

# BAPTISTE AGLAVE

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<https://balglave.github.io/b-aglave/>

## RESEARCH INTEREST

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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

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**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, Denmark. 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

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**Languages** R, C++, Java, SQL, Python

**Tools** TMB, Git, LaTeX, R-INLA, JAGS, Nimble, PostgreSQL

## SCIENTIFIC PUBLICATIONS

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### Peer-reviewed

Aglave 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

Aglave 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

Aglave 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.

Aglave 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

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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

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### 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

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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.** Ecolstat 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

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**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

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### 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

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### Practical work in spatial modelling (Msc)

2021

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

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### Grant for the international mobility of doctoral students

2021

Grant obtained from Ifremer for the mobility at DTU Aqua (Danemark).

## PEER-REVIEWING

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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

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**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

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### Etienne Rivot

DECOD (Ecosystem Dynamics and Sustainability), Institut Agro, IFREMER, INRAE, Rennes, France.

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