



## Nis Sand Jacobsen

Year of birth: 1985

### ORCID

0000-0001-8754-4518

### Degrees

BSc, University of Copenhagen (2010).

Cand.polyt., Technical University of Denmark (2012).

PhD, Technical University of Denmark (2015).

### Positions

Postdoc, DTU Aqua, Technical University of Denmark (2015).

Research Associate, University of Washington (2016-2018).

Postdoc, Northwest Fisheries Science Center, NOAA (2018-2020).

Postdoc, Section for Ecosystem based Marine Management, DTU Aqua, Technical University of Denmark (2020-2022).

Researcher, Section for Ecosystem based Marine Management, DTU Aqua, Technical University of Denmark (2022-2024).

Senior Researcher, Section for Ecosystem based Marine Management, DTU Aqua, Technical University of Denmark (2024-Present).

### Research area

I work in fisheries ecology with special interests in how ecological interactions and fisheries management affect each other. I investigate these fisheries related issues by applying mathematical and statistical models in frameworks such as management strategy evaluation and multispecies ecosystem models. I am interested in both local stock assessment models and global analysis of fisheries sustainability.

### Distinctions, awards, and grants

SOS-FISK (coordinator and applicant). EMFAF project on cormorant and seal predation. 3,200,000 DKK.

Internal DTU Aqua participants: 9, External Universities: 1. external industry partners: 2.

SC10- coordinator – Study on stomach content of fish to update databases and analyse possible changes in diet or food webs interaction (coordinator and lead partner). EASME/EMFF/2018/011 FRAMEWORK CONTRACT.

600,000 EURO. Internal DTU Aqua participants: 3. External Universities: 8. Total number of participants > 30.

Otto Mønsted Foundation; travel grant for internship at University of Washington.

Lektor Arne Harritsøes Foundation; personal grant.

Villum postdoc grant (2016-2018).

NRC postdoctoral scholar grant (2018-2020).

Carlsberg reintegration fellowship (2020-2022).

### Supervision

Main supervisor for PhD Markus Varlund Strange (2024-present)

Main supervisor for Masters students Tarshib Uddin Ahmed (2024) and Christopher Weller (2025)

Cosupervisor for Masters student Rob van Gemert and Yixin Zhao

### Memberships of scientific committees, 2016-present

HAWG (Chair since 2024)

WGSAM (Chair since 2025).

ICES : WGSPF, WGECOBAL, WGNSSK, WGECO

NCEAS working group focused on assessing and predicting the full environmental impact of global land and ocean-based food production systems.

Danish ACOM alternate

**Web of Science publications: 33. Citations: 1292. h-index: 19. Reports: >20.**

**International conferences, 2016-present: Contributions as first author: 6. Invited: 2, Session convener: 1.**

## **Educational tasks at academical level, 2016-present**

DTU course PhD: Fisheries biology study group (responsible).

Coordinator for the fisheries study line in the Sustainable Fisheries and Aquaculture MSc degree.

Teacher at several courses related to stock assessment, population dynamics, mathematical modeling, and ecosystem based management.

Several guest lectures at University of Washington, School of Aquatic and Fishery Science.

## **Advisory tasks**

Stock assessor for North Sea sandeel and developer of the stock assessment model used for sandeel and sprat.

Chair for the Herring assessment working group (HAWG) that oversees > 10 herring and sprat stocks in the Northern Atlantic and Baltic Sea, and chair of WGSAM which produces multispecies and ecosystem advice for management. Contributor to the MSFD D3 and D4 related to exploited resources and food webs. Danish ACOM alternate contributing to advice related to the Baltic Sea, Ecosystem overviews, and VMEs.

## **Reviewer**

Nature, ICES Journal of Marine Science, Philosophical Transactions B, Canadian Journal of Aquatic and Fisheries Science, Fish and Fisheries, PLOS One, Journal of Theoretical Biology, Ecosystems, Limnology and Oceanography: Methods, Journal of Applied Ecology, Revista de Biología Marina y Oceanografía, Frontiers in Marine Science, Marine Ecology Progress Series, Ecological Modeling, Fisheries Research, Ecological applications, JEMA, Limnology and Oceanography, and more.

## **Selected publications**

**Jacobsen NS**, Gislason H & Andersen KH (2014). The consequences of balanced harvesting of fish communities. Proceedings of the Royal Society B: Biological Sciences, volume 281 (1775).

DOI: 10.1098/rspb.2013.2701.

**Jacobsen NS**, Burgess MG & Andersen KH (2016). Efficiency of fisheries is increasing at the ecosystem level. Fish and Fisheries, volume18 (2), pp. 199-211. DOI: 10.1111/faf.12171.

**Jacobsen NS** & Essington TE (2018). Natural mortality augments population fluctuations of forage fish. Fish and Fisheries, volume19 (5), pp. 791-797. DOI: 10.1111/faf.12290.

Halpern BS, Cottrell RS, Blanchard JL, Bouwman L, Froehlich HE, Gephart JA, **Jacobsen NS**, et al. (2019). Putting all foods on the same table: Achieving sustainable food systems requires full accounting. Proceedings of the National Academy of Sciences of the United States of America, 116 (37), pp. 18152-18156.

DOI: 10.1073/pnas.1913308116.

**Jacobsen NS**, Marshall KN, Berger AM, Grandin C, Taylor IG (2022). Climate-mediated stock redistribution causes increased risk and challenges for fisheries management. ICES Journal of Marine Science, volume 79 (1) pp. 1120-1132.

DOI: 10.1093/icesjms/fsac029