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Profession Biologist, Dr. Philos.

Current position Director, Faroe Marine Research Institute

Specialisation Biological oceanography. Plankton ecology

Education

1986	Cand. Scient. in Biology, University of Odense, Denmark. Chemistry as minor subject in the degree.
2001	Doctor philos. at the University of Tromsø, Norway. Title: "The Plankton Community Structure on the Faroe Shelf: Relationship to environmental conditions, trophic interactions and comparison with offshore environment".

Employments

1986 - present	Research scientist at the Faroe Marine Research Institute
1987 - 2001	Teacher at University of the Faroe Islands
2001 - present	Associate Professor II at the University of the Faroe Islands
2010 - present	Director at the Faroe Marine Research Institute
2010 - present	Chairman of the steering group for the Fisheries Research Fund of the Faroe Islands

Main work fields

- Research of pelagic ecosystems.
Ecological studies and monitoring of plankton on the Faroese shelf and in oceanic waters. Research of phytoplankton, zooplankton and ichthyoplankton; plankton production and feeding in relation to the physical, chemical and biological environment.
Ecosystems and trophic interactions.
- Environmental research & monitoring in Faroese fjords.
- Aquaculture: Environment
- Toxic phytoplankton

Language capacity

Faroese	Mother tongue
Scandinavian	Fluent
English	Fluent

Participation in international research organisations and projects

2013 - 2017	Steering committee chairman for Ph.D. fellowships and Post Docs in Marine Climate and Oceanographic Conditions in the Waters between the Faroes and Greenland and their effects on plankton and fish.
2009 - 2011	WATER. Warning of Algal Toxin Events in the Northern Periphery Region. International research project. Funded by Northern Periphery Programme (NPP)
2008 - 2012	Steering committee member for Ph. D. fellowships and Post Docs in Marine Climate and Ecosystem around the Faroes.

- 2002 - 2008 MAR-ECO. Patterns and Processes of the Ecosystems of the Northern Mid-Atlantic Ridge. International research project. <http://www.mar-eco.no/>
- 1996 - 2000 TASC. Trans-Atlantic Studies of *Calanus*. International research project.

Teaching experience 1987 - present Teacher at University of the Faroe Islands in:
 - Biological & chemical oceanography
 - Marine biology

Since 2002 Associate Professor II at University of the Faroe Islands.
 Supervisor for several B.Sc., M.Sc. and Ph.D. students.

Publications About 40 peer-reviewed publications in international journals and books
 About 100 other reports and papers

Peer-reviewed publications 2000-2020

1. Jacobsen, S., Klitgaard Nielsen, K., Kristiansen, R., Grønkjær, P., Gaard, E., Steingrund, P. 2020. Diet and prey preferences of larval and pelagic juvenile Faroe Plateau cod (*Gadus morhua*). Marine Biology volume 167. <https://doi.org/10.1007/s00227-020-03727-5>
2. Jacobsen, S., Gaard, E., Hátún, H., Steingrund, P., Larsen, K. M. H., Reinert, J., Ólafsdóttir, S. R., Poulsen, M. 2019. Environmentally driven ecological fluctuations on the Faroe Shelf revealed by fish juvenile surveys. Frontiers in Marine Science, Vol. 6, Article 559: 1-12. <https://doi.org/10.3389/fmars.2019.00559>
3. Kristiansen, I., Hátún, H., Petursdóttir, H., Gislason, A., Broms, C., Melle, W., Jacobsen, J. A., Gaard, E., 2019. Decreased influx of *Calanus* spp. into the south-western Norwegian Sea. Deep Sea Research Part I, 149. <https://doi.org/10.1016/j.dsr.2019.05.008>
4. 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. Journal of Marine Systems 177, 28–38. <https://doi.org/10.1016/j.jmarsys.2017.08.004>
5. á Norði, G., Glud, R. N. Simonsen, K., Gaard E. 2018. Deposition and benthic mineralization of organic carbon: A seasonal study from Faroe Islands. Journal of Marine Systems 177: 53-61. <https://doi.org/10.1016/j.jmarsys.2016.09.005>
6. Kristiansen, I., Gaard, E., Jónasdóttir S. and Ferreira, S. 2015. Persistent shift of *Calanus* spp in the south-western Norwegian Sea since 2003, linked to ocean climate. ICES. J. Mar. Sci., 73(5): 1319-1329. <https://doi.org/10.1093/icesjms/fsv222>
7. Melle, W., Runge, J. A., Head E., Plourde, S., Castellani, C., Licandro P., Pierson, J. Jónasdóttir, S. H., Johnson, C., Broms, C., Debes, H. Falkenhaus, T., Gaard, E., Gislason, A., Heath, M. R., Niehoff, B., Nielsen, T. G., Pepin, P., Stenevik, E. K., Chust, G. 2015. Biogeography of key mesozooplankton species in the North Atlantic and egg production of *Calanus finmarchicus*. Earth Syst. Sci. Data, 7, 223-230. <https://doi.org/10.5194/essd-7-223-2015>
8. Melle, W., Runge, J. A., Head, E., Plourde, S., Castellani, C., Licandro, P., Pierson, J., Jónasdóttir, S. H., Johnson, C., Broms, C., Debes, H., Falkenhaus, T., Gaard, E., Gislason, E., Heath, M. R., Niehoff, B., Nielsen, T. G., Pepin, P., Stenevik, E. K., Chust, G. 2014. The North Atlantic Ocean as habitat for *Calanus finmarchicus*: Environmental factors and life history traits. Progress in Oceanography, 129, Part B: 244-284. <https://doi.org/10.1016/j.pocean.2014.04.026>
9. Eliassen K., Reinert, J., Gaard, E., Hansen, B., Jacobsen, J. A., Grønkjær, P., Tang Christensen, J. 2011. Sandeel as a link between primary production and higher trophic levels on the Faroe shelf. Marine Ecology Progress Series, 438: 185-194. <https://doi.org/10.3354/meps09301>
10. Gaard, E., á Norði, G., Simonsen, K. 2010. Environmental effects on phytoplankton production in a Northeast Atlantic fjord, Faroe Islands. Journal of Plankton Research 2010. <https://doi.org/10.1093/plankt/fbq156>
11. Hansen, B., Gaard, E., Debes, H, Larsen, K. M. H. 2010. Abrupt interruptions in the spring bloom on the Faroe Shelf. Dorete – her book, Annales Societatis Scientiarum Færoensis Supplementum, 52: 21-35. Faroe University Press, Tórshavn, 307 pp.
12. Hátún, H. and Gaard, E. 2010. Marine climate, squid and pilot whales in the northeastern Atlantic. Dorete – her book, Annales Societatis Scientiarum Færoensis Supplementum, 52: 50-68. Faroe University Press, Tórshavn, 307 pp.
13. Steingrund, P., Mouritsen, R., Reinert, J., Gaard, E., Hátún, H. 2010. Total stock size and cannibalism

- regulate the recruitment in cod (*Gadus morhua* L.) on the Faroe Plateau. ICES Journal of Marine Science, 67: 111-124. <https://doi.org/10.1093/icesjms/fsp240>
14. Lund-Hansen, L.C., Gaard, E., Debes, H. 2009. Optical properties and optical constituents of the Faroe Islands shelf and off-shelf waters, North East Atlantic. *Hydrobiologia*, 636: 285-293. <https://doi.org/10.1007/s10750-009-9957-8>
 15. Debes, H., Gaard, E., Hansen, B. 2008. Primary production on the Faroe shelf: Temporal variability and environmental influences. *Journal of Marine Systems*, 74: 686-697. <https://doi.org/10.1016/j.jmarsys.2008.07.004>
 16. Madsen, M. L., Gaard, E., Hansen, B. W. 2008. Wax ester mobilization by female *Calanus finmarchicus* (Gunnerus) during spring ascendance and advection to the Faroe shelf. *ICES Journal of Marine Science*, 65: 1112-1121. <https://doi.org/10.1093/icesjms/fsn097>
 17. Debes H., Eliassen, K, Gaard E. 2008. Seasonal variability in copepod ingestion and egg production on the Faroe shelf. *Hydrobiologia*, 600: 247-265. <https://doi.org/10.1007/s10750-007-9238-3>
 18. Gaard, E., Gislason, A., Falkenhaug, T., Sjøiland, H., Musaeva, E., Vereshchaka, A., Georgyi Vinogradov, G. 2008. Horizontal and vertical distribution of copepod composition and abundance on the Mid-Atlantic Ridge in June 2004. *Deep-Sea Research II*, 55: 59-71. <https://doi.org/10.1016/j.dsr2.2007.09.012>
 19. Gislason, A., Gaard, E., Debes, H., Falkenhaug, T. 2008. Abundance, feeding and reproduction of *Calanus finmarchicus* in the Irminger Sea and on the northern mid-Atlantic Ridge in June. *Deep-Sea Research II*, 55: 72-80. <https://doi.org/10.1016/j.dsr2.2007.09.008>
 20. Stenevik, E. K., Melle, W., Gaard, E., Gislason, A., Årnes, C., Prokopchuk, I., Ellertsen, B. 2007. Egg production of *Calanus finmarchicus* – A basin-scale study. *Deep-Sea Research II*, 54: 2672-2685. <https://doi.org/10.1016/j.dsr2.2007.08.027>
 21. Gaard, E., Gislason, Á., Melle, W. 2006. Iceland, Faroe and Norwegian coasts. *The Sea*, vol. 14, Chapter 27, 1073-1105. Ed. by A. Robinson and K. Brink.
 22. Steingrund, P., Hansen, B., Gaard, E. 2005. Cod in Faroese Waters. Spawning and life history information for North Atlantic cod stocks, ICES Cooperative Research Report, 274: 50-55.
 23. Hansen, B., Eliassen, S. K., Gaard E., Larsen, K. M. H. 2005. Climatic effects on plankton and productivity on the Faroe Shelf. *ICES J. Mar. Sci.*, 62: 1224-1232. <https://doi.org/10.1016/j.icesjms.2005.04.014>
 24. Eliassen, S. K., Gaard, E., Hansen, B., 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>
 25. Steingrund, P., Gaard, E. 2005. Relationship between phytoplankton production and cod production on the Faroe shelf. *ICES J. Mar. Sci.*, 62: 163-176. <https://doi.org/10.1016/j.icesjms.2004.08.019>
 26. Gaard, E. 2003. Plankton variability on the Faroe shelf during the 1990s. *ICES Marine Science Symposia*, 219: 182-189.
 27. Gaard, E., Reinert, J. 2002. Pelagic cod and haddock on the Faroe Plateau: Distribution, diets and feeding habitats. *Sarsia*, Vol. 87: 193-206. <https://doi.org/10.1080/00364820260294833>
 28. Gaard, E., Hansen, B., Olsen, B, Reinert, J. 2002. Ecological features and recent trends in physical environment, plankton, fish stocks and sea birds in the Faroe plateau ecosystem. In: K. Sherman and H.-R. Skjoldal (eds). *Large Marine Ecosystems of the North Atlantic*. 245-265. Elsevier. 449 pp. [https://doi.org/10.1016/S1570-0461\(02\)80060-X](https://doi.org/10.1016/S1570-0461(02)80060-X)
 29. Gaard, E., Steingrund, P. 2001. Reproduction of the Faroe Plateau cod: Spawning ground, egg advection and larval feeding. *Fróðskaparrit*, 48: 87-103.
 30. Gaard, E. 2001. The Plankton Community Structure on the Faroe Shelf. Relationship to environmental conditions, trophic interaction, and comparison with the offshore environment. Dr. Philos thesis. The Norwegian College of Fisheries Science. University of Tromsø. 65 pp + 9 accompanying papers.
 31. Gaard, E. 2000. Seasonal abundance and development of the copepod *Calanus finmarchicus* in relation to phytoplankton and hydrography on the Faroe shelf. *ICES J. Mar. Sci.*, 57: 1605-1611. <https://doi.org/10.1006/jmsc.2000.0963>
 32. Gaard, E., Hansen, B. 2000. Variations in the advection of *Calanus finmarchicus* onto the Faroese shelf. *ICES J. Mar. Sci.*, 57: 1612-1618. <https://doi.org/10.1006/jmsc.2000.0962>
 33. Heath, M., Ellertsen, B., Gaard, E., Gislason, Á., Melle, W., Olsen, K., Skreslet, S., Tande, K. 2000. Comparison of the annual cycle of *Calanus finmarchicus* at selected locations in the North Atlantic Ocean. *ICES J. Mar. Sci.*, 57: 1562-1580. <https://doi.org/10.1006/jmsc.2000.0950>

Selected papers and reports, 2000-2020

1. Gaard, E., Sørensen, D. 2018. Fiskiskapur eftir reyðæti. Havstovan nr. 18-01. Smárit. 20 pp.
2. Gaard, E. 2017. Final report for the research programme on Changes in Marine Climatic and Oceanographic Conditions in the Waters between the Faroes and Greenland and their effects on plankton and fish 2013-2017. Havstovan no. 17-05. Technical Report. 32 pp.
3. Gaard E., 2011. Fiskivinnutingið 2011. Havstovan Smárit, nr. 11-08.170 pp.
4. Kristiansen, I., Gaard, E., Kolbeinshavn, A. G. 2011. The potential of a semi-intensive production system to support an increased number of fish larvae by optimising the plankton season. Fiskaaling Report No. 2011-1. 87 pp. Aquaculture Research Station of the Faroes.
5. Gaard, E., Debes, H. 2011. Site 12: Faroe Islands (southern Norwegian Sea and Faroe Shelf). ICES Zooplankton Status Report 2008/2009. ICES Cooperative Research Report, 307:44-47.
6. á Norði, G., Simonsen, S., Gaard, E., Glud, R. N. 2010. Accumulation and mineralization of fish farming residuals in the benthic footprint area at two different farming locations in a Faroese fjord. ICES CM 2010/J:2. 20 pp.
7. Gaard, E. 2010. Æti og fiskur á Landgrunninum. Mið og Magn 5: 14-15.
8. Eliassen, K., Reinert, J., Gaard, J., Hansen B., Grønkjær, P., Christensen, J. T. 2009. Mortality of juvenile sandeel on the Faroe Shelf due to food limitation. ICES CM 2009/T:05. 14 pp.
9. Debes, H. H., Gaard, E., Hansen, B., Hátún, H. 2009. Changes in phytoplankton biomass during a period of significant warming in the south-western Norwegian Sea. ICES CM 2009/D: 07. 11 pp.
10. Gaard, E. 2009. Batnandi føðiviðurskifti á Landgrunninum. Sjóvarmál 2009: 15-17.
11. Gudfinnson, H. G., Debes, H., Falkenhaus, T., Gaard, E., Gislason, Á., Petursdóttir, H., Sigurdsson, T., Stupnikova, A., Valdimarsson, H. 2008. Abundance and productivity of the pelagic ecosystem along a transect across the northern Mid Atlantic Ridge in June 2003. ICES CM 2008/C:12. 23 pp.
12. Grønkjær, P., Kristiansen, R., Nielsen, K. K, Gaard, E. 2008. Inter-annual variation in sizespecific gut content biomass of larval and juvenile cod (*Gadus morhua* L) on the Faroe Shelf during 1998-2005. Poster.
13. Hansen, B., Gaard, E. 2007. Svarið blæsur í vetrarkuldanum. Sjóvarmál 2007: 4-8.
14. Gaard, E. 2007. Plantugróðurin verið eitt sindur undir miðal. Sjóvarmál 2007: 11-12.
15. Falkenhaus, T., Gislason, A., Gaard, E. 2007. Vertical distribution and population structure of copepods along the northern Mid-Atlantic Ridge. ICES CM 2007/F:07. 26 pp.
16. Gaard, E., Debes, H., Nolsøe, K. 2007. *Calanus finmarchicus* changes in the southern Norwegian Sea, 1990-2007. Poster 3545 at the 4th International Zooplankton Production Symposium. May 28 - June 1 2007, Hiroshima, Japan.
17. á Norð, G., Gaard, E. 2007. Umhvørviskanning av Vatnsnesvatni 2006. Kanning gjørd fyri P/F Hovsá 19. juni 2007. 26 pp. Fiskirannsóknarstovan 2007.
18. Gaard, E. 2007. Plantuæti – grundarlagið undir lívinum í sjónum. Atlantic Review, 46-51.
19. á Norði, G., Gaard, E. 2006. Undankanning av Lómundaroyri. 44 pp. Fiskirannsóknarstovan 2006.
20. á Norði, G., Gaard, E. 2006. Undankanning Frammi á Vatni. 52 pp. Fiskirannsóknarstovan 2006.
21. á Norði, G., Gaard, E. 2006. Undankanning av vatninum í Heygardali. 52 pp. Fiskirannsóknarstovan 2006.
22. Gaard, E., Heinesen, S., Hansen, M. G., Jacobsen, H., Magnussen, E. 2005. Árinnskanning av Funningsfirði í sambandi við vatnorkuútbygging hjá SEV. Ávegis frágreiðing. 18 pp. + appendix.
23. á Norði, G., Gaard, E. 2004. Umhvørviskanningar av Vatnsnesvatni, juni 2004. 21 pp. Fiskirannsóknarstovan 2004.
24. Gaard, E., Sørensen, J. 2004. Firðir og Sund. Eutrofieringskanningar. Føroya umhvøvi í tølum 2003, 57-62.
25. Gaard, E. 2004. Ójovn framleiðsla av føði høvuðsorsøkin til ójavna toskavøksturin. Fiskirannsóknarstovan Ársfrágreiðing 2003: 23-24.
26. Steingrund, P., Gaard, E. 2003. Relationship between phytoplankton production and cod production on the Faroe shelf. ICES CM P:40. 3 pp.
27. Gaard, E. 2003. Plankton on the Faroe shelf. Workshop on Ecosystem Modelling of Faroese Waters. Tórshavn, 24-36 September 2002, pp, 19-20.
28. Gaard, E., Nattestad, K. 2002. Feeding, reproduction and seasonal development of *Calanus finmarchicus* in relation to water masses and phytoplankton in the southern Norwegian Sea. ICES

CM 2002/N:08. 16 pp.

29. *Eliassen, S. K., Gaard, E., Hansen, B. 2002. A Mathematical Model of the Lowest Trophical Levels on the Faroe Shelf. Technical Report No. 02-04. Faroese Fisheries Laboratory.*
30. *Gaard, E. 2002. Firðir og sund: Eutrofieringskanningar. Føroya umhvørvi í tølum 2001: 54-60.*
31. *Gaard, E., Reinert, A. 2001. Kanning av Leynará í sambandi við boring av Vágatunnlinum. 10 pp.*
32. *Gaard, E. 2000. Hví gýtir landgrunstoskurin, har hann gýtir? Frøði, 2/2000: 4-7.*

Book

Fosaa, A. M., Gaard, E., Dalsgarð, J. (Ritsj.) 2006. Føroya Náttúra. Lívfrøðiligt margfeldi. Føroya Skúlabókagrunnur, Tórshavn, 268 pp.