

## CV Bogi Hansen

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**Profession** Physical oceanography, Ph.D.

**Current position** Senior scientist (part time), Faroe Marine Research Institute

**Education**

1969	Cand. scient. in Theoretical Physics, University of Copenhagen
1970	M.A in Theoretical Physics, S.U.N.Y. at Stony Brook
1973	Mag. scient. in Physical Oceanography, University of Copenhagen
1977	Lic. scient. (Ph.D.) in Physical Oceanography, University of Copenhagen

**Employments**

1970 - 1972	Highschool (Gymnasie) teacher in Tórshavn
1975 - 1982	Lecturer in Physics at the University of the Faroes
1982 -	Hydrographer at Havstovan
1991 - 2012	Head of Environmental Department
2012 -	Senior scientist at FAMRI (part time)

**Language capacity**

Faroese	Mother tongue
Scandinavian	Fluent
English	Fluent
German	Moderate
French	Moderate

**Selected offices**

1988 - 1991	Chairman of the ICES Working Group on Oceanic Hydrography
1988 - 1995	Member of the Nordic WOCE Steering Group
1992 - 1993	President of the Faroese Scientific Society (Føroya Fróðskaparfelag)
2000 - 2005	Chairman of the Westnordic Programme for Ocean Climate Research
2000 - 2005	Contributing author to the Arctic Climate Impact Assessment, Ch. 9: Marine Systems
2004 - 2006	Chairman of the Norwegian – Iceland Seas Experiment (NISE)
2006 - 2015	Honorary (adjungeraður) professor at the University of the Faroe Islands
2009 - 2013	Honorary (adjungeret) professor at Aarhus University, Denmark
2010 - 2013	Member of CLIVAR Atlantic Panel

### Main research fields

- Regional oceanography of the North East Atlantic.
- Regional oceanography of the Faroe Shelf and Faroese fjords
- Oceanic coupling between the Arctic and North Atlantic
- North Atlantic thermohaline circulation
- Physical effects on primary production and ecosystems in Faroese waters
- Coupling: Climate – Ocean - Biology

## Peer-reviewed publications since 2000

- Erenbjerg, S. V., Albretsen, J., Simonsen, K., Olsen, E. L., Kaas, E., Hansen, B. 2021. A tidally driven fjord-like strait close to an amphidromic region, *Ocean Sci.*, 17, 1639–1655. <https://doi.org/10.5194/os-17-1639-2021>
- 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>
- 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>
- 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>
- 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>
- Hansen, B., Poulsen, T., Húsgarð Larsen, K. M., Hátún, H., Østerhus, S., Dareljus, 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>
- 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>
- 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>
- Olsen, S. M., Hansen, B., Østerhus, S., Quadfasel, D., Valdimarsson, H. 2016. Biased thermohaline exchanges with the Arctic across the Iceland-Faroe Ridge in ocean climate models. *Ocean Science*, 12, 545-560. <https://doi.org/10.5194/os-12-545-2016>
- 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>
- 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>
- 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>
- Homrum, E. í, Hansen, B., Jónsson, S. Þ., Michalsen, K., Burgos, J., Righton, D., Steingrund, P., Jakobsen, T., Mouritsen, R., Hátún, H., Armansson, H., Joensen, J. S. 2013. Migration of saithe (*Pollachius virens*) in the Northeast Atlantic. *ICES Journal of Marine Science*. doi.1093/icesjms/fst048.
- 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., 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., Hansen, B., Steingrund, P., Hátún, H. 2012. Growth, maturation, diet and distribution of saithe (*Pollachius virens*) in Faroese waters (NE Atlantic). *Marine Biology Research*, 2012; 8: 246-254.

- Mauritzen, C. et al. 2011. Closing the loop – Approaches to monitoring the state of the Arctic Mediterranean during the International Polar Year 2007-2008. *Progress in Oceanography* 90, 62-89.
- Eliassen, K., Reinert, J., Gaard, E., Hansen, B., Jacobsen, J. A., Grønkjær, P., Christensen, J.T. 2011. Sandeel as a link between primary production and higher trophic levels on the Faroe shelf. *Mar Ecol Prog Ser* Vol. 438: 185-194, 2011. <https://doi.org/10.3354/meps09301>
- Hansen, B., Gaard, E., Debes, H., Larsen, K. M. H. 2010. Abrupt interruptions in the spring bloom on the Faroe Shelf. *Ann. Soc. Scient. Faer. Suppl.* 52, 21-35.
- 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 Sci. Discuss.*, 7, 1245–1287, 2010, doi:10.5194/osd-7-1245-2010.
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- Hátún, H., Payne, M. R., Beaugrand, G., Reid, P. C., Sandø, A. B., Drange, H., Hansen, B., Jacobsen, J. A., 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.
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- Olsen, S. M., Hansen, B., Quadfasel, D., Østerhus, S. 2008. Observed and modelled stability of overflow across the Greenland-Scotland ridge. *Nature* 455, 519-522.
- Larsen, K. M. H., Hansen, B., Svendsen, H. 2008. Faroe Shelf Water. *Continental Shelf Research* 28, 1754-1768.
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- Hansen, B., Østerhus, S., Turrell, B., Jónsson, S., Valdimarsson, H., Hátún, H., Olsen, S. M. 2008. The inflow of Atlantic water, heat, and salt to the Nordic Seas across the Greenland-Scotland Ridge. In *Arctic–Subarctic Ocean Fluxes: Defining the role of the Northern Seas in Climate*, 15 - 43 (eds Dickson, D., Meincke, J. & Rhines, P.), Ch. 1, Springer Science + Business Media B.V., 15-43.
- Holliday, N. P., Hughes, S. L., Bacon, S., Beszczynska-Möller, A., Hansen, B., Lavin, A., Loeng, H., Mork, K. A., Østerhus, S., Sherwin, T., Walczowski, W. 2008. Reversal of the 1960s to 1990s freshening trend in the northeast North Atlantic and Nordic Seas. *Geophys. Res. Lett.*, 35. L03614, doi:10.1029/2007GL-032675.
- Hansen, B., Østerhus, S. 2007. *Faroe Bank Channel overflow 1995 - 2005*. *Progress in Oceanography*. doi: 10.1016/j.pocean.2007.09.004 .
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- Geyer, F., Østerhus, S., Hansen, B., Quadfasel, D. 2006. Observations of highly regular oscillations in the overflow plume downstream of the Faroe Bank Channel. *J. Geophys. Res.*, 111, C12020, doi:10.1029/2006JC003693.
- Hansen, B. 2006. How well can the Atlantic inflow to the Nordic Seas be monitored from satellite? *Cahiers du Centre Européen de Géodynamique et de Séismologie* Vol 25: 93-98.
- Loeng, H., Brander, K., Carmack, E., Denisenko, S., Drinkwater, K., Hansen, B., Kovacs, K., McLaughlin, F., Sakshaug, E. 2005. Chapter 9, *Marine Systems*. In *Arctic Climate Impact Assessment*, Cambridge University Press, 453-538.
- Hansen, B., Eliassen, S. K., Gaard, E., Larsen, K. M. H. 2005. Climatic effects on plankton and productivity on the Faroe Shelf. *ICES Journal of Marine Science*, 62: 1224-1232. doi: 10.1016/j.icesjms.2005.04.014.
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- Hátún, H., Hansen, B., Haugan, P. 2004. Using an "Inverse Dynamic Method" to Determine Temperature and Salinity Fields from ADCP Measurements. *Journal of Atmospheric and Oceanic Technology*, 21: 527-534.
- 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.
- Turrell, W. R., Hansen, B., Hughes, S., Østerhus, S. 2003. Hydrographic variability during the decade of the 1990s in the Northeast Atlantic and southern Norwegian Sea. *ICES Ma. Sc. Symp.*, 219: 111-120.
- Hansen, B., Turrell, W. R., Østerhus, S. 2003. Indications and consequences of weakened Iceland-Scotland overflow. *ICES Mar. Sc. Symp.*, 219: 102-110.
- Gaard, E., Hansen, B., Olsen, B., Reinert, J. 2002. Ecological features and recent trends in the physical environment, plankton, fish stocks, and seabirds in the Faroe Shelf Ecosystem. In *Large Marine Ecosystems of the North Atlantic*, ed. by K. Sherman and H. R. Skjoldal. Elsevier, London.
- Kuijpers, A., Hansen, B., Huhnerbach, V., Larsen, B., Nielsen, T., Werner, F. 2002. Norwegian Sea overflow through the Faroe-Shetland gateway as documented by its bedforms. *Marine Geology* 188: 147-164.
- Østerhus, S., Turrell, W. R., Hansen, B., Lundberg, P., Buch, E. 2001. Observed transport estimates between the North Atlantic and the Arctic Mediterranean in the Iceland-Scotland region. *Polar Research* 20(1): 169-175.
- Hansen, B., Turrell, W. R., Østerhus, S. 2001. Decreasing overflow from the Nordic seas into the Atlantic Ocean through the Faroe Bank channel since 1950. *Nature* 411: 927-930.
- Gaard, E., Hansen, B. 2000. Variations in the advection of *Calanus finmarchicus* onto the Faroe Shelf. *ICES J. Mar. Sci.*, 57: 1612-1618.
- Blindheim, J., Borovkov, V., Hansen, B., Malmberg, S. Aa., Turrell, W. R., Østerhus, S. 2000. Upper layer cooling and freshening in the Norwegian Sea in relation to atmospheric forcing. *Deep-Sea Research I* 47: 655-680.
- Hansen, B., Østerhus, S. 2000. North Atlantic - Nordic Seas Exchanges. *Progress in Oceanography* 45: 109-208.

### Popularized papers for the general public

- Hansen, B. 1987. Rákið á Føroya Banka. *Fiskirannsóknir* nr. 4, 29-45.
- Hansen, B., Poulsen, M. 1987. Ilttrot á føroyskum gáttarfirðum. *Fiskirannsóknir* nr. 4, 69-89.
- Hansen, B. 1988. Sjóvarfallið (1. Partur). *Fiskirannsóknir* nr. 5, 39-71.
- Hansen, B. 1991. Veðurlagsbroytingar og havið um Føroyar. *Fiskirannsóknir* nr. 7, 57-90.
- Hansen, B., Joensen, H. P. 1991. Geislavirkni í føroyskum sjógvi. *Fiskirannsóknir* nr. 7, 91-112.
- Hansen, B. 2000. Menneskeskabte klimaændringer i Nordatlanten. *Global Økologi*, 7. årgang, nr. 1: 14-15.
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- Hansen, B. 2003. Bli de nordiska haven kallare under det kommande århundradet? *Finlands Natur* nr. 5, 2003, 16-17.
- Hansen, B. 2006. Et oplagt emne for nordisk samarbejde. In *Nordisk Styryka, NordForsk Rapporter*: 1, NordForsk, Oslo.
- Hansen, B., Olsen, S. M. 2016. Det "kolde hul", "Golfstrømmen" og Danmarks klima. *Vejret*, 147, 20-26.

## Books

*Hansen, B. 1993. Streymur og sjóvarfall. Føroya Skúlabókagrunnur, Tórshavn, 32 pp.*

*Hansen, B. 2000. Havið. Føroya Skúlabókagrunnur, Tórshavn, 232 pp.*

*Hansen, B. 2011. Veðurlagsbroytingar. Nám, Tórshavn, 118 pp.*