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Profession Physical oceanography, Ph.D.

Current position Researcher

Academic degrees

2004	Dr. Scient (Ph.D.) in Oceanography, University of Bergen.
2000	M.Sc. in Physics, NTNU, Norwegian University of Science and Technology.
1998 - 1999	Exchange student at UC Berkeley, Department of Physics.

Relevant Professional Experience

2006 - present	Oceanographer, Environmental Department, Faroe Marine Research Institute, Faroe Islands.
Fall 2021	Visiting Scholar at Århus Universitet
2000 - present	One to two annual scientific cruises with R/V Magnus Heinason and now R/S Jákup Sverri, both as crew and as cruise leader.
Summer 2014	A four months stay as visiting scholar at the Max Planck Institute (MPI) for Meteorology in Hamburg, Germany.
2004 - 2005	Post Doc, School of Oceanography, University of Washington, Seattle, USA.
2000 - 2001	Data analyst, Environmental Department, Faroese Fisheries Laboratory, Faroe Islands. Analysis of Oceanographic data (primarily current and hydrographical observations) from the Faroese region.
1994 - 1995	Data collection, Office of Public Works (presently called 'Landsverk'), Faroe Islands. Responsible for Oceanographic, Hydrologic and Meteorological data collection and processing.

Teaching Experience and supervision

Spring 2021	Meteorology, (University of the Faroe Islands, UIFI)
Fall2019	Meteorology, (UIFI)
Fall2018	Marine climate and ecosystems, (UIFI)
Fall2017	Meteorology, (UIFI)
Fall2016	Marine climate and ecosystems, (UIFI)
Fall2016	Oceanography for Aquaculture, (UIFI)
Fall2015	Climate and Ecosystems, Johan Hjort Summer School, University of Bergen, Norway
Fall2015	Meteorology, (UIFI)
Fall2013	1) Meteorology and 2) Thermodynamics, (UIFI)
Fall2012	Data analysis in Meteorology and Oceanography (UIFI)
Fall2011	Introductory oceanography (UIFI)
Spring 2010	Marine climate and ecosystems at the University of the Faroe Islands (UIFI)
Fall 2011, 12, 13 and 14	Nordic Master of Climate and Ecosystems

I am presently supervising one PhD student, and a Post-Doc.

Language capacity	Faroese	Mothertongue
	Danish	Fluent
	Scandinavian	Fluent
	English	Fluent

Peer reviewed publications, presentation and posters

- 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 Chemical Oceanography of Frontal Zones, Accepted.
- Hátún, H., Chafik, L., Larsen, K. M. H., 2021. The Norwegian Sea Gyre – A Regulator of Iceland-Scotland Ridge Exchanges. *Front. Mar. Sci.* 8. <https://doi.org/10.3389/fmars.2021.694614>
- Jacobsen, S., Hátún, H., Gaard, E., 2021. Climatic changes and the decline in pre-bloom *Calanus finmarchicus* egg production in the Faroe area. *Front. Mar. Sci.* In Review.
- Kristiansen, I., Hátún, H., Jacobsen, J. A., Eliassen, S. K., Petursdóttir, H., Gaard, E., 2021. Spatial variability of the feeding conditions for the Norwegian spring spawning herring in May. *Front. Mar. Sci.* In Review.
- Kristiansen, I., Jónasdóttir, S. H., Gaard, E., Eliassen, S. K., Hátún, H., 2021. Seasonal variations in population dynamics of *Calanus finmarchicus* in relation to environmental conditions in the southwestern Norwegian Sea. *Deep. Res. Part I Oceanogr. Res. Pap.* 171. doi:10.1016/j.dsr.2021.103508.
- Ofstad, L. H., Hátún, H., Torstein, P., Steingrund, P. 2021. Horizontal and vertical migration of anglerfish *Lophius piscatorius* in relation to environmental conditions in Faroese waters. *Front. Mar. Sci.* In Review.
- Skagseth, Ø., Broms, C., Gundersen, K., Hátún, H., Kristiansen, I., Mork, K. A., et al. 2021. Variability in Atlantic and Arctic waters in the Norwegian Basin and ecosystem implication: 1995-2019. *Front. Mar. Sci.* In Review.
- Chafik, L., T. Rossby, H. Hátún, H. Søiland, 2021. Rethinking oceanic overturning in the Nordic Seas, *Eos*, 102, <https://doi.org/10.1029/2021EO156810>
- 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. <https://doi.org/10.3389/fmars.2020.542386>
- 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, 1–10. <https://doi.org/10.1038/s41467-020-19049-5>
- Post, S., Werner, K.M., Núñez-Riboni, I., Chafik, L., Hátún, H., Jansen, T., 2020. Subpolar gyre and temperature drive boreal fish abundance in Greenland waters. *Fish Fish.* 1–14. <https://doi.org/10.1111/faf.12512>
- Chafik, L., Hátún, H., Kjellsson, J., Larsen, K.M.H., Rossby, T., Berx, B., 2020. Discovery of an unrecognized pathway carrying overflow waters toward the Faroe Bank Channel. *Nat. Commun.* <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., Rossby, 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.* <https://doi.org/10.1038/s41467-020-14474-y>
- Koul, V., Tesdal, J.E., Bersch, M., Hátún, H., Brune, S., Borchert, L., Haak, H., Schrum, C., Baehr, J., 2020. Unraveling the choice of the north Atlantic subpolar gyre index. *Sci. Rep.* 10, 1–12. <https://doi.org/10.1038/s41598-020-57790-5>
- Jacobsen, S., Gaard, E., Hátún, H., Steingrund, P., Larsen, K.M.H., Ólafsdóttir, S.R., Poulsen, M., 2019. Environmentally Driven Ecological Fluctuations on the Faroe Shelf Revealed by Fish Juvenile Surveys. *Front. Mar. Sci.* <https://doi.org/10.3389/fmars.2019.00559>
- Kristiansen, I., Hátún, H., Petursdóttir, H., Gislason, A., Broms, C., Melle, W., Jacobsen, J.A., Eliassen, S.K., Gaard, E., 2019. Deep-Sea Research Part I Decreased influx of *Calanus* spp. into the south-western Norwegian Sea since 2003. *Deep. Res. Part I* 149, 103048. <https://doi.org/10.1016/j.dsr.2019.05.008>
- Eliassen, S.K., Hátún, H., Larsen, K.M.H., Vang, H.B.M., Rasmussen, T.A.S., 2019. The Faroe shelf spring bloom onset explained by a 'Critical Volume Hypothesis.' *J. Mar. Syst.* <https://doi.org/10.1016/J.JMARSYS.2019.02.005>

- Hátún, H., & Chafik, L., 2018. On the recent ambiguity of the North Atlantic subpolar gyre index. *Journal of Geophysical Research: Oceans*, 123. <https://doi.org/10.1029/2018JC014101>
- Hátún, H. And Jacobsen, H., 2017. Góðar tíðir eru feskar. *Frøði*, 22. Árg. 12-16.
- Bonitz, F. G. W., Andersson, C., Trofimova, T. & Hátún, H., 2017. Links between phytoplankton dynamics and shell growth of *Arctica islandica* on the Faroe Shelf. *J. Mar. Syst.* 179, 72-87. <https://doi.org/10.1016/j.jmarsys.2017.11.005>
- Hátún, H. et al. The subpolar gyre regulates silicate concentrations in the North Atlantic, 2017. *Nature Scientific Reports*, 7: 14576. <https://doi.org/10.1038/s41598-017-14837-4>
- Hansen, B., Poulsen, T., Larsen, K.M.H., Hátún, H., Østerhus, S., Darelus, E., Berx, B., Quadfasel, D., Jochumsen, K., 2017. Atlantic water flow through the Faroese Channels. *Ocean Science*, 179, Iss. 6, 72-87. <https://doi.org/10.5194/os-13-873-2017>
- Jacobsen, S., Gaard, E., Larsen, K. M. H., Eliassen, S. K. & Hátún, H., 2017. 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>
- Hátún, H., Olsen, B. & Pacariz, S., 2017. The dynamics of the North Atlantic subpolar gyre introduces predictability to the breeding success of kittiwakes. *Frontiers in Marine Science* 4, doi: 10.3389/fmars.2017.00123. <https://doi.org/10.3389/fmars.2017.00123>
- Eliassen, S. K., Hátún, H., Larsen, K. M. H., Jacobsen, S., 2017. Faroe shelf bloom phenology – The importance of ocean-to-shelf nutrient fluxes. *Continental Shelf Research, Cont. Shelf. Res.* 179, 72-87. <https://doi.org/10.1016/j.csr.2017.06.004>
- Eliassen, S. K., Hátún, H., Larsen, K. M. H., Hansen, B., Rasmussen, T. A. S., 2016. Phenologically distinct phytoplankton regions on the Faroe Shelf. *Journal of Marine Systems*, 169, 99-110. <https://doi.org/10.1016/j.jmarsys.2017.01.015>
- Hansen, B., Larsen, K.M.H, Hátún, H., Østerhus, S., 2016. A stable Faroe Bank Channel overflow 1995-2015, *Ocean Sciences*, 12, 1205-1220. <https://doi.org/10.5194/os-12-1205-2016>
- Hátún, H., Lohmann, K., Matei, D., Jungclaus, J., Pacariz, S., Bersch, M., Gislason, A., Ólafsson, J., Reid, P. C., 2016. An inflated subpolar gyre blows life towards the northeastern Atlantic. *Progress in Oceanography* <https://doi.org/10.1016/j.pocean.2016.07.009>
- Pacariz, S., Hátún, H., Jacobsen, J. A., Johnson, C., Eliassen, S. K., Rey, F., 2016. Nutrient-driven poleward expansion of the Northeast Atlantic mackerel (*Scomber scombrus*) stock: A new hypothesis. *Elementa: Science of the Anthropocene* <https://doi.org/10.12952/journal.elementa.000105>
- Eliassen, S. K., Hansen, B., Larsen, K. M. H., Hátún, H., 2015. 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>
- Hansen, B., Larsen, K. M. H., Hátún, H., Kristiansen, R., Mortensen, E., Østerhus, S., 2015. Transport of volume, heat, and salt towards the Arctic in the Faroe Current 1993-2013. *Ocean Science* 11, 743-757. <https://doi.org/10.5194/os-11-743-2015>
- Kristiansen, I., Gaard, E., Hátún, H., Jonasdottir, S., Ferreira, A. S. A., 2015. Persistent shift of *Calanus* spp. in the southwestern Norwegian Sea since 2003, linked to ocean climate. *ICES Journal of Marine Science* 73, 1319-1329. <https://doi.org/10.1093/icesjms/fsv222>
- Djurhuus, A., Jorgensen, J., Hátún, H., Debes, H. H., Christiansen, D. H., 2015. Seasonal progression of microbial communities on the Faroe shelf. *Marine Biology Research* 11, 895-908. <https://doi.org/10.1080/17451000.2015.1041532>
- Ferreira, A. S., Hátún, H., Counillion, F., Payne, M. R., Visser, A. W., 2014. Synoptic scale analysis of mechanisms driving surface chlorophyll dynamics in the North Atlantic. *Biogeosciences*, *Biogeosciences*, 12, 3641-3653. <https://doi.org/10.5194/bg-12-3641-2015>
- Rasmussen, T. A. S., Olsen, S. M., Hansen, B., Hátún, H., Larsen, K. M. H., 2014. The Faroe shelf circulation and its potential impact on the primary production. *Continental Shelf Research* 88, 171-184. <https://doi.org/10.1016/j.csr.2014.07.014>
- Homrum, E. I., Hansen, B., Jonsson, S. P., Michalsen, K., Burgos, J., Righton, D., Steingrund, P., Jakobsen, T., Mouritsen, R., Hátún, H., Armannsson, H., Joensen, J. S., 2013. Migration of saithe (*Pollachius virens*) in the Northeast Atlantic. *ICES Journal of Marine Science* 70, 782-792. <https://doi.org/10.1093/icesjms/fst048>
- Jansen, T., Kelly, C., Hátún, H. and Payne, M. R., 2012. Migration and Fisheries of North East Atlantic Mackerel (*Scomber scombrus*) in Autumn and Winter, *Plos One*, 7, 12. <https://doi.org/10.1371/journal.pone.0051541>

- Larsen, K.M., Hátún, H., Hansen, B. and Kristiansen, R., 2012. Atlantic water in the Faroe area: sources and variability. <https://doi.org/10.1093/icesjms/fss028>
- Homrum, E. Í., Hansen, B., Steingrund, P., Hátún, H., 2012. Growth, maturation, diet and distribution of saithe (*Pollachius virens*) in Faroese waters (NE Atlantic). *Marine Biology Research* 8, 246-254. <https://doi.org/10.1080/17451000.2011.627921>
- Zhai, L., Gudmundsson, K., Miller, P., Peng, W. J., Gudfinnsson, H., Debes, H., Hátún, H., White, G. N., Walls, R. H., Sathyendranath, S., Platt, T., 2012. Phytoplankton phenology and production around Iceland and Faroes. *Continental Shelf Research* 37, 15-25. <https://doi.org/10.1016/j.csr.2012.01.013>
- V. M. Trenkel, G. Huse, B. MacKenzie, P. Alvarez, H. Arrizabalaga, M. Castonguay, N. Goñi, F. Grégoire, H. Hátún, T. Jansen, J. A. Jacobsen, P. Lehodey, M. Lutcavage, P. Mariani, G. Melvin, J. D. Neilson, L. Nøttestad, G.J. Óskarsson, M. Payne, D. Richardson, I. Senina, D.C. Speirs, 2011. Comparative ecology of widely-distributed pelagic fish species in the North Atlantic: implications for modelling climate and fisheries impacts. <https://doi.org/10.1016/j.pocean.2014.04.030>
- Payne, M. R., Egan, A., Fassler, S. M. M., Hatun, H., Holst, J. C., Jacobsen, J. A., Slotte, A., Loeng, H., 2012. The rise and fall of the NE Atlantic blue whiting (*Micromesistius poutassou*). *Marine Biology Research* 8, 475-487. <https://doi.org/10.1080/17451000.2011.639778>
- Hansen, B., Hátún, H., Kristiansen, R., Olsen, S. M., Østerhus, S., 2010. Stability and forcing of the Iceland-Faroe inflow of water, heat, and salt to the Arctic. *Ocean Science*, 6. <https://doi.org/10.5194/os-6-1013-2010>
- Hátún, H. and Gaard, E. 2010. Marine climate, squid and pilot whales in the northeastern Atlantic. in Dorete - her book, *Annales Societatis Scientiarum Færoensis Supplementum* 52: 50-68. Faroe University Press, Tórshavn, 307 pp.
- Steingrund, P., R. Mouritsen, J. Reinert, E. Gaard, and H. Hátún, 2010. Total stock size and cannibalism regulate recruitment in cod (*Gadus morhua*) on the Faroe Plateau. *ICES Journal of Marine Science*, 67, 111-124. <https://doi.org/10.1093/icesjms/fsp240>
- Hátún, H., Payne, M., Beaugrand, G., Reid, P. C., Sandø, A. B., Drange, H., Hansen, B., Jacobsen, J. A., and Bloch, D. 2009. Large bio-geographical shifts in the north-eastern Atlantic Ocean: From the subpolar gyre, via plankton, to blue whiting and pilot whales. *Progress in Oceanography*, 80: 149-162. <https://doi.org/10.1016/j.pocean.2009.03.001>
- Hátún, H., Payne, M. R., and Jacobsen, J. A. 2009. The North Atlantic subpolar gyre regulates the spawning distribution of blue whiting (*Micromesistius poutassou*). *Canadian Journal of Fisheries and Aquatic Sciences*, 66: 759-770. <https://doi.org/10.1139/F09-037>
- Reid, P. C. et al. (and Hátún, H.), 2009. Impacts of the Oceans on Climate Change. *Advances in Marine Biology*, Vol 56 56: 1-150.
- Steingrund, P., and Hátún, H. 2008. Relationship between the North Atlantic Subpolar Gyre and fluctuations of the saithe stock in Faroese waters. *ICES, North Western Working Group*: 1-7.
- Häkkinen, S., Hátún, H., and Rhines, P. 2008. Satellite evidence of change in the northern gyre. In *Arctic-Subarctic Ocean Fluxes*. Edited by R.R. Dickson, J. Meincke, and P. Rhines. Springer, 551-565.
- Hátún, H., Arge, J. and Sandø, A.B.: Environmental influence on the spawning distribution and migration pattern of northern blue whiting (*Micromesistius poutassou*). *ICES CM:B06*
- Hátún, H., Eriksen, C. C., and Rhines, P. B. 2007. Buoyant eddies entering the Labrador Sea observed with gliders and altimetry. *J. Phys. Oceanogr.*, 37: 2838-2854. <https://doi.org/10.1175/2007JPO3567.1>
- Hátún, H., Sandø, A. B., Drange, H., Hansen, B., and Valdimarsson, H. 2005a: Influence of the Atlantic subpolar gyre on the thermohaline circulation. *Science*, 309, 1841-1844. <https://doi.org/10.1126/science.1114777>
- Hátún, H., Sandø, A., Drange, H., and Bentsen, M., 2005b: Temperature variations in the Faroe-Shetland inflow waters, in *The Nordic Seas: An integrated perspective*, Geophysical Monograph series 158, American Geophysical Union, Washington, DC, 239-250. <https://doi.org/10.1029/158GM16>
- Hátún, H., 2004, *The Faroe Current*, Dr. Scient, University of Bergen, Norway.
- Hátún, H., B. Hansen, and P. Haugan, 2004: Using an "inverse dynamic method" to determine temperature and salinity fields from ADCP measurements. *J. Atmos. Oceanic Technol.*, 21, 527-534. [https://doi.org/10.1175/1520-0426\(2004\)021<0527:UAIDMT>2.0.CO;2](https://doi.org/10.1175/1520-0426(2004)021<0527:UAIDMT>2.0.CO;2)
- Hansen, B., S. Østerhus, H. Hátún, R. Kristiansen, and K. M. H. Larsen, 2003: The Iceland-Faroe inflow of Atlantic water to the Nordic Seas. *Prog. Oceanogr.*, 59, 443-474. <https://doi.org/10.1016/j.pocean.2003.10.003>

Hátún, H. and T. A. McClimans, 2003: Monitoring the Faroe Current using altimetry and coastal sea-level data. *Continental Shelf Research*, 23, 859-868. [https://doi.org/10.1016/S0278-4343\(03\)00059-1](https://doi.org/10.1016/S0278-4343(03)00059-1)

Hátún, H. 2000, On the accuracy of computing slope current transports from current meter arrays, Master of Science thesis, 97 pp., The Norwegian University of Science and Technology - NTNU, Trondheim, Norway.

Talks or posters 73 contributions (talks or posters) to international conferences, whereof six as invited speaker. More than a hundred presentations at workshops, public events etc.

Activity as an editor, reviewer and PhD opponent

Fall 2021 Chief editor for the Research Topic: 'Physical Drivers of Biogeographical Shifts in the Northeastern Atlantic – and Adjacent Shelves', in *Frontiers of Marine Science*.

Spring 2020. Opponent at the dissertation for the PhD thesis: 'Listening to the polar oceans - Monitoring and mapping marine ecosystems using passive and active acoustics' by Sebastian Menze, University of Bergen.

January 2014. Opponent at the dissertation for the PhD thesis: 'The circulation of the Norwegian Sea- An investigation from space and ocean' by Roshin Pappukutty Raj, University of Bergen.

Review of six research proposals and four annual reports.

Review of scientific papers in the following journals: *Ocean Dynamics*, *Marine Biology Research*, *Earth System*, *MCCIP*, *Deep Sea Research* (5 papers), *EGU* (2), *Frontiers* (5), *Journal of Climate* (4), *Fisheries Oceanography* (2), *G-cubed*, *Global Change Biology*, *Geophysical Research Letters* (5), *ICES journal* (3), *Journal of Geophysical Research* (7), *Ocean Science*, *MEPS* (2) and *Tellus* (2). Review of 12 papers since January 2020.

Current research interests

- a) Analysis of oceanographic observations (*in situ* and remotely sensed)
- b) Analysis of the output from numerical ocean models
- c) Combined analysis of *in situ* observations and models
- d) The impact of the marine environment on ecosystems. Main regions of interest: The subpolar North Atlantic and the Nordic Seas.
- e) Predictability. Main regions of interest: The subpolar North Atlantic, the Nordic Seas and adjacent shelves.

Current memberships, projects and awards

I have led and participated in more than 20 projects, funded by EU, the Nordic Council, NASA, NSF, Norges Forskningsråd, Danish sources (e.g. Danish Finance Act, Jens Smed, DANCEA) and Faroese sources (Granskingarráðið, Fiskivinnuoyndir) (see hav.fo).

- Member of the ICES working Group of Oceanic Hydrography (WGOH)
- Honored as an 'outstanding Faroese young (< 40 years old) scientist' (December 2009).
- Inspirational award in Physical Oceanography (NorMER), 2014.