

Curriculum Vitae

Name: Friedrich W. Köster

Date of birth: 26 June 1959

Citizenship: German

Present position: Director, National Institute of Aquatic Resources

University education and degrees:

Education in biology, fisheries biology, biological and physical oceanography,
Institute of Marine Sciences, Kiel (IfM) 1979-1985

Diploma (~M.Sc.), IfM Kiel 1986

Dr. rer. nat. (~Ph.D.), IfM Kiel 1994

Positions held:

Project scientist, Institute for Sea Fisheries, Hamburg 1986-1988

Research focus: Antarctic fish stock assessment

Project scientist, IfM Kiel 1988-1994

Research focus: Fish stock dynamics and species interactions in Greenland waters and the Baltic

Teaching: Contributions to courses in basic methods of stock assessment and fish population dynamics

Scientific assistant (~Junior Professor), IfM Kiel 1995-2002

Research focus: Fish stock interactions and recruitment processes

Teaching: Lectures in fisheries biology, responsible for courses in fish stock assessment and population dynamics and related seminars/examinations including supervision of master and PhD students

Research Director, Dept. of Marine Fisheries, Danish Institute for Fisheries Research (DIFRES)
..... 2002-2007

Research focus: Improving fisheries management by considering environmental drivers and species interactions

Teaching: Lectures within courses on fisheries biology and fish stock assessment within different research schools, head of DTU Aqua's Ph.D. school

Director, National Institute of Aquatic Resources (DTU Aqua) 2007-present

Research focus: Development of multidisciplinary, cross-sectorial cooperation to implement the EU Marine and Maritime Research Strategy

Fields of interest and research activities:

The role of species interactions in marine fish stock dynamics under variable environmental forcing conditions has been central focus of my research. In this respect I acted as co-ordinator of the fish species interaction work packages in EU framework projects CORE (1994-1998), STORE (1999-2003) and LIFEKO (2000-2004). While the latter project focused on the role of frontal regions for fish stock recruitment in the North Sea, CORE and STORE addressed the entire life cycle of cod and sprat with the objective to explain regime shifts in upper trophic levels of the Baltic. In the latter projects I was as well responsible for integrating project results into stock assessment, which included coordination of related modelling activities. To facilitate this I am member of the International Council of the Exploration of the Sea (ICES) Baltic Fisheries Assessment Working Group since 1996, have chaired the ICES Study Group on Multispecies Model Implementation in the Baltic 1996-1999, co-chaired the Study Group on Multispecies Predictions in the Baltic 2000-2003 and the Study Group on Multispecies Assessments in the Baltic 2004-2007.

The interaction between intermediate and upper trophic levels under variable environmental conditions was central topic of the German GLOBEC project, in which I was member of the Steering Committee 1999-2004 and have coordinate a subproject on coupled bio/physical modelling until 2003. As co-chair of the ICES Steering Group on the North Atlantic Regional Office 2001-2007, member of the IOC/SPACC SG on the Use on Environmental Indices in the Management of Pelagic Fish Populations 2001-2004 and the IMBER/GLOBEC Task Team Ecosystems End to End 2005-2007, I have as well participated in the co-ordination of international research activities. Furthermore, I acted as co-chair of the Baltic System Study in the EU NoE EUR-OCEANS 2005-2008, based on experience gained within the multi-disciplinary Baltic Sea System Study BASYS and other EU projects in the Baltic.

As Research Director at DIFRES, the working area naturally expanded more into research organisation (e.g. member of the ICES Baltic Committee 2002-2007 and Delegate of Denmark in ICES since 2004, ICES vice president since 2011) and fisheries management (e.g. member of the Danish Delegation at the EU Council of Minister, member of the North Sea Commission Fisheries Partnership 2002-2005 and member of the ICES Advisory Committee on Fisheries Management 2005-2007, alternate of ICES ACOM since 2008).

As Director of DTU Aqua (formerly DIFRES), the working field broadened further encompassing now responsibility for conservation and management aspects of freshwater systems and all aspects of marine and fisheries research inclusive related economics (e.g. under the research school Fisheries and Aquaculture Management and Economics, FAME). Duties include representation of the institute in activities of the European Fisheries and Aquaculture Research Organisation (EFARO), since 2008 as member of the board of directors and as vice-president of ICES, since 2012. Work encompasses as well development and implementation of cross-sectorial research agendas within the EU project MARCOM+ and related EU initiatives as well as the international Steering Group of BONUS to implement an article 185 action for the Baltic.

Membership in academic and professional committees (sub-set of most relevant):

1989-1992	EU delegation at NAFO Scientific Council Meetings.
Since 1987	Served in 23 ICES working, study, planning or steering groups with focus on fish stock assessment, recruitment and species interactions, impact of environmental change, served in 5 as chair or co-chair.
1998-2002	Extra-ordinary Member of the German Commission on Marine Research.
1998-2004	German National GLOBEC Steering Committee.
2000-2003	SPACC/IOC Study Group on the Use of Environmental Indices in the Management of Pelagic Fish Populations.
2000-2002	ICES Resource Management Committee.
2002-2004	ICES Baltic Committee.
2002-2004	North Sea Commission Fisheries Partnership.
Since 2004	Danish delegate at the ICES Council.
2005-2007	ICES Advisory Committee on Fisheries Management.
Since 2007	EFARO, Board of directors (2008-2012).
Since 2010	BONUS 185 Steering Committee.
2011-2018	Vice president of ICES
Since 2018	President of ICES

Activities as Referee (subset of most relevant):

Evaluation/employment committee: Member of evaluation panel for 2 external (IfM Kiel, GNIR), 3 cooperation (AU, KU and SDU), 5 internal DTU professorships and 10 associated professorships/senior scientists as well as several Scientist/Postdoc, Research Assistant and PhD evaluation/employment committees.

Review of research programmes: Review of research programmes to be set up by national or international funding organisation, such as EU Commission FP6 specific programmes and Directorate for Food, Fisheries and Agri Business (DFFE).

Review of research proposals: Review of national (e.g. DFFE programmes Pilot and demonstration projects and Exploratory fisheries) and international (e.g. DEFRA, UK; NWO, Earth and Life Sciences, ZKO North Sea panel) research projects.

Review of scientific manuscripts: Acting reviewer in ca. 10 international journals.

Students:

7 PhD and 12 master students supervised at IfM Kiel and DTU Aqua, acted as external referee in PhD studies at German and Norwegian universities.

Contributions to international conferences:

45 contributions to international symposia, 15 as invited speaker.

Publications:

65 papers in peer reviewed international scientific journals or books and more than 60 written contributions to symposia, popular scientific articles and research reports. Selected publications since 2000:

Köster, F.W. and Möllmann, C. 2000. Egg cannibalism in Baltic sprat (*Sprattus sprattus* L.). Mar. Ecol. Progr. Ser., 196: 269-277.

Köster, F.W., Möllmann, C., Neuenfeldt, S., Plikshs, M. and Voss, R. 2001. Developing Baltic cod recruitment models I: Resolving spatial and temporal dynamics of spawning stock and recruitment for cod, herring and sprat. Can. J. Fish. Aquat. Sci. 58: 1516-1533.

Köster, F.W., Hinrichsen, H.-H., Schnack, D., St. John, M. A., MacKenzie, B.R., Tomkiewicz, J. & Plikshs, M. 2001. Developing Baltic cod recruitment models II: Incorporation of environmental variability and species interaction. Can. J. Fish. Aquat. Sci. 58: 1535-1557.

Köster, F.W., Möllmann, C., Neuenfeldt, S., Vinther, M., St. John, M.A., Tomkiewicz, J., Voss, R., Hinrichsen, H.H., Kraus, G. and Schnack, D. 2003. Fish stock development in the Central Baltic Sea (1976-2000) in relation to variability in the physical environment. ICES Mar. Sci. Symp., 219: 294-306.

Köster, F.W., D. Schnack and C. Möllmann. 2003. Scientific knowledge on biological processes potentially useful in fish stock predictions. Scientia Marina 67 (suppl.1): 101-127.

MacKenzie, B.R. & Köster, F.W. 2004. Fish production and climate: sprat in the Baltic Sea. Ecology 85: 784-794.

Köster, F.W., Möllmann, C., Hinrichsen, H.-H., Wieland, K., Tomkiewicz, J., Kraus, G., Voss, R., Makarchouk, A., MacKenzie, B.R., St. John, M.A., Schnack, D., Rohlf, N., Linkowski, T., and Beyer, J.E. 2005. Baltic cod recruitment – impact of climate variability on key processes. ICES J. Mar. Sci., 62: 1408-1225.

Eero, M., Köster, F.W., Plikshs, M. and Thurow, F. 2007. Eastern Baltic cod (*Gadus morhua callarias*) stock dynamics: Extending the analytical assessment back to the mid-1940s. ICES J. Mar. Sci. 64: 1257-1271.

Eero, M., Köster, F.W., and B.R. MacKenzie 2008. Reconstructing historical stock development of Atlantic cod (*Gadus morhua*) in the eastern Baltic Sea before the beginning of intensive exploitation. Can. J. Fish. Aquat. Sci. 65: 2728–2741.

Köster, F.W., M. Vinther, B. R. MacKenzie, M. Eero, and M. Plikshs. 2009. Environmental effects on recruitment and implications for biological reference points of eastern Baltic cod (*Gadus morhua*). J. Northw. Atl. Fish. Sci., 41: 205–220.

Huwer, B., Clemmesen, C., GrønkJær, P., Köster, F.W. 2011. Vertical distribution and growth performance of Baltic cod larvae - Field evidence for starvation-induced recruitment regulation during the larval stage? Progress in Oceanography 91: 382-396.

Eero, M., Köster F.W. and Vinther M. 2012. Why is the Eastern Baltic cod recovering? Marine Policy 36: 235–240.

Voss, R., Peck, M.A., Hinrichsen, H.-H., Clemmesen, C., Baumann, H., Stepputis, D., Bernreuther, M., Schmidt, J.O., Temming, A., Köster, F.W. 2012. Recruitment processes in Baltic sprat - A re-evaluation of GLOBEC Germany hypotheses. Progress in Oceanography 107: 61-79.

Köster, F.W., Trippel, E.A. and J. Tomkiewicz. 2013. Linking size and age at sexual maturation to body growth, productivity and recruitment of Atlantic cod stocks spanning the North Atlantic. Fisheries Research, 138: 52-61.