

## Dorothy Jane Dankel, Ph.D.

**Date of birth:** July 26, 1979 (Kendallville, Indiana, USA)

**Nationality:** USA, with permanent residency and work permit in Norway

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**Languages:** English (native), Norwegian (fluent) and French (good knowledge)

**Personal:** married, two daughters (born 2011 and 2013 with paid leave)

**URL and Social Media** <https://dorothyjdankel.h.uib.no/> Twitter: @dorothydankel; @nordicmarinett

### Introductory Narrative

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Dorothy is a researcher with a marine science and interdisciplinary background. She has specialized in the field of *science for policy* with proven leadership competencies in both academia and international. From 2009-2015 she chaired the Working Group Fishery Systems (WGFS), and subsequently lead the transition to Working Group Marine Systems (WGMARS). In 2012 she lead the team that created a new institution for annual high-profile research dissemination with high school students called *Forskningsdagene UNG* (Researcher's Night for High School students). Since 2012, she has been a board member of the Nordic Marine Think Tank. Dorothy is co-editor for the textbook [Management Science For Fisheries: An introduction to simulation-based methods](#), and has co-edited two special issues for the academic journal *Futures* on social and ethical topics of biotechnology and society. Dorothy strives for new thinking in the marine sciences, including integration of the humanities into long-term management plans and a [Talk @ Google](#)'s Cambridge campus in 2013 on integrated ocean assessments, and publishes innovative papers with her international network. In parallel, she keeps an ear to the ground and communicates directly with stakeholders through formal and informal channels, such that science can be tailored to be useful and sound for policy needs. Transdisciplinary perspectives of integrated assessments will advance the frontiers of knowledge and set a clear and inspirational target for research quality assurance of integrated assessments across Europe. Dorothy's vision for the future is an inter-faculty research and teaching platform integrated in European universities that inspires and fuels *salient transdisciplinary research* on societal needs and grand challenges.

### Education

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2006 – 2009	Ph.D. degree, Department of Biology, fisheries management, funded by research grant by the Norwegian Research Council's HAVKYST program, University of Bergen/ Norway
2002 – 2004	Masters degree in Fisheries Biology and Management, Department of Biology, University of Bergen/ Norway
1997 – 2001	Bachelor of Arts degree, Biology and French Departments, Hillsdale College, Michigan/ USA
2000 – 2001	French studies of language and culture, Université Stendhal, Grenoble / France

### Current Position

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2016–	Researcher, REGIMES project (funded under the POLARPROG program of the Research Council of Norway), Department of Biology/University of Bergen/ Norway <a href="http://www.regimes.b.uib.no">www.regimes.b.uib.no</a>
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### Previous Positions

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2010 – 2016	Researcher, Salmosterile project (funded under the BIOTEK2021 program of the Research Council of Norway) and AQUAFly project (funded by the Research Council of Norway) Center for the Study of the Sciences and the Humanities, University of Bergen/ Norway
2010–2014	Post-doctoral researcher, Institute of Marine Research, funded by research grant awarded by the Norwegian Research Council/ Norway
2010 – 2013	Researcher, Reflexive Systems Biology project, funded by the Research Council of Norway, Center for the Study of the Sciences and the Humanities, University of Bergen/ Norway
2006–2009	Ph.D. candidate Institute of Marine Research and Department of Biology, University of Bergen/ Norway

Summer 2002 Marine projects assistant, Reef Relief, Key West, Florida/ USA  
 Summer 2001 Marine science instructor, Seacamp Association, Inc, courses taught: Coral reef ecology, Humans and the Environment, Marine Investigations SCUBA II-Coral reef ecology, Big Pine Key, Florida/ USA

## Fellowships

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Summer 2007 Young Scientists Summer Program (YSSP)/International Institute of Applied Systems Analysis/Evolution and Ecology Program/ Austria  
 Winter 2008 Guest Researcher, International Institute of Applied Systems Analysis/Evolution and Ecology Program, Austria  
 Summer 2008 Guest Researcher, University of Massachusetts School of Marine Science and Technology/Northeast Fisheries Science Center at Woods Hole/ USA

## Supervision of Graduate Students

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2012 – 2014 Deirdre Duggan/ PhD Student  
 Faculty of Medicine, Health and Life Sciences/ Queen's University Belfast, Northern Ireland  
 2012 – 2015 Friederike Lempe/ PhD Student  
 Thünen Institute of Baltic Sea Fisheries/ Rostock, Germany

## Teaching Activities

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2009 – current Invited lecturer, Marine Module of the Research Ethics course (MNF 990), University of Bergen, Norway  
 2009 – current Invited lecturer, Marine Fisheries Management (BIO 331), Department of Biology/University of Bergen/  
 2015 Invited lecturer, Risk and the Precautionary Principle (MOL 270), Department of Molecular Biology, University of Bergen  
 2012 Invited oral module for master's course "The overlooked systems view in marine fisheries management", University College Cork and the Marine Institute/ Ireland.

## Organization of Scientific Meetings

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2016 Event Organizer, "Fishackathon, Bergen" [www.fishackathon.co/bergen](http://www.fishackathon.co/bergen)  
 2014 Scientific Organizer, "Post-Normal Science in Practice" symposium, University of Bergen/ Norway  
 2012 Chair of Scientific and Organizing Committees for inaugural "Researcher's Night" / ca 800 participants (high school students and their teachers) / Norway  
 2012 Co-Chair of Theme Session "Management Strategy Evaluations" with Professor Ray Hilborn at the World Fisheries Congress / ca 100 participants / Scotland

## Commissions of Trust

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2012 – current Board member, Nordic Marine Think Tank/ Denmark  
 2012 – current Associate Editor, *Aquatic Living Resources* (peer reviewed journal)/ France  
 2015 – current Reviewer, European Research Council Grant Proposals/ Belgium  
 2012 – current Board member, Nordic Marine Think Tank/ Denmark  
 2013 – current Peer Reviewer, *ICES Journal of Marine Science*/ Denmark  
 2010 – 2015 Chair of ICES Working Group Marine Systems/ Denmark  
 2010 – 2014 Member of ICES working/study groups: Working Group on Evolutionary effects of Fishing (WGEVO), Herring Assessment Working Group (HAWG), Working Group Fishery Systems (WGFS), Working Group on North Atlantic Salmon Assessment (WGNAS)  
 2015 Nominated for a Pew Marine Fellow grant/ Proposal title: *Quality in Integrated Ecosystem Assessments to Support Marine Policy*. Nominator: Peter Gullestad, Norwegian Directorate of Fisheries/ USA

## Memberships of Scientific Societies

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- 2015 – current Member, Marie Curie Research Training Network “*Marine Management and Ecosystem Dynamics under Climate Change*” (MARmaED)
- 2012 – current Member, Nordic Marine Think Tank/ Denmark
- 2002 – current Member, Faculty of Mathematics and Natural Science/ Department of Biology/ University of Bergen/ Norway
- 2010 – current Member, Faculty of Humanities/ Center for the Study of the Sciences and the Humanities/ University of Bergen/ Norway

## Peer-Reviewed Publications (up-to-date citations: <http://scholar.google.co.uk/citations?user=pUympmAAAAAJ>)

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- Dankel, D.J.** 2016. Defining a responsible path forward for simulation-based methods for sustainable fisheries, *Management Science in Fisheries: An Introduction to Simulation-based Methods*: p435; ISSN: 1317615174.
- Dankel, D.J.** and Edwards, C.T.T. 2016. Fishery systems and the role of management science, *Management Science in Fisheries: An Introduction to Simulation-based Methods*: p1; ISSN: 1317615174.
- Stephenson, R.L., Stacey Paul, S., Martin A Pastoors, M.A., Kraan, M., Holm, P., Wiber, M., Mackinson, S., **Dankel, D.J.**, Brooks, K. and Benson, A. 2016. 'Integrating fishers' knowledge research in science and management', *ICES Journal of Marine Science: Journal du Conseil*: fsw025.
- Dankel, D.J.**, Vølstad, J.H., Aanes, S. 2015. Communicating uncertainty in quota advice: the case for Confidence Interval Harvest Control Rules (CI-HCRs) for fisheries. *Canadian Journal of Fisheries and Aquatic Science* DOI: 10.1139/cjfas-2015-0078.
- Dankel, D.J.**, Stange, K. and Nolde Nielsen, K. 2015. What hat are you wearing? On the changing roles of fisheries scientists in the ICES community. *ICES Journal of Marine Science: Journal du Conseil*. DOI: 10.1093/icesjms/fsv199
- Dankel, D.J.**, Roland, K.L., Fisher, M., Brennehan, K., Delgado, A., Santander, J., Baek, C-H, Clark-Curtiss, J., Strand, R., Curtiss, R., III. 2014. Making Common Sense of Vaccines: An Example of Discussing the Recombinant Attenuated *Salmonella* Vaccine with the Public. *Nanoethics* 8 (2), 179-185.
- Delgado, A., Funtowicz, S., **Dankel, D.J.**, Strand, R. Plug and play: Synthetic biology and the dream of engineering life, *Futures*, Volume 48, April 2013, Pages 1-4, ISSN 0016-3287, <http://dx.doi.org/10.1016/j.futures.2013.02.005>.
- Skagen, D.W., Skern-Mauritzen, M., **Dankel, D.J.**, Enberg, K., Kjesbu, O.S., Nash, R.D.M. 2013. A simulation framework for evaluating fisheries management decisions using environmental information. *ICES Journal of Marine Science: Journal du Conseil*, 70 (2013) 743-754.
- Heino, M., Baulier, L., Boukal, D.S., Ernande, B., Johnston, F.D., Mollet, F.M, Pardoe, H., Therkildsen, N.O., Uusi-Heikkilä, S., Vainikka, A., Arlinghaus, R., **Dankel, D.J.**, Dunlop, E.S., Eikeset, A.M., Enberg, K., Engelhard, G.H., Jørgensen, C., Laugen, A.T., Matsumura, S., Nusslé, S.B., Urbach, D., Whitlock, R., Rijnsdorp, A.D., Dieckmann, U. Can fisheries-induced evolution shift reference points for fisheries management?, *ICES Journal of Marine Science: Journal du Conseil*, 70 (2013) 707-721.
- Eikeset, A.M., Richter, A.P., **Dankel, D.J.**, Dunlop, E.S., Heino, M., Dieckmann, U., Stenseth, N.C. 2013. A bio-economic analysis of harvest control rules for the Northeast Arctic cod fishery. *Marine Policy* 39 (2013) 172–181.
- Dankel, D.J.**, Aps, R., Padda, G., Röckmann, C., van der Sluijs, J. P., Wilson, D. C. and Degnbol, P. 2012. "Advice under uncertainty in the marine system." *ICES Journal of Marine Science: Journal du Conseil* 69(1): 3-7.
- Laugen, A.T., Engelhard, G.H., Whitlock, R., Arlinghaus, R., **Dankel, D.J.**, Dunlop, E. S., Eikeset, A.M., Enberg, K., Jørgensen, C., Matsumura, S., Nusslé, S., Urbach, D., Baulier, L., Boukal, D.S., Ernande, B., Johnston, F.D., Mollet, F., Pardoe, H., Therkildsen, N. O., Uusi-Heikkilä, S., Vainikka, A., Heino, M., Rijnsdorp, A.D. and Dieckmann, U. 2012. Evolutionary impact assessment: accounting for evolutionary consequences of fishing in an ecosystem approach to fisheries management. *Fish and Fisheries*. doi: 10.1111/faf.12007
- Delgado, A., S. Funtowicz, **Dankel, D.J.** 2012. Super-computers, evolution and the fabrication of life: How can Science and Technology Studies (STS) contribute to more reflexive developments in systems and

synthetic biology? *International Journal of Social Ecology and Sustainable Development* 3(2) 11-24, April-June 2012.

- Eikeset, A.M., Richter, A.P., Diekert, F.K., **Dankel, D.J.**, Stenseth, N.C., 2010. Unintended consequences sneak in the back door: wise use of regulations in fisheries management. In: Belgrano, A., Fowler, C.W.s (Eds.), *Ecosystem Based Management for Marine Fisheries: An Evolving Perspective*. Cambridge University Press.
- Dankel D.J.**, Skagen D.W., & Ulltang Ø. 2009. Fisheries management in practice: A review of 13 commercially-important fish stocks *Reviews in Fish Biology and Fisheries* 18 201-233.
- Dankel, D.J.**, Jacobson, N., Georgianna, D., Cadrin, S.X., 2009. Can we increase haddock yield within the constraints of the Magnuson-Stevens Act? *Fisheries Research* 100, 240-247.

### Selected Published Reports & Popular articles

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- Dankel, D. J.**, Haraldsson, G.; Heldbo, J.; Høydal, K.; Lassen, H.; Siegstad, H.; Schou, M.; Sverdrup-Jensen, S.; Waldo, S.; Ørebech, P. 2015. "Allocation of Fishing Rights in the Northeast Atlantic Ocean: Discussion paper. TemaNord.2015:546, Nordic Marine Think Tank."
- Dankel, D. J.** 2015. Makrellboksen er truet. *NRK Ytring*. <http://www.nrk.no/ytring/makrellboksen-er-truet-1.12331880>.
- ICES 2013. Interim Report of the Working Group on Maritime Systems (WGMARS), 4-8 November, Stockholm, Sweden. ICES CM 2013/SSGSUE:06
- ICES 2012. Report of the Working Group on Maritime Systems (WGMARS), 12-14 June 2012, Kiel, Germany. ICES CM 2012/SSGSUE:07
- ICES. 2012. Report of the Working Group on North Atlantic Salmon (WGNAS), 26 March–4 April 2012, Copenhagen, Denmark. ICES CM 2012/ACOM:09. 322 pp.
- Dankel, D.J.** "Vi skal bli best og inspirere flest" (We will be the best and inspire the most). *Kronikk* (Op-Ed article). *Bergens Tidende* (The Bergen Times). September 19, 2012. <http://www.imr.no/filarkiv/kronikk.pdf/nb-no>

### Invited Presentations at Scientific/Policy Meetings<sup>1</sup>

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- Opening Keynote Address (invited) "Transdisciplinary insights into Integrated Ecosystem Assessments" OCEANEXT Interdisciplinary Conference on Risks and Opportunities in Marine and Coastal Socio-ecosystems, Nantes, France. June 8, 2016. [http://prezi.com/pmjrsvuswon\\_c/?utm\\_campaign=share&utm\\_medium=copy](http://prezi.com/pmjrsvuswon_c/?utm_campaign=share&utm_medium=copy)
- Oral presentation (invited) "Integrating social and community aspects in ecosystem-based management: trade-off, harvest rules and metrics" Baltic Eye/ICES Workshop on the Ecosystem Approach to Baltic Fisheries, Stockholm, Sweden. June 16, 2016. [http://prezi.com/sponqjducicj/?utm\\_campaign=share&utm\\_medium=copy](http://prezi.com/sponqjducicj/?utm_campaign=share&utm_medium=copy)
- Oral presentation (invited) "Hva bør vi gjøre når fisk svømmer fra tidligere avtaler?" ("What should we do when fish swim away from previous agreements?") A summary of the Nordic Marine Think Tank's latest report: Quota allocation in the North Atlantic. The Norwegian Pelagic Industry's annual meeting, hosted by the Norwegian Seafood Council, Norges Sjømatrådet. August 25, 2015, Ålesund, Norway.
- Oral presentation (invited) "Fisheries science and quota management: Significant digits and significant scripts" 10 June 2015, "Significant Digits: Responsible use of quantitative information" seminar European Commission Joint Research Centre, Fondation Universitaire, Brussels, Belgium.
- Oral presentation (invited) "Institutional aspects of long-term marine management plans", EU/Norway managers/ stakeholder seminar on long-term management plans for shared stocks, 14-16 May 2012, Longyearbyen, Svalbard.
- Oral presentation (invited) "The overlooked systems view in marine fisheries management" April 10, 2010, Sokenai University, Japan.

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<sup>1</sup> Dorothy has presented her work on three different continents and has orally presented at over 30 international conferences and meetings. This list is abbreviated.