R., Ingvaldsen, R., Jochumsen, K., Johns, W., Jónsson, S., Karstensen, J., Kieke, D., Krishfield, R., Lankhorst, M., Larsen, K. M. H. et al. 2021. Climate-relevant ocean transport measurements in the Atlantic and Arctic Oceans. Pp. 10–11 in *Frontiers in Ocean Observing: Documenting Ecosystems, Understanding Environmental Changes, Forecasting Hazards*. E. S. Kappel, S. K. Juniper, S. Seeyave, E. Smith, and M. Visbeck, eds, *A Supplement to Oceanography* 34(4). <https://doi.org/10.5670/oceanog.2021.supplement.02-04>
- Hansen, B., Larsen, K. M. H., Hátún, H. 2019. Monitoring the velocity structure of the Faroe Current. Havstovan no. 19-01. Technical report.
- Mortensen, E., Larsen, K. M. H., Hansen, B., Hátún, H., Kristiansen, R., Østerhus, S. 2018. FARMON Deployments in Faroese Waters 2017 - 2018. Havstovan no. 18-05. Technical report.
- González-Pola, C., Larsen, K. M. H., Fratantoni, P., Beszczynska-Möller, A., and Hughes, S. L. (Eds). 2018. ICES Report on Ocean Climate 2016. ICES Cooperative Research Report No. 339. 110 pp. <https://doi.org/10.17895/ices.pub.4069>
- Berx, B., Larsen, K. M. H., Rossby, T. 2017. Tracking water through the North Atlantic Ocean, *Eos*, 98, <https://doi.org/10.1029/2017EO076827>

- Hansen, B., Larsen, K. M. H., Quadfasel, D., Jochumsen, K. 2017.* Historical oceanographic observations in the Western Valley. Havstovan no. 17-02. Technical report.
- Hansen, B., Larsen, K. M. H., Kristiansen, R., Mortensen, E., Quadfasel, D., Jochumsen, K., Østerhus, S. 2017.* Observations from the WOW field experiment in the Western Valley 2016-2017. Havstovan no. 17-03. Technical report.
- Larsen, K. M. H., Hátún, H., Berx, B., Rossby, T. 2017.* Workshop on currents and transports across the Iceland-Faroe-Scotland Ridge. Havstovan no. 17-01. Technical report.
- Larsen, K. M. H., Gonzalez-Pola, C., Fratantoni, P., Beszczynska-Möller, A., and Hughes, S. L. (Eds). 2016.* ICES Report on Ocean Climate 2015. ICES Cooperative Research Report No. 331. 79 pp.
- Mortensen, E., Larsen, K. M. H., Hansen, B., Kristiansen, R., Østerhus, S. 2016.* ADCP Deployments in Faroese Waters 2016 - 2017. Havstovan no. 17-04. Technical report.
- Mortensen, E., Larsen, K. M. H., Hansen, B., Kristiansen, R., Østerhus, S. 2016.* NAACLIM ADCP Deployments in Faroese Waters 2015 - 2016. Havstovan no. 16-03. Technical report.
- Mortensen, E., Larsen, K. M. H., Hansen, B., Kristiansen, R., Østerhus, S. 2015.* NAACLIM ADCP Deployments in Faroese Waters 2014 - 2015. Havstovan nr. 15-03. Technical report.
- Larsen, K. M. H. 2009.* Landgrunssjógvurin – uppvakstrarøki hjá toski. Mið og Magn 1/2009: 8-9.
- Larsen, K. M. H., 2009.* Circulation and exchange of water masses on the Faroe Shelf and the impact on the Shelf ecosystem. Dissertation for the degree of philosophiae doctor (PhD). University of Bergen, Norway. ISBN 978-82-308-0737-8.
- Larsen, K. M. H. 2005.* Hitin á Landgrunninum sett nýtt met. Frøði 1/2005: 30-34.
- Larsen, K. M. H. 2004.* Útskiptingin av sjónum á Landgrunninum stýrir tilgongd av fiski. Sosialurin nr. 78: 6-7.
- Larsen, K. M. H. 2003.* An investigation of the Faroe Shelf Front. Cand Scient Thesis. Geophysical Institute, University of Bergen. 50 pp.
- Larsen, K. M. H., Hansen, B., Svendsen, H., and Simonsen, K. 2002.* The front on the Faroe Shelf. ICES CM 2002/P:10, 15 pp.
- Larsen, K. M. H., Hansen, B., Kristiansen, R. and Østerhus, S. 2000.* Internal tides in the waters surrounding the Faroe Plateau. ICES CM 2000/L:09, 13 pp
- Hansen, B., Østerhus, S., Kristiansen, R., and Larsen, K. M. H. 1999.* The Iceland-Faroe inflow of Atlantic water to the Nordic Seas. ICES CM 1999/L:21, 14 pp.
- Hansen, B., Larsen, K. M. H., Østerhus, S., Turrell, B., Jónsson, S. 1999.* The Atlantic Water Inflow to the Nordic Seas. The International WOCE Newsletter 35: 33-35.