

# Cecilia Pinto

University of Genoa

DISTAV – Department of Earth, Environmental and Life Sciences

Fisheries Biology Laboratory

[cecilia.pinto@edu.unige.it](mailto:cecilia.pinto@edu.unige.it)

[pntccl@gmail.com](mailto:pntccl@gmail.com)

## Profile

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I am a quantitative marine ecologist working on fisheries and stock management in European waters of the Mediterranean Sea. My research focuses primarily on stock assessment methods and management strategy evaluation (MSE), both in their theoretical development and practical application. The case studies I work on include species impacted by commercial fishing, either as target species or bycatch, having worked on both aspects throughout my career. To develop methods that can improve conservation planning, I focus on integrating spatial dimensions into most of the methodologies I use, working with both individual and population-level data. Throughout my career, I have worked on models integrating movement data, spatial distribution, and abundance time series to test alternative management scenarios. Given that I have consistently worked with data-limited species, I have increasingly specialized in applying and developing statistical methods to quantify uncertainty in modeling, aiming for more robust results to support effective resource management.

## Professional experience

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### Sep 2023 – Present: Postdoctoral Research Fellow

Department of Earth, Environmental and Life Sciences (DISTAV) – University of Genoa, Italy

- Assessment of the marine ecosystem impact from the removal and reuse of fishery discards in the context of the circular economy.

### May 2021 – Apr 2023: Postdoctoral Research Fellow

DISTAV – University of Genoa, Italy

- Assessment of the state of major demersal fishery resources in the Ligurian Sea through the spatio-temporal analysis of the last ten years.

### Apr 2018 – Apr 2021: Project Officer

European Commission, Joint Research Centre, Directorate D – Sustainable Resources, Unit D.02 Water and Marine Resources – Ispra (VA), Italy

- Scientific support to the Scientific, Technical and Economic Committee for Fisheries (STECF) in stock assessment, management strategy evaluation (MSE), and official data collection management (Data Collection Framework, DCF).
- Support in evaluating the implementation of the Common Fisheries Policy (CFP) through indicator development and management plan evaluation.

### Nov 2015 – May 2017: Postdoctoral Research Fellow

Ifremer – Northern and Eastern Channel Sea Centre – Boulogne-sur-Mer, France

- DYSTRETE Project: Spatio-temporal dynamics of *Mullus surmuletus* related to exploitation, using mixed models and the INLA platform.

### May – Jul 2010: Research Assistant

Molecular Genetics Laboratory for Environmental Resources and Fisheries, Prof. Fausto Tinti – University of Bologna, Ravenna, Italy

- ELASMOMED Project: Segregation and potential hybridization assessment of *Mustelus mustelus* and *Mustelus punctulatus* in the Adriatic Sea.

### Oct 2009 – Apr 2010: Research Assistant

Marine Ecology and Biology Laboratory, Prof. Giulio Relini – University of Genoa, Italy

- ELASMOIT Project: Evaluation of exploitation and conservation of cartilaginous fish in Italian seas.

### **May & Oct 2008 – May 2010: Field Research Assistant**

National Trawl Survey (GRUND) & International Trawl Survey (MEDITS)

- Data collection during GRUND and MEDITS surveys (GSA9) for demersal species stock status in the Mediterranean.

### **Oct 2007 – May 2008: Internship**

Marine Ecology and Biology Laboratory, Prof. Giulio Relini – University of Genoa, Italy

- Data collection and analysis in the project “Understanding trawl fisheries in the Ligurian Sea by identifying nursery areas of demersal species on the continental shelf.”

## **Education**

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### **Oct 2011 – Jul 2015: Ph.D. in Zoology**

University of Aberdeen (Scotland, UK) – Marine Scotland Laboratory

Thesis: “Integrating multiple opportunistic and sparse datasets helps planning spatial conservation for an endangered marine species.”

### **Sep 2010 – Aug 2011: MRes in Applied Marine and Fisheries Ecology**

University of Aberdeen (Scotland, UK), Prof. Justin Travis

Thesis: “Assessing the population viability of two deepwater sharks integrating demographic and environmental suitability models.”

### **Jan 2008 – Oct 2009: MSc in “Biological Monitoring Sciences and Technologies”**

University of Genoa, Italy – Marine Ecology and Biology Laboratory, Prof. Giulio Relini

Thesis: “Distribution and identification of nursery areas of *Etmopterus spinax* and *Galeus melastomus* in the northern Ligurian Sea.”

### **Oct 2004 – Jan 2008: BSc in Biological Sciences**

University of Genoa, Italy – Marine Ecology and Biology Laboratory

Thesis: “A MARXAN spatial model application for the Marine Protected Area of Portofino, Ligurian coast.”

### **Aug – Sep 2007: Internship in Spatial Ecology**

Spatial Ecology Laboratory, Prof. Hugh Possingham – University of Queensland, Brisbane, Australia

Training in ArcGIS and MARXAN for applied spatial ecology.

## **Teaching experience**

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### **Support in MSc Courses**

Stock assessment modeling in the course “Fisheries Resources Management” (Prof. Vassallo, DISTAV, University of Genoa)

“Artificial Marine Habitats” (Dr. Luca Lanteri, DISTAV, University of Genoa)

### **PhD Training Courses**

Stock assessment models: Assessment for All (a4a)

R-based Fisheries Library (FLR): FLCore, FL4a, FLBRP, Flasher, mse, ggplotFL, FLife

Bayesian model development using WinBUGS

R programming and statistical modeling using frequentist frameworks

Spatial ecology analysis with ArcGIS

## Undergraduate Courses

Population ecology

Wildlife species assessment models using MARK software for capture-recapture mortality estimation

Spatial analysis with ArcGIS for wildlife ecology

## Publications

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- Lanteri, L., **Pinto**, C., Palandri, G., Cima, C., Dei, M., Relini, G., Orsi Relini, L. and Garibaldi, F., 2025. Mesopelagic Fish Biodiversity in the Ligurian Cetacean Sanctuary. *Diversity*, 17(2), p.97.
- **Pinto** Cecilia, Roppo Valente G., Rasore N., Olmi E., Lanteri L., Garibaldi F., Viva C., Neri A., Massaro A., De Carlo F., Ligas A., Sartor P. "Range expansion of the Atlantic fish *Zenopsis conchifer* (Lowe, 1852), family Zeidae, in the western. *Medit. Mar. Sci.*, 24/1 2023, 90-95
- **Pinto** Cecilia, Lanteri L., Olmi E., Rasore N., Roppo Valente G., Garibaldi F. (2023). "A swallow doesn't make a summer: the case of *Charybdis (Charybdis) feriata* (Linnaeus, 1758) in the western Mediterranean Sea." *BioInvasions Records*, 12, 1: 223–233
- Sharma R., Winker H., Levontin P., Kell L.T., Ovando D., Palomares D., **Pinto** Cecilia and Ye Y. "Assessing the Potential of Catch-Only Models to Inform on the State of Global Fisheries and the UN's SDGs" – *Sustainability* (2021), 13, 6101. <https://doi.org/10.3390/su13116101>
- Mannini A., **Pinto** Cecilia, Konrad C., Vasilakopoulos P., Winker H. "The elephant in the room: exploring natural mortality uncertainty in statistical catch at age models." *Frontiers in Marine Science* (2020) 7: 585654, doi: 10.3389/fmars.2020.585654
- Vasilakopoulos P., Jardim E., Konrad C., Rihan D., Mannini A., **Pinto** Cecilia, Casey J., Mosqueira I., O'Neill F.G. "Selectivity metrics for fisheries management and advice." *Fish and Fisheries* (2020) 21:621–638
- **Pinto** Cecilia, Travers-Trolet M., Vermard Y. "Uncovering the environmental processes driving a seasonal migratory species characterized by strong inter annual fluctuations" – *Canadian Journal of Fisheries and Aquatic Sciences* (2018), 76 (9): 1338–1349, doi.org/10.1139/cjfas-2018-0149 .
- **Pinto** Cecilia, Thorburn J.A., Neat F., Wright P.J., Wright S., Scott B.E., Cornulier T. and Travis J.M.J. "Using individual movement data to validate environmental suitability predictions." – *Diversity and Distributions* (2016), 22 (6): 682-693.
- **Pinto** Cecilia and Luigi Spezia "Markov switching autoregressive models for interpreting vertical movement data with application to an endangered marine apex predator" – *Methods in Ecology and Evolution* (2016), 7 (4): 407-4017.
- Hilbers J.P., Santini L., Visconti P., Schipper A. M., **Pinto** Cecilia, Rondinini C. and Huijbregts M. A. "Setting population targets for mammals using body mass as a predictor of population persistence". *Conservation Biology* (2016), doi:10.1111/cobi.12846.
- Neat F., **Pinto** Cecilia, Burret I., Cowie L., Travis J., Thorburn J., Gibb F. and Wright P. "Site fidelity, survival and conservation options for the threatened flapper skate (*Dipturus cf. intermedia*) - *Aquatic Conservation: Marine and Freshwater Ecosystems* (2015), 25 (1): 6-20.
- **Pinto** Cecilia, Mannini A. and Relini G. "Remarks on *Galeus melastomus*, in the Northern Ligurian Sea" - *Biologia Marina Mediterranea* (2010), 17 (1): 224-227.

## Reviewer for scientific journals

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Marine Ecology Progress Series (MEPS), Marine Policy, ICES Journal of Marine Science, Wildlife research, Journal of Experimental Marine Biology and Ecology (JEMBE), Journal of the Marine Biological Association (JMBA), Methods in Ecology and Evolution (MEE)

Editorial board member: Fisheries Research

## Software and programming

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Office package

(Word, Excel, Power point)

ArcGIS and MARXAN (spatial analysis)  
R, INLA, FLR and WinBUGS (statistical modeling and spatial analysis)  
a4a, SS3, SPiCT, JABBA (stock assessment models)

## Languages

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Mother tongue: Italian

Foreign languages: English and French

Language	Comprehension	Speaking	Writing
English	C2	C2	C2
French	C2	C2	C1

## References

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- Dr. Jann Martinsohn ([jann.martinsohn@ec.europa.eu](mailto:jann.martinsohn@ec.europa.eu)) phone : +39 0332 78 65 67, Directorate D – Sustainable Resources, Unit D.02 Water and Marine Resources, Joint Research Centre, TP 051, Via Enrico Fermi 2749 - 21027 Ispra (VA), Italy
- Dr. Hendrik Doerner ([hendrik.doerner@ec.europa.eu](mailto:hendrik.doerner@ec.europa.eu)) phone : +39 0332 78 93 43, Directorate D – Sustainable Resources, Unit D.02 Water and Marine Resources, Joint Research Centre, TP 051, Via Enrico Fermi 2749 - 21027 Ispra (VA), Italy
- Dr. Youen Vermard ([youen.vermard@ifremer.fr](mailto:youen.vermard@ifremer.fr)) phone: +33 02 40 37 41 69 Centre Atlantique, Ifremer, Rue de l'Ile d'Yeu, BP 21105 - 44311 Nantes Cedex 03, France
- Dr. Morgane Travers-Trolet ([morgane.travers@ifremer.fr](mailto:morgane.travers@ifremer.fr)) Centre Atlantique, Ifremer, Rue de l'Ile d'Yeu, BP 21105 - 44311 Nantes Cedex 03, France

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