

Curriculum vitae *Anne Gro Veia Salvanes*

August 2022

Group Leader, Fjord and Coastal Ecology Group (FjordCoast: <https://www.uib.no/en/FjordCoast>),
Department of Biological Sciences, University of Bergen and Bjerknes Centre for Climate Research, Bergen,
Norway Bergen

Phone: 55584487

Cell: +47 99642388 ,

Email: Anne.Salvanes@uib.no

Web pages: <http://www.uib.no/persons/Anne.Salvanes> & <https://hyponfjordfish.w.uib.no/>

EDUCATION

- 1991 PhD: Disputation date: 10.12.1991.
Department of Fisheries and Marine Biology, University of Bergen, Norway
- 1984 Master
Department of Fisheries Biology, University of Bergen, Norway
- 2017 Collegial Teaching and Learning Course in Biology, bioCEED Center of Excellence in Biology
Education, University of Bergen (UiB).

RESEARCH INTERESTS:

Main research interests are on environmental influences on fish and ecosystem functioning. Through fieldwork and experimental methods, I have studied the biology and ecology of hypoxia tolerant fish in upwelling ecosystems, how nursery environments shape juvenile cod and salmon behaviors as well as life history of mesopelagic fish. I combine field- and experimental work; the field work generates hypotheses that are tested experimentally. I use a basic science approach on applied questions that are relevant for conservation biology and ecosystem management. I have published original articles in the peer-reviewed press in the field of marine ecology, biological oceanography, fish biology, animal behaviour and in the fisheries literature.

CURRENT AND PREVIOUS POSITIONS

- 2000-present *Professor in Fisheries Biology, Department of Biological Sciences, University of Bergen, Norway*
- 2005-2009 *Prorektor (Deputy Vice Chancellor), University of Bergen*
- 1991-2000 *Post doc, Researcher, and Senior Researcher (externally funded research projects), Department of Fisheries and Marine Biology, University of Bergen, Norway*
- 1987-1991 *Assistant professor, Stord-Haugesund College, Haugesund, Norway*
- 1985-1987 *Research assistant, Institute of Marine Research, Bergen, Norway*

FELLOWSHIPS and AWARDS

- 2017-2018 *Fulbright Research Fellow*
- 2016-2018 *Thon Foundation, national tuition-related research projects, Norway*

MOBILITY (research stays abroad lasting more than three months)

- 2018 *Visiting professor, Scripps Institution of Oceanography, UC San Diego, US*
- 2011 *Visiting professor, National Marine Information and Research Centre, Ministry of Fisheries, Swakopmund, Namibia*
- 2010 *Visiting professor, Penn State University, State College, US*
- 2003-2004 *Visiting professor, Department of Biology, University College London, London, UK*
- 1996 *Honorary Visiting Scholar, Department of Zoology, University of Leicester, Leicester, UK*
- 1987 *Visiting Scholar, Institute of Fisheries Analysis, Simon Fraser University, Vancouver, Canada*

TEACHING ACTIVITIES

- 2000-present** Graduate courses: Initiator of, and Coordinator of BIO325 Ocean Science (20 ECTS since 2015); *Marine Field methods* and analysis of data from field campaigns (since 2004); *Introduction to fish physiology, behaviour, ecology and systematics* (2000). Stock assessment I *Population dynamics of fish and stock and assessment methodology* (2001). *Fisheries and marine biological methods* (2002); Mentoring behavior experiments. *Research project in biology (BIO299)*; *Individual supervision. Fish functional ecology and behavior* (contribution to BIO280- Fish Biology I), University of Bergen.
- 2004** Guest lecturer on B260 Applied population ecology and supervisor in the field course B243: Ecological genetics, University College London, UK
- 1996-2000** Organiser: 4 National PhD-courses: “*Modelling the behaviour and life history of fish*” (Guest lecturers: Colin Clark, Paul JB Hart, Marc Mangel). “*Exploitation of evolving resources*” (Guest lecturers: Randsom Myers, Richard Law, Paul JB Hart). “*Population consequences of environmental fluctuations*” (Guest lecturers: Steinar Engen, Jeffrey Hutchings, Richard Law). “*Experimental behavioural studies on fish*” (Guest lecturers: Eva Brännes, Carin Magnhagen, Trygve Nilsen, Gunilla Rosenquist, Nicky Welton), Espesgrend Marine Biological Field Station, University of Bergen, Norway
- 1987-1991** Teacher: Undergraduate courses for Aquaculture engineering: Fish biology, systematics and ecology, aquaculture and extensive mariculture, *Stord-Haugesund College, Norway*

ORGANISATION OF SCIENTIFIC MEETINGS

- 2017-2018** Member of scientific committee & led sessions on the conference: “*Benguela: Opportunities, Challenge and Change*”, ca 300 participants, Cape Town, South Africa
- 2011-2012** Chaired Program committee, local organising committee and led session for the 24th Annual conference of the Akademia Europaea: “*Northern Seas – The European Dimension*”, ca 100 participants, Bergen, Norway
- 2011** Member of the national and local organising committee & session leader for the 47th *European Marine Biology Symposia (EMBS)*, ca 100 participants, Arendal, Norway
- 2002-2004** Chaired organising committee for 3 meetings for “*Norske Havforskere Forening*”, 70, 80, 150 participants, Norway.
- 1997** Chaired local organising committee, member of scientific committee & led session of the conference “*Objectives and Uncertainties in Fisheries Management with emphasis on three North Atlantic Ecosystems*”, ca 250 participants, Norway

INSTITUTIONAL RESPONSIBILITIES - Selected tasks:

- 2009-2010** Chaired committee on early career development “*Doktorgrad som karrierestart innenfor og utenfor universitetet*”, University of Bergen, Norway

- 2005-2009** Prorektor (Deputy Vice Chancellor), University of Bergen, Norway.

Chaired Committees & Boards: University Research Board; PhD program; Strategy for PhD training (“*Fra livsverk til karrierestart*”); Development of *Handbook for doctoral education*; Research Ethics Committee; Evaluation of Research Organization; Benchmarking: Research organisation, PhD Education, International Masters Degrees, Research Funding together with Universities of Århus, Gothenburg, Kiel, Turku; Fund allocations: University Research Funds; Meltzer Fund, “*FRIFORSK*”. Selection of “*Meltzer prize for young scientists*” and “*Meltzer prize for outstanding outreach*”; Strategy development for improving gender balance. **Board member**: UHR-FU; COIMBRA Task Force Doctoral Studies Working Group (initiator of COIMBRA group summer school - “*Transferable and professional challenges in cross-scientific global climate research - a summer school for European research leaders of the future*” held in Bergen July 2007); “*Samarbeidsorganet med Helse Vest*”; Center of Excellences (GeoBiology, Mideaval studies, CIPR).

Organised UiB meetings on PhD education, research ethics, gender politics. Gave invited talks on same themes at Norwegian, Nordic and European Universities.

Chairing research groups: Systems Ecology (2001); Aquatic Behavioural Ecology (2004-2005); EVOFISH (2015-2017). Fjord and Coastal Ecology Group (since 2021); Chair Master studies in Marine Biology (2014-2017).

PROJECTS MANAGEMENT EXPERIENCE (PI)

2020-2023: Hypoxia effects on fish in west Norwegian fjords: harnessing the power of multidisciplinary studies (**HypOnFjordFish**) The Research Council of Norway.

2018-2023: **PRIMA LEARNING**: Connecting hands-on-**PR**actice and Innovative **MA**rine ecological sampling methods and analysis tools for enhancing student **Learning** of ocean science; INTPART mobility project with South Africa, The Research Council of Norway.

2016-2018: *Ecosystem, climate and variation in a "marine mini-ecosystem": a fjord in western Norway*, Thon Foundation.

2014-2016: *Nursery environments and survival of salmon fry*, Funds: Nansen Foundation, RFF-West, BIO Seed funding.

2007-2010: *The trade-off between immune function and brain development in fish*. FRIBIO, The Research Council of Norway.

2003-2005: *Habitat choice and activity in relation to hypoxia and haemoglobin genotype in fish; comparisons across populations and species*. The Research Council of Norway.

2003-2012: 4 projects on *Ecology, physiology and behavior of the hypoxia tolerant bearded goby *Sufflogobius bibarbat**. Funds: 2 Meltzer Foundation, FRIFORSK, The Research Councils of Norway & South Africa.

1999-2003: *Environmental influence on fish populations*. Strategic University Prog. The Research Council of Norway.

COMMISSIONS OF TRUST

2022	Chair self-evaluation of research for EVALBIOVIR (RCN) for one of the established research groups at BIO, UiB
2018	Board member SANOCEAN, The Norwegian & South African Research Councils
2016-2018	Editor on the book " <i>Marine Ecological Field Methods: A guide for marine biologists and fisheries scientists</i> ", Wiley Blackwell, John Wiley & Sons Ltd, US
2017-2018	Guest editor on Journal of Marine Systems Volume 188: " <i>Benguela: Opportunities, Challenge and Change</i> "
2014-2017:	Elected member of the board of The Fisheries Society of the British Isles (FSBI)
2014-2017:	Elected member of the Travel Grant Committee of FSBI (Chair 2016-2017)
2014-2017:	Elected Section Chair of Applied and Translational Biology, Academia Europaea
2014-2017:	Council member of Academia Europaea
2011-2014	Board member FRIMEDBIO, The Norwegian Research Council
2010-2011	Board member FRIBIO, The Norwegian Research Council
2006-2007	Board member Institute of Marine Research, Bergen
2002-2004	Leader of "Norske Havforskeres Forening" (The Norwegian Association for Ocean Science)
1997-1998	Guest editor and organiser of the referee process of papers for <i>Fisheries Research</i> Volume 37, <i>Objectives and Uncertainties in Fisheries Management with emphasis on three North Atlantic Ecosystems</i> ".
1996-2000	Board member of "Marine Resource Management", The Norwegian Research Council

Referee & evaluations

Referee for proposals for Norwegian, Nordic, UK and USA (including NSF) research councils. Evaluated candidates for employment and promotion at Norwegian governmental Institutions and for Universities in Norway, USA, Iceland, Faroe Islands and Sweden. Opponent of PhD-theses both nationally and abroad.

Referee for academic journals: Animal Aquatic Biology, Animal Behavior, Animal Cognition, Aquatic Living Resources, Behaviour, Behavioural Ecology, Behavioural Processes, Canadian Journal of Fisheries and Aquatic Sciences, Ecology and Freshwater Fish, Estuaries and Coast, Ethology, Experimental Marine Biology, Fishery Bulletin, Fisheries Oceanography, Fisheries Research, ICES Journal of Marine Science, Journal of Applied Biology, Journal of Applied Ichthyology, Journal of Ethology, Journal of Experimental Biology, Journal of Fish Biology, Journal of the Marine Biological Association of the United Kingdom, Journal of Marine Systems, Journal of Zoology, Marine Biology Research, Marine Ecology, MEPS, National Centre for the Replacement, National Science Foundation, Neurobiology of Learning and Memory, PLoS Biology, PLoS ONE, Polar Biology, Refinement and Reduction of Animals in Research (NC3Rs), Proceedings of the Royal Society London B, Reinventing Fisheries Management - A Fish & Fisheries Series Book Chapman & Hall, Sarsia, Royal Society Open Science, Science, Scottish Aquaculture Research Forum (SARF); Swiss national Science Foundation

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

2013 -present: Elected member of The Norwegian Academy of Science and Letters

2011 -present: Elected member of the Akademia Europaea

1995- present: Fisheries Society of the British Isles

1991-present: Association of Norwegian Marine Oceanographers (Norske Havforskeres Forening),

MAJOR COLLABORATIONS

Victoria Braithwaite, Behavioural ecology of fish, Department of Ecosystem Science and Management, Penn-State University, Pennsylvania, USA; **Mark Gibbons**, Marine ecosystem dynamics, Department of Biodiversity and Conservation Biology, University of Western Cape, South Africa

SUPERVISION - PhD STUDENTS

- 11. Taraneh Westergerling** (main supervisor, 2022 – ongoing): Species and size composition of pelagic and demersal ecosystems determined by visual sampling methods
- 10. Francesco Saltalamacchia** (main supervisor, 2021- ongoing): Assessing the effect of hypoxia on growth and physiology of mesopelagic fish in Western Norway's fjord environment
- 9. Martine R Solås** (main supervisor, 2019 – ongoing): Ecology of two mesopelagic fish species in poorly and well-oxygenated Norwegian fjords
- 8. Vitalija Bartuseviciute** (co-supervisor, 2019 – ongoing): Cost of life-history adaptations: Multiple trait consequences of fisheries-induced evolution
- 7. Peter Nestory** (co-supervisor, PhD 2020): Behavior of parasitized fish in an African lake.
- 6. Olav Moberg** (main supervisor, PhD 2010): Trade-off in fish immune function and brain development of fish
- 5. Arved Staby** (main supervisor, PhD 2010): Acoustic tracking of individual behaviour of *Maurolicus muelleri* (Teleost) related to light and predator occurrence
- 4. Jon Egil Skjæraasen** (main supervisor, PhD 2003): Behaviour, maturation and spawning in cod
- 3. Jon Bent Kristoffersen** (main supervisor, PhD 1999): Mesopelagic fish life history
- 2. Tore Kristiansen** (co-supervisor, PhD 2000): Growth and survival studies on cod
- 1. Kristogou B Suneetha Gunawickrama** (co-supervisor; PhD 2000): Genetics of mesopelagic fish

SUPERVISION: RESEARCH MASTER STUDENTS, *Co-supervisor.

41. ***Bernt Rydstrøm** (2022 – ongoing): Bycatch of coastal cod (*Gadus morhua*) and golden redfish (*Sebastes norvegicus*) in the North Sea and Norwegian Sea saithe fishery
40. **Modupe Olawunmi Ibikunle** (2022 – ongoing): Distribution pattern and abundance of the jellyfish *Periphylla periphylla* in west Norwegian fjords
39. ***Sigrid Kjeldstad** (2022- ongoing): Environmental drivers of fjord ecosystem structure in western Norway
38. **Karen Rosland** (2021 – 2022): Distribution and trophic interactions of Velvet Belly Lantern shark (*Etmopterus spinax*) and Blackmouth Catshark (*Galeus melastomus*) in fjords that differ in basin oxygen levels.
37. **Øivind Andersen** (2021 – 2022): Effect of a copepod parasite on the mesopelagic fish *Benthosema glaciale*.
36. ***Cecilie Kaars Skaale** (2021 – ongoing): Modern broadband acoustics as a method to observe swimming behaviour in Atlantic salmon
35. **Carl Bukowski** (Freie University Berlin, 2021-2022): Hypoxia and community structure and trophic ecology of diel vertical migrating crustaceans in Norwegian fjords.
34. ***Nils Mo** (2020 – 2021): Distribution of saithe (*Pollachius virens*) in the Barents Sea under changing environmental conditions
33. ***Ainsley Nash** (2020-2021): A tale of two fish: the vertical distribution of juvenile Atlantic salmon in relation to the presence of brown trout
32. ***Magnus Hulbak** (2019-2020): Are migration timing estimates based on tagged Atlantic salmon smolts (*Salmo salar*) biased?
31. ***Erlend M Hanssen** (2019-2020): Novel telemetry predation sensors and mechanistic models reveal the tribulations of Atlantic salmon (*Salmo salar*) smolts migrating through lakes
30. **Kristina Dypvik Skants** (2018-2019): Environmental variation and ecology of North Norwegian coastal demersal fish.
29. **Elise Eidset** (2018-2019): Evaluation of data from coastal fisheries for management purposes
28. **Julie Trollebø Kvalheim** (2018-2019): Comparative analysis of fishery-dependent and independent data on bycatch species for management purposes.
27. **Martine Røystedt Solås**: (2016-2018): Effect of rearing environment on juvenile salmon survival
26. ***Daniel Notvik** (2016-2018): Behaviour of Antarctic krill in response to sampling gear
25. **Torborg Rustand** (2015 – 2018): Climate variation and Antarctic krill distribution
24. **Synne Myhre Sunde** (2017- 2018): Feeding behavior of mesopelagic fish in the Northern Atlantic
23. *** Kristine Rokke** (2017 – 2018): Behaviour of mesopelagic fish in response to light
22. **Aurelien Delaval** (2015- 2017): Population structure of round-nose grenadier in west Norwegian fjords
21. **Janne Stenseng Høye** (2015- 2017). Diet of round-nose grenadier in fjords
20. **Ingeborg Bjerkvik Alnes** (2014 –2016): Sensitive learning periods in salmon fry
19. **Silje Elvatun Sikveland** (2014 – 2016): Effect of nursery environment on salmon aggression
18. **Anne Marte Fauske** (2015-2016): Effect of nursery environment on salmon feeding behaviour
17. **Moritz Arne Nessim Pohl** (Technical University of Braunschweig, Germany: 2013-2014): Search for the molecular “trick” to survive in sea with little oxygen in Benguela
16. **Maria Larsen Seivåg** (2011-2013): Variation in reproductive strategies in male bearded goby
15. **Yusra Taha** (2011-2013): Variation in maturity and fecundity of the bearded goby
14. **Henrik Christensen (University of Bremen 2013)**: Variation in growth of territorial and sneaker male bearded gobies
13. ***Gisle Sverdrup** (2007-2008): Competition between farmed and wild cod
12. **David Allan Strand** (2005-2007): Environmental enrichment and social learning on feeding behaviour in juvenile cod
11. **Lise Langård** (MA 2005-2006): Environmental enrichment and anti-predator behaviour in cod

10. **Selmer O Årsheim** (2002-2006): Temperature and haemoglobin effect on survival of egg and larvae of cod
9. **Francisca Seghers** (Wageningen 2005-2006): Feeding behaviour in cod
8. **Paulus Kainge** (2000-2002): Reproductive biology of Namibian hake
7. **Arved Staby** (2000-2002): Biology of orange roughy;
6. **Mandisile Mcquoi** (2000-2002): Feeding ecology of *Sephia australis*
- 5.* **Dung Vo** (2000): Population studies of carp in Vietnam
4. **Judy L Renque** (2002-2005): Diel vertical migration of Namibian *Sufflogobius bibarbatus*
3. **Kristin Smestad** (1998-2001): Individual behaviour in cod
2. **Ian Knutsen** (1996-1998): Digestion handling time in cod
1. **Linda A Hansen** (1997-1999): Feeding behaviour of juvenile with different haemoglobin genotype

PUBLICATIONS (*corresponding author)

***Salvanes AGV**, Levin LA, Currie B (2022) Ghost crabs as an example of beach life threatened by beach traffic. Elsevier, *Imperiled: The Encyclopedia of Conservation*. 727-732.

Bartuseviciute V, Pauli BD, **Salvanes AGV**, Heino M (2022) Size-selective harvesting affects the immune-competence of guppies exposed to the parasite *Gyrodactylus*. *Proc. Roy. Soc. B*
<https://doi.org/10.1098/rspb.2022.0534>

Nash AJ, Vollset KW, Hanssen EM, Berhe S, **Salvanes AGV**, Isaksen TE, Barlaup BT, Lennox RJ. 2022. A tale of two fishes: depth preference of migrating Atlantic salmon smolt and predatory brown trout in a Norwegian lake. *Canadian Journal of Fisheries and Aquatic Sciences*.

*Delaval A, Solås MR, Skoglund H, **Salvanes AGV** (2021) Does vaterite otolith deformation affect post-release survival and predation susceptibility of hatchery-reared juvenile Atlantic salmon? *Frontiers in Veterinary Science* 8:1066. doi:10.3389/fvets.2021.709850. Open access

*Alnes I, Jensen KH, Skorping A, **Salvanes AGV** (2021) Ontogenetic change in behavioural response to structural enrichment from fry to parr in juvenile Atlantic salmon (*Salmo salar* L.). *Frontiers in Veterinary Science - Animal Behaviour and Welfare*. doi: 10.3389/fvets.2021.638888 , Open access (Main supervisor to Alnes)

Pitcher GC, Aguirre-Velarde A, Breitburg D, Cardich J, Carstensen J, Conley DJ, Dewitte B, Engel A, Espinoza-Morriberón D, Flores G, Garçon V, Graco M, Grégoire M, Gutiérrez D, Hernandez-Ayon JM, Huang H-HM, Isensee K, Jacinto ME, Levin L, Lorenzo A, Machu E, Merma L, Montes I, SWA N, Aurelien A, Roman M, Rose K, Raleigh H, Rabalais NN, **Salvanes AGV**, Salvatelli R, Sifeddine SSA, Tall AW, van der Plas AK, Yasuhara M, Zhang J, Zhu ZY (2021) System controls of coastal and open ocean oxygen depletion. *Progress in Oceanography* <https://doi.org/10.1016/j.pocean.2021.102613>

Jones NAR, Webster MR, **Salvanes AGV** (2021) Physical enrichment research for captive fish: Time to focus on the DETAILS. *Journal of Fish Biology*. <https://doi.org/10.1111/jfb.14773>

Hulbak M, Hanseén EM, Lennox RJ, **Salvanes AGV**, Barlaup B, Gharbi N, Nilsen TO, Vollset KW (2021) Validating timing of salmon smolt runs obtained by telemetry studies. *Fisheries Management and Ecology*:
<https://doi.org/10.1111/fme.12495>

Melle W, Klevjer T, Drinkwater K, Strand E, Naustvoll LJ, Wiebe P, Aksnes DL, Knutsen T, Sundby S, Slotte A, Dupont N, **Salvanes AGV**, Korneliussen R, Huse G (2020) Structure and functioning of four North Atlantic ecosystems - a comparative study. *Deep-Sea Research Part II* <https://doi.org/10.1016/j.dsr2.2020.104838>

Lennox RJ, **Salvanes AGV**, Barlaup BT, Stöger E, Madhun A, Helle TM, Vollset KM (2020) Negative impacts of the sea lice prophylactic emamectin benzoate on the survival of hatchery released salmon smolts in rivers. *Aquatic Toxicology* 224 <https://doi.org/10.1016/j.aquatox.2020.105519>

Gunawickrama S, Delaval A, Johansen T, van der Plas A, **Salvanes AGV** (2020) Genetic structure of *Sufflogobius bibarbatus* in the Benguela upwelling ecosystem using microsatellite markers. *Journal of Applied Ichthyology* 36: 168-182. <https://doi.org/10.1111/jai.14002>

Klevjer T, Melle W, Knutsen T, Strand E, Korneliussen R, Dupont N, **Salvanes AGV**, Wiebe P (2019) Micronekton biomass distribution, improved estimates across four north Atlantic basins. *Deep-Sea Research Part II* <https://doi.org/10.1016/j.dsr2.2019.104691>

Aksnes DL, Aure J, Johansen P-O, Johnsen GH, **Salvanes AGV** (2019) Multi-decadal warming of Atlantic water and associated decline of dissolved oxygen in a deep fjord. *Estuarine, Coastal and Shelf Science* 228(2019) 106392 <https://doi.org/10.1016/j.ecss.2019.106392>

*Solås MR, Skoglund H, **Salvanes AGVS** (2019) Can structural enrichment reduce predation mortality and increase recaptures of hatchery-reared Atlantic salmon *Salmo salar* L. fry released into the wild? *Journal of Fish Biology* 95: 575-588. (Main supervisor to Solås)

Gabagambi NP, Salvanes AGV, Midtøy F, Skorping A (2019), The tapeworm *Ligula intestinalis* alters the behavior of the fish intermediate host *Engraulicypris sardella*, but only after it has become infective to the final host. *Behavioural Processes* 158: 47-52 <https://doi.org/10.1016/j.beproc.2018.11.002>

Currie B, Utne-Palm AC, **Salvanes AGV** (2018) Winning ways with hydrogen sulphide on the Namibian shelf. *Frontiers in Marine Science*, <https://doi.org/10.3389/fmars.2018.00341>

Staby A, **Salvanes AGV** (2018) Mesopelagic Fish. In: *Encyclopedia of Ocean Sciences (Third Edition)*. Vol 2: 283-289. <https://doi.org/10.1016/B978-0-12-409548-9.11212-6>

Moberg O, **Salvanes AGV** (2018) Ocean ranching. In: *Encyclopedia of Ocean Sciences (Third Edition)*. Vol 2: 449-459. <https://doi.org/10.1016/B978-0-12-409548-9.11646-X> (Main supervisor to Moberg)

***Salvanes AGV**, Christiansen H, Taha Y, Henseler C, Seivåg ML, Kjesbu SO, Folkvord A, Utne-Palm A-C, Currie B, Ekau W, van der Plas, AK, Gibbons M (2018) Variation in growth, morphology and reproduction of the bearded goby (*Sufflogobius bibarbatus*) in varying oxygen environments of Northern Benguela. *Journal of Marine Systems* <https://doi.org/10.1016/j.jmarsys.2018.04.003>

***Salvanes AGV**, Gibbons MJ (2018) Adaptation to hypoxic environments – bearded gobies *Sufflogobius bibarbatus* in the Benguela upwelling ecosystem. *Journal of Fish Biology* 92: 752-772, <https://doi.org/10.1111/jfb.13547>

Gordon TAC, Harding HR, Clever FK, Davidson1 IK, Davison W, Montgomery DW, Nedelec SL, Weatherhead RC, Windsor FM, Armstrong JD, Bardonnnet A, Bergman E, Britton JR, Côté IM, D’Agostino D, Greenberg LA, Harborne AR, Kahilainen KK, Metcalfe NB, Mills SC, Milner NJ, Mittermayer FH, Montorio L, Prokkoala JM,

Rutterford LA, **Salvanes AGV**, Simpson SD, Vainikka A, Pinnegar JK, Santos EM (2018) Fishes in a changing world: learning from the past to promote sustainability of fish populations. *Journal of Fish Biology* 92:804-827, <https://doi.org/10.1111/jfb.13546>

*Delaval A, Dahle G, Knutsen H, Devine J, **Salvanes AGV** (2018) Norwegian fjords contain sub-populations of roundnose grenadier *Coryphaenoides rupestris*, a deep-water fish. *Marine Ecology Progress Series* 586: 181–192 <https://doi.org/10.3354/meps12400> (Main supervisor to Delaval)

***Salvanes AGV**, Devine J, Jensen KH, Hestetun JT, Sjøtun K, Glenner H (2018) *Marine Ecological Field Methods. A Guide for Marine Biologists and Fisheries Scientists*. Wiley Blackwell
<https://onlinelibrary.wiley.com/doi/book/10.1002/9781119184362>

***Salvanes, A.G.V.** (2017) Are anti-predator behaviours of hatchery juveniles similar to wild juveniles? *Journal of Fish Biology*. <http://onlinelibrary.wiley.com/doi/10.1111/jfb.13268/full>

Ahlbeck Bergendahl I, **Salvanes AGV**, Braithwaite VA (2016) Determining the effects of duration and recency of exposure to environmental enrichment. *Applied Animal Behaviour Science* 176: 163-169. <http://www.sciencedirect.com/science/article/pii/S0168159115003068>

*Seivåg ML, **Salvanes AGV**, Utne-Palm AC, Kjesbu SO (2016) Reproductive tactics of male bearded goby (*Sufflogobius bibarbatus*) in anoxic and hypoxic waters. *Journal of Sea Research*, 109: 29-41 <http://authors.elsevier.com/a/1SNy44wyOKTFJy> (Main supervisor to Seivåg)

***Salvanes AGV**, Bartholomae C, Yemane D, Gibbons MG, Kainge P, Krakstad J-O, Rouault M, Staby A, Sundby S (2015) Spatial dynamics of the bearded goby and its key fish predators off Namibia varies with climate and oxygen availability. *Fisheries Oceanography* 24 (Suppl. I): 88-101.
<http://onlinelibrary.wiley.com/doi/10.1111/fog.12068/abstract>

Skrypzeck H, **Salvanes AGV**, Currie B, Kotze A (2014) First records of reproductive behaviour and early development for the bearded goby *Sufflogobius bibarbatus*. *Journal of Fish Biology* 84: 1256-1261
doi: 10.1111/jfb.12347

***Salvanes AGV**, Moberg O, Ebbesson LO, Nilsen TO, Jensen KH, Braithwaite VA (2013) Environmental enrichment promotes neural plasticity and cognitive ability in fish. *Proc. Roy. Soc. B* 280
<https://doi.org/10.1098/rspb.2013.1331>

Gunawickrama KBS, Westgaard J-I, **Salvanes AGV**, Johansen T (2012) Characterization of polymorphic microsatellite markers for the bearded goby *Sufflogobius bibarbatus*. *Conservation Genetics Resources*. 4: 187-189; <https://link.springer.com/article/10.1007/s12686-011-9505-5>

Cedras RB, **Salvanes AGV**, Gibbons MJ (2011) Investigations into the diet and feeding ecology of the bearded goby, *Sufflogobius bibarbatus*, off Namibia. *African Journal of Marine Science* 33:313-320
<http://dx.doi.org/10.2989/1814232X.2011.600431>

Sverdrup GK, Meager JJ, Fernö A, Skjæraasen JE, Rodewald P, **Salvanes AGV**, Järvi T (2011) Territorial and agonistic interactions between farmed and wild cod (*Gadus morhua*). *Aquaculture Research* 42:1539-1548
<http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2109.2010.02746.x/abstract;jsessionid=0B9D8F97599E50947A59E04C0D132D32.d03t01>

Moberg O, Braithwaite VA, **Salvanes AGV** (2011) Effects of habitat enrichment and food availability on the foraging behaviour of juvenile Atlantic cod (*Gadus morhua* L) *Environmental Biology of Fishes* 91:449-457.
<http://www.springerlink.com/content/6463r65753382088/> (Main supervisor to Moberg)

Salvanes AGV, Utne-Palm AC, Currie B, Braithwaite VA (2011). Behavioural and physiological adaptations of the bearded goby: a key fish species of the extreme environment of Benguela. *Marine Ecology Progress Series* 425: 193-202. <http://www.int-res.com/abstracts/meps/v425/p193-202/>

Herbert NA, Skjæraasen JE, Nilsen T, **Salvanes AGV**, Steffensen JF (2011). The hypoxia avoidance behaviour of juvenile Atlantic cod (*Gadus morhua* L.) depends on the provision and pressure level of an O₂ refuge. *Marine Biology* 158: 737-746 <http://www.springerlink.com/content/gt7713n428m74576/>

Utne-Palm AC, **Salvanes AGV**, Currie B, Kaartvedt S, Nilsson GE, Braithwaite V, Stecyk JAW, Hundt M, van der Bank M, Flynn B, Sandvik GK, Klevjer TA, Sweetman, AK, Brüchert, V, Pittman K, Peard KR, Lunde IG, Strandabø RAU, Gibbons MJ (2010) Trophic structure and community stability in an overfished ecosystem. *Science* 329: 333-336 <http://www.sciencemag.org/content/329/5989/333.full?sid=3ecac9ca-691f-4d4e-9cf8-714309bf2935>

*Strand DA, Utne-Palm AC, Jakobsen P, Braithwaite VA, Jensen KH, **Salvanes AGV** (2010) Enrichment promotes learning in fish. *Mar. Ecol. Prog. Ser.* 412:273-282. <http://www.int-res.com/abstracts/meps/v412/p273-282/> (Main supervisor to Strand)

Braithwaite VA, **Salvanes AGV** (2010) Aquaculture and restocking: Implications for conservation and welfare. *Animal Welfare* 19: 139-149

Gunawickrama KBS, De Silva PMCS, Johansen T, **Salvanes AGV**, Nævdal G (2010) Preliminary evidence for genetic heterogeneity of the goby (*Sufflogobius bibarbatus*) in the Benguela ecosystem. *Journal of Applied Ichthyology* 26: 110-112 <http://onlinelibrary.wiley.com/doi/10.1111/j.1439-0426.2009.01370.x/abstract>

Kristoffersen JB, **Salvanes AGV** (2009) Distribution, growth, and population genetics of the glacier lanternfish (*Benthoosema glaciale*) in Norwegian waters: contrasting patterns in fjords and the ocean. *Marine Biology Research* 5: 596-604 <https://doi.org/10.1080/17451000903042479> ((Main supervisor to Kristoffersen)

Braithwaite VA, **Salvanes AGV** (2008) Cognition: Learning and memory. p. 33- 60 In: Magnhagen C, Braithwaite VA, Forsgren E & Kapoor BG (eds) Fish Behaviour. Science Publisher, Inc, Enfield, NH, USA <https://bora.uib.no/handle/1956/3709>

Skjæraasen JE, Nilsen T, Meager JJ, Herbert NA, Moberg O, Tronci V, Johansen T, **Salvanes AGV** (2008) Hypoxic avoidance behaviour in cod (*Gadus morhua* L.): The effect of temperature and haemoglobin genotype. *Journal of Experimental Marine Biology and Ecology* 358: 70-77 <http://www.sciencedirect.com/science/article/pii/S002209810800035X>

Kainge P, Kjesbu OS, Thorsen A, **Salvanes AGV** (2007) *Merluccius capensis* spawn in Namibian waters, but do *M. paradoxus*? *African Journal of Marine Science* 29: 379-392 <http://www.mendeley.com/research/merluccius-capensis-spawn-namibian-waters-m-paradoxus/> ((Main supervisor to Kainge)

Mqoqi M, Lipinski MR, **Salvanes AGV** (2007) The ecology of *Sepia australis* (Cephalopoda : Sepiidae) along the south coast of South Africa *ICES Journal of Marine Science* 64: 945-955 <http://icesjms.oxfordjournals.org/content/64/5/945> ((Main supervisor to Mqoqi)

***Salvanes AGV**, Moberg O, Braithwaite VA (2007). Effects of early experience on group behaviour in fish. *Animal Behaviour* 74:805-811 <http://www.sciencedirect.com/science/article/pii/S0003347207002072>

- ***Salvanes AGV**, Braithwaite VA (2006) The need to understand the behaviour of fish we rear for mariculture or for restocking. *ICES Journal of Marine Science*. 63, 346-354
<http://icesjms.oxfordjournals.org/content/63/2/345>
- Braithwaite VA, **Salvanes AGV** (2005) Environmental variability in the early rearing environment generates behaviourally flexible cod: implications for rehabilitating wild populations. *Proceedings of the Royal Society, London Series B*. 272: 1107-1113 <http://www.jstor.org/openurl?volume=272&date=2005&spage=1107&issn=09628452&issue=1568>
- ***Salvanes AGV**, Braithwaite VA (2005) Exposure to variable spatial information in the early rearing environment generates asymmetries in social interactions in coastal cod. *Behav Ecol Soc Biol*. 59 (2): 250-257 <http://www.springerlink.com/content/u54v71566165284j/>
- ***Salvanes AGV** (2004) Mesopelagic fish. Pp 247-260 in *The Norwegian Sea Ecosystem* (e.d. H.R. Skjoldal), Tapir, Trondheim, Norway
- ***Salvanes AGV**, Skjæraasen JE, Nilsen T (2004) Subpopulations of coastal cod with different behaviour and life history strategies. *Mar. Ecol. Prog. Ser.* 267: 241-251 <https://bora.uib.no/handle/1956/3507>
- Skjæraasen JE, **Salvanes AGV**, Karlsen Ø, Dahle R, Nilsen T, Nordberg B (2004). The effect of photoperiod on sexual maturation, appetite and growth in wild Atlantic cod (*Gadus morhua* L.). *Fish Physiology and Biochemistry* 30 (2): 163-174 <http://www.springerlink.com/content/t40243744v52468w/> (Main supervisor to Skjæraasen)
- Huse G, Giske J, **Salvanes AGV** (2002) Individual based modelling. *Book chapter: Volum II, Chapter 11, Handbook of Fish and Fisheries*, Blackwell Science
- ***Salvanes AGV** (2001) Review of ecosystem models for fjords; new insights of relevance for fisheries management. *Sarsia* 86:441-463 <https://bora.uib.no/handle/1956/3866>
- ***Salvanes AGV** (2001) Ocean Ranching (stock enhancement). Pp. 1973-1982 in *Encyclopedia of Ocean Sciences* (eds: J. Steele, S. Thorpe & K. Turekian), Academic Press Ltd.
- Kristoffersen JB, **Salvanes AGV** (2001) Sexual size dimorphism and sex ratio in Müllers pearlside (*Maurolicus muelleri*). *Marine Biology* 138:1087-1092 <http://www.springerlink.com/content/5muatxfkqdf50w86/> (Main supervisor to Kristoffersen)
- ***Salvanes AGV**, Kristoffersen JB (2001) Mesopelagic Fish (life histories, behaviour, adaptation). Pp. 1711-1717 in *Encyclopedia of Ocean Sciences* (eds: J. Steele, S. Thorpe & K. Turekian), Academic Press Ltd.
- Svåsand T, Kristiansen TS, Pedersen T, **Salvanes AGV**, Engelsen R, Nævdal G, Nødtvedt M (2000) The biological and economical basis of cod stock enhancement. *Fish and Fisheries* 1:173-205
<http://onlinelibrary.wiley.com/doi/10.1046/j.1467-2979.2000.00017.x/abstract>
- Suneetha KB, **Salvanes AGV** (2001) Population genetic structure of the glacier lanternfish *Benthosema glaciale* (Myctophidae) in Norwegian waters. *Sarsia* 86:203-212 <https://bora.uib.no/handle/1956/3872>
- Hart PJB, **Salvanes AGV** (2000) Causes of individual variation in competitive performance in juvenile cod., *Jmar Biol Ass UK* 80:569-570 <https://bora.uib.no/handle/1956/3505>
- ***Salvanes AGV**, Har, PJB (2000) Is individual variation in competitive performance of juvenile cod related to haemoglobin genotype? *Sarsia* 85:265-274 <https://bora.uib.no/handle/1956/3874>

*Knutsen I, **Salvanes AGV** (1999) Temperature-dependent digestion handling time in juvenile cod and possible consequences for prey choice. *Mar. Ecol. Prog. Ser.* 181:61-79
<https://bora.uib.no/handle/1956/3506> (Main supervisor to Knutsen)

Asplin L, **Salvanes AGV**, Kristoffersen JB (1999) Non-local wind-driven fjord-coast advection and its potential effect on pelagic organisms and fish recruitment. *Fisheries Oceanography* 8:255-263
<http://onlinelibrary.wiley.com/doi/10.1046/j.1365-2419.1999.00109.x/abstract>

Kristoffersen JB, **Salvanes AGV** (1998) Life history of *Maurolicus muelleri* in fjordic and oceanic environments. *Journal of Fish Biology* 53: 1324-1341 <http://onlinelibrary.wiley.com/doi/10.1111/j.1095-8649.1998.tb00252.x/abstract> (Main supervisor to Kristoffersen)

Flaaten O, Salvanes AGV, Schweder T, Ulltang Ø (1998) Fisheries management under uncertainty - an overview. *Fisheries Research* 37: 1-6

Giske J, **Salvanes AGV** (1999) A model for enhancement potentials in open ecosystems. Pp. 22-36 in "*Stock Enhancement and Sea Ranching*", Eds: B.R. Howell (UK), E. Moksness (Norway) and T. Svåsand (Norway), Blackwell Fishing, News Books

Kristoffersen JB, **Salvanes AGV** (1998) Formaldehyde and ethanol preservation of mesopelagic fish: Effects on size, weight, and quality of body and otoliths. *Sarsia*: 83:95-102 <https://bora.uib.no/handle/1956/3877> (Main supervisor to Kristoffersen)

***Salvanes AGV**, Baliño B (1998) Production and fitness in a fjord cod population: An ecological and evolutionary approach. *Fisheries Research* 37: 143-161
<http://www.sciencedirect.com/science/article/pii/S0165783698001337>

***Salvanes AGV**, Hart PJB (1998) Individual variability in state-dependent feeding behaviour in three-spined stickleback. *Animal Behaviour* 55: 1349-1359
<http://www.sciencedirect.com/science/article/pii/S0003347297907077>

Holst JC, **Salvanes AGV**, Johansen T (1997) Feeding, *Ichthyophonus* sp. infection, distribution and growth history of Norwegian spring-spawning herring in summer. *Journal of Fish Biology* 50: 652-664

***Salvanes AGV**, Stockley BM (1996) Spatial variation of growth and gonadal developments of *Maurolicus muelleri* in the Norwegian Sea and in a Norwegian fjord. *Marine Biology* 126:321-332
<http://www.springerlink.com/content/p5h48602uu217884/>

***Salvanes AGV**, Aksnes DL, Fosså JH, Giske J (1995) Simulated carrying capacities of fish in Norwegian fjords *Fisheries Oceanography* 4(1): 17-32 <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2419.1995.tb00058.x/abstract>

***Salvanes AGV** (1995) Pollack (*Pollachius pollachius*) stock size development and potential influences on cod (*Gadus morhua* L.) mariculture in a west Norwegian fjord. *Fisheries Research* 24:223-242
<http://www.sciencedirect.com/science/article/pii/S016578369500369L>

***Salvanes AGV**, Aksnes DL, Giske J (1995) A surface-dependent gastric evacuation model for fish. *Journal of Fish Biology* 47:679-695 <http://onlinelibrary.wiley.com/doi/10.1111/j.1095-8649.1995.tb01934.x/abstract>

Giske J, **Salvanes AGV** (1995) Why pelagic fishes should be unselective feeders. *Journal of Theoretical Biology* 173:41-50 <http://www.sciencedirect.com/science/article/pii/S0022519305800037>

***Salvanes AGV**, Giske J, Nordeide JT (1994) Life history approach to habitat shifts for coastal cod. *Aquaculture and Fisheries Management* 25, supplement 1: 215-228

Smedstad O, **Salvanes AGV**, Fosså JH, Nordeide JT (1994) Enhancement of cod in Masfjorden: An overview. *Aquaculture and Fisheries Management* 25, supplement 1: 117-128

Nordeide JT, Fosså JH, **Salvanes AGV**, Smedstad O (1994) Testing if year-class strength of coastal cod (*Gadus morhua* L.) can be determined at the juvenile stage. *Aquaculture and Fisheries Management* 25, supplement 1: 101-116

Fosså JH, Nordeide JT, **Salvanes AGV**, Smedstad O (1994) Impacts of released cod on wild fish populations in Masfjorden, western Norway. *Aquaculture and Fisheries Management* 25, supplement 1: 35-48

***Salvanes AGV**, Nordeide JT (1993) Dominating sublittoral fish species in a west Norwegian fjord and their trophic links to cod (*Gadus morhua* L.). *Sarsia* 78: 221-234 <https://bora.uib.no/handle/1956/3875>

***Salvanes AGV**, Aksnes DL, Giske J (1992) Ecosystem model for evaluating potential cod production in a west Norwegian fjord. *Marine Ecology Progress Series* 90: 9-22 <https://bora.uib.no/handle/1956/3508>

***Salvanes AGV**, Ulltang Ø (1992) Population parameters, migration and exploitation of the cod (*Gadus morhua* L.) in Masfjorden, western Norway. *Fisheries Research* 15: 253-289
<http://www.sciencedirect.com/science/article/pii/016578369290019P>

***Salvanes AGV** (1991) The selectivity for cod (*Gadus morhua* L.) in two experimental trammel-nets and one gillnet. *Fisheries Research* 10: 265-285
<http://www.sciencedirect.com/science/article/pii/016578369190080Y>

Nordeide JT, **Salvanes AGV** (1991) Observations on newly released and wild cod (*Gadus morhua* L.) and their potential predators. *ICES Marine Science Symposia* 192:139-146

Giske J, Aksnes DL, Baliño B, Kaartvedt S, Lie U, Nordeide JT, **Salvanes AGV**, Wakili SM, Aadnesen A (1990) Vertical distribution and trophic interactions of zooplankton and fish in Masfjorden, Norway. *Sarsia* 75: 65-81 <https://bora.uib.no/handle/1956/3876>

Research expeditions led

Over 25 years' experience as cruise leader on expeditions and student field courses onboard RV G.O. Sars, RV Haakon Mosby and RV Kristine Bonnevie to Norwegian fjords and the Norwegian Sea, and on RV Dr. Fridtjof Nansen (2004 and 2005) to the Benguela upwelling ecosystem, South-Western Africa.