

CV Eilif Gaard

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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 2011 - present Member of the Editorial Board of the Open Journal of Marine Science (OJMS)
Main work fields	<ul style="list-style-type: none">• 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; Shellfish• Toxic phytoplankton in Faroese fjords.
Language capacity	Faroese Mother tongue Scandinavian Fluent English Fluent
Participation in international research organisations and projects	2009 - 2011 WATER. Warning of Algal Toxin Events in the Northern Periphery Region. International research project. Funded by Northern Periphery Programme (NPP) www.nppwater.com 2008 - 2012 Steering committee member for Ph. D. fellowships and post docs in Marine Climate and Ecosystem around the Faroes. Since 2007 Staff member of Joint Nordic Master's Programme in Marine Ecosystems and Climate. http://folk.uib.no/ngfew/webpage2/ 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 January 2002 Associate Professor II at University of the Faroe Islands.

Advisor for 7 B.Sc., 5 M.Sc. and 3 Ph.D. students.

Ph.D students and projects:

Høgni Debes (2003-2007). Phytoplankton and zooplankton interactions on the Faroe Shelf.
University of the Faroe Islands.

Supervisor: Eilif Gaard.

Gunnvør á Norði (2006-2010): Impact of organic enrichment on the sediment microbial biogeochemistry and overlying water quality in relation to fish farms in Faroese Fjords.
University of the Faroe Islands.

Supervisors: Eilif Gaard, Knud Simonsen, and Ronnie N. Glud.

Kirstin Eliassen (2009-2012). Lesser sandeel, *Ammodytes marinus*, as a link between climate and higher trophic levels on the Faroe shelf. Århus University.

Supervisors: Peter Grønkjær, Jens Tang Christensen, Eilif Gaard, Bogi Hansen, and Jan Arge Jacobsen.

Research cruises I have been on ca. 60 research cruises, about 70% of these as cruise leader.

Publications 33 peer-reviewed publications in international journals and books
76 other reports and papers

Peer-reviewed publications 2000-2011

1. *Eliassen K., Reinert, J., Gaard, E., Hansen, B., Jacobsen, J. A., Grønkjær, P., and Tang Christensen, J. 2011.* Early life of sandeel in relation to primary production on the Faroe shelf. *Marine Ecology Progress Series*, 438: 185-194.
2. *á Norði, G, Glud, R.N., Gaard, E., and Simonsen S. 2010.* Large scale experiment on benthic impact and recovery from fish farming activity (Rainbow trout, *Oncorhynchus mykiss*): Case study from Kaldbaksfjørður in Faroe Islands. Submitted
3. *Gaard, E., á Norði, G., and Simonsen, K. 2010.* Environmental effects on phytoplankton production in a Northeast Atlantic fjord, Faroe Islands. *Journal of Plankton Research* 2010; doi: 10.1093/plankt/fbq156.
4. *Hansen, B., Gaard, E., Debes, H, and 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.
5. *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.
6. *Steingrund, P., Mouritsen, J., Reinert, J., Gaard, E., and 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.
7. *Lund-Hansen, L.C., Gaard, E., and Debes, H. 2009.* Optical properties and optical constituents of the Faroe Islands shelf and off-shelf waters, North East Atlantic. *Hydrobiologia*, 636: 285-293.
8. *Debes, H., Gaard, E., and Hansen, B. 2008.* Primary production on the Faroe shelf: Temporal variability and environmental influences. *Journal of Marine Systems*, 74: 686-697.
9. *Madsen, M.L., Gaard, E., and 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.

10. *Debes H., Eliassen, K, and Gaard E. 2008.* Seasonal variability in copepod ingestion and egg production on the Faroe shelf. *Hydrobiologia*, 600: 247-265.
11. *Gaard, E., Gislason, A., Falkenhaug, T., S¸oiland, H., Musaeva, E., Vereshchaka, A., and 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.
12. *Gislason, A., Gaard, E., Debes, H., and 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.
13. *Stenevik, E.K., Melle, W., Gaard, E., Gislason, A., Årnes, C., Prokopchuk, I., and Ellertsen, B. 2007.* Egg production of *Calanus finmarchicus* – A basin-scale study. *Deep-Sea Research II*, 54: 2672-2685.
14. *Gaard, E., Gislason, Á., and Melle, W. 2006.* Iceland, Faroe and Norwegian coasts. *The Sea*, vol. 14, Chapter 27, 1073-1105. Ed. by A. Robinson and K. Brink.
15. *Steingrund, P., Hansen, B. and Gaard, E. 2005.* Cod in Faroese Waters. Spawning and life history information for North Atlantic cod stocks, ICES Cooperative Research Report, 274: 50-55.
16. *Hansen, B., Eliassen, S. K., Gaard E., and Larsen, K.M.H. 2005.* Climatic effects on plankton and productivity on the Faroe Shelf. *ICES J. Mar. Sci.*, 62: 1224-1232.
17. *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.
18. *Steingrund, P. and Gaard, E. 2005.* Relationship between phytoplankton production and cod production on the Faroe shelf. *ICES J. Mar. Sci.*, 62: 163-176.
19. *Gaard, E. 2003.* Plankton variability on the Faroe shelf during the 1990s. *ICES Marine Science Symposia*, 219: 182-189.
20. *Gaard, E. and Reinert, J. 2002.* Pelagic cod and haddock on the Faroe Plateau: Distribution, diets and feeding habitats. *Sarsia*, Vol. 87: 193-206.
21. *Gaard, E., Hansen, B., Olsen, B and 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.
22. *Gaard, E. and Steingrund, P. 2001.* Reproduction of the Faroe Plateau cod: Spawning ground, egg advection and larval feeding. *Fr¸oðskaparrit*, 48: 87-103.
23. *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 Troms¸o. 65 pp + 9 accompanying papers.
24. *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.
25. *Gaard, E. and Hansen, B. 2000.* Variations in the advection of *Calanus finmarchicus* onto the Faroese shelf. *ICES J. Mar. Sci.*, 57: 1612-1618.
26. *Heath, M., Ellertsen, B., Gaard, E., Gislason, Á., Melle, W., Olsen, K. Skreslet, S. and 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.

Selected papers and reports, 2000-2011

1. *Gaard E., 2011.* Fiskivinnutingi¸o 2011. Havstovan Sm¸arit, nr. 11-08.170 pp.
2. *Kristiansen, I., Gaard, E., and 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.
3. *Gaard, E., and 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.
4. *¸a Nor¸i, G., Simonsen, S., Gaard, E., and 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.
5. *Gaard, E. 2010.* Æti og fiskur á Landgrunninum. *Mi¸o og Magn* 5: 14-15.
6. *Eliassen, K., Reinert, J., Gaard, J., Hansen B., Gr¸onkjær, P., and Christensen, J.T. 2009.* Mortality of juvenile sandeel on the Faroe Shelf due to food limitation. *ICES CM 2009/T:05*. 14 pp.
7. *Debes, H.H., Gaard, E., Hansen, B., H¸at¸un, 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.
8. Gaard, E. 2009. Batnandi fœðiviðurskipti á Landgrunninum. Sjóvarmál 2009: 15-17.
 9. Gaard, E. 2008. Faroe Islands (Northern Transect/North of Faroe Islands and Faroe Shelf/South of Faroe Islands). ICES Zooplankton Status Report 2006/2007. ICES Coop. Res. Rep. 292: 56-61. Special Issue, October 2008. Editors: Todd D. O'Brien, Angel Lopez-Urrutia, Peter H. Wiebe, and Steve Hay.
 10. Gudfinnson, H.G., Debes, H., Falkenhaug, T., Gaard, E., Gislason, Á., Petursdottir, H., Sigurdsson, T., Stupnikova, A., and 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.
 11. Grønkjær P., Kristiansen R., Nielsen K.K, and 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.
 12. Hansen, B. og Gaard, E. 2007. Svarið blæsur í vetrarkuldanum. Sjóvarmál 2007: 4-8.
 13. Gaard, E. 2007. Plantugróðurin verið eitt sindur undir miðal. Sjóvarmál 2007: 11-12.
 14. Falkenhaug, T., Gislason, A., and Gaard, E., 2007. Vertical distribution and population structure of copepods along the northern Mid-Atlantic Ridge. ICES CM 2007/F:07. 26 pp.
 15. Gaard, E., Debes, H., and 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.
 16. á Norð, G. og Gaard, E. 2007. Umhvørviskanning av Vatnsnesvatni 2006. Kanning gjørd fyri P/F Hovsá 19. juni 2007. 26 pp. Fiskirannsóknarstovan 2007.
 17. Gaard, E., 2007. Plantuæti – grundarlagið undir lívinum í sjónum. Atlantic Review, 46-51.
 18. á Norði, G. og Gaard, E. 2006. Undankanning av Lómundaroyri. 44 pp. Fiskirannsóknarstovan 2006.
 19. á Norði, G. og Gaard, E. 2006. Undankanning Frammi á Vatni. 52 pp. Fiskirannsóknarstovan 2006.
 20. á Norði, G. og Gaard, E. 2006. Undankanning av vatninum í Heygardali. 52 pp. Fiskirannsóknarstovan 2006.
 21. Fosaa, A.M., Dalsgarð, J., Gaard, E. and Gaard, M. 2006 [Ritstj.]. Føroya Náttúra. Lívfrøðiligt margfeldi. Føroya Skúlabókagrunnur. 268 pp.
 22. Gaard, E., Heinesen, S., Hansen, M.G., Jacobsen, H. og Magnussen, E. 2005. Árinsskanning av Funningsfirði í sambandi við vatnorkuútbýgging hjá SEV. Ávegis frágreiðing. 18 pp. + appendix.
 23. á Norði, G. og Gaard, E. 2004. Umhvørviskanningar av Vatnsnesvatni, juni 2004. 21 pp. Fiskirannsóknarstovan 2004.
 24. Gaard, E. og Sørensen, J. 2004. Firðir og Sund. Eutrofieringskanningar. Føroya umhvørvi í tølum 2003, 57-62.
 25. Gaard, E. 2004. Ójovn framleiðsla av fœði høvuðsorsøkin til ójavna toskavøksturin. Fiskirannsóknarstovan Ársfrágreiðing 2003: 23-24.
 26. Steingrund, P. and 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. and 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., and 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 og 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. og Dalsgarð J. (Ritstj.) 2006. Føroya Náttúra. Lívfrøðiligt margfeldi. Føroya Skúlabókagrunnur, Tórshavn, 268 pp.