BAPTISTE ALGLAVE

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https://balglave.github.io/b_alglave/

RESEARCH INTEREST

I am broadly interested in fisheries science and statistical modeling with a specific focus on spatio-temporal modeling. I currently work to develop statistical models combining commercial catch declarations and scientific survey data to infer the spatio-temporal distribution of marine harvested species and identify their essential habitats.

Methods: hierarchical modeling, species distribution models, spatio-temporal statistics. I mainly build my models under Template Model Builder. I also have experience with Bayesian inference and Management Strategy Evaluation.

EDUCATION

PhD November 2019 - present
Ifremer and Institut Agro (Rennes) - UMR DECOD
Subject: Integrating commercial catch declarations and scientific survey data to map marine species distribution.
Supervisors: Youen Vermard, Marie-Pierre Etienne, Mathieu Woillez, Etienne Rivot.
Student mobility: DTU Aqua, Copenhagen, Danemark. Supervision of Kasper Kristensen. August - October 2021

MSc in fisheries science and quantitative ecology 2018 - 2019
Institut Agro (Rennes)
Master thesis February - August 2019
Ifremer Nantes - EMH Research Unit
Subject: Management Strategy Evaluation under stock structure uncertainty.
Application to the common sole in the Eastern English Channel.
Supervisors: Sigrid Lehuta, Youen Vermard.

BSc in agriculture and food science 2016 - 2017
Institut Agro (Rennes)
Student mobility: semester study at University College Cork, Ireland. August - December 2017

TECHNICAL SKILLS

Languages R, C++, Java, SQL, Python
Tools TMB, Git, LaTeX, R-INLA, JAGS, Nimble, PostgreSQL

SCIENTIFIC PUBLICATIONS

Peer-reviewed

Alglave Baptiste, Rivot Etienne, Etienne Marie-Pierre, Woillez Mathieu, Thorson James T, Vermard Youen (2022). **Combining scientific survey and commercial catch data to map fish distribution.** ICES Journal of Marine Science. In press. https://doi.org/10.1093/icesjms/fsac032

Under review

Alglave Baptiste, Vermard Youen, Rivot Etienne, Etienne Marie-Pierre, Woillez Mathieu (*in prep*). **Identifying reproduction areas from space-time modeling of catch declarations and scientific survey data.** Submitted in the Canadian Journal of Fisheries and Aquatic Sciences. https://hal.archives-ouvertes.fr/hal-03674691/

In preparation

Alglave Baptiste, Kristensen Kasper, Vermard Youen, Rivot Etienne, Woillez Mathieu, Etienne Marie-Pierre (*in prep*). **Downscaling coarse observations to predict continuous wild species spatial distribution.** Expected submission: end July 2022 in the Journal of the Royal Statistical Society: series C.

Alglave Baptiste, Bez Nicolas, Etienne Marie-Pierre, Grandremy Nina, Vermard Youen, Woillez Mathieu, Rivot Etienne (*in prep*). **Analysing the main spatio-temporal patterns from species distribution models can**

help identifying fish essential habitats. Expected submission: end September 2022 in Marine Ecology Progress Series.

Vajas Pablo, Brind'Amour Anik, Alglave Baptiste, Laffargue Pascal, Lecomte Jean-Baptiste, Mahévas Stephanie (*in prep*). **Vulnerability of accessory species in the Bay of Biscay, from biology to fishing risk.** Expected submission: end September 2022 in Fisheries Research.

TECHNICAL REPORTS

Alglave Baptiste, Vermard Youen (2022). Ad-hoc contract for the preparation of STECF EWG 22-01 concerning closure areas to protect juveniles and spawners of all demersal stocks in western Mediterranean Sea.

ADDITIONAL REPORTS

Master thesis
Alglave Baptiste (2019). **Management Strategy Evaluation of the Eastern English Channel common sole: management approach under uncertainty.** Master thesis. Institut Agro, Rennes. Specialization in fisheries science and quantitative ecology. https://archimer.ifremer.fr/doc/00756/86773/

CONFERENCES

Alglave Baptiste, Vermard Youen, Bez Nicolas, Etienne Marie-Pierre, Kristensen Kasper, Thorson James T., Woillez Mathieu, Rivot Etienne (2022). **Can we trust commercial catch declarations data to map fish spatio-temporal distribution and identify fish essential habitats?** 15th conference of the AFH 'Fisheries research and sustainable development'. June 2022, Brest, France.

Alglave Baptiste, Vermard Youen, Etienne Marie-Pierre, Woillez Mathieu, Rivot Etienne (2022). **Can we use catch declarations data to map fish spatial distribution?** International Statistical Ecology Conference (ISEC). June 2022, Cape Town, South Africa.

Alglave Baptiste, Kristensen Kasper, Vermard Youen, Rivot Etienne, Woillez Mathieu, Etienne Marie-Pierre (2022). **Downscaling coarse observations to predict continuous species spatio-temporal distribution.** Meeting of the RESSTE network 'Spatio-temporal statistics for remote sensing data'. May 2022, Paris, France.

Alglave Baptiste, Kristensen Kasper, Vermard Youen, Rivot Etienne, Woillez Mathieu, Etienne Marie-Pierre (2022). **Going from coarse landings data to fine scale species distribution.** Annual meeting of the GdR 'Ecology and statistics'. April 2022, Montpellier, France.

Alglave Baptiste, Vermard Youen, Etienne Marie-Pierre, Woillez Mathieu, Rivot Etienne (2021). **Can we trust commercial landings data to identify essential habitats of harvested fish? Application to several demersal species in the Bay of Biscay.** ISOBAY 17 - XVII International Symposium on Oceanography of the Bay of Biscay. June 2021, virtual event.

Alglave Baptiste, Vermard Youen, Etienne Marie-Pierre, Woillez Mathieu, Rivot Etienne (2021). **Can we identify fish essential habitats with landings data? Application to the common sole of the Bay of Biscay.** Ecostat 2021: annual meeting of the GdR 'Ecology and statistics'. April 2021, virtual event.

Alglave Baptiste, Etienne Marie-Pierre, Vermard Youen, Woillez Mathieu, Rivot Etienne (2020). **Spatio-temporal modeling of fishery functional zones by combining catch declarations data and scientific survey data.** Annual meeting of the GdR 'Ecology and statistics'. March 2020, Rennes, France.

Alglave Baptiste, Lehuta Sigrid, Leforestier Sophie, Vermard Youen (2019). **Management Strategy Evaluation of the Eastern English Channel common sole: management approach under uncertainty.** 14th conference of the AFH 'Fisheries research and sustainable development'. June 2019 , University of Caen Normandie, France.

PROJECTS AND WORKING GROUPS

MACCO project: Identification of the target species and by-catch of the Bay of Biscay mixed fishery and evaluation of alternative management strategies. https://www.macco.fr/
Head of the project: Stéphanie Mahévas (Ifremer Nantes).

EWG 22-01 - West Med closure areas (2022): working group aiming at identifying and evaluating the potential closure areas for the demersal species of the Western Mediterranean Sea.

Ifremer working group 'Science with and for society': working group aiming at evaluating the interactions between science and society within Ifremer. It led to several surveys among researchers, post-doctoral and doctoral students and to internal reports for the Ifremer scientific direction.

SUPERVISORY EXPERIENCE

Master May - July 2022
Subject: Contributions of the lognormal Poisson model in multivariate analysis analysis in community ecology.
Student: Théo Fabien.
Co-supervision with: Marie-Pierre Etienne, Thomas Outrequin and Jean-Louis Marchand.

Master thesis February - August 2021
Subject: Combining commercial and scientific data to infer the space-time distribution of sardine in the Bay of Biscay.
Student: Florian Quemper.
Co-supervision with: Etienne Rivot and Marie-Pierre Etienne.

Student project (MSc) November 2020 - February 2021
Subject: Investigating the effect of catch reallocation on VMS pings for species distribution model predictions.
Students: Chloé Tellier, Juliette Theoleyre, Océane Guitton.
Co-supervision with: Marie-Pierre Etienne.

TEACHING

Practical work in spatial modelling (Msc) 2022
Institut Agro (Rennes), 4 hours.

Practical work in statistics for fisheries science (MSc) 2020
Institut Agro (Rennes), 20 hours.

Practical work in basics of probability theory (BSc) 2020
University of Nantes, 20 hours.

GRANT

Grant for the international mobility of doctoral students 2021
Grant obtained from Ifremer for the mobility at DTU Aqua (Danemark).

PEER-REVIEWING

Gonzalez Guillermo Martin, Wiff Rodrigo, Marshall C. Tara, Cornulier Thomas (2021). **Estimating spatio-temporal distribution of fish and gear selectivity functions from pooled scientific survey and commercial fishing data.** Fisheries Research, 243, 106054.

LAB AND DEPARTMENT COMMITMENT

Amédée seminars: organization of semestrial seminars with a focus on methodological development in fisheries science and marine ecology. https://halieutique.institut-agro-rennes-angers.fr/fr/seminaires-amedee

REFERENCES

Etienne Rivot
DECOD (Ecosystem Dynamics and Sustainability), Institut Agro, IFREMER, INRAE, Rennes, France.
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Marie-Pierre Etienne
Mathematical Research Institute of Rennes IRMAR, Rennes University, Rennes, France.
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Youen Vermard
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Mathieu Woillez
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n.b. Some of my TMB codes are available on the public repository: https://github.com/balglave/example_tmb_ba