

Artiklar i internasjonale tidsskrift

- Jakobsson, J. and Østvedt, O.J. 1999. A review of joint investigations on the distribution of herring in the Norwegian and Iceland Seas 1950-1970. *Rit Fiskideildar* 16:209-238.
- Jennings, S., Alvsvåg, J., Cotter, A.J.R., Ehrich, S., Greenstreet, S.P.R., Jarre-Teichmann, A., Mergardt, N., Rijnsdorp, A.D. and Smedstad, O. 1999. Fishing effects in northeast Atlantic shelf seas: patterns in fishing effort, diversity and community. III. International trawling effort in the North Sea: an analysis of spatial and temporal trends. *Fisheries Research* 40:125-134.
- Smith, T.D., Allen, J., Clapham, P.J., Hammond, P.S., Katona, S., Larsen, F., Lien, J., Mattila, D., Palsbøll, P.J., Sigurjónsson, J., Stevick, P.T. and Øien, N. 1999. An ocean-basin-wide mark-recapture study of the North Atlantic humpback whale (*Megaptera novaeangliae*). *Marine Mammal Science* 15(1):1-32.
- Stevick, P.T., Øien, N. and Mattila, D.K. 1999. Migratory destinations of humpback whales from Norwegian and adjacent waters: evidence for stock identity. *J.Cetacean Res. Manage*:1(2):147-152.
- Tolley, K. et al. 1999. Genetic population structure of harbour porpoises (*Phocoena phocoena*) in the North Sea and Norwegian waters. *J. Cetacean Res. Manage*. 1(3):265-274.
- Westgate, A.J. and Tolley, K.A. 1999. Geographical differences in organochlorine contaminants in harbour porpoises *Phocoena phocoena* from the Western North Atlantic. *Marine Ecology Progress Series* 177:255-268.

ICES/internasjonale organisasjoner

- Bergstad, O.A. and Langedal, G. 1999. Norwegian Deep Sea Fisheries: Management, data collection and research activities. *Bidrag til EC Open Hearing on Deep-Sea Species, Brussel, 22.06.1999*, 12 p.
- Bjordal, Å. 1999. The precautionary approach to sustainable utilisation of marine ecosystems. In: Schei, P.J., Sandlund, O.T. and Strand, R. (Eds.) *Proceedings from the Norway/UN Conference on the Ecosystem Approach for Sustainable Use of Biological Diversity, 06 - 10.09.1999, Trondheim, Norway*.
- Bogstad, B., Fotland, Å. and Mehl, S. 1999. A revision of the abundance indices for cod and haddock from the Norwegian winter survey in the Barents Sea, 1983-1999. *Working Document to the Arctic Fisheries Working Group, Copenhagen, 23.08 - 01.09.1999*.
- Bogstad, B., Fotland, Å. and Yaragina, N.A. 1999. A revision of the catch data for Northeast Arctic cod. *Working Document to the Arctic Fisheries Working Group, Copenhagen, 23.08 - 01.09.1999*.
- Bogstad, B. and Gjøsaeter, H. 1999. Predation by cod (*Gadus morhua*) on capelin (*Mallotus villosus*) in the Barents Sea. *Working Document to the NPBW Working Group meeting 27.04 - 05.05.1999*.
- Dommasnes, A. 1999. Norwegian tagging experiments on Norwegian spring spawning herring. *Working Document to the ICES Northern Pelagic and Blue Whiting Fisheries Working Group 27.04 - 05.05.1999*.
- Gjøsaeter, H. 1999. Norwegian investigations and fishing on

capelin during spring 1999. *Working Document to the NPBW Working Group meeting 27.04 - 05.05.1999*.

- Gjøsaeter, H. 1999. The Barents Sea capelin. Draft of chapter 4 in the WGNPBW report. *Working Document to the NPBW Working Group meeting 27.04 - 05.05.1999*.
- Gjøsaeter, H. 1999. Prognosis for development of the Barents Sea capelin stock. *Working Document to the Arctic Fisheries Working Group, Copenhagen, 23.08 - 01.09.1999*.
- Gjøsaeter H., Mamylov V., Ushakov, N., Prozorkevitch D. and Tjelmeland S. 1999. Report from the 1998 joint Russian-Norwegian meeting to assess the Barents Sea capelin stock. *Working Document to the ICES Northern Pelagic and Blue Whiting Fisheries Working Group, Copenhagen, 27.04-05.05.1999*.
- Holst, J.C., Blindheim, B., Couperus, B., Hammer, C., Jákupsstovu, H., Melle, W., Mork, K.A., Stein, M., Vilhjálmsson, H., Götz, S., Krysov, A., Martin B., and Zimmermann, C. 1999. Report on surveys of the distribution, abundance and migrations of the Norwegian spring-spawning herring, other pelagic fish and the environment of the Norwegian Sea and adjacent waters in late winter, spring and summer of 1999. *ICES CM 1999/D:3 Ref. ACFM*.
- ICES (Bergstad, O.A. m.fl.) 1999. Report of the ICES Study Group on the Biology and Assessment of Deep-Sea Fisheries Resources, *ACFM:21*, 35 p.
- ICES (Tjelmeland, S. m.fl.) 1999. Report of the study group to evaluate the effects of multispecies interactions. Lowestoft, UK, 07 - 11.09.1999. *ICES CM 1999/D:4*.
- ICES (Bogstad, B., Fotland, Å., Jakobsen, T., Marshall, C.T., Mehl, S. and Nedreaas, K.H. m.fl.) 1999. Report of the Arctic Fisheries Working Group. *ICES 1999/ACFM:3*, 276 pp.
- ICES (Bogstad, B., Jakobsen, T., Korsbrekke, K., Skagen, D.W., Tjelmeland, S.) 1999. *Report of the Comprehensive Fishery Evaluation Working Group. ICES CM 1999/D:1*, 156 pp.
- ICES 1999 (Dommasnes, A., Fossum, P., Gjøsaeter, H., Hiis Hauge, K., Melle, W., Monstad, T., Røttingen, I., Bogstad, B., Tjelmeland, S. og andre). *Report of the Northern Pelagic and Blue Whiting Fisheries Working Group. ICES CM 1999/ACFM:18*, 238 pp.
- ICES, (Frøysa, K.G., Skagen, D.W., Torstensen, E. m.fl.) 1999. Report of Herring Assessment Working Group. *ICES CM 1999/ACFM:12*.
- ICES (Gill, H. m.fl.) 1999. Report of the Working Group on mackerel and horse mackerel egg surveys. *ICES CM/G:5*.
- ICES (Gill, H. m.fl.) 1999. Report of the horse mackerel otolith workshop. *ICES CM/G:19*.
- ICES 1999 (Iversen, S.A., Myklevoll, S. m.fl.). Spatial pattern of migration and recruitment on northeast Atlantic mackerel. *Final report for EC project 96/035*.
- ICES (Iversen, S.A., Skagen, D.W., Nedreaas, K.H. m.fl.) 1999. Report of the study group on multiannual assessment procedures. *ICES CM/ACFM:11*.
- ICES (Johannessen, T., Smedstad, O.M. m.fl.) 1999. Report of the Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak. *ICES CM 1999/ACFM:8*.
- ICES (Nedreaas, K. m.fl.) 1999. Report of the North-Western Working Group. ICES Headquarters 26.04 - 04.05.1999. 329 pp. *ICES CM 1999/ACFM:17*.
- ICES (Smedstad, O.M. m.fl.) 1999. Report of the

- International Bottom Trawl Survey Working Group. *ICES CM 1999/D:2*.
- ICES (Tveite, S. m.fl.) 1999. Report of the Working Group on the assessment of *Pandalus* Stocks, September 1998. *ICES CM 1999/ACFM:5*.
- ICES (Tveite, S. m.fl.) 1999. Report of the Working Group on *Nephrops* Stocks, April 1999. *ICES CM 1999/ACFM:13*.
- ICES (Torstensen, E. m.fl.) 1999. Report of Planning Group for Herring Surveys. *ICES CM 1999/G:7*, Ref. D.
- ICES (Torstensen, E. m.fl.) 1999. Report of the Study Group on IIIa Herring (SG3AH). *ICES CM 1999/ACFM:10* Ref. G.
- Iversen, S.A. 1999. Biological evidence for a separate spawning stock (component) of mackerel in the North Sea. *Working Document for the MHSA assessment WG, ICES, 14-23.09.1999*.
- Iversen, S.A. and Eltink, A. 1999. Egg production and spawning stock size of mackerel in the North Sea in 1999. *Working Document for the MHSA assessment WG, ICES, 14-23.09.1999*.
- Iversen, S.A., Skogen, M. and Svendsen, E. Prediction of the Norwegian fishery of horse mackerel in 2000. *Working Document for the MHSA assessment WG, ICES, 14-23.09.1999*.
- Korsbrekke, K. and Mehl, S. 1999. The ability of standard demersal surveys to evaluate the fisheries impact on the Barents Sea ecosystem. *ICES/SCOR Symposium on Ecosystem Effects of Fishing, Montpellier, France, 15-19.03.1999. Poster*.
- Korsbrekke, K., Mehl, S., Nakken, O. and Pennington, M. 1999. Acoustic and bottom trawl surveys; how much information do they provide for assessing the Northeast Arctic cod stock? *ICES CM 1999/J:07*, 14 pp.
- Mehl, S. 1999. Inter-sessional assessment Northeast Arctic saithe. Institute of Marine Research, Bergen, Norway, 1 December 1998. *Working Document to the Arctic Fisheries Working Group, 23.08 – 01.09.1999*.
- Mehl, S. 1999. Investigations on demersal fish in the Barents Sea winter 1999. Main results. *Working Document to the Arctic Fisheries Working Group 23.08 – 01.09.1999*.
- Monstad, T. and Gullaksen, O. 1999. Survey activities on blue whiting and hydrography west of the British Isles during spring 1999. *Working Note for NEAFC Workshop on blue whiting, Torshavn 2-4 February 1999*.
- Monstad, T. and Holst, J.C. Observations of Blue Whiting in the Norwegian Sea during spring and summer 1998. *ICES Northern pelagic and blue whiting fisheries working group, 1999*.
- Monstad, T., Søiland, H. and Shamrai, E. 1999. Observations of blue whiting and hydrography west of the British Isles during spring 1999. *Working Document for the Northern Pelagic and Blue Whiting Fisheries Working Group, Copenhagen, 27.04 – 05.05.1999*.
- Monstad, T. and Holst, J.Ch. 1999. Observations of blue whiting in the Norwegian Sea during spring and summer 1998. *Working Document for the Northern Pelagic and Blue Whiting Fisheries Working Group, Copenhagen, 27.04 – 05.05.1999*.
- Nakken, O. 1999. Comments on the assessment of Northeast Arctic cod. *Working document to ACFM, Autumn 1999*.
- Simmonds, E.J., Bailey, M., Toresen, R., Torstensen, E., Pedersen, J., Götz, E., Fernandes, P. and Couperus, A.S. 1999. 1998 co-ordinated acoustic survey of ICES Divisions IIIa, IVa, IVb and VIa (north). *ICES CM, J:16* (poster).
- Skaug, H.J. 1999. Combination of multi-year surveys for Northeastern Atlantic minke whale. *IWC/Scientific Committee Paper SC/51/RMP10*.
- Skaug, H.J. 1999. Whale abundance estimated from genetic relationships between individuals in catches. *IWS Scientific Committee Paper SC/51/08*.
- Slotte, A. 1999. The Norwegian age and length specific fishery of Norwegian spring spawning herring in 1998. *Working Group Paper at the ICES Northern Pelagic and Blue Whiting Fisheries Working Group 1999*.
- Slotte, A. and Dommasnes, A. 1999. Distribution and abundance of Norwegian spring spawning herring during the spawning season in 1999. *Working Group Paper at the ICES Northern Pelagic and Blue Whiting Fisheries Working Group 1999*.
- Tjelmeland S. 1999. Problems connected to the assessment of Norwegian spring spawning herring. *Working document to the ICES Northern Pelagic and Blue Whiting Fisheries Working Group, Copenhagen, 27.04 – 05.05.1999*.
- Tjelmeland, S. 1999. Biological reference points and harvesting control in the Barents Sea - a discussion note. *Working document to the ICES SGEEMI Working Group, Lowestoft, 07-11.11.1999*.
- Tolley, K.A., Rosel, P.E., Sundt, R.C., Walton, M., Bjørge, A. and Øien, N. 1999. Genetic population structure of harbour porpoises (*Phocoena phocoena*) in the North Sea and Norwegian waters. *IWC Scientific Committee Paper SC/51/SM7*.
- Øien, N. 1999. Report of the Norwegian 1998 sighting survey for minke whales. *IWC/SC/51/RMP 12*.

Andre rapporter/publikasjoner

- Bekkby, T. and Bjørge, A. 1999. Harbour seal (*Phoca vitulina*) mother-pup interactions. The degree of limitation of nursing. *13th Biennial Conference on the Biology of Marine Mammals, Maui, 28. Nov. - 3. Dec. 1999. (poster)*.
- Berntsen, J., Bjordal, Å., Nakken, O., Ulltang, Ø. og Walløe, L. 1999. Hvordan beregning og framskriving av fiskebestander kan forbedres. *Rapport, Havforskningsinstituttet, 24.04.1999, 12 s.*
- Bjordal, Å. 1999. Leppefisk i Toresen, R. et al. 1999, *Havets ressurser 1999, Fiskerihav, Særnr. 1:110-111*.
- Bogstad, B. 1999. Norsk-arktisk torsk i Toresen, R. et al. 1999, *Havets ressurser 1999, Fiskerihav, Særnr. 1: 15-19*.
- Borge, A., Fotland, Å., Gjosæter, H. and Mjanger, H. 1999. *Manual for sampling of fish and crustaceans*.
- Bjørge, A. and Øien, N. 1999. Statusrapport for Havforskningsinstituttets overvåking av kystsel. *Rapport SPS-9904, oktober 1999*.
- Footo, K.G. and Røttingen, I. 1999. Acoustic abundance estimation of midwater animals. *Arbeid presentert på møte i "Acoustical society of America" og "America and European Acoustic association". Berlin, 15.-19. mars 1999*.
- Frøysa, K.G. 1999. Gir Fleksibest betre torskforvaltning? *Kronikk i Fiskaren 24.02.1999*.
- Gjosæter, H. 1999. Polartorsk i Toresen, R. et al. *Havets ressurser 1999, Fiskerihav, Særnr. 1:104-105*.
- Gjosæter, H. 1999. Lodde i Toresen, R. et al. *Havets ressurser 1999, Fiskerihav, Særnr. 1:25-29*.
- Graner, F., Bjørge, A. and Kock, K.-H. 1999. Behaviour of

- harbour porpoises (*Phocoena phocoena*) in Indre Sognefjord, Norway, with integrated studies testing cognitive abilities. *13th Biennial Conference on the Biology of Marine Mammals, Maui*, 28. Nov. - 3. Dec. 1999. (poster).
- Holst, J.C. og Melle, W. 1999. Sildas beiting i Norskehavet; grunnlaget for høsting av bestanden. *Spissartikkel til Aure, J. et al., Havets miljø 1999, Fiskerihav, Særnr. 2:100-104.*
- Iversen, S.A. 1999. Makrell i *Toresen, R. et al, Havets ressurser 1999, Fiskerihav, Særnr. 1:79-84.*
- Iversen, S.A. 1999. Taggmakrell i *Toresen, R. et al, Havets ressurser 1999, Fiskerihav, Særnr. 1:85-87.*
- Jakobsen, T. 1999. Management strategies for the fish stocks in the Barents Sea. *Proceedings of the 8th Norwegian-Russian Symposium. Bergen 15-16.06.1999.*
- Lettervall, E. and Øien, N. 1999. Mark-recapture modelling of the sperm whale population off Andenes in the Norwegian Sea. *13th Biennial Conference on the Biology of Marine Mammals, Maui*, 28. Nov. - 3. Dec. 1999. (poster).
- Mehl, S. 1999. Sei nord for 62°N i *Toresen, R. et al. 1999, Havets ressurser 1999, Fiskerihav, Særnr. 1:53-56.*
- Michalsen, K. 1999. Fiskeressursene nå og i fremtiden. *Rapport fra Norges Fiskarlag sitt landsmøte for tillitsvalgte, Trondheim 10.12.1999.*
- Michalsen, K. 1999. Rapport vedrørende Fiskerilaget sitt forslag om grensedragning og konsekvensene for brosmebestandene langs kysten. *Havforskningsinstituttet, desember 1999*, 8 s.
- Nakken, O. 1999. Retrospective review of management advice and TACs for some stocks. *Paper to the 8th Norwegian-Russian Symposium Management strategies for the fish stocks in the Barents Sea, Bergen, 15-16.06.1999.*
- Nedreaas, K.H. 1999. Norsk-arktisk blåkveite i *Toresen et al. 1999, Havets ressurser 1999, Fiskerihav, Særnr. 1:61-66.*
- Nedreaas, K.H. 1999. Uer i *Toresen, R. et al. 1999, Havets ressurser 1999, Fiskerihav, Særnr.1:66-70.*
- Nedreaas, K.H. 1999. Breiflabb i *Toresen, R. et al. 1999, Havets ressurser 1999, Fiskerihav, Særnr.1:108-110.*
- Nedreaas, K., Solbakken, L. and Sæverud, A. 1999. Merking av blåkveite - historiske og nye foreløpige resultat. *Fiskerimagasinet nr. 7/8, 08.1999.*
- Røttingen, I. 1999. Norsk vårgytende sild i *Toresen, R. et al. 1999, Havets ressurser 1999, Fiskerihav, Særnr.1:45-48.*
- Røttingen, I. 1999. Silda fra Lindesnes. *Kronikk i Fiskaren 15.02.1999.*
- Røttingen, I. 1999. Silda i Trondheimsfjorden. *Kronikk i Adresseavisen 15.02.1999.*
- Slotte, A. and Dommasnes, A. 1999. Distribution and abundance of Norwegian spring spawning herring during the spawning season in 1999. *Fisken og Havet Nr. 12, 27 s.*
- Stensholt, B.K. and Nakken, O. 1999. Spatial density and size distributions of 0-group fish in relation to environmental factors. *The 17th Lowell Wakefield Fisheries Symposium on Spatial Processes and management of fish population, Anchorage Alaska 27-30.10.1999.*
- Tolley, K., Rosel, P.E. and Vikingsson, G. 1999. Intra-oceanic population structure of harbour porpoises from the North Atlantic based on mitochondrial DNA sequence variation. *13th Biennial Conference on the Biology of Marine Mammals, Maui*, 28 Nov. - 3 Dec. 1999. (Poster).
- Toresen, R. 1999. Sild sør for 62°N i *Toresen, R. et al., Havets ressurser 1999, Fiskerihav, Særnr. 1:1999.*
- Toresen, R. 1999. Klimaendring og sildefisket. *Kronikk i Bergens Tidende 07.09.1999.*
- Toresen, R. 1999. Variasjoner i sildemengde - styrt av klima eller fiskeriene. *Kronikk i Fiskaren 10.09.1999.*
- Torstensen, E. 1999. Utsiktene for kyst- og fjordfiske av brisling i 1999. *Fiskets Gang 1999 (1):35-37.*
- Torstensen, E. 1999. Brisling i *Toresen, R. et al. Havets ressurser 1999, Fiskerihav, Særnr.1:88-90.*
- Yaragina, N. and Aglen, A. 1999. Basis for stock assessment and management advice. *Proceedings of the 8th Norwegian-Russian Symposium. Bergen 15-16.06.1999.*
- Øien, N. 1999. Norsk fangst og undersøkelser av sel i 1998. *Notat SPS 9902*. 11 s.
- Øien, N., Bjørge, A., Hartvedt, S. and Fagerheim, K.-A. 1999. Dispersal and by-catch mortality in juvenile harbour and grey seals at the Norwegian coast. *13th Biennial Conference on the Biology of Marine Mammals, Maui*, 28 Nov. - 3 Dec. 1999. (Poster).

Foredrag

- Bjordal, Å. 1999. By-catch Control through Technical Regulations and Fisheries Monitoring. The International Conference on Integrated Fisheries Monitoring. Sydney, Australia, 01-05.02.1999.
- Bjordal, Å. 1999. Føre-var-forvaltning i praksis. 53. *Representantskapsmøte, Fiskebåtrederens Forbund, Ålesund, 07. - 08.01.1999.*
- Bjordal, Å. 1999. Havets ressurser 1999. *Havforskningsinstituttets årskonferanse, Bergen, 08.03.1999.*
- Bjordal, Å. 1999. Hvordan vet vi hvor mye fisk det er i havet. *Havforskningsinstituttets årskonferanse, Bergen, 08.03.1999.*
- Bjordal, Å. 1999. Norsk-russisk samarbeid innen havforskning. *Seminar, Det norske generalkonsulat, Murmansk, 23.03.1999.*
- Bjordal, Å. 1999. Resource monitoring and management advice. Delegation from NOAA (USA), Bergen 23.04.1999.
- Bjordal, Å. 1999. Ressurssituasjonen for år 2000. *FNLs generalforsamling 29.04.1999, Oslo.*
- Bjordal, Å. 1999. Havets rammebetingelser for fiske i norske farvann. *Avslutningsseminar, Nfr-program "Teknologiutvikling i fiskerisektoren", Værnes 18.-19.10.99.*
- Bjordal, Å. 1999. Fiskeriforvaltning etter "føre-var prinsipp". *Årsmøte, Nord-Norges Rederiforening, Bodø, 26.-27.11.1999.*
- Bjørge, A., Bekkby, T. and Bryant, E. 1999. Harbour seal summer home range and ecology as explored by a combined GIS and population energetics model. *13th Biennial Conference on the Biology of Marine Mammals, Maui*, 28.11 - 03.12.1999.
- Dommasnes, A. 1999. Stock monitoring and advice on management of pelagic fish stocks. *Foredrag for tyske journalister. Havforskningsinstituttet, 16.09.1999.*
- Dommasnes, A. 1999. Stock monitoring and advice on management of pelagic fish stocks. *Foredrag for hollandske journalister. Havforskningsinstituttet 06.12.1999.*
- Fosså, J.H. and Misund, O.A. 1999. Recent regulations to prevent deterioration of deep-water coral reef off Western Norway. *ICES WGFTFB, St. John,*

- 20.04.1999.
- Frøysa, K.G. 1999. Presentasjon av Fleksibest. *Ukens Orientering* 03.02.1999.
- Furevik, D.M. 1999. Fishing gear and fish behaviour. (European Platform for Dutch Education). *Seminar, Havforskningsinstituttet, Bergen, 23.09.1999.*
- Gjosæter, H. 1999. Ressurssituasjonen for pelagisk fisk. *Sjømannsforbundets regionskonferanse for fiskere, Bergen 17.-18.12.1999.*
- Holst, J.C. 1999. Norwegian Sea: Decadal variations in growth of herring in response to the environment. *Holdt ved symposiet: Changing states of the large marine ecosystems of the North Atlantic and global environmental trends, Bergen 17-19.06.1999.*
- Iversen, S.A. 1999. Forskning og statistikk som grunnlag for norsk fiskeriforvaltning. *Kystvaktens nasjonale langkurs 02.02.1999.*
- Iversen, S.A. 1999. IMR as national and international advicer for fishery management bodies. *Delegasjon fra Mosambik 11.02.1999.*
- Iversen, S.A. 1999. Vandringsmønster, fordeling og eierandeler av makrell. *Krysspunktmøte, Fiskeridepartementet, 12.03.1999.*
- Iversen, S.A. 1999. Prospects for future pelagic fisheries. *Joint Committee on Agriculture, Food and the Marine of the Parliament of Ireland. Fiskeridirektoratet 08.09.1999.*
- Iversen, S.A. 1999. Kort orientering til Næringskomiteen, *Havforskningsinstituttet 06.10.1999.*
- Iversen, S.A. 1999. Bestandssituasjonen for pelagisk fisk. *FNLs internseminar om ressurser og reguleringer. Oslo 26.10.1999.*
- Iversen, S.A. 1999. Moderne målemetoder for pelagiske fiskebestander og innføring i føre var prinsippetts anvendelse i vitenskapelig rådgivning. *Vest-Norges Rederiforening. Bergen 06.12.1999.*
- Iversen, S.A. 1999. IMR and the implementation of precautionary approach in management advice. *Delegasjon fra Mosambik. Fiskeridirektoratet 10.12.1999.*
- Iversen, S.A. 1999. Utsikter for bestand og størrelsesfordeling i det norske makrellfisket i 2000. *FNL, Bergen 15.12.1999.*
- Jakobsen, T. 1999. Some consequences of long-term management strategies. *Contribution to the 8th Norwegian-Russian Symposium. Bergen, 15-16.06.1999.*
- Lauvås, K. 1999. Forholdet Havforskningsinstituttet - Kystvakten, prøvetaking av fisk. *Foredrag Fiskeriinspektørkurs ved KNM Tordenskjold 12.03.1999.*
- Lauvås, K. 1999. Samarbeid mellom Havforskningsinstituttet og Kystvakten. *Foredrag for kommandanten for Sjøstridskretene i Nord-Norge, 20.08.1999.*
- Lauvås, K. 1999. Samarbeid mellom Havforskningsinstituttet og Kystvakten. *Foredrag for Den norske atlantehavskomité, 25.08.1999.*
- Michalsen, K. 1999. Ressurssituasjonen for våre viktigste fiskebestander. *Nordmøre Fiskarlags årsmøte, Kristiansund, 19.11.1999.*
- Michalsen, K. 1999. Fiskeressursene nå og i fremtiden. *Norges Fiskarlag sitt landsmøte for tillitsvalgte, 10.12.1999.*
- Misund, O.A. 1999. "Nye G.O. Sars". *Kontaktmøte, Simrad, 21.01.1999.*
- Misund, O.A. 1999. "Grid-selection in purse seiner". *Gear and Technology Working Group Meeting, IATTC, La Jolla, 13.-14.04.1999.*
- Misund, O.A. 1999. "Experiences from 4 framework programme". *Konferanse om limkvalitet og forvaltning av levende ressurser, - et tematisk program i EUs 5. rammeprogram. Oslo, 16.04.1999.*
- Misund, O.A. 1999. ICES Strategic Plan. *ICES WGFTFB & WGFASST, St. John's, 19. - 22.04.1999.*
- Misund, O.A. 1999. "Bærekraftig fiske i framtidens fiskerinæring". *Avslutningsseminar "Teknologiutvikling i fiskerisektoren", Værnes, 19.10.1999.*
- Misund, O.A. 1999. "The scientists problems, expectations and demands". *Essential Noise Requirements for Fisheries Research Vessels, Havforskningsinstituttet, Bergen 02.11.1999.*
- Misund, O.A. 1999. "EU-finansiering og Norges forskningsråd". *Avslutningsseminar, MARRES og MAREMI, Geilo, 03.11.1999.*
- Misund, O.A. and Fosså, J.H. 1999. Recent regulation to prevent deterioration of the deep water coral reef off Western Norway. *ICES WGFTFB, St. John's, 20.04.1999.*
- Misund, O.A. Data uncertainty in monitoring fisheries and fish stocks and sonar techniques to improve accuracy. *Fisheries Science and Ehi CFP. A Greenwich Forum Conference, Palais des Congres, Brussels, 21.-22.09.1999.*
- Monstad, T. 1999. Blue Whiting; distribution, migration pattern and zonal distribution. *NEAFC's Workshop on Blue Whiting. Torshavn, 03.02.1999.*
- Monstad, T. 1999. Generell biologi om kolmule, vandringsmønster, fordeling på soner og nåværende status for bestanden. *Krysspunktmøte/formøte for NEAFC's arbeidsgruppemøte om kolmule i London i mai. Fiskeridepartementet, Oslo, 10.05.1999.*
- Nakken, O. 1999. Forvaltar vi bestandene i Barentshavs - Norskehavsområdet rett? *Foredrag på årsmøte i Norske Trålrederiets Forening, Oslo, 25.06.1999.*
- Nakken, O. 1999. Frihet, åpenhet og ansvar i forskningen i dag. *Foredrag på NIFU-konferanse om forskningsmeldingen St. meld. 39 1998-1999. 27.09.1999.*
- Nakken, O. 1999. Forskningsmetodar og forvaltning - kor mykje torsk er der og kor mykje kan fiskast? *Norske Havforskeres Forening. Årsmøte, Geilo, 03.-05.11.1999.*
- Nakken, O. 1999. Fiske og fangst i Norskehavet - Barentshavet. Korleis har kunnskapsforlaget utvikla seg og korleis er det brukt? *Fisk 2000, Norges fiskerihøgskole, 02.12.1999.*
- Nedreaas, K.H. 1999. Ressurssituasjonen for norsk-arktisk torsk og sei. *LofotFishing '99, Kabelvåg, 15.-18.04.1999.*
- Nedreaas, K.H. 1999. Assessment process of resources in the Norwegian Economic Zone. *Foredrag/orientering for fransk fiskeridelegasjon. HI, 07.06.1999.*
- Nedreaas, K.H. 1999. Orientering om ressursituasjonen for norsk-arktisk torsk, hyse og sei. *Reguleringsrådet, 08.06.1999.*
- Nedreaas, K.H. 1999. Ressurssituasjonen for våre viktigste fiskebestander/reker. *Troms Fiskarfylkings årsmøte Tromsø, 17.-18.06.1999.*
- Nedreaas, K.H. 1999. Bestandssituasjonen for hvitfisk. *FNLs internseminar om ressurser og reguleringer. Oslo, 26.11.1999.*
- Nedreaas, K.H. 1999. Orientering om bestandssituasjonen for dei kommersielt viktigaste artane. *Årsmøte i Sunnmøre og Romsdal Fiskarlag, Ålesund, 12.-13.11.1999.*
- Nedreaas, K.H. 1999. Orientering om ressursituasjonen for norsk-arktisk torsk, hyse, blåkveite, uer og lodde.

Norsk-russiske fiskerikommisjon, Murmansk 15.-19.11.1999.

- Røttingen, I. 1999. Anbefalinger fra Det internasjonale råd for havforskning om fiskekvoter i år 2000. *Sør-Trøndelag Fiskerilag, Trondheim 13.11.1999.*
- Røttingen, I. 1999. Ressurssituasjonen for en del bestander i nordområdene. *Nordland Sildfiskerilag, Bodø, 11.12.1999.*
- Røttingen, I. 1999. Norsk vårgytende sild i år 2000 og tiden framover. *Fiskerinæingens landsforening, Bergen, 15.12.1999.*
- Shevelev, M. and Gjosæter, H. 1999. Overview of fish stocks in the Barents Sea and adjacent areas. *Contribution to the 8th Norwegian-Russian Symposium. Bergen, 15-16.06.1999.*
- Smedstad, O.M. 1999. "Havforskningsinstituttet - Bestandsberegninger". *Foredrag Fiskeriinspektørkurs ved KNM Tordenskjold, 12.03.1999.*
- Toresen, R. 1999. Foredrag for nye hovedfagsstudenter i fiskeribiologi om Ressurssenteret og hvilke forskningsaktiviteter vi har her. 05.02.1999.
- Toresen, R. 1999. Presentasjon av Havets ressurser 1999. *Ukens orientering, 10.03.1999.*
- Toresen, R. 1999. Presentasjon av Havets ressurser 1999 for HIs styre, 14.04.1999.
- Toresen, R. 1999. HI, fiskeressurser og vår forskning. *Foredrag for tyske journalister fra TV-kanalen ZDF, 08.06.1999.*
- Toresen, R. 1999. De norske fiskeriene og fiskeriforvaltningen i Nordsjøen. *Foredrag for nederlandske lærere i videregående skole, 23.09.1999.*
- Torstensen, E. 1999. Orientering om ressurssituasjonen når det gjelder sild og brisling. *Rogaland Notfiskerilags årsmøte, 17.12.1999.*
- Torstensen, E. 1999. Orientering om prognosene for brisling-fisket i kyst- og fjordområdene 2000. *Oslofjordens Notfiskerilags årsmøte, 20.12.1999.*
- Tolley, K. et al. 1999. Population genetic structure of harbour porpoises (*Phocoena phocoena*) from the North Sea and Barents Sea. *Abstracts, 13th Annual Conference, European Cetacean Society, Valencia, Spain, 05-08.04.1999.*
- Yaragina, N. and Aglen, A. 1999. Basis for stock assessment and management advice. *Contribution to the 8th Norwegian-Russian Symposium. Bergen, 15-16.06.1999.*
- Øien, N. 1999. Kystsel - overvåking og forvaltning. *Foredrag ved Noregs Grunneigar - og Sjølaksefiskerilags landsmøte 1999. Scandic Hotell, Bergen, 29.01.1999.*
- Øritsland, T. 1999. The Norwegian "small type" whale fishery". *Europees Platform voor het Nederlandse Onderwijs (European Platform for Dutch Education). Seminar, Havforskningsinstituttet, Bergen, 23.09.1999.*

PROGRAM 92 - OVERVÅKING OG TILSTANDSVURDERING AV HAVMILJØET

Artiklar i internasjonale tidsskrift

- Bergstad, O.A., Bjelland, O. and Gordon, J.D.M. 1999. Fish communities on the slope of the eastern Norwegian Sea. *Sarsia* 84:67-78.
- Ottersen, G. Barents Sea temperatures and cod. Working Document to the ICES Arctic Fisheries Working Group, Copenhagen, 23 August – 1 September

1999.

ICES/internasjonale organisasjonar

- Dahl, E. and Tangen, K. 1999. The life with harmful algae in Norway – management. *ICES CM 1999/N: 05, 7 pp.*
- Gytre, T. 1999. Operational data acquisition and internet presentation of marine environmental data from ships of opportunity and fixed monitoring stations. *ICES CM 1999/Z:6, 9 pp.*
- Gytre, T., Aure, J. and Sætre, R. Long-term surface observations from ships of opportunity in Norwegian waters and in the North Sea. *Conference Proceedings Second EuroGoos International Conference, Rome, 10-13 March 1999, 9 pp.*
- Ottersen, G. Barents Sea temperatures and cod. Working Document to the ICES Arctic Fisheries Working Group, Copenhagen, 23 August – 1 September 1999.

Andre rapportar og publikasjonar

- Dahl, E. 1999. Algegifter i skjell, status 1998. *Fisken og Havet, Særnummer 3-1999: 89-91.*
- Dahl, E., Aune, T. og Tangen, K. 1999. Giftalger og algegifter i norske farvann. *Fisken og Havet, Særnummer 2-1999: 76-81.*
- Dahl, E., Reisvaag, A. og Böhm, N. 1999. Algegifter i skjell i Norge 1994-1998 – erfaring fra 5 års overvåking. *Fiskets Gang nr. 6/7-1999: 75-82.*
- Dahl, E., Aune, T., Hestdal, M. og Torp Varran, G. 1999. Algegifter i skjell langs kysten av Norge i 1998. *Fiskets Gang nr. 2-1999: 39-41.*
- Loeng, H., Ottersen, G. and Ådlandsvik, B. Varsling av havtemperaturer i Barentshavet. *Fisken og Havet, særnummer 2, 1999 (Miljørapporten) s 92-93.*
- Aure, J. et al, Havets miljø 1999. *Fisken Hav. Særnr. 2:1999. 104 s.*
- Aure, J. og Danielssen, D. 1999. Ytre Oslofjord - Hydrografi og næringssalter over terskeldyp. *Statlig program for forurensningsovervåking, rapport 785/99. Rapport Havforskningsinstituttet, desember 1999. 36 s.*
- Aure, J., Danielssen, D., Skogen, M., Svendsen, E. and Søiland, H. 1999. Environmental conditions during the *Chattonella* bloom in the North Sea and Skagerrak in May 1999. In report from 2. *Nordic Marine Science Meeting, Hirtshals, March 1999.*

Foredrag

- Gytre, T. 1999. Personal satellite terminal. Foredrag på 11. SeaNet meeting, Bergen, 2. – 4. juni 1999.

PROGRAM 93 – HAVBRUK OG RÅDGJEVING

Artiklar i internasjonale tidsskrift

- Hunt, M.C., Sørheim, O. and Slinde, E. 1999. Color and heat denaturation of myoglobin forms in ground beef; *Journal of Food Science, 64 (5):847-851.*
- Kristiansen, T.S. 1999. Enhancement studies of coastal cod (*Gadus morhua* L.) in Nord-Trøndelag, Norway. p. 277-293. In: Howell, B.R., E. Moksness and T. Svåsand (eds.): *Stock enhancement and sea ranching. Fishing News Books. 606 pp.*

- Otterå, H., Jørstad, K.E., Svåsand, T. and Kristiansen, T.S. 1999. Migration patterns and recapture rates of Northeast Arctic and Norwegian coastal cod reared and released under similar conditions. *Journal of Fish Biology* 54:213-217.
- Otterå, H., Kristiansen, T.S., Svåsand, T., Nordeide, J.T., Nævdal, G., Borge, A. and Pedersen, J. 1999. Enhancement studies of Atlantic Cod (*Gadus morhua* L.) in an exposed coastal area in western Norway. In: Howell, B.R., E. Moksness and T. Svåsand (eds.): *Stock enhancement and sea ranching*. *Fishing News Books*. P. 257-277.
- Otterå, H., Kristiansen, T.S., Svåsand, T., Nødtvedt, M. and Borge, A. 1999. Sea Ranching of Atlantic Cod (*Gadus morhua* L.): Effects of Release Strategy on Survival. In: Howell, B.R., E. Moksness and T. Svåsand (eds.): *Stock enhancement and sea ranching*. *Fishing News Books*. P. 293-306.
- Sægrov, H. and Skilbrei, O.T. 1999. Can stocking programs affect the predator stocks and decrease the survival of the wild Atlantic salmon juveniles? P. 182-189. In: Howell, B.R., E. Moksness and T. Svåsand (eds.): *Stock enhancement and sea ranching*. *Fishing News Books*. 606 pp.

ICES

- ICES (Ervik, A. m.fl.) 1999. Working Group on Environmental Interaction of Mariculture, *ICES CM 1999/F:2*, 62 pp.
- ICES (Holm, M. m.fl.) 1999. Report of the Working Group on north Atlantic Salmon 1998, *ICES CM 1999/ACFM:14*, 222 pp.
- Holm, M., Arnold, G.P., Holst, J.C. and Midling, K.Ø. 1999. Capture and handling of fish for electronic tagging - a review and a new non-intrusive capture method. *ICES CM 1999/AA:03* Theme Session on Microprocessors and Things that Swim in the Sea. 23 pp.
- Holm, M., Holst, J.C. and Hansen, L.P. 1999. Spatial distribution of post-smolts 1990-98 in the Norwegian Sea and adjacent areas in relation to hydrographical parameters. Working paper 1999/38, *ICES North Atlantic Salmon Working Group*, 9 pp. + fig.
- ICES (Hjeltnes, B. m.fl.) 1999. Working Group on Pathology and Diseases of Marine Organisms. Lisbon (Portugal 2-6 March) *ICES CM 1999/F:4*.

Andre publikasjoner/rapportar

- Bergh, Ø. og Grotmol, S. 1999. Helsesituasjon for kveite. *Havbruksrapport 1999, Fisken og Havet, Særnummer*, 1999, s. 52-53.
- Borgstrøm, R. og Ø. Skaala. 1999. Betydinga av lange tidsserier i forvaltningsrelatert havbruksforskning: Sjøaure i Hardangerfjorden. *Fisken og Havet*, 11:25 s.
- Duinker, A. og Mortensen, S. 1999. Kvalitet av skjell - et kritisk punkt for en voksende eksportnæring. *Norsk Fiskeoppdrett*, 19:30-32.
- Eiken, G. og Mortensen, S. 1999. Fra "Kamskjellprosjektet" til "Skjellprosjektet", s. 72-73, I: Kristiansen, T. (red.), *Havbruksrapport 1999, Fisken og Havet, Særnummer* 3, 1999, 155 s.
- Holm, M., Holst, J.C. og Hansen, L.P. 1999. Laks i havet - Kunnskapsstatus, forskningsbehov og flaskehals. Vedlegg 11 i NOU 1999:9 "Til laks åt alle kan ingen gjera?", pp 256- 272.
- Holm, M., Holst, J.C. and Hansen, L.P. 1999. Salmon in the summer - where, how and when do we find them

in the Northeast Atlantic? Results from Norwegian trawl surveys in 1990 - 1998. The Salmon Net. *The Magazine of the Salmon net Fishing Association of Scotland*, November 1999, pp 1-7.

- Holm, M. 1999. Capture, handling and recovery. Chapt 5.3, pp 6-15 in Thorsteinsson, V. 1999. Concerted Action "Improvements of Tagging Methods for Stock Assessment and Research in Fisheries" (CATAG), FAIR. CT.96.1394. FINAL REPORT May 1999. Unpublished report. available at <http://www.hafro.is/catag/>.
- Håstein, T. og Hjeltnes, B. 1999. Helsesituasjonen for laksefisk. *Havbruksrapport 1999, Fisken og Havet, Særnummer* 3, s. 30-32.
- Mortensen, S. 1999. Østers, s. 82-84, I: Kristiansen, T. (red.), *Havbruksrapport 1999, Fisken og Havet, Særnummer* 3:155 s.
- Mortensen, S. og Strand, Ø. 1999. Norsk skjellnæring: Forvaltning av ville bestander av kamskjell, *Pecten maximus*. *Fiskets Gang* 2: 37-38.
- Mortensen, S. 1999. Gullkantede råvarer, gullkantet konkurranse, Bocuse d'Or, Lyon. *Fiskets Gang* 1: 18-20.
- Mortensen, S. 1999. Om mat, sirkus - og gull! *Norsk Fiskeoppdrett* 4: 42-43.
- Mortensen, S. 1999. Salt produktiv jord - på fjære sjø. *Norsk Fiskeoppdrett*, 21: 22-24.
- Mortensen, S. 1999. Østers er julemat. *Fiskets Gang* 11/12: 48-49.
- Mortensen, S. og Strand, Ø. 1999. Forvaltning av ville bestander av kamskjell. *Fiskets Gang* 2: 37-38.
- Mortensen, S., Strand, Ø. og Kristiansen, T. 1999. Er verdens største kamskjellproduksjon i krise? *Fiskets Gang* 9: 24-26.
- Roth, B., Torrissen, O.J. and Slinde, E. 1999 The effect of slaughtering procedures on bleeding in Rainbow Trout (*Oncorhynchus mykiss*). *Farmed fish quality conference*, Bristol.
- Rungruangsak Torrissen, K. 1999. La den rømme. *Havbruk - fiskeri og foredling*, 2/99, pp. 34-35.
- Rungruangsak Torrissen, K., Stensholt, B. and Holm, M. 1999. Forskjell i trypsin-isozym hos laks har effekt på veksten i havet. *Havforskningsnytt nr 6*, Havforskningsinstituttet (ISSN 0804-5496).
- Skilbrei, O.T. 1999. Vekstmønster hos lakseunger. *Norsk Fiskeoppdrett*. 20/99:31-33.
- Skaala, Ø. 1999. Fall and rise of the fine-spotted trout. Workshop report. *Troutconcert EU, St. Felu de Guixols, Spania*.
- Skaala, Ø. 1999. Genmateriale hos laks: problem eller ressurs? Norsk-finsk faggruppe for vurdering av sikringstiltak for oppdrettsanlegg i Tanafjorden (Hopsfjorden) i Finnmark. *Rapport, Fiskeridirektoratet*.
- Skaala, Ø. 1999. Til laks åt alle... Korleis sikre framtida for villaks og havbruk? *Havforskningsstemta* 1 - 1999.
- Skaala, Ø., Taggart, J.B., Nævdal, G., Gunnes, K., Jørstad, K.E. and Karlsen, T. 1999. Genetic variability at isozyme loci of farmed Atlantic salmon strains and wild stocks. Poster presented at *Aquaculture Europe '99*. *Trondheim*, 7. - 10. august.
- Slinde, E. 1999. Havblikk. Doktorgrad i fisk og fisketeknologi? *Havbruk* 1:54.
- Slinde, E. 1999. Havblikk. Tilstrekkelig rett. *Havbruk* 2:58.
- Slinde, E. 1999. Havblikk. Genmodifisert mat. *Havbruk* 3:58.
- Slinde, E. 1999. Havblikk. Trygghet og etikk. *Havbruk* 4:58.
- Slinde, E. 1999. Havblikk. Hvor kunnskap teller. *Havbruk* 5:46.
- Slinde, E. 1999. Havblikk. Villaks skal vi ha! *Havbruk* 6:46.
- Slinde, E. 1999. Havblikk. Rødt som astaxanthin. *Havbruk* 7:58.
- Slinde, E. 1999. Havblikk. Lysing; en spennende art for oppdrett? *Havbruk* 8:70.

- Slinde, E. 1999. Havblikk. Potens fra havet. *Havbruk* 9:102.
- Slinde, E. 1999. Havblikk. Rent vann – ren mat. *Havbruk* 10:92.
- Slinde, E. 1999. Havblikk. Norsk genteknologi. *Havbruk* 11:94.
- Slinde, E. 1999. Havblikk. Havbruk i neste årtusen. *Havbruk* 12:78.
- Slinde, E., Hunt, M. and Sørheim, O. 1999. Effects of myoglobin froms on colour and heat denaturation of ground beef. *Det 35. Biokjemiske kontaktmøte*. Norway.
- Slinde, E., Roth, B. and Torrissen, O.J. 1999. Cold shortening and drip loss in Atlantic salmon (*Salmo salar*), Rainbow Trout (*Oncorhynchus mykiss*), Halibut (*Hippoglossus hippoglossus*), Cod (*Gadus morhua*), Whiting (*Merlangius merlangus*) and Saithe (*Pollachius virens*). *Farmed fish quality conference*, Bristol.
- Stigebrandt, A. 1999. Turnover of energy and matter by fish - a general model with application to salmon. *Fisken og Havet* nr 5.
- Storset, A. and Rungruangsak Torrissen, K. 1999. Vanntemperaturer i tidlige stadier - viktig også for laksens vekstegenskaper. *AquaGen nytt, Kundemagasin for Aqua Gen AS*, 2: pp. 6-7.
- Strohmeier, T., Strand, Ø. og Mortensen, S. 1999. Bunnskraping etter stort kamskjell. *Fiskets Gang* 3:29-32.
- Svåsand, T. (m.fl.) 1999. Høringsuttalelse til NOU 1999:9 (Villaksutvalget).
- Svåsand, T., Skilbrei, O.T., van der Meeren, G.I. and Holm, M. 1999. The quality of juveniles for sea ranching (Abstract). *European Aquaculture Society, Special publication* No. 27, 238-239.
- Torrissen, O.J., Roth, B. and Slinde, E. 1999. Effect of storage and slaughter temperature on fillet color of Atlantic salmon (*Salmo salar*). *Farmed fish quality conference*, Bristol (1999).
- Torrissen, O.J., Sigurgisladottir, S. and Slinde, E. 1999. Texture and technological properties of fish. *Farmed fish quality conference*, Bristol 1999.

Foredrag

- Agnalt, A.-L., Jørstad, K.E. and Svåsand, T. 1999. Enhancement of a local stock of European Lobster (*Homarus gammarus*) at Kvitøy in Norway, measured as increase in Catch Per Unit Effort. *WAS'99 Conference, Sydney*, mai 1999.
- Ervik, A. and Hansen, P.K. 1999. Monitoring the environmental impact of Norwegian fish farms. Foredrag på konferansen *Towards predictable quality, Aquaculture Europe 99, Trondheim*, August 7-10, 1999.
- Hansen, P.K. 1999. "MOM - a system for regulating environmental impact from aquaculture". *Verdensbanken, Washington DC*, 21.9.99.
- Hansen, P.K. 1999. An environmental monitoring programme for Norwegian fish farming". ICES symposium: Environmental effects of mariculture, *St. Andrews, New Brunswick, Canada*, 13-17.09.99.
- Haugum, G.A. 1999. Vitenskapelig dykking på kamskjell-prosjekter. Foredrag, *møte i Norsk Baromedisinsk Forening, Bergen*, 27. mai 1999.
- Kristiansen, T.S. 1999. The sea ranching programme on cod and lobster in Norway. Foredrag ved *Yellow Sea Fisheries Research Institute, Qingdao, Kina*, 24.08.99.
- Mortensen, S. 1999. Scallop introductions and transfers,

from an animal health point of view. *12th International Pectinid Workshop, Bergen, Norway*, 5.-11.05.1999.

- Strand, Ø. 1999. Dyrking av kamskjell. *Workshop om kamskjelldyrking (MAROPP - NUMARIO) i Stavanger* 10. juni 1999.
- Svåsand, T. 1999. Cod Juvenile Research at IMR. Foredrag på "How to stimulate the juvenile production of cod?", *an open international Network meeting arranged by the Norwegian Cod Farming Network. Bergen 15-16.11.99*.
- Svåsand, T., Skilbrei, O.T., van der Meeren, G.I. and Holm, M. 1999. The quality of juveniles for sea ranching. Foredrag på konferansen *Towards predictable quality, Aquaculture Europe 99, Trondheim, August 7-10, 1999*.

PROGRAM 95 – BISTANDSRETTA SAMARBEID INNAN FORSKNING OG FORVALTING

Foredrag

- Bakken, E. "Fisheries management issues in developing countries". *Norges handelshøyskole, Bergen*, 24. mars 1999.

Toktrapportar, ressursrapportar (begrensa distribusjon)

Surveys of the fish resources of Namibia:

- Strømme, T., Huse, I. and Staalesen, B. Surveys of the hake stocks 11 January - 21 February 1999. NORAD-FAO/UNDP PROJECT GLO 92/013. *Cruise reports "Dr. Fridtjof Nansen"*.
- Axelsen, B.E., D'Almeida, G., Fjeldstad, I., Kanandjembo, A. and Mjanger, M. Horse mackerel target strength. 21 - 27 May 1999. *Cruise reports "Dr. Fridtjof Nansen"*.
- Misund, O.A., Buckle, W., Cloete, R., Coetzee, J., Dalen, J., Fossen, I., Haugland, E., Horne, J., Jech, M., Luyeye, N., Oechslin, G., Olsen, M. and Totland, B. An experimental survey of the abundance, spatial distribution, schooling behaviour and acoustic backscatter of the Namibia pilchard. 14 June - 2 July 1999. NORAD-FAO/UNDP PROJECT GLO 92/013. *Cruise reports "Dr. Fridtjof Nansen"*.
- Staalesen, B., Boyer, D., Staby, A., Kainge, P., Gamatham, J., Shimanda, M., Wells, S., Barange, M., Hampton, I., Rees, A., Olsen, M., Mørk, T. and Johansen, T. Orange roughy survey. 6 - 29 July 1999. NORAD-FAO/UNDP PROJECT GLO 92/013. *Cruise reports "Dr. Fridtjof Nansen"*.

Surveys of the fish resources of Angola:

- Kolding, J., Olsen, M. and Einarsson, H. Survey of the demersal resources. 1 - 29 March 1999. NORAD-FAO/UNDP PROJECT GLO 92/013. *Cruise reports "Dr. Fridtjof Nansen"*.
- Bianchi, G., Burgos, G., Haugland, T., Vaz Velho, F. and Bazica, B. Survey of the pelagic resources. 2 - 26 August 1999. NORAD-FAO/UNDP PROJECT GLO 92/013. *Cruise reports "Dr. Fridtjof Nansen"*.

Regional surveys:

- Huse, I., Fjeldstad, Y., Iilende, T., Kainge, P., Kamati, D., Mjanger, M., Shimanda, M., Smith, C., Wells, S. and Øvredal, J.T. BENEFIT Hake survey methodology. 27 May - 12 June 1999. *Cruise reports "Dr. Fridtjof Nansen"*.
- Axelsen, B.E., Boyer, H., Brierley, A., Buecher, E., Mørk, T., Oechslin, G., Skeide, R. and Sparks, C. Jellyfish acoustic properties, distribution and abundance. 31 August - 6 September 1999. *Cruise reports "Dr. Fridtjof Nansen"*.
- Axelsen, B.E., Berry, S., Coetzee, J., Cooper, R., Du Plessis, S., Hendricks, M., Kanandjembo, A., Mørk, T., Pillar, S., Skeide, R., Soule, M. and Terry, M. Application of multiple frequency acoustics or improvement of *in situ* target identification. 6 - 17 September 1999. *Cruise reports "Dr. Fridtjof Nansen"*.
- Sundby, S., Thorsen, A., Kjesbu, O., Thorisson, K., Kainge, P., Boyd, A. and Osborne, R. Investigation on spawning hake and their eggs and larvae. 23 September - 6 October 1999. NORAD-FAO/UNDP PROJECT GLO 92/013. *Cruise reports "Dr. Fridtjof Nansen"*.
- Huse, I., Axelsen, B.E., Bagley, N., Cooper, R., Evenson, M., Hamukuaya, F., Klingelhoefter, E., Kreiner, A., Kristiansen, J., Malan, P., Mjanger, M., Namwandi, T., Shifidi, J., Skeide, R. and Øvredal, J.T. Horse mackerel survey methodology. 7 - 19 October 1998. NORAD-FAO/UNDP PROJECT GLO 92/013. *Cruise reports "Dr. Fridtjof Nansen"*.

Surveys of the fish resources of the western Gulf of Guinea:

- Mehl, S., Alvheim, O., Koranteng, K.A. and Tandstad, M. Survey of the pelagic and demersal resources. 19 April - 6 May 1999. NORAD-FAO/UNDP PROJECT GLO 92/013. *Cruise reports "Dr. Fridtjof Nansen"*.

Surveys of the pelagic fish resources of North West Africa:

- Toresen, R. and Ullebust, H. Part I. Senegal - The Gambia. 30 October - 9 November 1998. NORAD-FAO/UNDP PROJECT GLO 92/013. *Cruise reports "Dr. Fridtjof Nansen"*.
- Toresen, R. and Ullebust, H. Part II. Mauritania. 9 - 18 November 1998. NORAD-FAO/UNDP PROJECT GLO 92/013. *Cruise reports "Dr. Fridtjof Nansen"*.
- Strømme, T., Chbani Idrissi, M. and Alvheim, O. Part III. Morocco. 18 November - 19 December 1998. NORAD-FAO/UNDP PROJECT GLO 92/013. *Cruise reports "Dr. Fridtjof Nansen"*.
- Toresen, R. and Kolding, J. Part I. Senegal - The Gambia. 30 October - 9 November 1999. *Cruise reports "Dr. Fridtjof Nansen"*.
- Toresen, R. and Kolding, J. Part II. Mauritania. 9 - 18 November 1999. *Cruise reports "Dr. Fridtjof Nansen"*.
- Strømme, T., Kolding, J., Ostrowski, M., Chbani Idrissi, M. and Alvheim, O. Part III. Morocco. 21 November - 19 December 1999. *Cruise reports "Dr. Fridtjof Nansen"*.

PROGRAM I – RESSURS- OG MILJØFORSKING I KYSTSONA

Artiklar i internasjonale tidsskrift

- Bjørnstad, O.N., Fromentin, J.-M., Stenseth, N.C. and Gjøsæter, J. 1999. A new test for density-dependent survival: the case of coastal cod populations. *Ecology* 80:1278-1288.
- Bjørnstad, O.N., Fromentin, J.-M., Stenseth, N.C. and Gjøsæter, J. 1999. Cycles and trends in cod population. *Proceedings of the National Academy of Science, USA*, 96:5066-5071.
- Knudsen H. and Tveite, S. 1999. Survival and growth of juvenile lobster *Homarus gammarus* L. raised for stock enhancement within in-situ cages. *Aquaculture Research* 30:421-425.
- Lekve, K., Stenseth, N.C., Gjøsæter, J., Fromentin, J.-M. and Gray, J.S. 1999. Spatio-temporal patterns in diversity of a fish assemblage along the Norwegian Skagerrak coast. *Marine Ecology Progress Series* 178:17-27.
- Nødtvedt, M., Fernö, A., Gjøsæter, J., and Steingrund, P. 1999. Anti-predator behaviour of Hatchery-reared and wild juvenile Atlantic cod (*Gadus morhua* L.), and the effect of predator training. Pp. 350-362 in Howel, B.R., Moksness, E. and Svåsand, T. *Stock enhancement and sea ranching*. Fishing News Books. Oxford.
- Stenseth, N.C., Bjørnstad, O.N., Falck, W., Fromentin, J.-M., Gjøsæter, J. and Gray, J.S. 1999. Dynamics of coastal cod populations: intra- and inter-cohort density-dependence and stochastic processes. *Proceedings of the Royal Society of London, B* 266:1645-1654.

Andre publikasjoner/rapportar

- Albrigtsen, A., van der Meeren, G.I., Woll, A., Langelo, G.F., Olsen, A. og Sneli, J.A. 1999. *Program for en bærekraftig utnyttelse av taskekrabbe - Forsøk for området Nordmøre - Helgeland*. Allforsk, desember 1999, 39 s.
- Bertinussen, I. 1999. Fødevalg til 0-gruppe torsk (*Gadus morhua* L.) i Grenlandsfjordene etter overgang fra pelagisk til bentisk levesett. *Hovedfagsoppgave ved Universitetet i Oslo*: 1-79.
- Dahl, E. 1999. Skjellanlegg – både produksjon og miljøforbedring? *Fisken og Havet*, Særnummer 3-1999: 92-94.
- Hvidsten, N.A., Knutsen, J.A., Gjøsæter, J., Torstensen, E., og Danielssen, D.S. 1999. Konsekvenser av havneutbygging for utvandring av laksesmolt i Numedalslågen. *Rapport. Norsk Institutt for Naturforskning og Havforskningsinstituttet Forskningsstasjonen Flødevigen*. 10 pp. + figs.
- Knutsen, J.A. 1999. Sjørretten - glupsk jeger med variert kost. *Alt om Fiske, Magasinet for den norske sportsfiskeren* 5: 30-36.
- Krakstad, J.-O. 1999. Fødevalg hos 0-gruppe torsk ved overgang fra pelagisk til bentisk levesett i forhold til årsklassestyrke og habitat. *Hovedfagsoppgave ved Universitetet i Bergen*: 1-66.
- Kroglund, T., Oug, E., Johannessen, T. og Dahl, E. 1999. Miljøtilstanden i Lillesands kystområde. Oksygenforhold, hardbunnsorganismer og bløtbunnsfauna. *NIVA-Rapport* 1.nr. 4052-99, 75 s.
- McClimans, T. 1999. Bruk av dykket ferskvannsutslipp og strømsettere for heving av næringsrikt sjøvann til lyssonen. *SINTEF Bygg og miljøteknikk*, Rapport

- STF22 F 99204, februar 1999, 10 s.
- Sjøtun, K. 1999. Kva inneber taretrålinga for fisken? *Fisken og Havet*, Særnummer 2:82-86.
- Sjøtun, K. 1999. Aldersstruktur til stortare (*Laminaria hyperborea*) og haustesyklus i Rogaland. *Statusrapport* for 1999.
- Svåsand, T., Skilbrei, O.T., van der Meeren, G.I., and Holm, M. 1999. The quality of juveniles for sea ranching (Abstract). *European Aquaculture Society, Special publication No. 27*: 238-239.
- Torstensen, E. 1999. Utvida sesongfiske av rognkjeks på Skagerrakkysten. *Havforskningsnytt* nr.1, 1999.
- van der Meeren, G.I. and Agnalt, A.-L. 1999. Fishery, management and restocking of the european lobster (*Homarus gammarus*); The Norwegian experience. *Proceedings from the Orkney Lobster Conference* 1999. 3pp.
- van der Meeren, G.I., Kristiansen, R. og Fredriksen, A.B. 1999. Forsøksfiske med krabbeteiner i plast. *Sluttrapport, Norges forskningsråd*, 10 s.

Foredrag

- Dahl, E. 1999. Kartlegging av undersjøiske habitater. *SAVOS (Samarbeidsrådet for Vestlands- og Sørlandsfylkene), Seminar i Arendal 5.-6. mai 1999*.
- Dahl, E. 1999. Planteplankton-biomasse - variabilitet til besvær. *Norske Havforskeres Forening, Årsmøte 1999, Geilo*.
- Johannessen, T. 1999. Nye ideer om regulerende og strukturere mekanismer i marine økosystem. *Ukens orientering ved Havforskningsinstituttet, Bergen, 1999*.
- van der Meeren, G.I. 1999. The Norwegian experience; Fishery, management and restocking of the lobster (*Homarus gammarus*) in Norway, with emphasis on the large scale enhancement programme 1990-1997. *The Orkney Lobster Seminar, Kirkwall 3-4 September 1999*.
- van der Meeren, G.I. 1999. "Mysteriet med den forsvunne småhummeren". *Festdykforedrag ved Austevoll havbruksstasjon 30. april 1999*.

PROGRAM 2 - ØKOSYSTEM NORSKEHAVET "MARE COGNITUM"

Artiklar i internasjonale tidsskrift

- Arkhipkin, A.I. and Bjørke, H. 1999. Ontogenetic changes in morphometric and reproductive indices of the squid *Gonatus fabricii* (Oegopsida, Gonatidae) in the Norwegian Sea. *Polar Biology* 6: 357-365.
- Arkhipkin, A.I. and Bjørke, H. 1999. Statolithe shape and microstructure as indicators of ontogenetic shifts in the squid *Gonatus fabricii* (Oegopsida, Gonatidae) from Norwegian Sea. *Polar Biology* 1: 1-10.
- Bergstad, O.A., Bjelland, O. and Gordon, J.D.M. 1999. Fish communities on the slope of the eastern Norwegian Sea. *Sarsia* 84:67-78.
- Dale, T., Rey, F. and Heimdal, B.R. (1999). Seasonal development of phytoplankton at a high latitude oceanic site. *Sarsia* (5/6):419-435.
- Foote, K.G. and Francis, D.T.I. 1999. Target strength spectra of swimbladder fish. *The Journal of the Acoustical Society of America*, 2, Part 2, p. 1111.
- Foote, K.G. and Røttingen, I. 1999. Acoustic abundance estimation of midwater animals. *The Journal of the Acoustical Society of America*, 2, Part 2, p. 995.

- Foote, K.G., Francis, D.T.I., Furset, H. and Hobæk, H. 1999. Spheres for calibrating high-frequency broadband echo sounders. *The Journal of the Acoustical Society of America*, 2, Part 2, pp. 1112-1113.
- Foote, K.G., Knutsen, T., Atkins, P.R., Bongiovanni, C., Francis, D.T.I., Eriksen, P.K. and Mortensen, T. 1999. A seven-octave-bandwidth echo sounding system for application to fish and zooplankton. *The Journal of the Acoustical Society of America*, 2, Part 2, p. 994.
- Francis, D.T.I., Foote, K.G., Knutsen, T., and Calise, L. 1999. Modelling the target strength of *Calanus finmarchicus*. *The Journal of the Acoustical Society of America*, 2, Part 2, p. 1050.
- Francis, D.T.I., Knutsen, T., Foote, K.G. and Calise, L. 1999. Modelling the target strength of *Meganyctiphanes norvegica*. *The Journal of the Acoustical Society of America*, 2, Part 2, p. 1111.
- Kögeler, J. and Rey, F. (1999). Ocean colour and the spatial and seasonal distribution of phytoplankton in the Barents Sea. *Int. J. Remote Sensing*, 20 (7):1303-1318.
- Mackinson, S., Nøttestad, L., Guenette, S., Pitcher, T., Misund, O.A. and Fernø, A. 1999. Cross-scale observations on distribution and behavioural dynamics of ocean feeding Norwegian spring-spawning herring (*Clupea harengus* L.). *ICES Journal of Marine Science* 56:613-626.
- Miller, L.A., Chierici, M., Johannessen, T., Noji, T.T., Rey F. and Skjelvan I. 1999. Seasonal dissolved inorganic carbon variations in the Greenland Sea and implications for atmospheric CO₂ exchange. *Deep-Sea Research II* 46:1473-1496.
- Nøttestad, L. and Axelsen, B.E. 1999. Herring schooling manoeuvres in response to killer whale attacks. *Canadian Journal of Zoology* 77:1540-1546.
- Nøttestad, L., Giske, J., Holst, J.C. and Huse, G. 1999. A length-based hypothesis to explain feeding migrations in pelagic fish. *Canadian Journal of Fisheries and Aquatic Sciences* 56 (Supplement I):26-34.
- Noji, T.T., Børsheim, K.Y., Rey F. and Nortvedt R. 1999. Dissolved organic carbon associated with sinking particles can be crucial for estimates of vertical carbon flux. *Sarsia* 84:129-135.
- Noji, T.T., Rey, F., Miller, L.A., Børsheim K.Y., and Urban-Rich J. 1999. Fate of biogenic carbon in the upper 200 m of the central Greenland Sea. *Deep-Sea Research II* 46:1497-1510.
- Watson, A.J., Messias, M.-J., Fogelqvist, E., VanScoy, K.A., Johannessen, T., Oliver, K.I.C., Stevens, D.P., Rey, F., Tanhua, T., Olsson, K.A., Carse, F., Simonsen, K., Ledwell, J.R., Jansen, E., Cooper, D.J., Kruepke, J.A. and Guiyardi, E. (1999) Mixing and convection in the Greenland Sea from a tracer-release experiment. *Nature*, 401:902-904.
- Wassmann, P., Andreassen, I.J. and Rey, F. (1999) Seasonal variation of nutrients and suspended biomass on a transect across Nordvestbanken, north Norwegian shelf, in 1994. *Sarsia* 84:199-212.
- Wassmann, P., Ratkova, T.N., Andreassen, I.J., Vernet, M., Pedersen, G. and Rey, F. (1999). Spring bloom development in the marginal ice zone and the central Barents Sea. *Publicazioni delle Stazione Zoologica di Napoli, Marine Ecology*, 20 (3-4):321-346.

ICES/Internasjonale organisasjonar

- Hansen, L.P., Holst, J.C., Jensen, A.J. and Jonsen, B.O. 1999. Norwegian spring spawning herring and Atlantic salmon: do they interact? *Working paper, 1999/14 ICES North Atlantic Salmon Working Group*. 10 pp.
- Holm, M., Arnold, G.P., Holst, J.C. and Midling, K.Ø. 1999. Capture and handling of fish for electronic tagging - a review. *ICES CM 1999/AA:03*.
- Holm, M., Holst, J.C. and Hansen, L.P. 1999. Spatial distribution of posts-smolts 1990 - 1998 in the Norwegian Sea and adjacent areas in relation to hydrographical parameters. *ICES North Atlantic Salmon working group, 1999*.
- Holst, J.C., Blindheim, B., Couperus, B., Hammer, C., Jákupsstovu, H., Melle, W., Mork, K.A., Stein, M., Vilhjálmsón, H., Götz, S., Krysov, A., Martin B., and Zimmermann, C. Report on surveys of the distribution, abundance and migrations of the Norwegian spring-spawning herring, other pelagic fish and the environment of the Norwegian Sea and adjacent waters in late winter, spring and summer of 1999. *ICES CM 1999/D:3 Ref. ACFM*.
- Holst, J.C., Shelton, R., Holm, M. and Hansen, L.P. 1999. Distribution and possible migration routes of post-smolt Atlantic salmon in the NE Atlantic. *In The Ocean Life of Salmon (ed. Derek Mills). Oxford*.
- Ingvaldsen, R., Asplin L. and Loeng, H. 1999. Short time variability of the Atlantic inflow to the Barents Sea, *ICES C.M. 1999/L:05*.
- Melle, W., Blindheim, J., Holst, J.C., Rey, F. and Mork, K.A. 1999. Growth success of the Norwegian spring spawning herring in relation to environmental conditions in its feeding area; a preliminary prediction of the growth success during the 1999 feeding season. *Working document to the ICES Northern Pelagic and Blue Whiting Fisheries Working Group*.
- Monstad, T. and Holst, J.C. 1999. Observations of Blue Whiting in the Norwegian Sea during spring and summer 1998. *ICES Northern pelagic and blue whiting fisheries working group, 1999*.
- Mortensen, T., Eriksen, P.K., Larsen, M., Atkins, P.R., Bongiovanni, C. and Francis, D.T.I. 1999. Octave-bandwidth transducers for an ultra-bandwidth echo sounding system, Institute of Acoustics Underwater Acoustics Group Conference '99', Birmingham, 19-21 April 1999. *In: Proceedings of the Institute of Acoustics, Vol. 21, Part 1, pp. 27-41 (1999)*.
- Francis, D.T.I., Foote, K.G., Furset, H. and Hobæk, H. 1999. Spheres for calibrating high-frequency broadband echo sounders. Joint meeting: 137th meeting of the Acoustical Society of America and the 2nd Convention of the European Acoustics Association integrating the 25th German Acoustics DAGA Conference, Berlin, 14-19 March 1999. *In: Acustica - acta acustica, Vol. 85, Suppl. 1, p. S69*.
- Foote, K.G., Francis, P.R., Bongiovanni, C., Francis, D.T.I., Eriksen, P.K., Larsen, M. and Mortensen, T. 1999. Measuring the frequency response function of a seven-octave-bandwidth echo sounder, Institute of Acoustics Underwater Acoustics Group Conference '99', Birmingham, 19-21 April 1999. *In: Proceedings of the Institute of Acoustics, Vol. 21, Part 1, pp. 88-95*.
- Foote, K.G., Knutsen, T., Atkins, P.R., Bongiovanni, C., Francis, D.T.I., Eriksen, P.K. and Mortensen, T. 1999. A seven-octave-bandwidth echo sounding system for application to fish and zooplankton. Joint meeting: 137th meeting of the Acoustical Society of America and the 2nd Convention of the European Acoustics Association integrating the 25th German Acoustics DAGA Conference, Berlin, 14-19 March 1999. *In: Acustica - acta acustica, Vol. 85, Suppl. 1, p. S68*.
- Francis, D.T.I., Foote, K.G., Knutsen, T. and Calise, L. 1999. Modelling the target strength of *Calanus finmarchicus*. Joint meeting: 137th meeting of the Acoustical Society of America and the 2nd Convention of the European Acoustics Association integrating the 25th German Acoustics DAGA Conference, Berlin, 14-19 March 1999. *In: Acustica - acta acustica, Vol. 85, Suppl. 1, p. S124*.
- Francis, D.T.I., Knutsen, T., Foote, K.G. and Calise, L. 1999. Modelling the target strength of *Meganyctiphanes norvegica*. Joint meeting: 137th meeting of the Acoustical Society of America and the 2nd Convention of the European Acoustics Association integrating the 25th German Acoustics DAGA Conference, Berlin, 14-19 March 1999. *In: Acustica - acta acustica, Vol. 85, Suppl. 1, p. S185*.
- Hassel, A. og Melle, W. 1999. Plankton som råstoffkilde for fremstilling av føremidler til bruk innen fiskeoppdrett. Et forprosjekt. Delprosjekt: Utredning av forekomster og tilgjengelighet av dyreplankton. *Interne notat 3*. 30 s.
- Holm, M., Holst, J.C. og Hansen, L.P. 1999. Laks i havet - Kunnskapsstatus, forskningsbehov og flaskehalser. *Vedlegg 11 i NOU 1999:9 "Til laks åt alle kan ingen gjera?"* pp 256 - 272.
- Holst, J.C., Shelton, R., Holm, M. and Hansen, L.P. 1999. Distribution and possible migration routes of post-smolt Atlantic salmon in the NE Atlantic. *In The Ocean Life of Salmon (ed. Derek Mills). Oxford*.
- Holst, J.C. og Sundquist, J. Lakseprognose for 1999. *Alt om Fiske. Mai 1999*.
- Knutsen, T. and Dalen, J. 1999. Measurement strategies, operation schemes and data visualization for a multi-frequency buoy acoustic plankton sensor. *Havforskningsinstituttet, Interne notat 8*, 30 sider.
- Knutsen, T., and Foote, K.G. 1999. Acoustic visualization

Andre publikasjoner/rapportar

- Asplin, L. 1999. Effects of insufficient vertical resolution in a 3D coastal ocean model, *Fisken og Havet, 1999 (3)*, 18 pp.
- Bjørke, H., Blindheim, J., Melle, W. 1999. Hydrographical conditions and vertical distribution of plankton and nekton in the eastern Norwegian Sea. *Fisken Hav. 2: 1-30*.
- Bjørke, H. 1999. Blekkspruten "*Gonatus fabricii*." Minst 20 millioner tonn i Norskehavet. *Fiskerimagasinet. 1: 36-38*.
- Foote, K.G. and Francis, D.T.I. 1999. Target strength spectra of swimbladdered fish. Joint meeting: 137th meeting of the Acoustical Society of America and the 2nd Convention of the European Acoustics Association integrating the 25th German Acoustics DAGA Conference, Berlin, 14-19 March 1999. *In: Acustica - acta acustica, Vol. 85, Suppl. 1, p. S185*.
- Foote, K.G. and Røttingen, I. 1999. Acoustic abundance estimation of midwater animals. Joint meeting:

and quantification of copepods and fish larvae in mesocosm experiments. *Final report, NFR-project project no. 113809/122. Institute of Marine Research, Bergen.* 14 pp.

- Mork, K.A. og Blindheim, J. 1999. Klimavariasjoner i Norskehavet gjennom de siste tiårene. In: Aure *et al.* *Havets miljø 1999, Fisken og Havet, Særnr. 2:* 94-99.
- Miller, L., Rey, F. and Noji, T. (1999). Kan opptak av atmosfærisk CO₂ i Grønlandshavet redusere virkningen av "drivhuseffekten"? *Havets miljø 1999, Fisken og Havet, Særnr. 2 (Red. Aure, J., et al.),* 63-67.
- Nøttestad, L. 1999. Spatial aspects of life cycle adaptation and survival in adult herring. *Dr. Scient.-oppgave. Institutt for fiskeri- og marinbiologi, Universitetet i Bergen.*
- Nøttestad, L. 1999. Film-dokumentar med tittelen "The struggle for life" vist ved 13th Biennial Conference on the Biology of Marine Mammals. *Waitea, Hawaii, 28 November - 3 December 1999.*
- Zedel, L. and Stanway, J.D. 1999. Towtank Evaluation of a Workhorse ADCP for Fisheries Applications. *Report for Department of Fisheries and Oceans, Contract number FP802-8-0382. Department of Physics and Physical Oceanography, Memorial University of Newfoundland and Labrador, St. John's, Nf, Pp 1-26.*
- Arashkevich, E., A. Pasternak, K. Tande and B. Ellertsen. Seasonal moulting pattern of *Calanus finmarchicus* along Svinøy and Gimsøy transects inferred from analysis of gnathobase structures, gonads and size of oil sacs. *ICES Symposium "Population Dynamics of Calanus in the North Atlantic. Results from the Trans-Atlantic Study of Calanus finmarchicus". Tromsø, Aug. 1999.*
- Asplin, L. Present status of regional modelling in WP1.2, north-eastern boundaries. *The 2nd VEINS modelling workshop, AWI, Bremerhaven, June 1999.*
- Atkins, P. R., Bongiovanni, C., Francis, D.T.I., Eriksen, P.K., Larsen, M., Mortensen, T., Foote, K.G. and Knutsen, T. Broadband acoustic scattering signatures of herring, *2nd EAA International Symposium on Hydroacoustics, Gdansk - Jurata, 24-27 May 1999.*
- Bjelland, O. 1999. Changes in the fish communities of the Norwegian Sea during the last decades - a period with fluctuating fisheries for pelagic fishes. *Holdt ved symposiet: ICES Young Scientist Conference on Marine Ecosystem Perspectives, Gilleleje, Danmark, 20.-24. november 1999.*
- Ellertsen, B. and Melle, W. Large scale distribution of *Calanus finmarchicus* in the Norwegian Sea summer 1997. *Årsmøte TASC, Nice, januar 1999.*
- Ellertsen, B. and Melle, W. Population dynamics of *Calanus finmarchicus* at weather station "M" in the Norwegian Sea in relation to environmental conditions. *ICES Symposium "Population Dynamics of Calanus in the North Atlantic. Results from the Trans-Atlantic Study of Calanus finmarchicus". Tromsø, Aug. 1999.*
- Foote, K.G. and Francis, D.T.I. Calculating herring target strength. *2nd EAA International Symposium on Hydroacoustics, Gdansk - Jurata, 24-27 May 1999.*
- Foote, K.G. How to do an acoustic abundance estimation of a pelagic fish stock. *2nd EAA International Symposium on Hydroacoustics, Gdansk - Jurata, 24-27 May 1999.*
- Heath, M., Ellertsen, B., Gaard, E., Gislason, A., Melle, W., Olsen, K., Skreslet, S. and Tande, K. Comparison of the annual cycle of *Calanus finmarchicus* at selected locations in the North Atlantic Ocean. *ICES Symposium "Population Dynamics of Calanus in the North Atlantic. Results from the Trans-Atlantic Study of Calanus finmarchicus". Tromsø, Aug. 1999.*
- Holst, J.C. 1999. Lakselus i vandringsveiene til postsmolt av laks. Holdt for bedriftsmøte for oppdrettsfirma Fossen A/S. Mars 1999.
- Holst, J.C. 1999. Havforskningsinstituttets prosjekt "Laks i havet", med fokus på lusproblematikken oppdrett-/villfisk. *Holdt for oppdrettsfirma Nor-Aqua, Ålesund, April 1999.*
- Holst, J.C. 1999. Norwegian Sea: Decadal variations in growth of herring in response to the environment. *Holdt ved symposiet: Changing states of the large marine ecosystems of the North Atlantic and global environmental trends, Bergen, 17.-19. juni 1999.*
- Holst, J.C. 1999. Lakselusen dreper vestlandslaksen. *Holdt på pressekonferanse under Aqua-Nor messen i Trondheim, 13.8.1999.*
- Holst, J.C. 1999. FISH-LIFT: Live Fish Trawl Sampler. *Holdt ved Pelagisk torsdag, oktober 1999.*
- Holst, J.C. 1999. Lakselusen dreper Vestlandslaksen. Tilstand og tiltak. *Holdt for Den regionale lakselusgruppen, Fiskeridirektoratet, 13.10.99.*
- Holst, J.C. 1999. Lakselusen dreper Vestlandslaksen. Tilstand og tiltak. *Holdt for Oppdrettsseminar, arrangert av Fiskeridirektoratet, Bergen Airport Hotel, nov. 99.*
- Melle, W. and Ellertsen, B. Abundance and development of *Calanus finmarchicus* at fixed transects and weather station "M" in relation to environmental conditions. *Årsmøte TASC, Nice, jan. 1999.*
- Melle, W. and Ellertsen, B. Population dynamics of *Calanus finmarchicus* in relation to water masses and seasonal phytoplankton production cycles in the Nordic Seas. *ICES Symposium "Population Dynamics of Calanus in the North Atlantic. Results from the Trans-Atlantic Study of Calanus finmarchicus". Tromsø, aug. 1999.*
- Melle, W. Environmental conditions and production of *Calanus*. *Workshop on demography, distribution and advection of Calanus in the Norwegian Sea. Trondheim, 4. - 5. oktober 1998.*
- Nøttestad, L. 1999. Herring overwintering strategy: An adaptive response to killer whale predation? *Muntlig foredrag holdt ved 13th Biennial Conference on the Biology of Marine Mammals. Waitea, Hawaii, 28 November - 3 December 1999.*
- Pasternak, A., Arashkevich, E., Tande K. and Melle, W. Egg production and recruitment patterns of *Calanus finmarchicus* at the Norwegian midshelf in 1997. *ICES Symposium "Population Dynamics of Calanus in the North Atlantic. Results from the Trans-Atlantic Study of Calanus finmarchicus". Tromsø, Aug. 1999.*
- Slagstad, D., Carlotti, F., Ellertsen, B., Melle, W. and Tande, K. Effect of climatic variability on demography and timing of cohort development of *Calanus* in the Norwegian Sea. *ICES Symposium "Population Dynamics of Calanus in the North Atlantic. Results from the Trans-Atlantic Study of Calanus finmarchicus". Tromsø, Aug. 1999.*

PROGRAM 3 - REPRODUKSJON OG REKRUTTERING

Artiklar i internasjonale tidsskrift

- Godø, O.R. and Haug, T. 1999. Growth and sexual maturity in cod (*Gadus morhua*) and Atlantic halibut (*Hippoglossus hippoglossus*). *Journal of Northwest Atlantic Fisheries Science. Special issue 25*: 117-125.
- Gundersen, A.C., Kjesbu, O., Stene, A. and Nedreaas, K. 1999. Fecundity of the Northeast Arctic Greenland halibut (*Reinhardtius hippoglossoides*). *Journal of Northwest Atlantic Fisheries Science. Special issue 25*: 29-36.
- Helle, K., and Pennington M. 1999. The relation of the spatial distribution of early juvenile cod (*Gadus morhua* L) in the Barents Sea to zooplankton density and water flux during the period 1978-1984. *ICES Journal of Marine Science 56*: 15-27.
- Rønnestad, I., Thorsen, A. and Roderick, N.F. 1999. Fish larval nutrition: a review of recent advances in the roles of amino acids. *Aquaculture 177*: 201-216.
- Stene, A., Gundersen, A.C., Solemdal, P., Nedreaas, K.H. and Albert, O.T. 1999. Early development of Northeast Arctic Greenland halibut (*Reinhardtius hippoglossoides*). *Journal of Northwest Atlantic Fisheries Science. Special issue 25*: 171-178.
- Suthers, I.M., van der Meeren, T. and Jørstad, K.E. 1999. Growth histories derived from otolith microstructure of three Norwegian cod stocks co-reared in mesocosms; effect of initial size and prey size changes. *ICES Journal of Marine Science 56*: 658-672.
- Sætre, R. 1999. Features of the central Norwegian shelf circulation. *Continental Shelf Research 19*: 1809-1831.

ICES/internasjonale organisasjoner

- Helle, K., Bogstad, B., Marshall, C.T., Michalsen, K., Ottersen, G., and Pennington, M. 1999. An evaluation of recruitment indices for Northeast Arctic cod (*Gadus morhua* L.). *ICES CM 1999/Y:20*.
- Marshall, C.T., Kjesbu, O.S., Thorsen, A. and Solemdal, P. 1999. Spawner quality effects on two measures of reproductive potential: have we been counting our eggs before they've hatched? *ICES CM 1999/Y:07*.
- Scott, B., Marteinsdottir, G., Wright, P. and Kjesbu, O.S. 1999. Sensitivity of potential recruitment to stock structure in the presence of temporally varying survival. *ICES CM 1999/Y:02*.
- Ådlandsvik, B., Albert, O.T., Gundersen, A.C., Nedreaas, K.H. and Stene, A. 1999. Modelling the advection and diffusion of eggs and larvae of Northeast Arctic Greenland halibut. *ICES CM 1999/K:03*.

Andre publikasjoner/rapportar

- Andersen, T.E., Witthames, P.R., Kjesbu, O.S., Bromley, P. and Tyler, C.R. 1999. Development of a surgery protocol for unilateral ovariectomy (ULO) on cod (*Gadus morhua*). Poster, *6th International Symposium on the Reproductive Physiology of Fish, 4-9 July 1999, Bergen*.
- Godø, O.R. 1999. Fluctuation in stock properties of Arcto-Norwegian cod related to long-term environmental changes. *IIASA Interim Report, IR-99*.
- Godø, O.R. 1999. Maturation dynamics of Arcto-Norwegian cod. *IIASA Interim Report, IR-99*.
- Gundersen, A.C., Nedreaas, K.H., Kjesbu, O.S. and Albert, O.T. 1999. Variability in individual and population fecundity of Northeast Arctic Greenland halibut, with emphasis in 1996-1998. Poster, *Fourth*

International Symposium on Flatfish Ecology, 18-23 October, 1999, Morehead City, North Carolina, USA.

- Munk, P., Larsson, P.O., Danielssen, D.S. and Moksness, E. 1999. Variability in frontal zone formation and distribution of gadoid fish larvae at the shelf break in the northeastern North Sea. *Marine Ecology Progress Series 177*: 221-233.
- Nedreaas, K., Albert, O.T., Gundersen, A. 1999. Blåkveiteprosjekter ved Havforskningsinstituttet/Møreforskning/Universitetet i Bergen og Fiskeriforskning/Norges fiskerihøgskole. *Felles faglig sluttrapport pr. 31.12.1999 for NFR-prosjektene nr. 1135227/122 og 113750/120*.

Foredrag

- Helle, K. 1999. Distribution of the copepodite stages of *Calanus finmarchicus* in the Barents Sea in July 1989. Foredrag *ICES Symposium: Population dynamics of Calanus in the North Atlantic. Results from the Trans-Atlantic Study of Calanus finmarchicus. 24-27 August 1999 Tromsø*.
- Helle, K., Bogstad, B., Marshall, C.T., Michalsen, K., Ottersen, G., and Pennington, M. 1999. An evaluation of recruitment indices for Northeast Arctic cod (*Gadus morhua* L.). Foredrag 1999 ICES ASC, Theme Session Y.
- Kurita, Y., Thorsen, A., Fonn, M., Svoldal, A. and Kjesbu, O.S. 1999. Oocyte growth and fecundity regulation of Atlantic herring (*Clupea harengus*) in relation to declining body reserves during overwintering. Foredrag, *6th International Symposium on the Reproductive Physiology of Fish, 4-9 July 1999, Bergen*.
- Marshall, C.T., Kjesbu, O.S., Thorsen, A. and Solemdal, P. 1999. Spawner quality effects on two measures of reproductive potential: have we been counting our eggs before they've hatched? Foredrag 1999 ICES ASC, Theme Session Y.
- Scott, B., Marteinsdottir, G., Wright, P. and Kjesbu, O.S. 1999. Sensitivity of potential recruitment to stock structure in the presence of temporally varying survival. Foredrag 1999 ICES ASC, Theme Session Y.
- Ådlandsvik, B., Albert, O.T., Gundersen, A.C., Nedreaas, K.H. and Stene, A. 1999. Modelling the advection and diffusion of eggs and larvae of Northeast Arctic Greenland halibut. Foredrag 1999 ICES ASC, Theme Session K.

PROGRAM 4 - POPULASJONSDYNAMIKK OG FLEIRBESTANDSMODELLAR

Artiklar i internasjonale tidsskrift

- Ajiad, A., Jakobsen, T. and Nakken, O. 1999. Sexual Difference in Maturation of Northeast Arctic Cod. *J. Northw. Atl. Fish. Sci., Vol. 25*:1-15.
- Huse, G. and Gjøsæter, H. 1999. A neural network approach for predicting stock abundance of the Barents Sea capelin. *SARSIA 84*:457-464.
- Høines, Å.S. and Bergstad, O.A. 1999. Resource sharing among cod, haddock, saithe and pollack on a herring spawning ground. *Journal of Fish Biology 55*:1233-1257.
- Jakobsen, T. and Ajiad, A. 1999. Management Implications of Sexual Differences in Maturation and Spawning Mortality of

- Northeast Arctic Cod. *J. Northw. Atl. Fish. Sci.*, *Vol*: 25:125-131.
- Marshall, C.T., Yaragina, N.A., Lambert, Y. and Kjesbu, O.S. 1999. Total lipid energy as a proxy for total egg production by fish stocks. *Nature* 402:288-290.
- Nøttestad, L., Giske, J., Holst, J.C. and Huse, G. 1999. A length based hypothesis to explain migrations in pelagic fishes. *Canadian Journal of Fisheries and Aquatic Sciences*, *Vol* 56, *Supp.* 1:24-34.
- Skogen, M.D., Monstad, T. and Svendsen, E. 1999. A possible separation between a northern and a southern stock of the northeast Atlantic blue whiting. *Fisheries Research* 41:119-131.
- Slotte, A. 1999. Differential utilisation of energy during wintering and spawning migration in Norwegian spring spawning herring (*Clupea harengus* L.). *Journal of Fish Biology* 54:338-355.
- Slotte, A. 1999. Effects of fish length and condition on spawning migration in Norwegian spring spawning herring (*Clupea harengus* L.). *SARSIA* 84:111-127.

ICES/internasjonale organisasjonar

- Ajiad, A. 1999. Growth prognosis of Northeast Arctic cod using a bioenergetics model. *Working Document to the Arctic Fisheries Working Group*, 23.08 - 01.09.1999.
- Bogstad, B., Frøysa, K.G. and Skagen, D.W. 1999. Fleksibest - an age-length structured assessment tool with application to North-east Arctic cod. *Working Document to the Arctic Fisheries Working Group*, 23.08 - 01.09.1999.
- Bogstad, B. and Gjørseter, H. 1999. Predation by cod (*Gadus morhua*) on capelin (*Mallotus villosus*) in the Barents Sea. *Working Document to the Northern Pelagic and Blue Whiting Fisheries Working Group*, 27.04 - 05.05.1999.
- Marshall, C.T. 1999. Maturity at age of Northeast Arctic cod in 1999 as estimated from Norwegian surveys of the Barents Sea and Lofoten region. *Working Document to the Arctic Fisheries Working Group*, 23.08 - 01.09.1999.
- Marshall, C.T., Ottersen, G., Bogstad, B., Helle, K., Michalsen, K. and Pennington, M. 1999. Availability of cod to the international 0-group survey. *Working document to the Arctic fisheries Working Group*, 23.08 - 01.09.1999.
- Marshall, C.T. and Yaragina, N.A. 1999. Condition and reproductive potential of Northeast Arctic cod in 1999 as determined by Norwegian and Russian surveys. *Working Document to the Arctic Fisheries Working Group*, 23.08 - 01.09.1999.
- Ottersen, G. 1999. *Working document to the Arctic fisheries Working Group*, 23.08 - 01.09.1999. G. 1999. Barents Sea temperatures and cod. *Working Document to the Arctic Fisheries Working Group*, 23.08 - 01.09.1999.
- Shleinik V.N., Ushakov N.G. and Tjelmeland S. 1999. A possible use of frequency-of-occurrence stomach content data to improve assessment models for Barents Sea capelin. *Working Document to the ICES Northern Pelagic and Blue Whiting Fisheries Working Group* 27.04 - 05.05.1999.
- Skagen, D.W. and Åsnes, M.N. 1999. Trial runs with Fleksibest for North-East Arctic cod at the Arctic Fisheries Working Group, 23.08 - 01.09.1999.

Andre rapportar og publikasjonar

- Bogstad, B. og Sætre, R. 1999. Økosystemet Barentshavet i *Toresen, R. et al. 1999, Havets ressurser 1999, Fiskerihav, Særnr*:1:12-14.
- Bogstad, B. og Sætre, R. 1999. Økosystemet Norskehavet/Norskekysten i *Toresen, R. et al. 1999, Havets ressurser 1999, Fiskerihav, Særnr*:1:42-44.
- Gjørseter, H. 1999. Procedure for dissection and preparing of age material on pelagic fish. Version 1.0. Institute of Marine Research. Department of Marine Resources. *Manual for age estimation of fish*. 10 pp.
- Gjørseter, H. 1999. Procedure for age estimation of capelin (*Mallotus villosus* Müller). Version 1.0. Institute of Marine Research. Department of Marine Resources. *Manual for age estimation of fish*. 9 pp.
- Gjørseter, H. 1999. Procedure for age estimation of herring (*Clupea harengus* L.). Version 1.0. Institute of Marine Research. Department of Marine Resources. *Manual for age estimation of fish*. 9 pp.
- Gjørseter, H. 1999. Procedure for age estimation of polar cod (*Boreogadus saida* Lepechin). Version 1.0. Institute of Marine Research. Department of Marine Resources. *Manual for age estimation of fish*. 8 pp.
- Gjørseter, H. 1999. Prosedyre for utplukking og preparering av aldersmateriale på pelagisk fisk. Versjon 1.0. Havforskningsinstituttet. Senter for marine ressurser, *Handbok for aldersfastsetjing av fisk*. 10 s.
- Gjørseter, H. 1999. Prosedyre for alderslesing av lodde (*Mallotus villosus* Müller). Versjon 1.0. Havforskningsinstituttet. Senter for marine ressurser, *Handbok for aldersfastsetjing av fisk*. 7 s.
- Gjørseter, H. 1999. Prosedyre for alderslesing av sild (*Clupea harengus* L.). Versjon 1.0. Havforskningsinstituttet. Senter for marine ressurser, *Handbok for aldersfastsetjing av fisk*. 8 s.
- Gjørseter, H. 1999. Prosedyre for aldersfastsetjing av polarorsk (*Boreogadus saida* Lepechin). Versjon 1.0. Havforskningsinstituttet. Senter for marine ressurser, *Handbok for aldersfastsetjing av fisk*. 8 s.
- Gjørseter, H. and Nedreaas, K. 1999. Procedure for quality assurance of age determination of fish. Version 1.0. Institute of Marine Research. Department of Marine Resources. *Manual for age estimation of fish*. 16 pp.
- Gjørseter, H. og Nedreaas, K. 1999. Prosedyre for å kvalitetssikre aldersfastsetjing av fisk. Versjon 1.0. Havforskningsinstituttet. Senter for marine ressurser. *Handbok for aldersfastsetjing av fisk*. 16 s.
- Pennington, M. (ed.) 1999. Report of the workshop on comparison of stock assessment model strategies, with application to Northeast Arctic cod. Bergen, 01-04.12 1998, Institute of Marine Research, Bergen, Norway. *Fiskerihav nr*: 4:1-42.
- Skagen, D.W. Fleksibest i *Toresen, R. et al. 1999, Havets ressurser 1999, Fiskerihav, Særnr*:1:131-132.
- Skagen, D.W. Bestandsberegningmodeller i *Toresen, R. et al. 1999, Havets ressurser 1999, Fiskerihav, Særnr*:1:143-144.

Foredrag

- Berntsen, J. 1999. Kva er viktigast: Modell eller inngangsdata for berekning av bestandsstorleik. *Seminarserie matematiske modeller i biologi*, 23.02.1999, HI.
- Dalpadado, P. 1999. Zooplankton - fish interactions. *LME Symposium 17-19.06 1999, Bergen*.
- Dalpadado, P. 1999. Lectures on climate and zooplankton - fish interactions. *Advanced study course, July 1999, Abisko, Sweden*.
- Dalpadado, P. 1999. Presentation on distribution, life his-

- tory and predator-prey interactions of krill in the Barents Sea. *Second international Symposium on krill - August 1999, Santa Cruz, California, USA.*
- Godø, O.R. 1999. Konseptuell tilnærming til absolutte bestandsmål. 19.01.1999. *Seminarserie matematiske modeller i biologi, HI.*
- Hamre, J. 1999. Presentasjon av Systmod. 20.04.1999. *Seminarserie matematiske modeller i biologi, HI.*
- Hamre, J. 1999. Capelin and herring as key species for the yield of cod. Results from multispecies model runs. *Contribution to the 8th Norwegian-Russian Symposium. Bergen, 15-16.06.1999.*
- Marshall, C.T. 1999. Rethinking the stock/recruit relationship: have we been counting our eggs before they've hatched? *Port Erin Marine Laboratory, Port Erin, Isle of Man.*
- Marshall, C.T. 1999. Spawner quality effects on two indices of reproductive potential: have we been counting our eggs before they've hatched? *ICES Annual Science Conference, Stockholm, Sweden.*
- Nakken, O. 1999. Betydinga av pålitelege fangsttall for bestandsberegningar. 12.01.1999. *Seminarserie matematiske modeller i biologi, HI.*
- Skagen, D.W. og Frøysa, K.G. 1999. Demonstrasjon av bestandsberegningens modellen Fleksibest. Modellgjennomgang og køyring av modellen. 04.02.1999. *Seminarserie matematiske modeller i biologi, HI.*
- Skaug, H.J. 1999. Metodikk for kvalbestandsestimering. 26.01.1999. *Seminarserie matematiske modeller i biologi, HI.*
- Skaug, H.J. 1999. Statistiske aspekter ved assessment-modeller for torsk. 16.03.1999. *Seminarserie matematiske modeller i biologi, HI.*
- Skogen, M. 1999. Primærproduksjon i hydrodynamisk modell. 05.01.1999. *Seminarserie matematiske modeller i biologi, HI.*
- Sundby, S. 1999. Turbulens og næringsopptak. 02.03.1999. *Seminarserie matematiske modeller i biologi, HI.*
- Svendsen, E. 1999. Klimaets betydning for rekruttering og vandrings av fisk i Nordsjøen. 11.05.1999. *Seminarserie matematiske modeller i biologi, HI.*
- Tjelmeland, S. 1999. Multispec – kva no? *Innlegg på Ukens orientering, Havforskningsinstituttet, 17.02.1999.*
- Tjelmeland, S. 1999. Multispecies research in the Barents Sea. *Foredrag i samband med besøk frå USAs fiskeriminister 23.04.1999.*
- Tjelmeland, S. 1999. Deira problem og våre problem - tuning av sild. 01.06.1999. *Seminarserie matematiske modeller i biologi, HI.*
- Tjelmeland, S. and Tretyak, V. 1999. Harvesting control rules and future development of the precautionary approach - Northeast arctic cod as an example. *Contribution to the 8th Norwegian-Russian Symposium. Bergen, 15-16.06.1999.*
- Tjelmeland, S. 1999. Effects of fishing on boreal ecosystems. *ICES/SCOR Symposium on Ecosystem Effects of Fishing. Montpellier, France, 16-19.03.1999.*
- Tjøstheim, D. 1999. Kvantifisering av usikkerhet og trender for tråldata. Analyse av samhal og døgnvariasjoner. 13.04.1999. *Seminarserie matematiske modeller i biologi, HI.*
- PROGRAM 5 - ABSOLUTT MENGDEMÅLING AV MARINE RESSURSA**
- Aglen, I., Engås, A., Huse, I., Michalsen, K. and Stensholt, B. 1999 (*in press*). Vertical distribution of cod, haddock and redfish; impact on bottom trawl and acoustic surveys in the Barents Sea. *ICES Journal of Marine Science* 56:345-360.
- Aschan, M. and Godø, O.R. 1999. Evaluation of the Shrimp (*Pandalus borealis*) Stock at Flemish Cap (NAFO Div. 3M) Based on an Area Comparison. *NAFO Sci. Coun. Studies*, 32:37-43.
- Foote, K.G. 1999. Extinction cross section of Norwegian spring-spawning herring. *ICES Journal of Marine Science*, 56:606-612.
- Foote, K.G. and Røttingen, I. 1999. Acoustic abundance estimation of midwater animals. *Acustica - acta acustica*, 85, s. 69, and *J. Acoust. Soc. Am.*, 105, 995 (A).
- Godø, O.R., Walsh, S.J. and Engås, A. 1999. Investigating density-dependent catchability in bottom-trawl surveys. *ICES Journal of Marine Science*, 56:292-298.
- Korsbrekke, K. 1999. Variations in Maturity of Haddock in the Barents Sea in Relation to Year-class Strength, Age, Size, Sex and Area 1999. *J. Northw. Atl. Fish. Sci.*, Vol. 25:1-10.
- Korsbrekke, K. and Nakken, O. 1999. Length and species-dependent diurnal variation of catch rates in the Norwegian Barents Sea bottom-trawl surveys. *ICES Journal of Marine Science*, 56:284-291.
- Ona, E. and Svellingen, I. 1999. High resolution target strength measurements in deep water. *J. Acoust. Soc. Am. Vol* 105, No. 2. Pt. 2. (2pAO1).
- Ottersen, G., Michalsen, K. and Nakken, O. 1999. Ambient temperature and distribution of Northeast Arctic cod. *ICES Journal of Marine Science* 55:67-85.
- Somerton, D., Ianelli, J., Walsh, S., Smith, S., Godø, O.R. and Ramm, D. 1999. Incorporating experimentally derived estimates of survey trawl efficiency into the stock assessment process: a discussion. *ICES Journal of Marine Science*, 56:299-302.
- Stensholt E. and B.K. Stensholt 1999. Fish movement vectors and the temperature gradient: A geometric analysis method for the depth-temperature time series from data storage tags. *ICES Journal of Marine Science*, 56:537-544.
- Svellingen, I. and Ona, E. 1999. A summary of target strength observation on fishes from the shelf of West Africa. *J. Acoust. Soc. Am. Vol* 105, No.2. Pt. 2. (2pAO2).
- Yousif, A. and Aglen, A. 1999. Availability of pelagic distributed cod (*Gadus morhua* L.) to bottom trawls in the Barents Sea. *Fisheries Research* 44:47-57.

ICES/internasjonale organisasjoner

- Eikeseth, H. and Nakken, O. 1999. Maturation in North-East Arctic Haddock. *ICES. CM 1999/Y:19.*
- Godø, O.R. and Ona, E. 1999. Changes in acoustic abundance – a signal indicator for stock dynamics of cod (*Gadus morhua*). *ICES CM 1999/J:05.*
- Godø, O.R., Somerton, D. and Totland, A. 1999. Fish behaviour during sampling as observed from free floating buoys - application for bottom trawl survey assessment. *ICES CM 1999/J:10.*
- Hjellvik, V., Godø, O.R. and Tjøstheim, D. 1999. Modelling Diurnal Variation in Bottom Trawl Catches and Potential Application in Surveys. *ICES CM 1999/J:6.*
- Korneliussen, R. 1999. Multifrequency echograms. 22.

Artiklar i internasjonale tidsskrift

- Proceedings of the Scandinavian symposium on Physical Acoustics 1999.
- Michalsen, K., A. Aglen, D. Somerton, I. Svellingen and J.T. Øvredal 1999. Quantifying the amount of fish unavailable to bottom trawl by use of an upward looking transducer. *ICES CM 1999/J:8*, 18 pp.
- Ona, E. 1999. Determining the entrance position in trawls. *ICES CM 1999/J:13*.
- Ona, E. (ed), 1999. Report of the study group on target strength methodology. *ICES Cooperative Research Report*. (In Press, September 1999).
- Øvredal, J.T. and Huse, I. 1999. Observation of fish behaviour, density and distribution around surveying vessel by means of a deployable echo sounder system. *ICES CM 1999/J:09*.

Andre rapportar/publikasjonar

- Berg, T. og Dalen, J. 1999: Plankton-system. Måleresultater fra Trolla februar 99. SINTEF-notat, Trondheim.
- Dalen, J., 1999: Arbeidsrapport frå tokt med "Dr. Fridtjof Nansen", 13.06. - 03.07.1999. Prosjekt 0506.01 "SODAPS - Sonardata Prosesseringssystem". HI-notat 0506.01-99/1.
- Foote, K.G. 1999. How to do an acoustic abundance estimation of a pelagic fish stock. *2nd EAA International Symposium on Hydroacoustics, Gdansk - Jurata, 24.-27.05.1999*.
- Foote, K.G. and Francis, D.T.I. 1999. Calculating herring target strength. *2nd EAA International Symposium on Hydroacoustics, Gdansk - Jurata, 24.-27.05.1999*.
- Huse, I., 1999 "Vertical migration of fish; impacts on aquaculture and abundance estimation". *Dr. Philos. Thesis., Dept. of Marine and Fisheries Biology, University of Bergen, Feb. 1999*.
- Leithe, A. and Olsen, E. 1999. Digital image analysis - a tool in age estimation. *13th Biennial Conference on the Biology of Marine Mammals, Maui, 28.11 - 03.12.1999. (poster)*
- Michalsen, K., 1999. "Distribution of gadoids in the Barents Sea; Impact on survey results". *Dr. Scient. Thesis, Dept. of Marine and Fisheries Biology, University of Bergen, 26.02.1999*.
- Olsen, E., Grahl-Nielsen, O. and Birkeland, A. 1999. Age estimation of minke whales using fatty acids and mandibular growth zones. *13th Biennial Conference on the Biology of Marine Mammals, Maui, 28.11 - 03.12.1999. (poster)*
- Stensholt, E. and Stensholt, B.K. 1999. Analytical method for depth-temperature-salinity time series from data storage tags. *17th Lowell Wakefield Fisheries Symposium, Alaska 27-30.10.1999. (poster)*
- Totland, A. and Godø, O.R. 1999. BEAM - An interactive GIS application for acoustic abundance estimation. *International Symposium on Geographic Information Systems in Fisheries Science. Seattle, USA, 02-04.03.1999. Poster No. 14*.
- Vabø, R. 1999. "Measurement and correction models of behaviourally induced biases in acoustic estimates of wintering herring." *Dr. Scient. Thesis., Dept. of Marine and Fisheries Biology, University of Bergen, May 1999*.

Foredrag

- Michalsen, K. 1999. Fish behaviour, impact on survey results. *ICES working groups, FTFB and FAST, St. John's, April 1999*.
- Michalsen, K. 1999. "Ambient temperature, horizontal distri-

bution and growth of north-east Arctic cod". *ICES/GLOBEC working group; "Application of environmental data in stock assessment", March 1998*.

- Misund, O.A. 1999. "Sonar studies of fish schools: we can quantify their behaviour, but can we measure their abundance?" *Southwest Fisheries Science Center, La Jolla, California, 12.04.1999*.
- Misund, O.A. 1999. Data uncertainty in monitoring fisheries and fish stocks, and sonar techniques to improve accuracy. *Fisheries Science and the CFP, A Greenwich Forum Conference, Palais des Congress, Brussels, 21-22.09.1999*.

PROGRAM 6 - ANSVARLEG FANGST

Artiklar i internasjonale tidsskrift

- Engaas, A.; Foster, D.; Hataway, B.D.; Watson, J.W. and Workman, I. 1999. The Behavioural Response of Juvenile Red Snapper (*Lutjanus compechanus*) to Shrimp Trawls that Utilize Water Flow Modifications to Unduce Escapement. *Marine Technology Society Journal* 33(2).
- Huse, I., Gundersen, A.C., Nedreaas, K.H. 1999. Relative selectivity of Greenland halibut (*Reinhardtius hippoglossoides*, Walbaum) by trawls, longlines and gillnets. *Fisheries Research* 44:75-93.
- Løkkeborg, S. and Fernö, A. 1999. Diel activity pattern and food search behaviour in cod, *Gadus morhua*. *Environmental Biology of Fishes* 54:345-353.
- Nøttestad, L., Giske, J., Holst, J.C. and Huse, G. 1999. A length-based hypothesis to explain feeding migrations in pelagic fish. *Canadian Journal of Fisheries and Aquatic Sciences* 56 (Supplement 1):26-34.
- Tirasin, E.M., Jørgensen, T. 1999. An evaluation of the precision of diet description. *Mar. Ecol. Prog. Ser.* 182:243-252.

ICES/internasjonale organisasjonar

- Borthers, N.P., Cooper, J. and Løkkeborg, S. 1999. The incidental catch of seabirds by longline fisheries: worldwide review and technical guidelines for mitigation. *FAO Fisheries Circular No. 937*. 100 pp.
- Furevik, D.M. 1999. Ghost fishing, lost gillnets and unaccounted mortality in the Greenland halibut (*Reinhardtius hippoglossoides*) fishery. *ICES/SCOR Symposium on Ecosystem Effects of Fishing, Le Corum, Montpellier, France, March 1999. Poster*.
- Furevik, D.M. 1999. Ghost fishing, lost gillnets and unaccounted mortality in the Greenland halibut (*Reinhardtius hippoglossoides*) fishery. *ICES FTFB Working Group Meeting, St. John's, Newfoundland, April 1999*.
- Furevik, D., Nøttestad, L., Fosså, J.H., Husebø, Å. og Jørgensen, S. 1999. Fiskefordeling på og utenfor korallområder på Storegga. *Fisken og Havet* 15:1-36 (appendix).
- Løkkeborg, S. 1999. Reducing bycatches of seabirds in longlining by means of various mitigation measures. *ICES/SCOR Symposium on Ecosystem Effects of Fishing, Le Corum, Montpellier, France, March 1999*.

Andre rapportar og publikasjonar

- Anon. 1999. Seleksjonsteknikk ikke nok alene. *Nord Fiskeri Nr. 4, August 1999* (Nytt fra Nordisk Arbeidsgruppe for Fiskeriforskning NAF).
- Furevik, D.M., Løkkeborg, S. og Fosseidengen, J.E. 1999. Miljøeffekter av garn, teine og line. *Sluttrapport til Norges forskningsråd*.
- Furevik, D.M. og Skeide, R. 1999. Ny fisketeine - et alternativt redskap for kystflåten. *Poster NFRs avslutningsseminar for programmet "Teknologiutvikling i fiskerisektoren" 18.-19.10.1999, Rica Hell Hotel, Værnes*.
- Furevik, D., Nøttestad, L., Fosså, J.A., Husebø, Å. og Jørgensen, S.B. 1999. Fiskefordeling på og utenfor korallområder på Storegga. *Fisken og Havet nr. 15 - 1999*.
- Isaksen, B. og Furevik, D.M. 1999: Snurrevad- og teineteknologi for fangst og føring av levende fisk. *Sluttrapport av 07.04.99 til Norges forskningsråd. Prosjekt 111331/121. Havforskningsinstituttet, Senter for marine ressurser, 07.04.1999, 14 s.*
- Isaksen, B. og Gamst, K. 1999. Utkast til forskrifter for enkel sorteringsrist (modifisert Sort-V) i torskestrål. *Notat til Fiskeridirektoratet. Havforskningsinstituttet, Senter for marine ressurser, 23.05.1999, 7 p.*
- Jørgensen, T., Løkkeborg, S. and Soldal, A.V. 1999. Residence of fish in the vicinity of a decommissioned oil platform in the North Sea. *Proceedings of the Seventh International Conference on Artificial Reefs and Related Aquatic Habitats, San Remo, Italy, 07-11.10.1999, pp. 424-432.*
- Løkkeborg, S., Humborstad, O.B., Jørgensen, T. and Soldal, A.V. 1999. Spatio-temporal variations in gillnet catch rates in the vicinity of oil platforms. *Proceedings of the Seventh International Conference on Artificial Reefs and Related Aquatic Habitats, San Remo, Italy, 07-11.10.1999, pp. 433-442.*
- Michalsen, K. og Isaksen, B. 1999. Plankton som råstoffkilde for fremstilling av føremidler til bruk innen fiskeoppdrett. *Oppdragsrapport. Senter for marine ressurser, Havforskningsinstituttet, 15.06.1999.*
- Nøttestad, L. 1999. Fiskeforekomster langs rørledninger i Nordsjøen. *Havforskningsinstituttets Internrapport, 41 s.*
- Soldal, A.V. 1999. Biologisk produsert lyd brukt til artsselektiv fangst; Forprosjekt. *Sluttrapport til Norges forskningsråd, Prosjekt 121344/121. Havforskningsinstituttet, Senter for marine ressurser, 29.01.1999, 7 s.*
- Soldal, A.V., Humborstad, O.-B., Løkkeborg, S., Svellingen, I. og Jørgensen, T. 1999. Etterlatte plattformer som kunstige fiskerev. *Fisken og Havet nr. 1 - 1999, 86 s.*
- Soldal, A.V., Svellingen, I., Jørgensen, T. and Løkkeborg, S. 1999. Rigs to reefs in the North Sea: Hydroacoustic quantification of fish in the vicinity of a "semi-cold" platform. *Proceedings of the Seventh International Conference on Artificial Reefs and Related Aquatic Habitats, San Remo, Italy 07-11.10.1999, pp. 413-423.*
- Wileman, D.A., Sangster, G.I, Breen, M., Ulmestrand, M., Soldal, A.V. and Harris, R.R. 1999. Roundfish and *Nephrops* survival after escape from commercial fishing gear. *Final report EC Contract no: FAIR-CT-95-0753. 30.11.1999, 140 pp.*

Foredrag

- Isaksen, B. 1999. Development and implementation of selectivity devices in the Norwegian trawl and seine fishery. *Foredrag ved 4th Meeting of IUCN-ESUSG Fisheries Working Group, Lofoten, Reine, 04-05.03.1999.*
- Jørgensen, T. 1999. Migration of acoustically tagged fish in the vicinity of an oil platform. *Presentasjon på Third Conference on fish Telemetry in Europe, 20-25.06.1999.*
- Jørgensen, T., Løkkeborg, S. and Soldal, A.V. 1999. Residence of fish in the vicinity of a decommissioned platform in the North Sea. *Proceedings of the Seventh International Conference on Artificial Reefs and Related Aquatic Habitats, San Remo, Italy, 07-11.10.1999, pp. 424-432.*
- Løkkeborg, S. 1999. Plattformer som kunstige rev. *Årsmøte i Banklinegruppa i Sogn og Fjordane Fiskarlag, Måløy, 09.02.1999.*
- Løkkeborg, S. 1999. Bird-scaring line and underwater setting reduce seabird bycatches in longlining. *Pacific Seabird Group Symposium: Seabird Bycatch: Trends, Roadblocks and Solutions. Blaine, Washington, USA, 24-28.02.1999.*
- Løkkeborg, S., Humborstad, O.B., Jørgensen, T. and Soldal, A.V. 1999. Spatio-temporal variations in gillnet catch rates in the vicinity of oil platforms. *Proceedings of the Seventh International Conference on Artificial Reefs and Related Aquatic Habitats, San Remo, Italy, 07-11.10.1999, pp. 433-442.*
- Misund, O.A. 1999. Experiences from 4. Framework programme. Livskvalitet og forvaltning — *et tematisk program i EUs 5. rammeprogram, Oslo, 14.04.1999.*
- Soldal, A.V. 1999. Etterlatte oljeplattformer som kunstige fiskerev. *Foredrag ved SAVOS (Samarbeidsrådet for Vest- og Sørlandet (Fylkeskommunene) møte, Hotell Scandic, Bergen, 24.03.1999.*
- Soldal, A.V., Svellingen, I., Jørgensen, T. and Løkkeborg, S. 1999. Rigs to reefs in the North Sea: Hydroacoustic quantification of fish in the vicinity of a "semi-cold" platform. *Proceedings of the Seventh International Conference on Artificial Reefs and Related Aquatic Habitats, San Remo, Italy, 07-11.10.1999,*

Artiklar i internasjonale tidsskrift

- Béland, F., Browman, H.I., Alonso Rodriguez, C. and J.-F. St-Pierre. 1999. The effect of solar ultraviolet radiation (280-400 nm) on the eggs and larvae of Atlantic cod (*Gadus morhua*). *Canadian Journal of Fisheries and Aquatic Sciences* 56:1058-1067.
- Duinker, A., Saout, C., Paulet, Y.M., 1999. Effect of photoperiod on conditioning of the great scallop. *Aquaculture international* 7, 449-457.
- Karlsen, Ø., 1999. Hatching and ontogeny in marine fishes: Consequences for variability and viability at first feeding. Dr. Scient. thesis, Department of Fisheries and Marine Biology, University of Bergen.
- Kouwenberg, J.H.M., Browman, H.I., Cullen, J.J., Davis, R.F., St-Pierre J.-F. and Runge, J.A. 1999. Biological weighting of ultraviolet (280-400 nm) induced mortality in marine zooplankton and fish. I. Atlantic cod (*Gadus morhua*) eggs. *Marine Biology* 134:269-284.
- Kouwenberg, J.H.M., Browman, H.I., Runge, J.A., Cullen, J.J., Davis, R.F. and St-Pierre J.-F. 1999. Biological weighting of ultraviolet (280-400 nm) induced mortality in marine zooplankton and fish. II. *Calanus finmarchicus* eggs. *Marine Biology* 134:285-293.
- Kuhn, P., Browman, H.I., McArthur, B. and St-Pierre J.-F. 1999. Penetration of ultraviolet radiation in the waters of the estuary and Gulf of St. Lawrence. *Limnology and Oceanography* 44:710-716.
- Solbakken, J.S., Norberg B., Watanabe, K. and Pittman K., 1999. Thyroxine as a mediator of metamorphosis of Atlantic halibut (*Hippoglossus hippoglossus* L.). *Environmental Biology of Fishes* 56:53-65.
- Suthers, I.M., van der Meeren, T., and Jørstad, K.E. 1999. Growth histories derived from otolith microstructure of three Norwegian cod stocks co-reared in mesocosms; effect of initial size and prey size changes. *ICES Journal of Marine Science*, 56:658-672.
- Weltzien, F.-A., Planas, M., Cunha, I., Evjen, M.S. and Fyhn H.J. 1999. Free amino acid and protein contents of start-feeding larvae of turbot (*Scophthalmus maximus*) at three temperatures. *Marine Biology* 133(2):327-336.
- Weltzien, F.-A., Planas M. and Fyhn H.J. 1999. Temperature dependency of early growth of turbot (*Scophthalmus maximus* L.) and its implications for measuring developmental progress. *Journal of Experimental Marine Biology and Ecology* 242(2):201-210.
- Weltzien, F.-A., Døving K.B. and Carr W.E.S. 1999. Avoidance reaction of yolk-sac larvae of the inland silverside *Menidia beryllina* (Atherinidae) to hypoxia. *Journal of Experimental Biology* 202(20):2869-2876.
- Weltzien, F.-A., Hemre, G.I., Evjemo J.O., Olsen Y. and Fyhn H.J. 1999. Hydroxybutyrate in developing nauplii of brine shrimp (*Artemia franciscana* K.) under fed and non-fed conditions. *Comparative Biochemistry and Physiology* 125B(1):59-65.
- Poster. 12th International Pectinid Workshop Bergen, 5.-11. mai 1999.
- Andersen, S. og Bergh Ø. Kan kamskjellarver produseres i kveitesiloer? På vei mot antibiotikafri yngelproduksjon. Norsk Fiskeoppdrett 1/99.
- Andersen, S., Burnell, G. and Bergh, Ø. 1999. Flow-through systems for scallop larvae (*Pecten maximus* L.). Poster presentation at: 12th International Pectinid Workshop, Bergen, Norway, May 1999. Book of Abstract, 72-73.
- Bergh, Ø., Andersen, S. og Strand Ø., 1999. Kamskjellproduksjon. Havbruksrapport 1999. Fisken og havet, Særnummer 3 - 1999. ISSN 0802 0620 s.73-75.
- Bergh, Ø., Torkildsen, L., Uglenes, I., Mortensen, S., Duinker, A. and Nylund, A. 1999. A method for fixation of scallop (*Pecten maximus*) larvae. Poster. 12th International Pectinid Workshop, Bergen, 5.-11. mai 1999.
- Browman, H.I., Béland, F., Cullen, J.J., Davis, R.F., Kouwenberg, J.H.M., St-Pierre J.-F. and Vetter, R.D. 1999. The effect of solar ultraviolet radiation (280-400 nm) on the early life history stages of Atlantic cod (*Gadus morhua*). Environment, Development and Growth of Fishes, Annual International Symposium of the Fisheries Society of the British Isles, St. Andrews, Scotland.
- Browman, H.I., Béland, F., Cullen, J.J., Davis, R.F., Kouwenberg, J.H.M., St-Pierre, J.-F. and Vetter, R.D. 1999. The effect of solar ultraviolet radiation (280-400 nm) on the early life history stages of Atlantic cod (*Gadus morhua*). 23rd Annual Larval Fish Conference, Beaufort, North Carolina, USA.
- Chauvaud, L. and Strand, Ø. *Pecten maximus*: memory of upwelling events in Norway. Poster ved 12th International Pectinid Workshop i Bergen, 5-11 mai 1999.
- Chauvaud, L. and Strand, Ø. Growth traits in three populations of *Pecten maximus*. Poster ved 12th International Pectinid Workshop i Bergen, 5-11 mai 1999.
- Gawlicka, A., Parent, B., Horn, M.H., Ross, N., Opstad, I. and Torrissen, O.J. Digestive limitations for early feeding in yolk-sac larvae of Atlantic halibut. (Abstract). In Laird, L. and Reinertsen, H. (Eds). Towards predictable quality. Aquaculture Europe 99, August 7-10, Trondheim, Norway. European Aquaculture Society Special Publication 27: 85-86.
- Harboe, T., Mangor-Jensen, R., Skår, S.Å., van der Meeren, T., and Holm, J. Chr. 1999. A water flow-through incubator without outlet sieve. (Abstract). In Laird, L. and Reinertsen, H. (Eds). Towards predictable quality. Aquaculture Europe 99, August 7-10, Trondheim, Norway. European Aquaculture Society Special Publication 27: 85-86.
- Hellberg, H., Hernar, I., Mortensen, S., and Knutsen, G. (1999). Status of protozoan parasites *Bonamia ostreae* and *Marteilia refringens* in Norwegian flat oysters (*Ostrea edulis* L.). Norges forskningsråds Fiske- og dyrehelsemøte, Tromsø, 18.-20.01.1999.
- Helvik, J.V., Seo, H.C., Næss, T., Forsell, J. and Holmqvist, B. (1999). A ventral distribution of the UV photoreceptor cells in retina of Atlantic halibut larvae. Meeting in The European Developmental Biology Organization, Oslo, 19-23 June 1999.
- Holm, J.C. (red) 1999. Intensiv yngelproduksjon av kveite. Sluttrapport for årene 1997 og 1998. Norges forskningsråd nr 115575/122. 38 pp. (In mimeo)

- systems for scallop larvae (*Pecten maximus* L.). - Poster på 12th International Pectinid Workshop, Bergen, 5-11 mai.
- Bergh, Ø., Torkildsen, L., Lambert, C. og Andersen, S. Yngelproduksjon av kamskjell. Problembeskrivelse og forslag til tiltak. Foredrag, skjelldyrkersamling. Skjellprosjektet/Norges forskningsråd, Stavanger, 10. juni 1999.
- Bergh, Ø. 1999. Algegifter, bakterier og virus i skjell. Foredrag skjelldyrkerkurs. Samarbeidsrådet for Sunnhordland, Leirvik, 6. juni 1999.
- Bergh, Ø. 1999. Alternative to antibiotic treatment in marine aquaculture. Application to bivalve larvae. Foredrag. Årsmøte Fransk-Norsk Stiftelse for vitenskapelig og teknisk forskning og industriell utvikling (FNS). Norges forskningsråd, Radisson SAS Scandinavia, Oslo, 10. juni 1999.
- Bjelland, R.M. and Skiftesvik, A.B. Larval development and start feeding of the European hake (*Merluccius merluccius* L.). The Fisheries Society of the British Isles: Environment, development and growth of fishes. Univ. Of St. Andrews, Scotland, 5-8 July 1999.
- Gawlicka, A., Parent, B., Horn, M.H., Ross, N., Opstad, I. and Torrissen, O.J. Digestive limitations for early feeding yolk-sac larvae of Atlantic halibut. Aquaculture Europe 99 Conference, August 7-9, Trondheim, Norway.
- Andersen, S. and Ringvold, H. 1999. Effect of broodstock diet on spawning success in the great scallop (*Pecten maximus*). Oral presentation at: 12th International Pectinid Workshop, Bergen, Norway, May 1999. Book of Abstract, 118-119.
- Karlsen, Ø. 1999. En review av ontogenetiske atferdsforandringer hos torsk og sild samt en analyse av konsekvensene av slike forandringer for valg av optimalt tidspunkt for pelagiske 0-gruppe surveys. Oppgitt emne, Institutt for Fiskeri- og Marinbiologi, Universitetet i Bergen, 13. august 1999.
- van der Meeren, T. 1999. Yngelproduksjon av kveite. Foredrag på stiftelsesmøte for "Kveitenett Nord", Bodø, 23. mars.
- Solbakken, J.S., Mangor-Jensen, A., Norberg, B. and Pittman, K. 1999. Metamorphosis in Atlantic halibut: Stage responses to exogenous thyroxine. Foredrag på konferansen Towards predictable quality, Aquaculture Europe Trondheim, August 7-10.
- Næss, T. 1999. Hvilke perspektiver har forskningens resultater gitt for lønnsomhet i yngelproduksjonen, vekst og utvikling av yngel relatert til miljø og fôr. Foredrag på NFR/SND sin kveiteworkshop «Hvordan utvikle en lønnsom kveitenæring?», Bergen, 26-27 mai.
- Hamre, K., Rønnestad, I., Næss, T., Graff, I.E., Harboe, T., Holm, J.C., Waagbø, R. and Lie, Ø., 1999. Vitamins to Atlantic halibut (*Hippoglossus hippoglossus*, L.) larvae through *Artemia*. Aquaculture Europe 99 Conference, August 7-9, Trondheim, Norway.
- Harboe, T., Mangor-Jensen, R., Skår, S.Å., van der Meeren, T. and Holm, J. Chr., 1999. A water flow-through incubator without outlet sieve. Aquaculture Europe 99 Conference, August 7-9, Trondheim, Norway.
- Haugum, G., Strand, Ø. og Minchin, D. "Are cultivated scallops wimps?" Foredrag ved 12th International Pectinid Workshop i Bergen, 5-11 mai 1999.
- Haugum, G.A. Vitenskapelig dykking på kamskjell-prosjekter. Foredrag, Møte i Norsk Baromedisinsk Forening, Bergen, 27 mai 1999.
- Mortensen, S. 1999. Scallop introductions and transfers, from an animal health point of view. 12th International Pectinid Workshop, Bergen, Norway, 5-11 mai.
- Mortensen, S. 1999. Production of scallop, *Pecten maximus*, in Norway; A short focus on problems in the production, IFREMER, La Tremblade, Frankrike, 21. april.
- Mortensen, S. 1999. Dyrking og høsting av skjell i Norge, - nybrott eller "gammel vin på nye flasker"? Medarbeiderseminar, Veterinærinstituttet, Hotell Bristol, Bergen, 7.-8. september.
- Skjæggestad, H., Strand, Ø. and Haugum, G.A. Experiences with scallop ongrowing in Norway. Foredrag, Aqua TT/Leonardo - course, 17-19 september 1999, Letterkenny, Irland.
- Skjæggestad, H., Andersen, S. and Strand, Ø. 1999. The capacity of the great scallop, *Pecten maximus*, to exploit enhanced food levels - Poster 12th International Pectinid Workshop, Bergen, 5.-11. mai.
- Strand, Ø. Dyrking av kamskjell. Foredrag. Workshop om kamskjelldyrking (MAROPP - NUMARIO) i Stavanger 10. juni 1999.
- Strand, Ø. Dyrking av kamskjell. Foredrag: Kurs i Skjelldyrking, Høgskolen i Sogn og Fjordane, Sogndal, januar 1999.
- Strand, Ø. Skjellnæringen i Rogaland - hva slags lokaliteter er egnet? Temasamling Fiske og Havbruk. Fylkesdelplan for kystsonen i Rogaland. Stavanger, januar 1999.
- Torkildsen, L. 1999. Afrodisiaka fra havet. Foredrag skjelldyrkersamling. Skjellprosjektet/Norges forskningsråd, Stavanger, 12. juni.
- Torkildsen, L. 1999. Skjell som afrodisiaka. Foredrag Akva-Nor, Trondheim, 12. august.

PROGRAM 8 - OPPDRETTSGRUPPER - MILJØ, VEKST OG KJØNNSMOGNING

Artiklar i internasjonale tidsskrift

- Fyhn, H.J., Finn, R.N., Reith, M. and Norberg, B. 1999. Yolk protein hydrolysis and oocyte free amino acids as key features in the adaptive evolution of teleost fishes to seawater. *Sarsia* 84:451-456.
- Olsen, R.E. and Ringø, E. 1999. Dominance hierarchies formation in Arctic char (*Salvelinus alpinus* L.). Nutrient digestibility of subordinate and dominant fish. *Aquaculture Research* 30:667-671.
- Olsen, R.E., Myklebust, R., Kaino, T. and Ringø, E. 1999. Lipid digestibility and ultrastructural changes in the enterocytes of Arctic char fed linseed oil and soybean lecithin. *Fish Physiology and Biochemistry* 21:35-44.
- Olsen, R.E., Løvaas, E. and Lie, Ø. 1999. Influence of temperature, dietary polyunsaturated fatty acids, vitamin E and spermine on hematology, indices of oxidative stress and fatty acid composition in Arctic char, *Salvelinus alpinus* (L.). *Fish Physiology and Biochemistry* 20:13-29.
- Oppedal, F., Taranger, G.L., Juell, J.E. and Hansen, T. 1999. Growth, osmoregulation and sexual maturation of underyearling Atlantic salmon smolt (*Salmo salar* L.) exposed to different intensities of continuous light in sea cages. *Aquaculture Research* 30:1-9.
- Pickova, J., Kiessling, A. and Dutta, P.D. 1999. Fatty acid

and carotenoid composition of eggs from two nonanadromous Atlantic salmon stocks of cultured and wild origin. *Fish Physiology and Biochemistry* 21: 147-156.

- Ringø, E. and Olsen, R.E. 1999. The effect of diet on aerobic bacterial flora associated with intestine of Arctic charr (*Salvelinus alpinus* L.). *Journal of Applied Microbiology* 86: 22-28.
- Sigurgisladottir, S., Hafsteinsson, H., Jonsson, A., Lie, Ø., Nortvedt, R., Thomassen, M. and Torrissen, O. 1999. Textural properties of raw salmon fillets as related to sampling method. *Journal of Food Science* 64:99-104.
- Solbakken, J.S., Norberg, B., Watanabe, K. and Pittman, K., 1999. Thyroxine as a mediator in the metamorphosis of Atlantic halibut (*Hippoglossus hippoglossus* L.). *Environmental Biology of Fish.* 56:53-65.
- Taranger, G.L., Haux, C., Hansen, T., Stefansson, S.O., Björnsson, B.Th., Walther, B.Th. and Kryvi, H. 1999. Mechanisms underlying photoperiodic effects on age at sexual maturity in Atlantic salmon, *Salmo salar*. *Aquaculture* 177:47-60.
- Torrissen, O.J., 1998. Not all salmon are «Norwegian» salmon and not all salmon pigments are astaxanthin. *J. AOAC Int.*, 81: A53-A54.
- Torrissen, O.J., Balk, L. and Ingebrigtsen, K. 1999. Astaxanthin metabolism in eggs and larvae of Atlantic salmon (*Salmo salar*) In: Nordic Research Co-operation on Reproductive Disturbances in Fish (Bengt-Erik Bengtson, Cathy Hill and Sture Nellbring, editors), *Nordic Council of Ministers, Copenhagen, TemaNord* 1999/530: 89-92.
- Veland, J.O. and Torrissen, O.J. 1999. The texture of Atlantic salmon (*Salmo salar*) muscle as measured instrumentally using TPA and Warner-Brazler shear test. *J. Science of Food and Agriculture* 79: 1737-1746.
- Øverli, Ø., Olsen, R.E., Løvik, F. and Ringø, E. 1999. Dominance hierarchies in Arctic charr (*Salvelinus alpinus* L.): differential cortisol profiles of dominant and subordinate individuals. *Aquaculture Research* 30:259-264.

Andre rapportar/publikasjonar

- Dahle, R., Taranger, G.L. and Norberg, B. 1999. Growth and sexual maturation of Atlantic cod (*Gadus morhua* L.) under different light intensities. Poster presentation at the 6th International Symposium on Reproductive Physiology of Fish, Bergen, July 4-9 1999.
- Holm, J.C. 1999. Aktuelle fiskearter i oppdrett. I: Poppe, T. (red.). *Fiskehelse og fiskesykdommer*. Universitetsforlaget, Oslo. ISBN 82-00-12718-4, pp 49-60.
- Holm, J.C. (red) 1999. Intensiv yngelproduksjon av kveite. *Sluttrapport for årene 1997 og 1998. Norges forskningsråd nr 115575/122*. 38 pp.
- Holm, J.C. 1999. Oppdrett av kveite ved HI – et 25-årsjubileum. Del 2 – Forskning på brei front. I: Kristiansen, T. (red.): *Havbruksrapport 1999. Fisken og Havet*, Særnr. 3 – 1999. Pp 115-122.
- Fjermestad, A., Hemre, G.-I., Holm, J.C., Totland, G.K., Frøyland, L. 1999. Effects of different fat levels in cage fed Atlantic mackerel (*Scomber scombrus*). *Fett* 12/99.
- Norberg, B., Karlsen, Ø., Weltzien, F.-A. and Holm, J.C. 1999. Lysstyrt kjønnsmodning i kveite. *Sluttrapport, NFR-prosjekt nr 110992/120*.
- Otterå, H., Roth, B. and Torrissen, O.J. 1999. Does killing

methods affect the quality of Atlantic salmon?

Poster presentation at *Farmed Fish Quality Conference, Bristol, 7-9 April 1999*.

- Pickova, J., Larsson, P.O. and Kiessling, A. 1999. Some possible explanations to Baltic cod (*Gadus morhua* L.) reproduction disturbances with special emphasis on lipids - an overview. *ICES CM 1999/U: 05 - Theme session U: Animals. Pp 8*.
- Riple, G.L., Kjesbu, O.S. and Norberg, B. 1999. Oocyte development and endocrine changes in plasma of maturing Atlantic halibut (*Hippoglossus hippoglossus* L.). Poster presentation at the 6th International Symposium on Reproductive Physiology of Fish, Bergen July 4-9 1999.
- Solbakken, V., Taranger, G.L. and Hansen, T. 1999. Effects of photoperiod on somatic growth and sexual maturation in rainbow trout (*Oncorhynchus mykiss*) in sea cages. Poster presentation at the 6th International Symposium on Reproductive Physiology of Fish, Bergen, July 4-9 1999.
- Solbakken, V.A. og Hansen, T. 1999. *Optimal settefisk-produksjon av regnbueørret. Fremdriftsrapport for NFR-prosjekt 122849/122*, 5 s.
- Taranger, G.L. 1999. Reproduksjon hos torsk - effekter av naturlige og antropogene miljøfaktorer: Kompetanseoppbygging og metodeutvikling ved Havforskningsinstituttet. *Faglig rapport NFR-prosjekt 11435/120* pr. 1. august 1999, 7 pp.
- Taranger, G.L., Stefansson, S.O., Oppedal, F., Andersson, E., Hansen, T. and Norberg, B. 1999. Photoperiod and temperature affects gonadal development and spawning time in Atlantic salmon (*Salmo salar* L.) Poster presentation at the 6th International Symposium on Reproductive Physiology of Fish, Bergen, July 4-9 1999.
- Torrissen, O.J. 1999. Drøye påstander om laks. *Kronikk. Bergens Tidende* 13. februar 1999.
- Tuene, S., Holm, J.C., Haugen, T., Fosseidengen, J.E., Mangor-Jensen, R., Bergh, Ø., Karlsen, Ø., Norberg, B., Kalvenes, H. and Rabben, H. 1999. Kveite i merd. *Sluttrapport Norges forskningsråd nr 115690/122*. 15 pp.

Foredrag/postere

- Berg, A. 1999. Optimal vaksinestrategi - bivirkning av vaksine. Foredrag på *Sunnmøre fiskehelse, Ulstein, 8. april 1999*.
- Berg, A. 1999. Optimal vaksinasjonsstrategi. Foredrag på: *Veterinærmøte, Bergen, 16. juni 1999*.
- Berg, A. 1999. Optimal vaksinasjonsstrategi. Foredrag på: *Veterinærmøte, Sandnes, 15. juni 1999*.
- Berg, A., Rødseth, O.M. og Hansen, T. 1999. Effekt av tidspunkt for vaksinerings og lysperiode på bivirkninger av vaksinerings hos laks. Foredrag på: *Fiske- og dyrehelsemøtet, Tromsø, 18-20 januar 1999*.
- Finn, R.N., Fyhn, H.J., Norberg, B., Munholland, J. and Reith, M. 1999. Oocyte hydration as a key feature in the adaptive evolution of teleost fishes to seawater. Oral presentation at the 6th International Symposium on Reproductive Physiology of Fish, Bergen, July 4-9 1999.
- Fjermestad, A., Hemre, G.-I., Holm, J.C., Totland, G. and Frøyland, L. 1999. Biochemical and morphological findings in cage fed Atlantic mackerel (*Scomber scombrus*). Oral presentation at 20th Nordic Lipid Symposium, 13-16. June, Kolding, Denmark.

- Hansen, E.K., Hansen, T., Rødseth, O.M., Wergeland, H. og Berg, A. 1999. Effekt av temperatur på sammen- voksningsener i vaksinert laks. *Foredrag på Fiske- og dyrehelsekonferansen, Tromsø, 18-20 januar 1999.*
- Hansen, T., Stefánsson, S.O., Taranger, G.L. and Norberg, B. 1999. Norwegian aquaculture. Oral presentation at the 6th International Symposium on Reproductive Physiology of Fish, Bergen, July 4-9 1999.
- Holm, J.C. 1999. Kveite – kjempe med vanskelig oppvekst. *Foredrag på Forskningsdagene i Bergen, Zachariasbryggen 24.-25.09.99.*
- Karlsen, Ø., Taranger, G.L., Dahle, R. and Norberg, B. 1999. Effect of exercise and continuous light on early sexual maturation in farmed Atlantic cod (*Gadus morhua* L.). Oral presentation at the 6th International Symposium on Reproductive Physiology of Fish, Bergen July 4-9 1999.
- Kiessling, A., Bjørnevik, M. and Johansson L. 1999. Can Slaughter Quality in Salmonids be Affected Already During Early Life? Oral presentation at *European Aquaculture Society, Trondheim, Norway, August 1999*, 2 pp.
- Kiessling, A., Bjørnevik, M. and Johansson, L. 1999. Does rapid muscle growth, early in life affect muscle fibre size composition and muscle quality also in the adult fish? Oral presentation *EAS Trondheim, Norway, August 1999.*
- Oppedal, F. 1999. Appetite feeding under commercial conditions. Oral presentation at *Working group meeting in COST 827 network, 2-7th March, Montpellier, France.*
- Oppedal, F. 1999. Lysstyring av matfisk. *Fagmøte arrangert av Biomar, 14 desember 1999, Hjelmeland, Rogaland.*
- Pickova, J., Larsson, P.O. and Kiessling, K. 1999. Some possible explanations to Baltic cod (*Gadus morhua* L.) reproduction disturbances with special emphasis on lipids - an overview. *Oral presentation at ICES CM, Stockholm, Sweden, September 1999.*
- Pickova, J., Larsson, P.O. and Kiessling, A. 1999. Possible explanations to Baltic cod reproduction problems – a short review. Oral presentation at the 6th International Symposium on Reproductive Physiology of Fish, Bergen, July 4-9 1999.
- Porter, M.J.R., Roed, A.J., Duncan, N. Oppedal, F., Taranger, G.L. and Bromage, N.R. 1999. Differential effects of light intensity on growth, maturation and plasma melatonin in Atlantic salmon and its impact in aquaculture. Oral presentation at the 6th International Symposium on Reproductive Physiology of Fish, Bergen, July 4-9 1999.
- Taranger, G.L., Oppedal, F. and Hansen, T. 1999. Use of light in broodstock management of Atlantic salmon. *Seminar on use of light in salmon farming -99. KPMG Management Consulting AS, October 26 - 28 1998. Trondheim, Norway.* (Lecture in Norwegian).
- Taranger, G.L. 1999. Recent advances in use of light on sea cages in salmon farming. *Meeting with Biomar AS and Hydro Seafood AS, Solstrand Fjord Hotell, Os, December 8, 1999.* (Lecture in Norwegian).
- Taranger, G.L., Holm, J.C. and Norberg, B. 1999. Broodstock management of Atlantic halibut. *Conference by the Regional Foundation for Northern Norway on new marine species in aquaculture. Tromsø, November 10 – 12 1999.*
- Vermeirssen, E.L.M., Mazorra de Quero, C., Shields, R., Norberg, B., Scott, A.P. and Kime, D. 1999. Fertility and motility of sperm from male Atlantic halibut (*Hippoglossus hippoglossus*) treated with gonadotrophin-releasing hormone agonist. Oral presentation at the 6th International Symposium on Reproductive Physiology of Fish, Bergen, July 4-9 1999.
- Weltzien, F.-A., Andersen, Ø., Kobayashi, T., Swanson, P. and Norberg, B. 1999. Isolation and molecular characterization of LHa and b subunits from Atlantic halibut (*Hippoglossus hippoglossus* L.). Oral presentation at the 6th International Symposium on Reproductive Physiology of Fish, Bergen July 4-9 1999.

PROGRAM 9 - MARINT BIOLOGISK MANGFALD

Artiklar i internasjonale tidsskrift

- Agnalt, A.-L., G.I. van der Meeren, K.E. Jørstad, H. Næss, E. Farestveit, E. Nøstvold, T. Svåsand, E. Korsøen and L. Ydstebø. 1999. P. 401-421. In: Howell, B.R., E. Moksness and T. Svåsand (eds.): *Stock enhancement and sea ranching*. Fishing News Books. 606 pp.
- Borgstrøm, R. og Ø. Skaala. 1999. Betydninga av lange tidsserier i forvaltningsrelatert havbruksforskning: Sjøaure i Hardangerfjorden. *Fisken og Havet* nr. 11.
- Borthen, J., Agnalt, A.-L. and van der Meeren, G.I. 1999. A Bio-economic Evaluation of a Stock Enhancement Project of European Lobster: The Simulation Model LOBST.ECO with some Preliminary Results. P. 583-597. In: Howell, B.R., E. Moksness and T. Svåsand (eds.): *Stock enhancement and sea ranching*. Fishing News Books. 606 pp.
- Jelmert, A. and van Leeuwen, J. (Hans). 1999. Harming local species or preventing the transfer of exotics? Possible negative and positive effects of using zinc anodes for corrosion protection of ballast water tanks. *Water Research*, Vol 00, pp 000, 1999. In press.
- Jørstad, K.E. and Farestveit, E. 1999. Population genetic structure of lobster (*Homarus gammarus*) in Norway and implications for enhancement and ranching operation. *Aquaculture*, 173: 447-457.
- Jørstad, K.E., Ø. Skaala and G. Nævdal. 1999. Genetic diversity and the Norwegian sea ranching programme: an Evaluation, p. 49-62. In: Howell, B.R., E. Moksness and T. Svåsand (eds.): *Stock enhancement and sea ranching*. Fishing News Books. 606 pp.
- Otterå, H., Jørstad, K.E., Svåsand, T. & Kristiansen, T.S. 1999. Migration patterns and recapture rates of Northeast Arctic and Norwegian coastal cod reared and released under similar conditions. *Journal of Fish Biology* 54: 213-217.
- Skaala, Ø., Makhrov, A.A., Karlsen, T., Jørstad, K.E., Altukhov, Yu.P., Politov, D.V., Kuzishin, K.V. and Novikov, G.G. 1998. Genetic comparison of salmon (*Salmo salar* L.) from the White Sea and North western Atlantic Ocean. *Journal of Fish Biology* 53: 569-580.

Andre publikasjoner/rapportar

- Agnalt, A.-L., K.E. Jørstad and T. Svåsand. Enhancement of a local stock of European Lobster (*Homarus gam-*

marus) at Kvitsøy in Norway, measured as increase in Catch Per Unit Effort. WAS'99 Conference, Sydney, mai 1999.

- Jelmert, A., 1999. Testing the effectiveness of an integrated hydrocyclone/UV treatment system for ballast water. Consultancy report. 22 pp.
- Jelmert, A. 1999. "Process and apparatus for the treatment of water systems". Patent Nr. 1999 5582.
- Glover, K. and Ø. Skaala. 1999. Identification of family and stock origin in brown trout by microsatellite DNA. Framdriftsrapport til EnFO.
- Skaala, Ø. 1999. Til Laks åt alle ... Korleis sikre framtida for villaks og havbruk? Havforskingstema 1-1999.

Foredrag

- Jelmert, A. 1999. Can Large Volumes of Ballast Water be Treated Efficiently? A Study on the Separation Efficiency and Survival Rates of Zooplankton, Algae and Bacteriae through an Integrated Hydrocyclone and UV-Irradiation unit. Oral presentation at the 9th International Zebra mussel and Aquatic Nuisance Species conference, Duluth, Minnesota, 26-30 April 1999.
- Jelmert, A. 1999. Toxicity of zinc on Ballast Water Organisms. Oral presentation at the 9th International Zebra mussel and Aquatic Nuisance Species conference, Duluth, Minnesota, 26-30 April 1999.
- Jelmert, A. 1999. Update on hydrocyclone and UV-tests. Presentasjon på ICES/IOC/IMO Study Group on Ballast Water and Sediments, Llandudno, Wales, 12-13 April 1999.
- Jelmert, A., Nilsen, O.K., Enger, Ø. and Gram, L. 1999. Bacteria and Vira in Ballast Water. Presentasjon på ICES/IOC/IMO Study Group on Ballast Water and Sediments, Llandudno, Wales, 12-13 April 1999.
- Jelmert, A. 1999 Biological Effects of Zinc on Ballast Water Biota. Presentasjon på ICES/IOC/IMO Study Group on Ballast Water and Sediments, Llandudno, Wales, 12-13 April 1999.
- Jørstad, K.E. 1999. Recent studies on marine stock enhancement in Norway. CSIRO Marine Laboratories, Hobart, Australia, September 1999.
- Jørstad, K.E. 1999. Lobster research programme in Norway. Tasmania Aquaculture and Fisheries Institute, Hobart, Australia, August 1999.
- Jørstad, K.E., Berg, Ø. and Andersen, K. 1999. Health aspects in Norwegian lobster stock enhancement – principles and practice. International Symposium on Lobster Health Management, Adelaide, Australia, September 1999.
- Jørstad, K.E. 1999. Norwegian research program: cooperative tag-recapture program. Lobster Sampling Workshop, Adelaide, September 1999.
- Jørstad, K.E. and Agnalt, A.-L. 1999. Large scale lobster (*Homarus gammarus*) enhancement in Norway. 3. International Lobster Conference, Adelaide, September 1999.
- Jørstad, K.E. 1999. Norwegian lobster release and recapture program. SA Lobster Growers Association Workshop, Adelaide, September 1999.
- Skaala, Ø. Fall and rise of the fine-spotted trout. Troutconcert, St. Felieu de Guixols, Spania, 1999.
- Skaala, Ø. Genetiske effektar av fiskeutsetting i Halne- og Bjornesfjorden på Hardangervidda. Prosjektmøte Statkraft.

PROGRAM 10 – MARIN FORUREINING

Artiklar i internasjonale tidsskrift

- Brown, J.E., Kolstad, A.K., Brungot, A.L., Lind, B., Rudjord, A.L., Strand, P. and Føyn, L. 1999. Levels of ⁹⁹Tc in Seawater and Biota Samples from Norwegian Coastal Waters and Adjacent Seas. *Marine Pollution Bulletin* 38 (7): 560-571.
- Boer, J. de, Klungsoyr, J., Nesje, G., Meier, S., Mchugh, B., Nixon, E. and Rimkus, G. 1999. MATT: Monitoring, Analysis and Toxicity of Toxaphene – Improvement of Analytical Methods. *Organohalogen Compounds* 41: 569-573.
- Djurhuus, R., Svardal, A.M. and Thorsen, E. 1999. Glutathione in the cellular defense of human lung cells exposed to hyperoxia and high pressure. *Undersea and Hyperbaric Medical Society* 26(2): 75-85.
- Føyn, L. 1999. Produced Water from Off-Shore Oil and Gas Production, a New Challenge in Marine Pollution Monitoring. *Proceedings from the Marine Pollution Symposium*, Monaco, 5-9 October 1999. IAEA-TEDOC-1094, p. 474-477.
- Føyn, L., Heldal, H.E. and Sværen, I. 1999. Distribution and Fate of Radioactive Contaminants. *Proceedings from the Marine Pollution Symposium*, Monaco, 5-9 October 1999. IAEA-TEDOC-1094, p. 471-474.
- Geus, H.J. de, Besselink, H., Brouwer, A., Klungsoyr, J., McHugh, B., Nixon, E., Rimkus, G., Wester, P.G. and de Boer, J. 1999. Environmental Occurrence, Analysis, and Toxicology of Toxaphene Compounds. *Environmental Health Perspectives* 107: 115-144.
- Noji, T., Noji, C., Miller, L.A., Klungsoyr, J. and Føyn, L. 1999. The flux of particles and Contaminants in the Skagerrak. *Proceedings from the Marine Pollution Symposium*, Monaco, 5-9 October 1999. IAEA-TEDOC-1094, p. 624-626.

Andre publikasjoner og rapporter

- Daling, P.S., Brakstad, O.G., Olsen, A. og Serigstad, B. 1999. Toksisitet og bioakkumulering av løst og dispergert olje under realistiske eksponeringsbetingelser. Rapport til Olje og Energidep. Nr.: STF66, 97 pp.
- Kershaw, P., Føyn, L., Christensen, G., Leonard, K., Heldal, H.E. and Varskog, P. 1999. The transfer of ⁹⁹Tc from Sellafield to the Arctic. *Poster presentation IUGG 99 Birmingham IAPSO Symposium*, juli 1999.
- Meier, S., Klungsoyr, J., Andersen, T.E. and Svardal, A. 1999. Effects of alkylphenols on lipid transport during gonadal development in cod (*Gadus morhua*). Sixth International Symposium on the Reproductive Physiology of Fish, Bergen 1999.
- Moe, K.A., Serigstad, B. og Brude O.W. Olje-Fisk; en reduksjonistisk tilnærming til skade- og risikoberegninger ved bruk av GIS. *Rapport nr 1012-98-1 Alpha Miljørådgivning as*, 26 pp.
- Moe, K.A., Anker-Nilssen, T., Bakke T., Bjørge, A., Finnstad, B., Melbye, A. og Serigstad B. 1999. Veiledning for etterkantundersøkelser etter store oljesøl. *Alpha Miljørådgivning as*.
- Otterlei, E., Folkvord, A., Svardal, A.M., 1999. Alkylerte fenolers hormonelle innvirkning på torsk - generasjonseffekter. *Teknisk rapport, Universitetet i Bergen - Havforskningsinstituttet*.
- Rye, H., Holand, P. og Serigstad, B. 1999. ROS - Risiko- og

- sårbarhetsforskning. Metodikk for miljørisiko-analyse. Rapport til Norsk Hydro og SFT, Rapport Nr.: STF66 F97043. 78 pp.
- Serigstad, B., Husebø Å., Westheim, K., Cooper, C., Fonn, M., Kristiansen, S.I. and Midtøy, F. 1999. Effekter av Kristin-kondensat på sildelarver ved ulike stadier i utviklingen. Rapport til Saga Petroleum.
- Svardal, A. 1999. Produsert vann - sammensetning og effekter på det marine miljø. *Fisken og Havet Særnr.* 2:1999, 87-91.
- Thorsen, A., Andersen, T.E., Fonn, M., Kjesbu, O.S., Klungsoyr, J., Meier, S. og Svardal, A.M. 1999. Effekter av alkylfenoler på torskens reproduksjon. Teknisk rapport, Havforskningsinstituttet.

Foredrag

- Heldal, H.E., Stupakoff, I. and Fisher, N.S. 1999. Bioaccumulation of Cs-137 and Co-57 by marine phytoplankton. Nordic Society for Radiation Protection, 12th Ordinary Meeting, Skagen, august 1999.
- Soiland, H. and Svendsen, E. 1999. Modelling of Nutrients, Primary Production and Oxygen in the North Sea. Presented at: 2nd Nordic Marine Science Meeting, Hirtshals, 2-4 March 1999.

PROGRAM 12 - FISKEHELSE OG BIOTEKNOLOGI

Artiklar i internasjonale tidsskrift

- Grotmol, S., Bergh, Ø. and Totland, G.K. 1999. Transmission of viral encephalopathy and retinopathy (VER) to yolk-sac larvae of the Atlantic halibut *Hippoglossus hippoglossus*: occurrence of nodavirus in various organs and a possible route of infection. *Diseases of Aquatic Organisms* 36: 95-106.
- Krossøy, B., Hordvik, I., Nilsen, F., Nylund, A. & Endresen, C. 1999. The putative polymerase sequence of infectious salmon anemia virus suggests a new genus within the *Orthomyxoviridae*. *Journal of Virology*, 73:2136-2142.
- Lygren, B., Sveier, H., Hjeltnes, B. and Waagbø, R. 1999. Examination of the immunomodulatory properties and the effect on disease resistance of dietary bovine lactoferrin and vitamin C ded to Atlantic salmon (*Salmo salar*) for a short-term periode. *Fish and Shellfish Immunology* 9:95-107.
- Nilsen, F. 1999. Small subunit rDNA phylogeny of *Bacillidium* sp. (Microspora, Mrazekiidae) infecting oligochaets. *Parasitology* 118:553-558.
- Rungruangsak-Torrissen, K., Carter, C.G., Sundby, A., Berg, A. and Houlihan, D.F. 1999. Maintenance ration, protein synthesis capacity, plasma insulin and growth of Atlantic salmon (*Salmo salar* L.) with genetically different trypsin isozymes. *Fish Physiol. Biochem* 21:223-233.
- Rungruangsak-Torrissen, K., Wergeland, H.I., Glette, J. and Waagbø, R. 1999. Disease resistance and immune parameters in Atlantic salmon (*Salmo salar* L.) with genetically different trypsin isozymes. *Fish Shellfish Immunol.* 9:557-568.
- Samuelsen, O.B., Hjeltnes, B. and Torkildsen, L. 1999. Efficacy of orally administered oxolinic acid and vetoquinol, an oxolinic acid ester, in the treatment of furunculosis in Atlantic salmon *Salmo salar*

held in seawater. *Diseases of Aquatic Organisms*, 37:53-59.

- Samuelsen, O.B. and Ervik, A. 1999. A single-dose pharmacokinetic study of oxolinic acid and vetoquinol, an oxolinic acid ester, in Atlantic halibut (*Hippoglossus hippoglossus*) held in seawater at 9°C. *Journal of Fish Diseases* 22:13-23.
- Seo, H.C., Nilsen, F. and Fjose, A. 1999. Three structurally and functionally conserved Hlx genes in zebrafish. *Biochimica et Biophysica Acta* 1498:323-335.
- Totland, G.K., Grotmol, S., Morita, Y., Nishioka, T. and Nakai, T. 1999. The pathogenicity of nodavirus strains from striped jack *Pseudocaranx dentex* and Atlantic halibut *Hippoglossus hippoglossus* studied by waterborne challenge of yolk-sac larvae of both teleost species. *Diseases of Aquatic Organisms* 38:169-175.

Andre rapportar/publikasjoner

- Bergh, Ø. 1999. Bacterial pathogens associated with early life stages of marine fish. In: Bell, C.R., Brylinski, M., Johnson-Green, P. (ed.) *Microbial Biosystems: New Frontiers. Proceedings of the 8th International symposium on Microbial Ecology*. Atlantic Canada Society for Microbial Ecology, Halifax, Canada.
- Bergh, Ø. 1999. Bruk av probiotika i marint fiskeoppdrett. Sluttrapport Norges forskningsråd, prosjekt 110608/122.
- Bergh, Ø. 1999. Sykdommer på rogn og yngel (marin fisk) I: Poppe, T. (red.) *Fiskehelse og fiskesykdommer*, s. 275-278. Universitetsforlaget ISBN 82-00-12718-4.
- Bergh, Ø. og Grotmol S. 1999. Helsestatus – kveite. *Norsk fiskeoppdrett* 12/99, s. 38-39.
- Boxaspen K. and Tuene S. 1999. Effect of infestation levels of salmon lice (*Lepeophtheirus salmonis*, Krøyer) and tapeworms (*Eubothrium* sp.) on feed utilisation in Atlantic salmon (*Salmo salar* L.). Poster. *9th international conference "Diseases of Fish and Shellfish"*, Rhodos 19-24/9.
- Boxaspen, K. 1999. Lakselusa, ikke bare parasitt, men også frittlevende plankton. *Fisken og Havet, særnr. 3. Havbruksrapport 1999*, 35-38.
- Grotmol, S. 1999. Nodaviriose. I: Poppe, T. (red.) *Fiskehelse og fiskesykdommer*, s. 148-152. Universitetsforlaget ISBN 82-00-12718-4.
- Hjeltnes, B. 1999. Infeksjoner med mykobakterier. I: Poppe, T. (red.) *Fiskehelse og fiskesykdommer*, s. 120-122. Universitetsforlaget ISBN 82-00-12718-4.
- Holm, J.C. 1999. Aktuelle fiskearter i oppdrett. I: Poppe, T. (red.) *Fiskehelse og fiskesykdommer*, s. 50-60. Universitetsforlaget ISBN 82-00-12718-4.
- Horsberg, T.E. og Samuelsen, O.B. 1999. Behandling. I: Poppe, T. (red.) *Fiskehelse og fiskesykdommer*, s. 324-338. Universitetsforlaget ISBN 82-00-12718-4.
- Huys, L., van der Meeren, T., Sorgeloos, P. and Bergh, Ø. 1999. Search for beneficial bacterial strains for the larviculture of turbot (*Scophthalmus maximus*). Poster. *Aquaculture Trondheim, Trondheim 7.-10. august 1999*.
- Jensen, S., Bergh, Ø. og Hjeltnes, B. 1999. Bakteriar assosiert med tidlige livsstadier hjå kveite, gruppering etter 16S rDNA restriksjonsanalyse. Poster, *Fiske- og Dyrehelsemøtet*, Tromsø, og *Mikrobiologisk Vintermøte*, Voss.
- Lambert, C., Nicolas, J.L., Cilla, V. and Corre, S. 1999.

- Vibrio pectenicida* sp. nov. a pathogen of *Pecten maximus* larvae. Poster. *9th international conference "Diseases of Fish and Shellfish"*, Rhodos 19-24/9.
- Nilsen, F. 1999. Ciliophora (ciliater). I: Poppe, T. (red.) *Fiskehelse og fiskesykdommer*, s. 192-195. Universitetsforlaget ISBN 82-00-12718-4.
- Nilsen, F. 1999. Apicomplexa. I: Poppe, T. (red.) *Fiskehelse og fiskesykdommer*, s. 195-197. Universitetsforlaget ISBN 82-00-12718-4.
- Nilsen, F. 1999. Rhizopoda. I: Poppe, T. (red.) *Fiskehelse og fiskesykdommer*, s. 197. Universitetsforlaget ISBN 82-00-12718-4.
- Nilsen, F. 1999. Pseudofungi. I: Poppe, T. (red.) *Fiskehelse og fiskesykdommer*, s. 197. Universitetsforlaget ISBN 82-00-12718-4.
- Rungruangsak-Torrissen, K., Stensholt, B.K. and Holm, M. 1999. Spatial distribution of Atlantic salmon post-smolts: Association between genetic differences in trypsin isozymes and environmental variables. Poster. *17th Lowell Wakefield Fisheries Symposium on Spatial Processes and Management of Fish Populations*, October 27-30, 1999, Anchorage, Alaska, USA.
- Rungruangsak-Torrissen, K. 1999. La dem rømme. *Havbruk - fiskeri og foredling* nr. 2/99, s. 34-35.
- Rungruangsak-Torrissen, K., Stensholt, B., og Holm, M. 1999. Forskjell i trypsin-isozym hos laks har effekt på veksten i havet. *Havforskningsnytt* nr. 6/99. ISSN 0804-5496.
- Samuelsen, O.B., Bergh, Ø., Jensen, S. and Husgard, S. 1999. Isolation of a possible pathogenic *Vibrio* sp. from corkwing wrasse (*Crenilabrus melops*) and the efficacy of a single intraperitoneal injection of flumequine in the treatment of an infection in wrasse. Poster. *9th international conference "Diseases of Fish and Shellfish"*, Rhodos 19-24/9.
- Hjeltnes, B. 1999. RT-PCR som diagnostikk av nodavirusinfeksjoner hos fisk. *Fiske- og dyrehelsemøtet 1999*, Scandic Hotell, 18-20 januar, Tromsø.
- Nilsen, F. 1999. Microsporidier hos fisk. *Fiske- og dyrehelsemøtet 1999*, Scandic Hotell, 18-20 januar, Tromsø.
- Nilsen, F. 1999. Molecular phylogeny of Microsporidia. *5th International Symposium on Fish Parasites*. Ceske Budejovice.
- Samuelsen, O.B. 1999. "Behandlingseffektivitet av oksolin-syre og vetoquinol mot furunkulose i laks." *Fiske- og dyrehelsemøtet*, Scandic Hotell, 18-20 januar, Tromsø.
- Torkildsen, L., Samuelsen, O.B., Lunestad, B.T., Nylund, A. and Bergh, Ø. Interactions between early life stages of scallops (*Pecten maximus*) and bacteria. *9th international conference "Diseases of Fish and Shellfish"*, Rhodos 19-24/9.
- Vikeså, V., Boxaspen K., Holm, J.C. og Pittman, K. 1999. Påvirkning av salinitet og temperatur på tidlige livsstadier av lakselus. *Fiske- og dyrehelsemøtet*, Scandic Hotell, 18-20 januar, Tromsø.

Foredrag

- Boxaspen, Karin, Anne Berit Skiftesvik og Howard Browman. 1999. Atferdsstudier på nauplier og copepoditt av lakselus. *Fiske- og dyrehelsemøtet*, Scandic Hotell, 18-20 januar, Tromsø.
- Husgard, S., Biering, E., Grotmol, S. og Hjeltnes, B. 1999. Eksperimentall smitte av piggvar (*Scophthalmus maximus*) med et nodavirus. *Fiske- og dyrehelsemøtet*, Scandic Hotell, 18-20 januar, Tromsø.
- Husgard, S., Biering, E., Grotmol, S. and Hjeltnes, B. 1999. Susceptibility of juvenile turbot (*Scophthalmus maximus*) to nodavirus. *Aquaculture Trondheim*, Trondheim, 7.-10. august 1999.
- Husgard, S., Biering, E., Grotmol S. og Hjeltnes B. 1999. Experimental challenge of juvenile turbot (*Scophthalmus maximus*) with a nodavirus. *9th international conference "Diseases of Fish and Shellfish"*, Rhodos, 19-24/9.
- Krossøy, B., Hordvik, I., Nilsen, F., Nylund, A. and Endresen, C. 1999. The putative polymerase sequence of infectious salmon anemia virus suggests a new genus within the Orthomyxoviridae. *XI International Congress of Virology*, Sydney, 9-13 August 1999.
- Makridis, P., Bergh, Ø., Fjellheim, J., Skjermo, J. and Vadstein O. 1999. Microbial control of live food cultures. *Aquaculture Trondheim*, Trondheim, 7.-10. august 1999.
- Nerland, A.H., Grotmol, S., Biering, E., Boge Eriksen, T. og