Rob van Gemert

PostDoc Fisheries Biology
Email: robvangemert@gmail.com

My mission is to find out how to get the most fish out of the seas in a sustainable manner. For this, my main focus is on how different forms of exploitation can impact the ecology of the stock, particularly its various density-dependent processes. I am a passionate, hard-working, enthusiastic person with an analytical mindset. I am a fast learner, with a strong affinity for scientific writing. My academic background gives me the ability to bridge the gap between fisheries ecology and management.

Work Experience

PostDoc Quantitative Fisheries Science & Modelling
|Leibniz-Institute of Freshwater Ecology and Inland Fisheries (IGB Berlin): 2019 – present|
Using data-poor methods, I work on the stock assessment of the pike fishery around the Baltic island of Rügen. Furthermore, using participatory model building with the pike stock's stakeholders, we plan to develop models to use in management strategy evaluations for the stock. Eventually, the goal is to create a stakeholder-approved management plan for the future exploitation of this Baltic pike stock.

PhD fellow in Fisheries Biology
|Centre for Ocean Life, National Institute of Aquatic Resources (AQUA), Technical University of Denmark: 2015 – 2019|
I mainly focused on studying the relationship between fish population dynamics (particularly density-dependent processes) and fisheries reference points. For this I used a variety of models, including stochastic state-space models and both single- and multispecies bioenergetic size-spectrum models.
This PhD was part of the MARmaED Marie Curie Innovative Training Network, an EU Horizon 2020 programme.

Professional activities within the PhD:

- Teaching assistant in the course "Ecology 25105" at the Danish Technical University (2017)
- Member of the Organizational Committee for the t-MARmaED course at the Kristineberg Sven Lovén Center, Sweden (2017)
- PhD representative in the Educational Committee of the MARmaED programme (2016-2017)
- 4-week research stay at the Danish Pelagic Producers Organization (DPPO).
- 2x 2-week research stay at the Centre for Ecological and Evolutionary Synthesis (CEES) at the university of Oslo (2017 & 2018)

Independent researcher
|Danish Pelagic Producers Organisation (DPPO): 2017-2018|
I was recruited by the DPPO to help work on the F_{MSY} project. This is an international collaboration that aims to calculate new F_{MSY} reference points for a variety of data-rich ICES-assessed stocks, using the latest scientific knowledge. My work mainly consisted of using a stochastic state-space model to calculate new F_{MSY} reference points. See also: https://www.fmsyproject.net

Education

MSc Biology, major in Marine Biology

|Wageningen University: 2012 – 2015|

During this Master I further specialized myself in quantitative ecology, with a focus on marine ecosystems. I also learned more about marine fisheries, and how they impact fish stocks and marine communities. I knew I wanted to do a PhD after this MSc, so I completed two Master Theses, for which I taught myself how to code and model in R.

Notable projects:

- Master thesis on three-spined stickleback migration and fishway passage, using PIT tags. Under supervision of Jeroen Huisman and Leo Nagelkerke.
- Erasmus exchange at the Danish Technical University, where I collaborated with Nis S. Jacobsen and Ken H. Andersen for a second MSc thesis on modelling the effects of balanced harvesting and density dependence on fisheries.

BSc Biology, major in Ecology & Biodiversity

|Wageningen University: 2008 –2012|

Minor in Marine Living Resources

During this Bachelor I learned about life in all its forms. I decided to specialize in Ecology & Biodiversity, learning more about ecosystems and how its components interact. For this, we made use of both quantitative models as well as practical experiments in the lab and in the field. I decided to take a minor in Marine Living Resources, knowing that I wanted to pursue a career in fisheries science.

Extracurricular Activities

Board member of the student rowing association 'WSR Argo'

|Wageningen, 2012-2013|

I was responsible for purchases, keeping inventory, and bookkeeping. Moreover, I was responsible for managing multiple volunteer committees involved in the day-to-day activities of the association.

Relevant Certificates

STCW Personal Survival Techniques

|Maersk Training, 2017|

A two-day course on safety at sea, required for participation in scientific research cruises. The course includes basic firefighting and first-aid.

Skills

Mathematical Modelling
Data Analysis & Statistics
Teamwork & Collaboration
R, MATLAB, LaTeX, Microsoft Office Suite
Quantitative Ecology
Analytical Mindset & Critical Thinking
Interdisciplinary
Scientific Writing & Communication

Languages

Dutch	Native Speaker
English	Fluent
German	Intermediate Communication Skills
Danish	Basic Communication Skills

List of Publications

van Gemert, R. (2019). *Improving the calculation of fisheries reference points: Influences of density dependence and size selectivity* (PhD Thesis). Kgs. Lyngby: National Institute of Aquatic Resources, Technical University of Denmark.

van Gemert, R., & Andersen, K. H. (2018). Implications of late-in-life density-dependent growth for fishery size-at-entry leading to maximum sustainable yield. *ICES Journal of Marine Science, 75*(4), 1296-1305.

van Gemert, R. & Andersen, K. H. (2018). Challenges to fisheries advice and management due to stock recovery. *ICES Journal of Marine Science, 75*(6), 1864-1870.

Reports

Beukhof, E. & **van Gemert, R.** (2017) *Preparing for Brexit: A historical overview of the abundance and Danish catch distribution of North Sea herring and Northeast Atlantic mackerel.* DPPO headquarters, Copenhagen, Denmark.

Scientific Dissemination

van Gemert, R. & Andersen, K.H. (2018) "The ability of a surplus production model to capture density dependence in growth and mortality", ICES Annual Science Conference, Hamburg, Germany, 24-27 September 2017.

van Gemert, R. & Andersen, K.H. (2017) "Challenges to fisheries management due to stock recovery", ICES Annual Science Conference, Fort Lauderdale, United States, 18-21 September 2017.

van Gemert, R. & Beukhof, E. (2017) "Dynamics in catch and distribution of herring and mackerel in the North Sea", Pelagic Advisory Council, Dublin, Ireland, 25 April 2017.

van Gemert, R. & Andersen, K.H. (2016) "Late-in-life density-dependence: catching smaller fish for higher yields.", ICES Annual Science Conference, Riga, Latvia, 19-23 September 2016.

- *Recipient of the Otto Mønsteds Travel Grant*