

CV Jan Arge Jacobsen

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Profession Biologist, Ph.D.

Current position Senior Scientist, Head of Pelagic Department, Faroe Marine Research Institute

Education

2000	Dr. scient. at the University of Bergen, Norway. Title: "Aspects of the marine ecology of Atlantic salmon (<i>Salmo salar</i> L.)".
1986	Cand. scient. in fishery biology, University of Bergen, Norway. Mathematics and statistics as minor subjects in the degree.

Employments

2011 - present	Head of Pelagic Division at the Faroe Marine Research Institute. Responsible for research, cruises, and assessment of pelagic fish species (herring, blue whiting, mackerel, and wild salmon). Currently involved in several projects on the pelagic fish assemblage in the Northeast Atlantic (distribution in relation to the environment, assessment, and trophic relations).
1988 - 2010	Leading scientist at the Faroe Marine Research Institute responsible for research and assessment of pelagic fish species.
1986 - 1988	Research scientist at the Norwegian Institute of Marine Research, Bergen, Norway. Involved in the assessment of cod, haddock, and shrimp in the Barents Sea.

Main qualifications

- Experience in assessing fish stocks, including the main pelagic fish species occurring in Faroese waters, i.e. blue whiting, herring, mackerel, and Atlantic salmon.
- Experience in using echo sounder and acoustic equipment (EK500/EK60) together with acoustic scrutinising software (EchoView/LSSS) as assessment tools in research cruises for pelagic fish.
- Experience in database design (Oracle and MS Access) and its use in a GIS environment (Mapinfo).
- Experience from several joint Nordic projects under the Nordic Council of Ministers.
- Experience from FP7 (EU-funded) projects.

Selected offices and assignments since 2000

2015 - 2019	Partner in EU Horizon2020 project on Optimizing and Enhancing the Integrated Atlantic Ocean Observing System (AtlantOS)
2012 - 2014	Partner in a NORA funded Nordic project on genetic stock-identification of mackerel SAM.
2010 - 2013	Partner in a joint Nordic network: "Climate impacts in the Nordic Seas".
2009 - 2012	Partner in a Nordic HERMIX project focusing on genetic stock-identification of the various herring stocks in the Nordic Seas (Iceland, Faroes, Norway and Denmark).
2008 - 2011	Partner in the FP7 (EU-funded) project on wild salmon (Salsea-Merge) investigating causes to the marine mortality of salmon using genetic markers.
2008 - 2011	Partner in a joint Nordic SPACE project (SubPolar Atlantic Climate and Ecosystem) focusing on development of methodologies for predicting recruitment of blue whiting.
2008 - 2010	Partner in a joint Nordic project NorExChange on the "effect of future climate changes on

- distribution, growth and migration on pelagic fish stocks in the Atlantic part of the Nordic Seas”.
- 2007 - 2010 Partner in the Norwegian INFERNO project on the ecosystem in the Norwegian Sea.
- 2005 - 2006 Partner in a joint Nordic project on distribution and abundance of mesopelagic fish and krill in the Northeast Atlantic.
- 2003 - 2005 Partner in a joint Nordic project on distribution and migration of salmon in relation to environmental parameters in the North Atlantic (NM 13.04.07).
- 2002 - 2006 Chairman for the ICES Planning Group on Northeast Atlantic Pelagic Ecosystem Surveys (PGNAPES), surveying herring and blue whiting in the Northeast Atlantic for assessment purposes.

Language capacity	Faroese	Mother tongue
	Danish	Fluent
	Norwegian	Fluent
	English	Fluent

List of publications (since 2000)

Peer review articles

- Gíslason, D., Helyar, S.J., Óskarsson, G.J., Ólafsdóttir, G., Slotte, A., Jansen, T., Jacobsen, J.A., Ólafsson, K., Skirmisdóttir, S., Dahle, G., Siegstad, H., Joensen, H., Curti, K.L., Grégoire, F., Masse, J., Sveinsson, S., Danielsdóttir, A.K., Pampoulie, C. 2020. The composition of feeding aggregations of the Atlantic mackerel (*Scomber scombrus*) in the central North Atlantic: A microsatellite loci approach. ICES journal of Marine Science 77(2), 604-612. <https://doi.org/10.1093/icesjms/fsaa003>
- Í Kongsstovu, S., Dahl, H. A., Gíslason, H., Homrum, E. í, Jacobsen, J. A., Flicek, P., and Mikalsen, S. O. 2020. Identification of male heterogametic sex-determining regions on the Atlantic herring *Clupea harengus* genome. Journal of Fish Biology 97(1), 190-201. <https://doi.org/10.1111/jfb.14349>
- Í Kongsstovu, S., Mikalsen, S., Homrum, E. í, Jacobsen, J. A., Flicek, P., Dahl, H. A. 2019. Using long and linked reads to improve an Atlantic herring (*Clupea harengus*) genome assembly Sci Rep 9, 17716 (2019). <https://doi.org/10.1038/s41598-019-54151-9>
- Kristiansen, I., Hátún, H., Petursdóttir, H., Gíslason, A., Broms, C., Melle, W., Jacobsen, J. A., Eliassen, S. K., Gaard, E. 2019. Decreased influx of *Calanus* spp. into the south-western Norwegian Sea since 2003. Deep. Res. Part I 149. <http://doi.org/10.1016/j.dsr.2019.05.008>
- Nikolioudakis, N., Skaug, H. J., Olafsdóttir, A. H., Jansen, T., Jacobsen, J. A., Enberg, K. 2019. Drivers of the summer-distribution of Northeast Atlantic mackerel (*Scomber scombrus*) in the Nordic Seas from 2011 to 2017; a Bayesian hierarchical modelling approach. ICES Journal of Marine Science 76(2), 530-548. <http://doi.org/10.1093/icesjms/fsy085>
- Ólafsdóttir, A. H., Utne, K. R., Jacobsen, J. A., Jansen, T., Óskarsson, G. J., Nøttestad, L., Elvarsson, B. P., Broms, C., and Slotte, A. 2019. Geographical expansion of Northeast Atlantic mackerel (*Scomber scombrus*) in the Nordic Seas from 2007 to 2016 was primarily driven by stock size and constrained by low temperatures. Drivers of dynamics of small pelagic fish resources: environmental control of long-term changes. Deep Sea Research Part II: Topical Studies in Oceanography 159, 152-168. <https://doi.org/10.1016/j.dsr2.2018.05.023>
- Vendramin, N., Cuenca, A., Sørensen, J., Alencar, A. L. F., Christiansen, D. H., Jacobsen, J. A., Axen, C., Lieffrig, F., Ruane, N. M., Martin, P., Sheehan, T., Iburg, T. M., Rimstad, E., Olesen, N. J. 2019. Presence and genetic variability of Piscine orthoreovirus genotype 1 (PRV-1) in wild salmonids in Northern Europe and North Atlantic Ocean. Journal of Fish Diseases 42(8): 1107-1118. <https://doi.org/10.1111/jfd.13025>
- Ó Maoiléidigh, N., White, J., Hansen, L. P., Jacobsen, J. A., Potter, T., Russell, I., Reddin, D., et al. 2018. Fifty years of marine tag recoveries from Atlantic salmon. ICES Cooperative Research Report No. 343. 121 pp.
- Gilbey, J., Wennevik, V., Bradbury, I. R., Fiske, P., Hansen, L. P., Jacobsen, J. A., Potter, T., 2017. Genetic

- stock identification of Atlantic salmon caught in the Faroese fishery. *Fisheries Research* 187, 110-119.
- Gastauer, S., Fässler, S. M. M., O'Donnell, C., Høines, Å., Jacobsen, J. A., Krysov, A. I., Smith, L., Tangen, Ø., Anthonypillai, V., Mortensen, E., Armstrong, E., Schaber, M., and Scouling, B. 2016. The distribution of blue whiting west of the British Isles and Ireland. *Fisheries Research* 183, 32-43.
- Nøttestad, L., Utne, K. R., Oskarsson, G. J., Jónsson, S., Jacobsen, J. A., Tangen, Ø., Anthonypillai, V., Aanes, S., Vølstad, J. H., Bernasconi, M., Debes, H. H., Smith, L., Sveinbjørnsson, S., Holst, J. C., Jansen, T., and Slotte, A. 2016. Quantifying changes in abundance, biomass, and spatial distribution of Northeast Atlantic mackerel (*Scomber scombrus*) in the Nordic seas from 2007 to 2014. *ICES Journal of Marine Science* 73(2), 359-373.
- Olafsdóttir, A. H., Slotte, A., Jacobsen, J. A., Oskarsson, G. J., Utne, K. R., and Nøttestad, L. 2016. Changes in weight-at-length and size-at-age of mature Northeast Atlantic mackerel (*Scomber scombrus*) from 1984 to 2013: effects of mackerel stock size and herring (*Clupea harengus*) stock size. *ICES Journal of Marine Science* 73(4), 1255-1265. <https://doi.org/10.1093/icesjms/fsv142>
- Pacariz, S. V., Hátún, H., Jacobsen, J. A., Johnson, C., Eliassen, S. K., and Rey, F. 2016. Nutrient-driven poleward expansion of the Northeast Atlantic mackerel (*Scomber scombrus*) stock: A new hypothesis. *Elementa: Science of Anthropocene* 4(105), 13 pp.
- Jansen, T., Kristensen, K., van der Kooij, J., Post, S., Campbell, A., Utne, K. R., Carrere, P., Jacobsen, J. A., Gudmundsdóttir, A., Roel, B. A. and Hatfield, E. M. C. 2015. Nursery areas and recruitment variation of Northeast Atlantic mackerel (*Scomber scombrus*). *ICES Journal of Marine Science*, 72: 1779-1789. <https://doi.org/10.1093/icesjms/fsv186>
- Stenevik, E. K., Vølstad, J. H., Høines, Å., Aanes, S., Oskarsson, G. J., Jacobsen, J. A., and Tangen, Ø. 2015. Precision in estimates of density and biomass of Norwegian spring-spawning herring based on acoustic surveys. *Marine Biology Research* 11(5), 449-461.
- Libungan, L. A., Oskarsson, G. J., Slotte, A., Jacobsen, J. A., and Pálsson, S. 2015. Otolith shape: a population marker for Atlantic herring *Clupea harengus*. *Journal of Fish Biology* 86(4), 1377-1395.
- Pampoulie, C., Slotte, A., Óskarsson, G. J., Helyar, S. J., Jónsson, Á., Ólafsdóttir, G., Skírnisdóttir, S., Libungan, L. A., Jacobsen, J. A., Joensen, H., Nielsen, H. H., Sigurðsson, S. K., and Danielsdóttir, A. K. 2015. Stock structure of Atlantic herring *Clupea harengus* in the Norwegian Sea and adjacent waters. *Marine Ecology Progress Series* 522, 219-230.
- Trenkel, V. M., Huse, G., MacKenzie, B. R., Alvarez, P., Arrizabalaga, H., Castonguay, M., Goñi, N., Grégoire, F., Hátún, H., Jansen, T., Jacobsen, J. A., Lehodey, P., Lutcavage, M., Mariani, P., Melvin, G. D., Neilson, J. D., Nøttestad, L., Oskarsson, G. J., Payne, M. R., Richardson, D. E., Senina, I., and Speirs, D. C. 2014. Comparative ecology of widely distributed pelagic fish species in the North Atlantic: Implications for modelling climate and fisheries impacts. *North Atlantic Ecosystems, the role of climate and anthropogenic forcing on their structure and function. Progress in Oceanography* 129, Part B, 219-243.
- Jacobsen, J.A., Hansen, L.P., Bakkestuen, V., Halvorsen, R., Reddin, D.G., White, J., Ó Maoiléidigh, N., Russell, I.C., Potter, E.C.E., Fowler, M., Smith, G.W., Mork, K.A., Isaksson, A., Oskarsson, S., Karlsson, L., and Pedersen, S. 2012. Distribution by origin and sea age of Atlantic salmon (*Salmo salar*) in the sea around the Faroe Islands based on analysis of historical tag recoveries. *ICES Journal of Marine Science* 69: 1598-1608.
- Payne, M.R., Egan, A., Fässler, S.M.M., Hátún, H., Holst, J.C., Jacobsen, J.A., Slotte, A., and Loeng, H. 2012. The rise and fall of the NE Atlantic blue whiting. *Marine Biology Research*, 8: 475-487.
- Utne, K.U., Huse, G., Ottersen, G., Holst, J.C., Zabavnikov, V., Jacobsen, J.A., Óskarsson, G.Ó., Nøttestad, L. 2012. Horizontal distribution and overlap of planktivorous fish stocks in the Norwegian Sea during summers 1995-2006. *Marine Biology Research*, 8: 420-441.
- Mork, K.A., Gilbey, J., Hansen, L.P., Jensen, A. J., Jacobsen, J.A., Holm, M., Holst, J.C., Ó Maoiléidigh, N., Vikebø, F.B., McGinnity, P., Melle, W., Thomas, K., Verspoor, E., and Wennevik, V. 2012. Modelling the migration of post-smolt Atlantic salmon (*Salmo salar*) in the Northeast Atlantic. *ICES Journal of Marine Science* 69, 1616-1624.
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- 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. *Prog. Oceanogr.*, 80: 149-162.
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- Holm, M., Hansen, L.P., Holst, J.C., Haugland, M., Jacobsen, J.A., and Sturlaugsson, J. 2005. Lik og ulikt om laks. In *Havets ressurser og miljø 2005. Fisken og Havet, særnummer 1*, pp. 196-200. Ed. by Bakketeig, I., Dommasnes, A., Føyn, L., Haug, T., Iversen, S.A., Røttingen, I., Svendsen, E. & Torstensen, E. Havforskningsinstituttet i Bergen, Norge.
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- Hansen, L.P. and Jacobsen, J.A. 2003. Origin, migration and growth of wild and escaped farmed Atlantic salmon, *Salmo salar* L., in oceanic areas north of the Faroe Islands. *ICES Journal of Marine Science*, 60: 110-119.
- Hansen, L.P., Holm, M., Holst, J.C., and Jacobsen, J. A. 2003. The Ecology of Post-Smolts of Atlantic Salmon. In *Salmon at the edge*, pp. 25-39. Ed. by D. Mills. Blackwell Science, Oxford.
- Holm, M., Holst, J.C., Hansen, L.P., Jacobsen, J.A., O'Maoileidigh, N., and Moore, A. 2003. Migration and Distribution of Atlantic Salmon Post-Smolts in the North Sea and North-East Atlantic. In *Salmon at the edge*, pp. 7-23. Ed. by D. Mills. Blackwell Science, Oxford.
- Hansen, L.P., Friedland, K.D., Holm, M., Holst, J.C. and Jacobsen, J.A. 2002. Temporal and spatial migration and distribution of Atlantic salmon, *Salmo salar* L., in the Northeast Atlantic Ocean. *North Pacific Anadromous Fish Commission Technical Report* (4): 15-17.
- Hansen, L.P. and Jacobsen, J.A. 2002. Atlantic salmon: the ocean traveller. *ICES Marine Science Symposia*, 215: 371-381.
- Jacobsen, J.A. 2002. Sloppin alilaksur millum villa laksin í sjónum. *Frøði* (1/2002): 18-24. (In Faroese: "Escaped farmed Atlantic salmon among wild salmon in the sea").
- Jacobsen, J.A., Lund, R.A., Hansen, L.P., and O'Maoileidigh, N. 2001. Seasonal differences in the origin of Atlantic salmon (*Salmo salar* L.) in the Norwegian Sea based on estimates from age structures and tag recaptures. *Fisheries Research*, 52: 169-177.
- Jacobsen, J.A., and Hansen, L.P. 2001. Feeding habits of wild and escaped farmed of Atlantic salmon, *Salmo salar* L., in the Northeast Atlantic. *ICES Journal of Marine Science*, 58: 916-933.
- Kristiansen, T.S., Michaelsen, K., Jacobsen, J.A., and Huse, I. 2001. Optimal selection of temperature areas by juvenile cod (*Gadus morhua* L.) in the Barents Sea modelled by dynamic optimisation. *ICES Journal of Marine Science*, 58: 172-182.
- Hansen, L.P., and Jacobsen, J.A. 2000. Distribution and migration of Atlantic salmon, *Salmo salar* L., in the sea. In *The ocean life of Atlantic salmon: Environmental and biological factors influencing survival*, pp. 75-87. Ed. by D. Mills. Fishing News Books, Blackwell Science, Oxford.
- Jacobsen, J.A. 2000. Aspects of the marine ecology of Atlantic salmon (*Salmo salar* L.). Dr.scient. thesis at the University of Bergen, Norway, May 2000. 80 pp.
- Jacobsen, J.A., and Hansen, L.P. 2000. Feeding habits of Atlantic salmon at different life stages at sea. In *The ocean life of Atlantic salmon: Environmental and biological factors influencing survival*, pp. 170-192. Ed. by D. Mills. Fishing News Books, Blackwell Science, Oxford.