

CV Øyvind Fiksen (50)

Date of birth: September 6th, 1968 **Nationality:** Norwegian
Present position: Professor Biological Oceanography, University of Bergen (since 2006). Web: <http://bio.uib.no/te/of/>
Academic degree: Dr. scient. (PhD) 1997, UiB
Excellent Teaching Practitioner, UiB.



Field of research: My research address how processes at the level of individuals drive the dynamics of populations and communities in the marine environment; including mechanistic models of processes, state-variable optimality theory and marine trait-based ecosystem models. I work on behaviour and strategies in fish, zooplankton and microbes, and get excited when fundamental theory explains observations in the field.

Teaching and educational leadership: During three years (2012-2015) I was appointed **Head of Education** and **Deputy Head of Department** at [Department of Biology](#) (BIO), [University of Bergen](#). During this period, BIO was granted status as a **Centre of Excellence in Education** with the [Centre of Excellence in Biology Education \(bioCEED\)](#). I lead a work package on ‘A collegial learning culture among teachers’ 2014-2016. Since then, I have held > 35 invited talks on activities in the centre, in a range of local and national fora. In 2017, I was rewarded status as an **Excellent Teaching Practitioner** from UiB.

Academic leadership/Commissions of trust:

- ✓ **Head of Education** and Deputy for Head of Department (BIO) 2012-2015
- ✓ Member of the SC in the Centre of Excellence in Education – bioCEED 2013-2015
- ✓ **Leader of the [Theoretical Ecology Group](#)** at BIO (~12 staff-members).
- ✓ **Organizer** of the [3rd International Workshop on Trait-based approaches to ocean life](#), 2017, Solstrand hotel, 130 participants.
- ✓ **Chair** of Scientific Advisory Board in the CoE ‘[Centre for Ocean Life](#)’, at DTU Aqua, Technical University of Denmark, Copenhagen (2013-2016).
- ✓ Member of the steering committee for the International Workshop ‘Trait-based approaches to ocean life’ in Waterville Valley, New Hampshire, October 5-8, 2015.
- ✓ Member of Expert Working Group on Marine Graduate Training (WG Marine Graduate), initiated by European Marine Board. 2014-2016.
- ✓ Leader of the Bergen node in the Nordic Centre of Excellence ‘[NorMER](#)’: Nordic Centre for Research on Marine Ecosystems and Resources under Climate Change.
- ✓ Editorial Board Member of *Oecologia* 2009-2013.
- ✓ Convenor of Scientific Sessions at 3 international Symposia and 2 Workshops.
- ✓ Member of GLOBEC Focus 3 Working Group *Modelling and predictive capabilities* 2000-2010.
- ✓ Since 2003, I have contributed to the initiation of, received and managed projects summing up to **>45 mill NOK**.
- ✓ Invited international talks/meetings: 26
- ✓ Contributed talks at international scientific conferences: >30.
- ✓ Fulfilled course in academic leadership 2014.
- ✓ Completed the course *Collegial Teaching and Learning – in Biology* 2016. (100 hours)

Long-term international research visits:

- 2011-12: Massachusetts Institute for Technology. 12 months with **Mick Follows** working on microbial traits and ecosystem models. (Boston)
- 2001: Technical University of Denmark. 6 months with **Brian MacKenzie** working on larval fish ecology (Copenhagen).
- 1996: Station Zoologique, Villefranche-sur-mer, France. 4 months with **François Carlotti** on zooplankton life-history theory.

Research projects and management:

Since 2003, I have contributed to the initiation of, received and managed or co-managed the following projects at BIO, UiB (>45 mill NOK):

1. ADAPT – Adaptation to the ecosystem: Co-evolution of life histories of Calanus and herring in the Norwegian Sea. 2003-2006. NFR. 1938 KNOK, of total project grant 6200 KNOK (1 PhD).
2. ECOBE – Effects of North Atlantic climate variability on the Barents Sea ecosystem. 2003-2006. NFR. 2920 KNOK, of total grant 22000 KNOK. Leader of Module 3: Larval and juvenile transport, growth and survival (1 PhD, 1 post-doc).
3. CLIMAR – Climate and production of marine resources. 2004-2006. In charge of the UoB contribution (1 post-doc, 1531 KNOK).
4. EUROCEANS. The loophole hypothesis of anchovy recruitment in Bay of Biscay. (1 PhD student, 2000 KNOK).
5. DEEEF. Sustainable harvesting of renewable resources. (2006-2010, NFR project, collaboration with IMR). 3000 KNOK of total 6450 KNOK (1 PhD, 1 technician, the UiB contribution).
6. TBECO. Trait-based ecosystem models: from individuals to biodiversity in aquatic communities. (2009-2012). Project leader. 4550 KNOK. Two researchers.
7. EGGVALUE. Towards operational models of fish eggs and larvae along the Norwegian coast (2011-2014). 6700 KNOK
8. **Nordic Centre of Excellence (NCoE) 2011- 2016**: The Nordic Centre for Research on Marine Ecosystems and Resources under Climate Change NorMer. Bergen node – 2 PhD students. 6000 KNOK.
9. **bioCEED – Centre of Excellence in Higher Education** 2014-2024. 50 000 KNOK. Contributed to application, and worked in the core leadership group of the centre.
10. Partner in **MARmaED** - Marine Management and Ecosystem Dynamics under Climate Change (2016-2019) where I co-supervise two PhD students.
11. **FILAMO** - Connecting Field work and Laboratory experiments to numerical MOdeling in a changing marine environment. INTPART. Project leader. 3800 KNOK.
12. PANDORA - Paradigm for Novel Dynamic Oceanic Resource Assessments. Horizon 2020. Call: H2020-SFS-2016-2017. Sustainable Food Security – Resilient and resource-efficient value. UiB-partner (80 K€). Starting 2018.

Teaching and supervision:

- Awarded the distinction Excellent Teaching Practitioner at UiB in 2017.
- Several undergraduate and graduate courses general-, behavioural- and aquatic ecology since 2002 – [My teaching portfolio is available here](#).
- I have long experience in running courses based on portfolio assessment.
- Organizer of several PhD courses/summer schools, for instance the [Hjort Summer School](#) .

- Bergen Summer Research School 2016 and 2018. Oceans, climate and society (16 PhD students), a recurrent course in BSRS.
- Graduated Master students supervised: **14**
- Graduated PhD candidates **10** (+5 ongoing).

Awards 1) **The Meltzer prize 2001** at the University of Bergen (NOK 100 000, or ~ \$12000). 2) The Education Price 2015, bioCEED. 3) **Excellent Teaching Practitioner** 2017. **Organizing 'Darwin Day'** at the University of Bergen since 2007 with for instance Geoffrey Miller, Daniel Dennett (see www.darwin.uib.no for complete program)

International refereed publications: 75 journal papers + 2 book chapters. ISI-citations: 2279, h-index: 30 (August 2018). Detailed list of publications are found [here](#).

International peer-reviewed publications since 2011:

1. J Myrseth, K. Enberg, M. Heino, **Ø. Fiksen**. (2011) Do accurate stock estimates increase harvest and reduce variability in fisheries yield? *Natural Resource Modelling* **24**:222-241
2. **Ø Fiksen** and C Jørgensen (2011). Model of optimal behaviour in fish larvae predicts that food availability determines survival, but not growth. *Marine Ecology Progress Series*. 432:207-219.
3. Reglero P, A Urtizberea, A Pérez, F Alemany, **Ø Fiksen** 2011. Cannibalism among size classes of larvae may be a substantial mortality component in tuna. *Marine Ecology-Progress Series* 433: 205-219.
4. A.F. Opdal, F. Vikebø, and **Ø. Fiksen**. 2011. Parental migration, climate and thermal exposure of larvae: spawning in southern regions gives Northeast Arctic cod a warm start. *Marine Ecology-Progress Series* **439**: 255–262.
5. H L. Pécseli, J Trulsen and **Ø. Fiksen**. (2012). Predator-prey encounter and capture rates for plankton in turbulent environments. *Progress in Oceanography* 101: 14-32.
6. **Fiksen Ø**, MJ Follows, DL Aksnes. 2013. Trait-based models of nutrient uptake in microbes extend the Michaelis-Menten framework. *Reviews in Limnology and Oceanography* 58(1):193-202
7. Visser AW, **Fiksen Ø**. 2013. Optimal foraging in marine ecosystem models: selectivity, profitability and switching. *Marine Ecology-Progress Series* 473: 91–101.
8. Vollset K. W., I. A. Catalan, **Ø. Fiksen** and A. Folkvord. 2013. The effect of food deprivation on the distribution of larval and early juvenile cod in experimental vertical temperature and light gradients. *Marine Ecology-Progress Series* 475:191-201.
9. Urtizberea, A and **Ø Fiksen**. (2013). Effects of prey size structure and turbulence on feeding and growth of anchovy larvae. *Environmental Biology of Fishes*. 96:1045–1063.
10. Castellani M, R Rosland, A Urtizberea, **Ø Fiksen**. 2013. A mass-balanced pelagic ecosystem model with size-structured adaptive zooplankton and fish. *Ecological Modelling* 251:54-63.
11. Jarl Giske, Sigrunn Eliassen, **Øyvind Fiksen**, Per J. Jakobsen, Dag L. Aksnes, Christian Jørgensen, and Marc Mangel. 2013. Effects of the Emotion System on Adaptive Behavior. *The American Naturalist* 182:689-703.
12. Christian Jørgensen, Anders Frugård Opdal, **Ø Fiksen**. (2014) Can behavioural ecology unite hypotheses for fish recruitment? *ICES Journal of Marine Science* 71: 909-917.
13. Ingrid A. Johnsen, **Øyvind Fiksen**, Anne D. Sandvik and Lars Asplin. (2014). Vertical positioning determines regional dispersion of planktonic salmon lice in a fjord system. *Aquaculture Environment Interactions* 5:127-141. doi:10.3354/aei00098

14. H L. Pécseli, J Trulsen and **Ø. Fiksen** (2014). Predator-prey encounter and capture rates in turbulent environments. *Limnology and Oceanography: Fluids and Environments* 4: 85–105. DOI 10.1215/21573689-2768717
15. Reglero P, Ortega A, Blanco E, **Fiksen Ø**, Viguri FJ, de la Gándara F, Seoka M, Folkvord A. (2014) Size-related differences in growth and survival in piscivorous fish larvae fed different prey types. *Aquaculture* 433: 94–101
16. Jarl Giske, Sigrunn Eliassen, **Øyvind Fiksen**, Per J. Jakobsen, Dag L. Aksnes, Marc Mangel and Christian Jørgensen. (2014) The emotion system promotes diversity and evolvability. *Proceedings of the Royal Society B -Biological Sciences*. 281: 20141096.
17. Andreas Sundelöf, Volker Grimm, Mats Ulmestrand, **Øyvind Fiksen**. (2015) Modelling management strategies for the lobster fishery in northern Europe - the importance of protecting egg-bearing females. *Population Ecology*. 57:237–251
18. Mikael van Deurs, Christian Jørgensen and **Øyvind Fiksen**. (2015). Effects of copepod size on fish growth – a model based on data for North Sea sandeel. *Marine Ecology Progress Series*. 520: 235–243.
19. Sainmont, Julie; Haste Anderson, Ken; Thygesen, Uffe; **Fiksen, Øyvind**; Visser, Andre (2015). An effective algorithm for approximating adaptive behavior in seasonal environments. *Ecological Modelling* 311: 20–30
20. **Ø. Fiksen** and A. F. Opdal. 2015. Optimality and rule-based models for larval fish behaviour. *Vie et Milieu – Life and Environment* 65 (2): 115-120.
21. Nadia Fouzai, Anders F. Opdal, Christian Jørgensen, and **Øyvind Fiksen** (2015). Effects of temperature and food availability on larval cod survival: a model for behaviour in vertical gradients. *Marine Ecology Progress Series* 529: 199–212.
22. Ken H. Andersen, Dag L. Aksnes, Terje Berge, **Øyvind Fiksen** and André Visser. 2015. Modeling emergent trophic strategies in plankton. *Journal of Plankton Ecology*.
23. Christian Lindemann, **Øyvind Fiksen**, Ken Haste Andersen, Dag Lorents Aksnes. 2016. Scaling laws in phytoplankton nutrient uptake affinity. *Frontiers in Marine Science* 3:26.
24. Kristina Øie Kvile, **Ø Fiksen**, Irina Prokopchuk, Anders Frugård Opdal. (2017). Coupling survey data with drift model results suggests that local spawning is important for *Calanus finmarchicus* production in the Barents Sea. *Journal of Marine Systems*. 165:69–76.
25. Edurne Blanco, Patricia Reglero, Aurelio Ortega, Fernando de la Gándara, **Øyvind Fiksen**, Arild Folkvord. 2017. The effects of light, darkness and intermittent feeding on the growth and survival of reared Atlantic bonito and Atlantic bluefin tuna larvae. *Aquaculture* (2017), doi: 10.1016/j.aquaculture.2017.05.020
26. Reglero, P., Ortega, A., Balbin, R., Abascal, F. J., Medina, A., Blanco, E., de la Gandara, F., Alvarez-Berastegui, D., Hidalgo, M., Rasmuson, L., Alemany, F., **Fiksen, Ø**. 2018. Atlantic bluefin tuna spawn at suboptimal temperatures for their offspring. *Proceedings of the Royal Society B-Biological Sciences*. 285 (): 20171405.
27. Rachelle Esterhazy and **Øyvind Fiksen**. (In revision). Evolution of portfolio assessment in ecology: a four-year course design cycle. *UniPed*
28. Nadia Fouzai, Anders F. Opdal, Christian Jørgensen, and **Øyvind Fiksen**. (in review). Benefits and costs of adaptive responses to variable predator communities. *Oikos*
29. Johanna M. Aarflot, Dag L. Aksnes, Anders F. Opdal, Hein Rune Skjoldal and **Øyvind Fiksen**. (in review). Caught in broad daylight: topographic constrains of zooplankton depth distributions. *Limnology & Oceanography*
30. Johanna Fall and **Øyvind Fiksen**. (in review). Digestion is slow in cold seas: a mechanistic model of prey selection in gut-limited piscivores. *Fish & Fisheries*