

CURRICULUM VITAE GERMANA GAROFALO

CURRENT POSITION

- Researcher at the National Research Council-Institute for Marine Biological Resources and Biotechnology (CNR-IRBIM), SS Mazara del Vallo
- Research Associate at the Italian National Institute for Environmental Protection and Research (ISPRA)

RESEARCH TOPICS

- Spatio-temporal dynamics of living marine resources in relation to fisheries and environmental factors; identification of essential fish habitats; habitat modelling and mapping; larval dispersion and connectivity of marine populations; identification of fish stock units; spatial management measures of fishery; ecosystem approach to fisheries; conservation oriented marine spatial planning

EDUCATION&TRAINING

- Two-year scholarship (01/03/1990 to 29/02/1992) from the National Research Council at the Istituto per le Tecnologie della Pesca e del Pescato (CNR-ITPP), Mazara del Vallo
- Degree in Physics (4 yrs, 108/110), Faculty of Science - University of Palermo (February 1988)

PROFESSIONAL EXPERIENCE: CONTRACTS & FELLOWSHIPS

- January 1999 – present: Senior researcher (permanent position) at Consiglio Nazionale delle Ricerche Istituto per le Risorse Biologiche e le Biotecnologie Marine (CNR-IRBIM)
- January-February 2018: Independent contractor with FAO/FIAFD in the regional project MedSudMed
- June-October 2015: Independent contractor with FAO/FIRFD - MedSudMed
- August-September 2011: Independent contractor with FAO/FIRFD - MedSudMed
- September-November 2007: Independent contractor with FAO/FIMF - MedSudMed
- October-November 2005: Independent contractor with FAO/FIRM - MedSudMed
- December 1994-January 1999: Researcher (fixed-term position) at CNR-Institute for the Coastal Marine Environment (CNR-IAMC)
- June 1994-December 1994: Independent contractor with CNR-Istituto per le Tecnologie della Pesca e del Pescato (CNR-ITPP)
- April 1993-December 1993: Independent contractor with CNR-ITPP
- March 1990-February 1992: Research fellowship by CNR at the CNR-ITPP

RESEARCH EXPERIENCE: SCIENTIFIC RESPONSIBILITY OF RESEARCH UNITS OR TASKS/ACTIVITIES IN NATIONAL AND INTERNATIONAL (EU-FUNDED) RESEARCH PROJECTS

- 2025-present - Living on the extinction edge: bridging knowledge gaps to PROtect threatened coastal SHARKS in the central Mediterranean Seav(PROSHARKS). PRIN: Progetti di ricerca di rilevante interesse nazionale 2022. Role: Responsible of Research Unit

- 2024 - Expanding the fully protected area coverage in the Strait of Sicily. Committente: WWF US (WORLD WILDLIFE FUND, INC). Role: Principal investigator
- 2023-present - Italian National Programs for Data Collection (PLNRDA) 2023-2027 - WP Research survey at sea MEDITS GSA16 (Sud della Sicilia). Role: Leader of Subtask
- 2022-present: BASSET-MED Biodiversity Assessment, Socio-economic Services, and anthropogenic Threats evaluation in the central MEDditerranean. Progetti di ricerca @Cnr; Role: Principal Investigator
- 2021-2024: ABIOMMED – Support coherent and coordinated Assessment of BIODiversity and Measures across MEDiterranean for the next 6-year cycle of MSFD. DG ENV/MSFD 2020, Agreement Nr. 110661/2020/839620/SUB/ENV; Role: Leader of Subtask 3.2.2. Proposal for a harmonized approach for the identification of key pressures and their ranking from national to subregional and regional scales.
- 2021-present: European DCR and DCF on Fisheries. Italian National Program (PLNRDA) 2021. DGMARE/EC and Mipaaf; Role: Coordinator of the Module MEDITS-GSA 16
- 2017-2019 and 2020 extension: European DCR and DCF on Fisheries. Italian National Program (PLNRDA 2017-2019 and 2020 extension), DGMARE/EC and PO FEAMP ITALIA 2014-2020; Role: Coordinator of scientific survey at sea MEDITS - GSA 16
- 2016-2017: National flag project RITMARE, MIUR; Role: Principal Investigator of Operative Unit SP2_LI1_WP3_UO05 – Multicriteria analysis for the identification of stock units of *M.barbatus* along the Sicilian coasts (SP2: Technology for sustainable fisheries)
- 2014-2016: European DCR and DCF on Fisheries. Italian National Plan (PNRDA 2014-2016), PO FEAMP ITALIA 2014-2020; Role: Coordinator of scientific survey at sea MEDITS-GSA 16
- 2014-2016: Information System of the Sicilian Regional Observatory for Biodiversity, PO FESR 2007-2013; Role: Leader of Activity 3 “Development of the Integrated Portal, creation of the DataBase and WebGIS
- 2013-2014: StockMed - Stock units: Identification of distinct biological units (stock units) for different fish and shellfish species and among different GFCM-GSA, EU DG Mare Specific Contract No 7 (SI2.642234); Role: Leader of WP4 - Identification of stock units and stock boundaries by multi-criteria approach
- 2012-2015: National flag project RITMARE, MIUR; Role: Coordinator of the Action SP2_WP1_AZ4: “Identification of stock boundaries of commercial species” (SP2: Technology for sustainable fisheries; WP1: Ecosystem approach to the assessment and sustainable use of fishery resources)
- 2011-2014: CREAM - Coordinating REsearch in support to Application of ecosystem approach to fisheries and management advice in the Mediterranean and Black seas, EU-FP7 Programme, ID 265648; Role: Responsible of Research Unit
- 2011-2013: MEDISEH - Compilation and mapping of environmental and fisheries related information in the Mediterranean Sea by means of Geographical Information Systems (GIS), EU DG Mare Specific Contract No 2 (SI2.600741); Role: Responsible of Research Unit

- 2006-2008: NURSERY - Space-time identification of the concentration areas of juveniles of the main demersal species and geographical location of nursery areas in the Italian seas, MIPAF 6A92; Role: Responsible of Research Unit
- 2006-2008: RAYS - Status of rays populations in the Mediterranean Sea and advice for sustainable exploitation of the stocks, EU DG XIV FISH/2004/03-41; Role: Responsible of Research Unit
- 1999-2001: Training project “Expert of Geographical Information Systems (GIS) for the integrated management of the coastal zone”, MURST 1190/86, Programma operativo 1994/99 - Ricerca, Sviluppo Tecnologico ed Alta Formazione; Role: Coordinator of the Project
- 1997-2000: SACS - Stocks assessment of some coastal species caught by artisanal fishery, EU DG XIV MED 96/054; Role: Coordinator of the Project
- 1996-1999: FIGIS - Spatio-temporal analysis of the Fisheries Resources, their Environment and Exploitation in the Mediterranean sea: experimental use of Geographical Information Systems, EC DGXIV FAIR-CT 95 0419; Role: Responsible of Research Unit

RESEARCH EXPERIENCE: PARTICIPATION TO NATIONAL AND INTERNATIONAL (EU-FUNDED) RESEARCH PROJECTS (LAST 10 YEARS)

- 2024-present – REDRESS, Restoration of Deep-sea Habitats to Rebuild European Seas
- 2023-present - Project NBFC - National Biodiversity Future Center, istituito e finanziato dal Piano Nazionale di Ripresa e Resilienza (PNRR).
Participation in the following subproject:
 - NBFC - Spoke 2: Solutions to stop marine biodiversity loss and manage marine resources sustainably - Activity 1: Assess and mitigate impacts and threats to marine biodiversity - Action 1: Recognizing the value of biodiversity and ecosystem health toward a more sustainable fishery - Task 1.1.1: Reduction of fishing impacts and protection of biodiversity
 - NBFC - Spoke 2: Solutions to stop marine biodiversity loss and manage marine resources sustainably - Activity 1: Assess and mitigate impacts and threats to marine biodiversity - Action 1: Recognizing the value of biodiversity and ecosystem health toward a more sustainable fishery - Task 1.1.6: (VMED) Vulnerable Marine Ecosystems assessment, socio-economic services and anthropogenic threats evaluation to support biodiversity conservation
- NBFC - Spoke 2: Solutions to stop marine biodiversity loss and manage marine resources sustainably – Activity 4: (MSP4BIODIVERSITY) Biodiversity mainstreaming in Maritime Spatial Planning - Task 4.4 - Biodiversity mainstreaming in MSP through scenario building and analysis
- 2023-present Med&BS RDBFIS II, Hosting, maintenance and further development of the Regional Database for the Mediterranean and Black Seas. Specific Contract CINEA/EMFAF/2021/3.1.2/03/SC04/SI2.881222
- 2024 – “Caratterizzazione Fauna ittica con pesca a strascico (Progetto Offshore Ibleo Campi Gas Argo e Cassiopea)”. Commessa 23632799 del contratto tra WSP ITALIA s.r.l e CNR-IRBIM
- 2016-2019: MANTIS - Marine Protected Area network Towards Sustainable fisheries in the Central Mediterranean Sea, EC DG Mare Nr SI2.721911
- 2015-2019: MINOUW - Science, technology and society initiative to minimize unwanted catches in European fisheries, HORIZON 2020 SFS-09-2014 Research and Innovation action, GA n. 634495

- 2017-2018: SIMWESTMED - Supporting Implementation of Maritime Spatial Planning in the Western Mediterranean region, EC DG Mare EASME SI2.742101
- 2009-2013: MESMA-Monitoring and Evaluation of Spatially Managed Areas, EU FP7-ENVIRONMENT GA ID 226661
- 2011-2013: Italian National Plan for the Fishery Data Collection Framework (PNRDA 2011-2013), PO FEAMP ITALIA 2007-2013

RESEARCH CRUISES

- 2023-present Coordinator of the annual scientific surveys-at-sea MEDITS, Geographic Sub-area (GSA) 16 – South of Sicily, of the Italian National Programs for Data Collection (PLNRDA) 2023-2027, in the framework of European DCR and DCF on Fisheries
- 2014-2020 Coordinator of the annual scientific surveys-at-sea MEDITS, Geographic Sub-area (GSA) 16 – South of Sicily, of the Italian National Programs for Data Collection (PLNRDA) 2014-2016, 2017-2019, 2020, 2021-2022 in the framework of European DCR and DCF on Fisheries
- 1995 Participation to the oceanographic cruise "Serena II" conducted in the Strait of Sicily onboard the oceanographic vessel Urania and coordinated by Dr. Salvatore Mazzola, researcher at the ITPP-CNR

ACKNOWLEDGMENTS

- 2020: Winner in the role of proponent of a Short Term Mobility (STM) 2020 by the National Research Council (Department of Earth systems science and environmental technologies). The recipient of the STM 2020 is Dr. Federico Quattrocchi who will develop a project on Connectivity of *Aristeus antennatus* and *Aristomorpha foliacea* in the Central Mediterranean in collaboration with Dr. Manuel Hidalgo at the Balearic Islands Oceanographic Center, Spanish Institute of Oceanography
- 2019–2021: Appointed as Italian National Expert for the UNESCO/IOC-DG MARE MSPglobal Initiative to promote cross-border marine spatial planning in the Western Mediterranean
- 2018: Published paper “Garofalo et al., 2011. Persistence and co-occurrence of demersal nurseries in the Strait of Sicily (Central Mediterranean): implications for fishery management. Journal of Sea Research, 66:29-38” acknowledged in the OCEANA catalogue as “2018 Ready-to-use science for Essential Fish Habitat designation in the Mediterranean” <https://eu.oceana.org/en/publications/reports/2018-ready-usescience-efh-designation-mediterranean>
- 2016: Award for best poster, Session Necton and Fishery, at 47° Congress of the Italian Society of Marine Biology
- 2015: Award for best poster, Session Miscellaneous, at 46° Congress of the Italian Society of Marine Biology
- 1994: Winner of a public competition for a fixed-term position as Researcher at Istituto di Tecnologie Didattiche e Formative (ITDF) - Consiglio Nazionale delle Ricerche, art. 23 del D.P.R. 12.2.91, n.171, renouncing for a similar position at CNR-IAMC

SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

- 2025-present - Supervisor of Postdoctoral Fellow, Dr. Gabriele Di Bona, on the project

“Functional Approaches to the Study of the Diversity and Status of Benthic and Demersal Communities.”

- 2025-present Supervisor of Postdoctoral fellow Dr Matteo Barbato on the project “Spatial ecology for sustainable management of marine species of commercial and conservation interest”
- 2023-present Tutor of 39° FishMed-PhD in Tecnologie innovative e uso sostenibile delle risorse di pesca e biologiche del Mediterraneo, research project: “Identification of Essential Fish Habitats for Ecosystem-Based management and biodiversity conservation”, Dr Vincent Georges
- 2024 - Supervisor of Postdoctoral fellow, Dr Matteo Barbato, on the project “Expanding the fully protected area coverage in the Strait of Sicily”,
- 2023-2024 – Supervisor of Postdoctoral fellow, Dr Umberto Grande, on the project “Gestione sostenibile delle risorse marine e crescita blu”
- 2019-2023 - Supervisor of 1 Postdoctoral fellow at CNR-IRBIM, Dr Federico Quattrocchi
- 2014-2018 - Supervisor at CNR-IAMC of 1 Graduate student (with Department of Civil and Environmental Engineering, Univ. Politecnica de Catalunya, Spain), Dr Federico Quattrocchi
- 2014-2018 - Supervisor at CNR-IAMC of 1 Postdoctoral fellow (with Marine Inst., Plymouth Univ., UK), Dr Valentina Lauria
- 1999-2001: Supervisor of 4 Graduate students, CNR-IRMA

REVIEWING ACTIVITY

- Since 2018: Member of the Editorial Board of *Frontiers in Marine Science* as Review Editor (section Fisheries, Aquaculture and Living Resources)
- Reviewer for the following journals: *Frontiers in Marine Science*, *ICES Journal of Marine Science*, *Marine Ecology Progress Series*, *Plos One*, *Oceans*

ISI PEER-REVIEWED PUBLICATIONS

1. Kitchel Z.J., Maureaud A.A., Fredston A., Shackell N., Mérigot B., Thorson J. T., Pécuchet L., Palacios-Abrantes J., Palomares M.L.D., Esteban Acón A., Belchier M., Bono G., Carbonara P., Collins M.A., Cubillos L.A., Fairweather T.P., Follesa M.C., Garcíá R.C., Farriols Garau M.T., Garofalo G., Isajlović I., Kathena J.N., Koen-Alonso M., Maiorano P., Manfredi C., Mifsud J., O’Driscoll R.L., Sbrana M., Sólmundsson J., Spedicato M.T., Stephenson F., Verner K.M., Yepsen D.V., Zupa W., Pinsky M.L.. Temporal dynamics of biotic homogenization and differentiation across marine fish communities (Under review in *PLOS Climate*)
2. Sbrana A., Galli S., Casini M., Carlucci R., Dassenakis M., Fiorentino F., Follesa M.C., Garofalo G., Georges V., Isajlovic I., Klančnik K., Lauria V., Maiorano P., Manfredi C., Mavric B., Pagou K., Papadopoulou N., Paramana T., Paraskevopoulou V., Pulcini M., Rakaj A., Ronchi F., Sabatella E.C., Scarcella G., Smith C.J., Stefani M., Streftaris N., Tassetti A.N., Yahyaoui A., Vrgoc N., Raicevich S., Russo T., 2025. Exploring spatial-based management scenarios to protect the seafloor in different areas of the Mediterranean Sea. *ICES Journal of Marine Science*, 2025, Vol. 82, Issue 3, fsaf023, <https://doi.org/10.1093/icesjms/fsaf023>
3. Rubino C, Di Maria C, Abbruzzo A, Bono G, Garofalo G, Milisenda G, Adelfio G, 2025. Derivative-based spatial mediation with INLA-SPDE. *Spatial Statistics*, 66, 100885, <https://doi.org/10.1016/j.spasta.2025.100885>
4. Sinerchia M., Fiorentino F., Colloca F., Cucco A., Garofalo G., Quattrocchia G., Fulton E.A., 2025. Atlantis end-to-end modelling to explore ecosystem dynamics in the Strait of Sicily, Central Mediterranean Sea. *Environmental Modelling & Software* 183, 106237

5. Catucci E., Panzeri D., Libralato S., Cossarini G., Garofalo G., Maina I., Kavadas S., Quattrocchi F., Cipriano G., Carlucci R., Vitale S., Mytilineou C., Fiorentino F., Russo T., 2025. Modeling the spatial distribution and abundance of Deep-Water Red Shrimps in the Mediterranean Sea: a machine learning approach Fisheries Research 281, 107257
6. Marsaglia L., Parisi A., Libralato S., Miller N., Davis P., Paolo F., Fiorentino F., Garofalo G., Costantini M., Russo T. 2025. Shedding light on trawl fishing activity in the Mediterranean Sea with remote sensing data, ICES Journal of Marine Science, fsae153, <https://doi.org/10.1093/icesjms/fsae153>
7. Falsone, F., Calabrò, M., Fiorentino, F., Gancitano, V., Garofalo, G., Geraci, M.L., Massi, D., Sardo, G., Scannella, D., and Vitale, S., 2025. Bycatch of demersal Elasmobranchii in the Strait of Sicily In: Phillips, M.R.; Al-Naemi, S., and Duarte, C.M. (eds.), Coastlines under Global Change: Proceedings from the International Coastal Symposium (ICS) 2024 (Doha, Qatar). Journal of Coastal Research, Special Issue No. 113, pp. 941-945. Charlotte (North Carolina), ISSN 0749-0208
8. Sabatella E.C., Fiorentino F., Grande U., Lauria V., Scannella D., Garofalo G., 2024. Survey data on public awareness on the value of marine biodiversity conservation in the Strait of Sicily (Central Mediterranean Sea). Data in Brief, 57,111081. <https://doi.org/10.1016/j.dib.2024.111081>
9. Quattrocchi F., Fiorentino F., Gargano F., Garofalo G., 2024. The role of larval transport on recruitment dynamics of red mullet (*Mullus barbatus*) in the Central Mediterranean Sea. Marine Environmental Research, 202, 106814. <https://doi.org/10.1016/j.marenvres.2024.106814>
10. Bignami F., Fiorentino F., Garofalo G., Zambianchi E., Colella S., Sorgente R., Olita A., Landolfi A., Quattrocchi F., Miller P.I., 2024. Environmental factors affecting the distribution of deep-water rose shrimp (*Parapenaeus longirostris*, Lucas, 1846) abundance in the Strait of Sicily (Mediterranean Sea). Continental Shelf Research, 282, 105323, <https://doi.org/10.1016/j.csr.2024.105323>
11. Fiorentino F., Garofalo G., Bono G., Vitale S., 2024. Learning from the history of red shrimp fisheries in the Mediterranean to improve sustainability of deep-water bottom trawling. ICES Journal of Marine Science, <https://doi.org/10.1093/icesjms/fsae031>
12. Georges V., Vaz S., Carbonara P., Fabri M.C., Fanelli E., Follesa M.C., Garofalo G., Gerovasileiou V., Maiorano P., Mytilineou C., Otero M., Marin P., Jadaud A., Thasitis I., Smith C.J., Lauria, V., 2024. Mapping the habitat refugia of *Isidella elongata* under climate change and trawling impacts to preserve Vulnerable Marine Ecosystems in the Mediterranean. Nature Scientific Reports 14, 6246 (2024). <https://doi.org/10.1038/s41598-024-56338-1>
13. Paramana Th., Dassenakis M., Paraskevopoulou V., Papadopoulou N., Smith C., Reizopoulou S., Raicevich S., Pulcini M., Ronchi Fr., Penna M., Nguyen Xuan A., Proietti R., Maltese S., Mavrič B., Lauria V., Garofalo G., Klančnik K., Kaučič R., Caserman H., Vrgoc N., Isajlovic I., Russo T., Streftaris N., Pagkou P., 2024. Screening and assessing physical pressures affecting seafloor integrity in the Mediterranean region. Ocean & Coastal Management 251, 107046
14. Cau A, Sbrana A., Franceschini S, Fiorentino F., Follesa M.C., Galgani F., Garofalo G., Gerigny O., Profeta A., Rinelli P., Sbrana M., Russo T., 2024. What, where, and when: Spatial-temporal distribution of macro-litter on the seafloor of the western and central Mediterranean Sea. Environmental pollution, 342,123028
15. Cicala D., Maiello G., Fiorentino F., Garofalo G., Massi D., Sbrana A., Mariani S., D'Alessandro S., Stefani M., Perrodin L., Russo T., 2024. Spatial analysis of demersal food webs through integration of eDNA metabarcoding with fishing activities. Frontiers in Marine Science 10 [10.3389/fmars.2023.1209093]
16. Sinopoli M., Badalamenti F., D'Anna G., Fiorentino F., Pipitone C., Garofalo G., (2022). The use of mean life span index as indicator of ecological status in trawled areas: preliminary observations. 2022 IEEE International Workshop on Metrology for the Sea; Learning to Measure Sea Health Parameters (MetroSea), Milazzo, Italy, 2022, pp. 521-525, doi: 10.1109/MetroSea55331.2022.9950979.
17. Scannella D., Bono G., Di Lorenzo M., Di Maio F., Falsone F., Gancitano V., Garofalo G., Geraci M.L., Lauria V., Mancuso M., Quattrocchi F., Sardo G., Titone A., Vitale S., Fiorentino F., Massi D. (2022). How does climate change affect a fishable resource? The case of the royal sea cucumber

- (*Parastichopus regalis*) in the central Mediterranean Sea. *Frontiers in Marine Science* 9, 934556, doi:10.3389/fmars.2022.934556
18. Agnetta D., Badalamenti F., Colloca F., Cossarini G., Fiorentino F., Garofalo G., Patti B., Pipitone C., Russo T., Solidoro C., Libralato S. (2022). Interactive effects of fishing effort reduction and climate change in a central Mediterranean fishing area: Insights from bio-economic indices derived from a dynamic food-web model. *Frontiers in Marine Science* 9, 909164, doi:10.3389/fmars.2022.909164
 19. Quattrocchi F, Garofalo G (2022). Revealing environmental synchronicity that enhances anchovy recruitment in the Mediterranean Sea. *SCIENTIFIC REPORTS*, 12, 5600, ISSN: 2045-2322, doi: 10.1038/s41598-022-09418-z
 20. Gargano F, Garofalo G, Quattrocchi F, Fiorentino F (2022). Where do recruits come from? Backward Lagrangian simulation for the deep water rose shrimps in the Central Mediterranean Sea. *FISHERIES OCEANOGRAPHY*, FOG12582, ISSN: 1365-2419, doi: 10.1111/fog.12582
 21. Russo T, Maiello G, Talarico L, Baillie C, Colosimo G, D'Andrea L, Di Maio F, Fiorentino F, Franceschini S, Garofalo G, Scannella D, Cataudella S, Mariani S (2021). All is fish that comes to the net: metabarcoding for rapid fisheries catch assessment. *ECOLOGICAL APPLICATIONS*, e02273, ISSN: 1051-0761, doi: <https://doi.org/10.1002/eap.2273>
 22. Milisenda G, Garofalo G, Fiorentino F, Colloca F, Maynou F, Ligas A, Musumeci C, Bentes L, Gonçalves JMS, Erzini K, Russo T, D'Andrea L, Vitale S (2021). Identifying persistent Hot Spot areas of undersized fish and crustaceans in southern European waters: implication for fishery management under the discard ban regulation. *FRONTIERS IN MARINE SCIENCE* 8, 60, DOI=10.3389/fmars.2021.610241
 23. Massi D., Titone A., Gristina M., Garofalo G., Lauria V., Micalizzi R., Sinacori G., Fiorentino F., (2021). Characterization and biogeographic affinity of megazoobenthos in the Central Mediterranean Sea. *Marine Ecology* 2021; 42:e12627
 24. Garofalo G, Quattrocchi F, Bono G, Di Lorenzo M, Di Maio F, Falsone F, Gancitano V, Geraci ML, Lauria V, Massi D, Scannella D, Titone A, Fiorentino F (2020). What is in our seas? Assessing anthropogenic litter on the seafloor of the central Mediterranean Sea. *ENVIRONMENTAL POLLUTION*, vol. 266, 115213, ISSN: 0269-7491, doi: 10.1016/j.envpol.2020.115213
 25. Bottari T, Gaglio G, Mobilia V, Garofalo G, Iaria C, Fiorentino F (2020). Discrimination of Red Mullet Populations (Teleostean, Mullidae) Off the Sicilian Coasts (Mediterranean Sea) on the Basis of Metazoan Parasites. *THALASSAS*, vol. 36, p. 357-363, ISSN: 0212-5919, doi: 10.1007/s41208-020-00211-1
 26. D' Andrea L, Parisi A, Fiorentino F, Garofalo G, Gristina M, Cataudella S, Russo T (2020). smartR: an R package for spatial modelling of fisheries and scenario simulation of management strategies. *METHODS IN ECOLOGY AND EVOLUTION*, vol. 11, p. 859-868, ISSN: 2041-210X, doi: 10.1111/2041-210X.13394
 27. Despoti S, Milisenda G, Ligas A, Bentes L, Maynou F, Vitale S, Garofalo G, Sbrana M, Erzini K, Tserpes G, Tsagarakis K, Maina I, Pyrounaki MM, Papadopoulou N, Machias A, Colloca F, Fiorentino F, Stergiou K, Giannoulaki M (2020). Marine spatial closures as a supplementary tool to reduce discards in bottom trawl fisheries: Examples from southern European waters. *FISHERIES RESEARCH*, vol. 232, 105714, ISSN: 0165-7836, doi: 10.1016/j.fishres.2020.105714
 28. Lauria V, Gristina M, Fiorentino F, Attrill MJ, Garofalo G (2020). Spatial Management Units as an Ecosystem-Based Approach for Managing Bottom-Towed Fisheries in the Central Mediterranean Sea. *FRONTIERS IN MARINE SCIENCE*, vol. 7, 233, ISSN: 2296-7745, doi: 10.3389/fmars.2020.00233
 29. Quattrocchi F, D'Anna G, Fiorentino F, Titone A, Zenone A, Garofalo G (2020). Phenotypic variation across populations of red mullet (*Mullus barbatus*) in different environments of the central Mediterranean. *MARINE AND FRESHWATER RESEARCH*, vol. 71, p. 1313-1326, ISSN: 1323-1650, doi: 10.1071/MF19251
 30. Quattrocchi F, Fiorentino F, Lauria V, Garofalo G (2020). The increasing temperature as driving force for spatial distribution patterns of *Parapenaeus longirostris* (Lucas 1846) in the Strait of Sicily

(Central Mediterranean Sea). *JOURNAL OF SEA RESEARCH*, vol. 158, 101871, ISSN: 1385-1101, doi: 10.1016/j.seares.2020.101871

31. Agnetta D, Badalamenti F, Colloca F, D'Anna G, Di Lorenzo M, Fiorentino F, Garofalo G, Gristina M, Labanchi L, Patti B, Pipitone C, Solidoro C, Libralato S (2019). Benthic-pelagic coupling mediates interactions in Mediterranean mixed fisheries: An ecosystem modeling approach. *PLOS ONE*, vol. 14, e0210659, ISSN: 1932-6203, doi: 10.1371/journal.pone.0210659
32. Colloca F, Milisenda G, Capezzuto F, Cau A, Garofalo G, Jadaud A, Kiparissis S, Micallef R, Montanini S, Thasitis I, Vallisneri M, Voliani A, Vrgoc N, Zupa W, Ordines F (2019). Spatial and temporal trend in the abundance and distribution of gurnards (Pisces: Triglidae) in the northern Mediterranean Sea. *SCIENTIA MARINA*, vol. 83S1, p. 101-116, ISSN: 0214-8358, doi: 10.3989/scimar.04856.30A
33. Franceschini S, Mattei F, D'andrea L, Di Nardi A, Fiorentino F, Garofalo G, Scardi M, Cataudella S, Russo T (2019). Rummaging through the bin: Modelling marine litter distribution using Artificial Neural Networks. *MARINE POLLUTION BULLETIN*, vol. 149, 110580, ISSN: 0025-326X, doi: 10.1016/j.marpolbul.2019.110580
34. Hidalgo M, Ligas A, Bellido JM, Bitetto I, Carbonara P, Carlucci R, Guijarro B, Jadaud A, Lembo G, Manfredi C, Esteban A, Garofalo G, Ikica Z, Garcia C, Gil de Sola L, Kavadas S, Maina I, Sion L, Vittori S, Vrgoc N (2019). Size-dependent survival of European hake juveniles in the Mediterranean Sea. *SCIENTIA MARINA*, vol. 83S1, p. 207-221, ISSN: 0214-8358, doi: 10.3989/scimar.04857.16A
35. Quattrocchi G, Sinerchia M, Colloca F, Fiorentino F, Garofalo G, Cucco A (2019). Hydrodynamic controls on connectivity of the high commercial value shrimp *Parapenaeus longirostris* (Lucas, 1846) in the Mediterranean Sea. *SCIENTIFIC REPORTS*, vol. 9, 16935, ISSN: 2045-2322, doi: 10.1038/s41598-019-53245-8
36. Russo T, Carpentieri P, D'Andrea L, De Angelis P, Fiorentino F, Franceschini S, Garofalo G, Labanchi L, Parisi A, Scardi M, Cataudella S (2019). Trends in effort and yield of trawl fisheries: a case study from the Mediterranean Sea. *FRONTIERS IN MARINE SCIENCE*, vol. 6, 153, ISSN: 2296-7745, doi: 10.3389/fmars.2019.00153
37. Russo T, D'Andrea L, Franceschini S, Accadia P, Cucco A, Garofalo G, Gristina M, Parisi A, Quattrocchi G, Sabatella RF, Sinerchia M, Canu DM, Cataudella S, Fiorentino F (2019). Simulating the Effects of Alternative Management Measures of Trawl Fisheries in the Central Mediterranean Sea: Application of a Multi-Species Bio-economic Modeling Approach. *FRONTIERS IN MARINE SCIENCE*, vol. 6, 542, ISSN: 2296-7745, doi: 10.3389/fmars.2019.00542
38. Sinopoli M, Lauria V, Garofalo G, Maggio T, Cillari T (2019). Extensive use of Fish Aggregating Devices together with environmental change influenced the spatial distribution of a tropical affinity fish. *SCIENTIFIC REPORTS*, vol. 9, 4934, ISSN: 2045-2322, doi: 10.1038/s41598-019-41421-9
39. Sion L, Zupa W, Calculli C, Garofalo G, Hidalgo M, Jadaud A, Lefkaditou E, Ligas A, Peristeraki P, Bitetto I, Capezzuto F, Carlucci R, Esteban A, Follesa C, Guijarro B, Ikica Z, Isajlovic I, Lembo G, Manfredi C, Perez JL, Porcu C, Thasitis I, Tserpes G, Carbonara P (2019). Spatial distribution pattern of European hake, *Merluccius merluccius* (Pisces: Merlucciidae), in the Mediterranean Sea. *SCIENTIA MARINA*, vol. 83S1, p. 21-32, ISSN: 0214-8358, doi: 10.3989/scimar.04988.12A
40. Garofalo G, Fezzani S, Gargano F, Milisenda G, Ben Abdallah O, Ben Hadj Hamida N, Jarboui O, Chemmam-Abelkader B, Khoufi W, Micallef R, Mifsud R, Gancitano S, Rizzo P, Zgozi S, Ceriola L, Arneri E, Fiorentino F (2018). Predictive distribution models of European hake in the south-central Mediterranean Sea. *HYDROBIOLOGIA*, vol. 821, p. 153-172, ISSN: 1573-5117, doi: 10.1007/s10750-017-3338-5
41. Milisenda G, Garofalo G, Fezzani s, Rjeibi O, Jarboui O, Chemmam B, Ceriola L, Bonanno A, Genovese S, Basilone G, Mifsud R, Lauria V, Gristina M, Colloca F, Fiorentino F (2018). Erratum to: Biomass HotSpot distribution model and spatial interaction of two exploited species of horse mackerel in the south-central Mediterranean. *HYDROBIOLOGIA*, vol. 821, p. 135-151, ISSN: 1573-5117, doi: 10.1007/s10750-017-3378-x

42. Buhl-Mortensen L, Galparsoro I, Fernandez TV, Johnson K, D'Anna G, Badalamenti F, Garofalo G, Carlstrom J, Piwowarczyk J, Rabaut M, Vanaverbeke J, Schipper C, van Dalfsen J, Vassilopoulou V, Issaris Y, van Hoof L, Pecceu E, Hostens K, Pace ML, Knittweis L, Stelzenmueller V, Todorova V, Doncheva V (2017). Maritime ecosystem-based management in practice: Lessons learned from the application of a generic spatial planning framework in Europe. *MARINE POLICY*, vol. 75, p. 174-186, ISSN: 0308-597X, doi: 10.1016/j.marpol.2016.01.024
43. Cariani A, Messinetti S, Ferrari A, Arculeo M, Bonello JJ, Bonnici L, Cannas R, Carbonara P, Cau A, Charilaou C, El Ouamari N, Fiorentino F, Follesa MC, Garofalo G, Golani D, Guarniero, I, Hanner, R, Hemida F, Kada O, Lo Brutto S, Mancusi C, Morey G, Schembri PJ, Serena F, Sion L, Stagioni M, Tursi A, Vrgoc N, et al. (2017). Improving the conservation of Mediterranean chondrichthyans: the ELASMOMED DNA barcode reference library. *PLOS ONE*, vol. 12, e0170244, ISSN: 1932-6203, doi: 10.1371/journal.pone.0170244
44. Gargano F, Garofalo G, Fiorentino F (2017). Exploring connectivity between spawning and nursery areas of *Mullus barbatus* (L., 1758) in the Mediterranean through a dispersal model. *FISHERIES OCEANOGRAPHY*, vol. 26, p. 476-497, ISSN: 1365-2419, doi: 10.1111/fog.12210
45. Keller S, Hidalgo M, Alvarez-Berastegui D, Bitetto I, Casciaro L, Cuccu D, Esteban A, Garofalo G, Gonzalez M, Guijarro B, Josephides M, Jadaud A, Lefkaditou E, Maiorano P, Manfredi C, Marceta B, Micallef R, Peristeraki P, Relini G, Sartor P, Spedicato MT, Tserpes G, Quetglas A (2017). Demersal cephalopod communities in the Mediterranean: a large-scale analysis. *MARINE ECOLOGY PROGRESS SERIES*, vol. 584, p. 105-118, ISSN: 0171-8630, doi: 10.3354/meps12342
46. Keller S, Quetglas A, Puerta P, Bitetto I, Casciaro L, Cuccu D, Esteban A, Garcia C, Garofalo G, Guijarro B, Josephides M, Jadaud A, Lefkaditou E, Maiorano P, Manfredi C, Marceta B, Micallef R, Peristeraki P, Relini G, Sartor P, Spedicato MT, Tserpes G, Hidalgo M (2017). Environmentally driven synchronies of Mediterranean cephalopod populations. *PROGRESS IN OCEANOGRAPHY*, vol. 152, p. 1-14, ISSN: 0079-6611, doi: 10.1016/j.pocean.2016.12.010
47. Lauria V, Garofalo G, Fiorentino F, Massi D, Milisenda G, Piraino S, Russo T, Gristina M (2017). Species distribution models of two critically endangered deep-sea octocorals reveal fishing impacts on vulnerable marine ecosystems in central Mediterranean Sea. *SCIENTIFIC REPORTS*, vol. 7, 8049, ISSN: 2045-2322, doi: 10.1038/s41598-017-08386-z
48. Milisenda G, Vitale S, Massi D., Enea M., Gancitano V., Giusto G. B., Badalucco C., Gristina M, Garofalo G, Fiorentino F, (2017). Spatio-temporal composition of discard associated with the deep water rose shrimp fisheries (*Parapenaeus longirostris*, Lucas 1846) in the south-central Mediterranean Sea. *MEDITERRANEAN MARINE SCIENCE*, vol. 18, p. 53-63, ISSN: 1108-393X, doi: 10.12681/mms.1787
49. Bottari T, Rinelli P, Garofalo G, Spanò N, Mangano MC, Porporato EMD, Mobilia V, Fiorentino F (2016). Epidemiology of gnathiid isopods on red mullet (*Mullus barbatus barbatus*) along the Tyrrhenian Sicilian coast (Mediterranean Sea). *CAHIERS DE BIOLOGIE MARINE*, vol. 57, p. 187-193, ISSN: 0007-9723
50. D'Anna G, Fernández TV, Pipitone C, Garofalo G, Badalamenti F (2016). Governance analysis in the Egadi Islands Marine Protected Area: A Mediterranean case study. *MARINE POLICY*, vol. 71, p. 301-309, ISSN: 0308-597X, doi: 10.1016/j.marpol.2015.12.009
51. Frodella N, Cannas R, Velonà A, Carbonara P, Farrell ED, Fiorentino F, Follesa MC, Garofalo G, Hemida F, Mancusi C, Stagion M, Ungaro N, Serena F, Tinti F, Cariani A (2016). Population connectivity and phylogeography of the Mediterranean endemic skate *Raja polystigma* and evidence of its hybridization with the parapatric sibling *R. montagui*. *MARINE ECOLOGY PROGRESS SERIES*, vol. 554, p. 99-113, ISSN: 0171-8630, doi: 10.3354/meps11799
52. Keller S, Bartolino V, Hidalgo M, Bitetto I, Casciaro L, Esteban A, Follesa MC, Garcia C, Garofalo G, Iosifides M, Jadaud A, Lefkaditou E, Maiorano P, Manfredi C, Marceta B, Massutí E, Micallef R, Peristeraki P, Relini G, Sartor P, Spedicato MT, Tserpes G, Quetglas A (2016). Large-scale spatio-temporal patterns of Mediterranean cephalopod diversity. *PLOS ONE*, vol. 11, e0146469, ISSN: 1932-6203, doi: 10.1371/journal.pone.0146469

53. Lauria V, Garofalo G, Gristina M, Fiorentino F (2016). Contrasting habitat selection amongst cephalopods in the Mediterranean Sea: When the environment makes the difference. *MARINE ENVIRONMENTAL RESEARCH*, vol. 119, p. 252-266, ISSN: 1879-0291, doi: 10.1016/j.marenvres.2016.06.011
54. Colloca F, Garofalo G, Bitetto I, Facchini MT, Grati F, Martiradonna A, Mastrantonio G, Nikolioudakis N, Ordinas F, Scarcella G, Tserpes G, Tugores MP, Valavanis V, Carlucci R, Fiorentino F, Follesa MC, Iglesias M, Knittweis L, Lefkaditou E, Lembo G, Manfredi C, Massutí E, Pace ML, Papadopoulou N, Sartor P, Smith CJ, Spedicato MT (2015). The seascape of demersal fish nursery areas in the North Mediterranean Sea, a first step towards the implementation of spatial planning for trawl fisheries. *PLOS ONE*, vol. 10, e0119590, ISSN: 1932-6203, doi: 10.1371/journal.pone.0119590
55. Druon JN, Fiorentino F, Murenu M, Knittweis L, Colloca F, Osio C, Mérigot B, Garofalo G, Mannini A, Jadaud A, Sbrana M, Scarcella G, Tserpes G, Peristeraki P, Carlucci R, Heikkonen J (2015). Modelling of European hake nurseries in the Mediterranean Sea: An ecological niche approach. *PROGRESS IN OCEANOGRAPHY*, vol. 130, p. 188-204, ISSN: 0079-6611, doi: 10.1016/j.pocean.2014.11.005
56. Finotto L, Gristina M, Garofalo G, Riginella E, Mazzoldi C (2015). Contrasting life history and reproductive traits in two populations of *Scyliorhinus canicula*. *MARINE BIOLOGY*, vol. 162, p. 1175-1186, ISSN: 0025-3162, doi: 10.1007/s00227-015-2659-z
57. Lauria V, Gristina M, Attrill MJ, Fiorentino F, Garofalo G (2015). Predictive habitat suitability models to aid conservation of elasmobranch diversity in the central Mediterranean Sea. *SCIENTIFIC REPORTS*, vol. 5, 13245, ISSN: 2045-2322, doi: 10.1038/srep13245
58. Telesca L, Belluscio A, Criscoli A, Ardizzone G, Apostolaki ET, Frascchetti S, Gristina M, Knittweis L, Martin CS, Pergent G, Alagna A, Badalamaneti F, Garofalo G, Gerakaris V, Pace ML, Pergent-Martini C, Salomidi M (2015). Seagrass meadows (*Posidonia oceanica*) distribution and trajectories of change. *SCIENTIFIC REPORTS*, vol. 5, 12505, ISSN: 2045-2322, doi: 10.1038/srep12505
59. Martin CS, Giannoulaki M, De Leo F, Scardi M, Salomidi M, Knittweis L, Pace ML, Garofalo G, Gristina M, Ballesteros E, Bavestrello G, Belluscio A, Cebrian E, Gerakaris V, Pergent G, Pergent-Martini C, Schembri PJ, Terribile K, Rizzo L, Ben Souissi J, Bonacorsi M, Guarnieri G, Krzelj M, Macic V, Punzo E, Valavanis V, Frascchetti S (2014). Coralligenous and maërl habitats: predictive modelling to identify their spatial distributions across the Mediterranean Sea. *SCIENTIFIC REPORTS*, vol. 4, 5073, ISSN: 2045-2322, doi: 10.1038/srep05073
60. Milano I, Babbucci M, Cariani A, Atanassova M, Bekkevold D, Carvalho GR, Espiñeira M, Fiorentino F, Garofalo G, Geffen AJ, Helyar SJ, Nielsen EE, Ogden R, Patarnello T, Stagioni M, Tinti F, Bargelloni L (2014). Outlier SNP markers reveal fine-scale genetic structuring across European hake populations (*Merluccius merluccius*). *MOLECULAR ECOLOGY*, vol. 23, p. 118-135, ISSN: 0962-1083, doi: 10.1111/mec.12568
61. Russo T, Parisi A, Garofalo G, Gristina M, Cataudella S, Fiorentino F (2014). SMART: A Spatially Explicit Bio-Economic Model for Assessing and Managing Demersal Fisheries, with an Application to Italian Trawlers in the Strait of Sicily. *PLOS ONE*, vol. 9, e86222, ISSN: 1932-6203, doi: 10.1371/journal.pone.0086222
62. Azzurro E, Soto S, Garofalo G, Maynou F (2013). *Fistularia commersonii* in the Mediterranean Sea: invasion history and distribution modeling based on presence-only records. *BIOLOGICAL INVASIONS*, vol. 15, p. 977-990, ISSN: 1387-3547, doi: 10.1007/s10530-012-0344-4
63. Fiorentino F., Patti B., Colloca F., Bonanno A., Basilone G., Gancitano V., Garofalo G, Goncharov S., Gristina M., Sinacori G., Mazzola S (2013). A comparison between acoustic and bottom trawl estimates to reconstruct the biomass trends of sardine and anchovy in the Strait of Sicily (Central Mediterranean). *FISHERIES RESEARCH*, vol. 147, p. 290-295, ISSN: 0165-7836
64. Gristina M, Fiorentino F, Gancitano V, Massi D, Mirto S, Garofalo G (2013). The role of juveniles in structuring demersal assemblages in trawled fishing grounds. *ESTUARINE, COASTAL AND SHELF SCIENCE*, vol. 133, p. 78-87, ISSN: 0272-7714

65. Katsanevakis S, Weber A, Pipitone C, Leopold M, Cronin M, Scheidat M, Doyle TK, Buhl-Mortensen L, Buhl-Mortensen P, D'Anna G, De Boois I, Dalpadado P, Damalas D, Fiorentino F, Garofalo G, Giacalone VM, Hawley KL, Issaris Y, Jansen J, Knight CM, Knittweis L, Kröncke I, Mirto S, Muxika I, Reiss H, Skjoldal HR, Vöge S (2012). Monitoring marine populations and communities: methods dealing with imperfect detectability. *AQUATIC BIOLOGY*, vol. 16, p. 31-52, ISSN: 1864-7790, doi: 10.3354/ab00426
66. Garofalo G., Fortibuoni T., Gristina M., Sinopoli M. and Fiorentino F., 2011. Persistence and co-occurrence of demersal nurseries in the Strait of Sicily (Central Mediterranean): implications for fishery management. *Journal of Sea Research*, 66:29-38.
67. Gristina M., Sinopoli M., Fiorentino F., Garofalo G., Badalamenti F., 2011. Shelter selection of the spiny lobster *Palinurus elephas* under different levels of *Octopus vulgaris* predation threat. *Marine Biology*, 158(6):1331-1337.
68. Fortibuoni T., Bahri T., Camilleri M., Garofalo G., Gristina M., Fiorentino F., 2010. Nursery and spawning areas of deep-water rose shrimp, *Parapenaeus longirostris* (Decapoda: Penaidae), in the Strait of Sicily (Central Mediterranean Sea). *Journal of Crustacean Biology*, 30(2):167-174.
69. Garofalo G., Ceriola L., Gristina M., Fiorentino F., Pace R., 2010. Nurseries, spawning grounds and recruitment of *Octopus vulgaris* in the Strait of Sicily, central Mediterranean Sea. *ICES Journal of Marine Science*, 67:1363-1371
70. Gristina M., Fiorentino F., Garofalo G., Badalamenti F., 2009. Shelter preference in captive juveniles of European spiny lobster *Palinurus elephas* (Fabricius, 1787). *Marine Biology*, 156: 2097-2105
71. Fiorentino F., Badalamenti F., D'Anna G., Garofalo G., Gianguzza P., Gristina M., Pipitone C., Rizzo P., Fortibuoni T., 2008. Changes in spawning-stock structure and recruitment pattern of red mullet, *Mullus barbatus*, after trawl ban in the Gulf of Castellammare (central Mediterranean Sea). *ICES Journal of Marine Science*, 65: 1175-1183.
72. Garofalo G., Fiorentino F., Gristina M., Cusumano S., Sinacori G., 2007. Stability of spatial pattern of fish species diversity in the Strait of Sicily (central Mediterranean). *Hydrobiologia*, 580:117-124.
73. Giacalone V.M., Garofalo G., D'Anna G., Badalamenti F., Pipitone C., 2006. Fi.S.A.R.: A data-managing and processing software for automated telemetry systems. *Marine Technology Society Journal* 40(1): 47-50.
74. Gristina M., Bahri T., Fiorentino F., Garofalo G., 2006. Comparison of demersal fish assemblages in three areas of the Strait of Sicily under different trawling pressure. *Fisheries Research*, 81: 60-71.
75. Fiorentino F., Garofalo G., De Santi A., Bono G., Giusto G.B., Norrito G., 2003. Spatio-Temporal Distribution of Recruits (0 group) of *Merluccius merluccius* and *Phycis blennoides* (Pisces; Gadiformes) in the Strait of Sicily (Central Mediterranean). *Hydrobiologia* 503 : 223-236.
76. Levi D., Andreoli M.G., Bonanno A., Fiorentino F., Garofalo G., Mazzola S., Norrito G., Patti B., Pernice G., Ragonese S., Giusto G.B., Rizzo P., 2003. Embedding sea surface temperature anomalies in the stock recruitment relationship of red mullet (*Mullus barbatus* L. 1758) in the Strait of Sicily. *Scientia Marina* 67 (Suppl. 1) : 259-268.
77. Garofalo G., Gristina M., Fiorentino F., Cigala Fulgosi F., Norrito G., Sinacori G., 2003. Distributional pattern of rays (Pisces, Rajidae) in the Strait of Sicily in relation to fishing pressure. *Hydrobiologia*, 503: 245-250.
78. Fortunati L., Garofalo G., Demontis R., 2002. TSDV: A GIS tool for inspecting trawl survey data. *ICES Journal of Marine Science*, 59, 168-178.
79. Craxì A., Tinè F., Vinci M., Almasio P., Cammà C., Garofalo G., Pagliaro L. (1991). Transmission of Hepatitis B and Hepatitis Delta Viruses in the Households of Chronic Hepatitis B Surface Antigen Carriers: A Regression Analysis of Indicators of Risk. *American Journal of Epidemiology*, 1991; 134:641-650.
80. Cammà C., Garofalo G., Almasio P., Tinè F., Craxì A., Palazzo U., Pinzello G., Fiorello F., Angelo P.M., Pagliaro L. (1991). A performance evaluation of the expert system 'Jaundice' in comparison with that of three hepatologists. *Journal of Hepatology*, 1991; 13:279-285

81. Cammà C., Almasio P., Craxì A., Garofalo G., Angelo P.M., Pagliaro L. (1989). Development of the knowledge base of an expert system for diagnosis of jaundice. *The Italian Journal of Gastroenterology*, 1989; 21: 350-354.

Datasets

1. Sabatella E.C., Fiorentino F., Grande U., Lauria V., Scannella D., Garofalo G., 2024. Survey on biodiversity conservation in the Strait of Sicily, Mendeley Data, V1, doi: 10.17632/rbnr9yr4yh.1 (<https://data.mendeley.com/datasets/rbnr9yr4yh/1>)
2. Marsaglia L., Parisi A., Libralato S., Miller N., Davis P., Paolo F., Fiorentino F., Garofalo G., Costantini M., Russo T. 2024, SAR_based_Fishing_Activity_Mediterranean_Sea_Total_2017_2021, Mendeley Data, V1, doi: 10.17632/zjg95xdkbd.1 (<https://data.mendeley.com/datasets/zjg95xdkbd/1>)

Mazara del Vallo, 11/09/2025

Germana Garofalo

