

Francesco Colloca



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Current Position: Research Director

Current Affiliation:

Department EMI (Integrated Marine Ecology),
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Education/Training/Experience

Institute and Location	Degree / Function	Year	Field of Study
La Sapienza, University of Rome, Italy	Biological Science	1988	Marine biology
La Sapienza, University of Rome, Italy	PhD	2003	Marine ecology
La Sapienza, University of Rome, Italy	Postdoc	2003-2012	Marine ecology
CNR	Researcher	2012-2019	Fisheries ecology
La Sapienza, University of Rome, Italy	Lecturer professor	2017-2021	Marine ecology
Stazione Zoologica Anton Dohrn, Napoli, Italy	Senior Researcher	October 2019-December 2021	Marine ecology
Stazione Zoologica Anton Dohrn, Napoli, Italy	Senior Researcher	January 2022 - present	Marine ecology

Appointments and awards

2022-ongoing. MARINEPLAN - Improved transdisciplinary science for effective ecosystem-based maritime spatial planning and conservation in European Seas. HORIZON-CL6-2021-BIODIV-01, proposal number: 101059407. Project budget 3,996,520 €, SZN budget 144,000 €. Role: participant, SZN PI.

2020-ongoing. ISSPA - Innovation, Development and Sustainability of Fisheries and Aquaculture OF the Campania Region. European Maritime and Fisheries Fund. Campania Region – Italy (DRD. n. 198 del 8/8/2019). (8/2019-7/2023, project budget 5,736,000€, SZN budget: 2,995,000€). Role: Project coordinator.

2021-ongoing - EASME/2020/OP/0021 - Multiple Framework Contract in cascade for the provision of scientific advice for the Mediterranean and the Black Seas, in three lots: Lot 1: Scientific advice for Western and Central Mediterranean Seas - Lot 2: Scientific advice for Eastern Mediterranean Sea - Lot 3: Scientific advice for Black Sea (EMFF/2020/3.2.4). Role: PI SZN

2020-ongoing. EASME//2020/OP/012, “Study on Ecosystem-based Approaches Applied to Fisheries Management under the Common Fisheries Policy for the Mediterranean and the Black Seas 01/04/2012 – 30/09/2019. Role: PI SZN (subcontractor, budget 18,000€).

2021-2023 Development of indicators for the Descriptor 3 of the Marine Strategy Framework Directive. Research agreement 2021 with ISPRA-Italy, budget 45,000€. Role: SZN PI.

2020 - Development of indicators for the Descriptor 3 of the Marine Strategy Framework Directive. Research agreement 2020 with ISPRA-Italy, budget 40,000€. Role: SZN PI.

2020-2022. MPA Engage - Engaging Mediterranean key actors in Ecosystem Approach to manage Marine Protected Areas facing Climate change. Programme 2014 - 2020 INTERREG VB Mediterranean, Grant number: 5216 | 5MED18_3.2_M23_007. Role: participant.

2017 – 2021 - Lecturer-Professor, La Sapienza University of Rome. Course “Effects of climate change on Mediterranean marine biodiversity”, cod. 1051983, Master degree in Ecobiology.

2017-2019. Italian National Program on Fisheries Data Collection (PNRDA). Leader of WP 7: Development of a national information system for Italian fisheries data. Co-responsible for fisheries data collection in GSA 10.

2018. Italian National Fisheries Management Plans. Italian DG-Pesca – MIPAAF, CNR. Development of stock assessments for commercial stocks and advice for fisheries management.

2016-2018. Project MANTIS: Marine protected Areas Network Towards Sustainable fisheries in the Central Mediterranean. European Commission DG MARE (Mare/2014/41). Leader of WP4: “Designing and assessing an optimal management framework for the marine managed areas network”.

2012-ongoing. National flag project RITMARE (MIUR). Coordinator of the sub-project SP2_WP1_AZ4_UO07: “Tagging of demersal elasmobranchs in the Strait of Sicily”. ”SP2 “Technology for sustainable fisheries. WP1: “Identification of stock boundaries of commercial species”.

2015-2016. Scientific agreement CNR-Montenegro (CNR-MOS). Project” Development of a new methodological approach to study the recruitment dynamics of fish and crustaceans in the Kotor Bay (Montenegro)”. Italian coordinator of the project.

2014-2017. MAREFRAME project: Co-creating Ecosystem-based Fisheries Management Solutions, EU Seventh Framework Programme (FP 7). Leader of WP5 “Apply new methods in case studies”.

2015-2017. FIMAPS project: “Fishery Management Plan System”. Guidelines for long-terms fisheries management plans in Italian waters based on scientific advice (Reg. EU n. 1380/2013)”, grant from MIPAAF. Scientific coordinator.

2013-2014 StockMed project. “Stock units: Identification of distinct biological units (stock units) for different fish and shellfish species and among different GFCM-GSA”. European Commission, DG-MARE. Specific Contract No 7 (SI2.642234). Coordinator of task 3.2: “Review and analysis of the information on the position of nursery and spawning areas of commercial species of fish and cephalopods in Mediterranean waters”.

2015-ongoing. MINOUW project: “Science, Technology, and Society initiative to minimize Unwanted Catches in European Fisheries”. HORIZON 2020, EU Grant Agreement n. 634495.

2015-2017. Scientific agreement CNR - CNRS-L (National Council for Scientific Research of Lebanon). Project “Evaluation of the ecological role of some key Lessepsian fish species in marine Lebanese waters

2010-2013. CREAM project: Coordinating REsearch in support to Application of ecosystem approach to fisheries and management advice in the Mediterranean and Black seas. EU 7^o Framework Programme. Coordinating and Support Action - Grant agreement no. 265648.

2009-2010. EVOMED project: “Understanding size developments of exploited stocks and ecosystems in the Mediterranean by using private fishermen's "tally-books" and historical information”. DG Mare open call for tenders n° MARE/2008/11, Proposal for Lot 4; Contratto N° SI2 539097.

Other

2021-2022. Annual meetings of the Subregional Committee for the Central Mediterranean. General Fisheries Commission for the Mediterranean – GFCM. Role: chair.

2018-2020. Italian Technological Cluster for the Blue Growth (Cluster BIG). Role: member of the Technical Scientific Committee.

2017-2019 Advanced school on Multispecies modelling approaches for ecosystem based marine REsource management in the MEDiterranean Sea (AMARE-MED). EuroMarine. European Marine Research Network.

2016-ongoing. ICES (International Council for the Exploration of the Sea) Working Group on Value of Coastal Habitats for Exploited Species [WGVHES]. Role: member

2014-ongoing. Italian focal point of the project FAO – COPEMED II (DM MIPAAF 28/04/2014, n. 0009804)

2017-2019. FAO-GFCM summer school in Quantitative Fisheries Stock Assessment in the Mediterranean Sea. Role: member of the organizing committee.

2017-2018. National Strategic Plan for innovation and research in agriculture, food and forestry of the MIPAAF (2014-2020). CNR member at the governance and coordination table (D.M. n. 5776, 21/02/2017, MIPAAF).

2017-2018: Topic Editor, *Frontiers in Marine Science*, Research Topic: “Challenges and Opportunities for The EU Common Fisheries Policy application in The Mediterranean and Black Sea”.

2014-2015. Coordinator of the Sub-Committee of Stock Assessment of the General Fisheries Commission for the Mediterranean Sea (GFCM), 2014-2015.

2008-2019. Independent expert in several EWG of the European’s Commission Scientific, Technical & Economic Committee for Fisheries (STECF) and FAO-GFCM meetings.

Students’ Supervision (last 5 years)

Thesis supervisor of several students (external) University of Rome “La Sapienza”, PhD reviewer of. 2 students, PhD external supervisor of 2 thesis.

Publications

Author of 86 publications on ISI-journals (h index google-scholar: 32). H index= 32. Total number of citations= 3020 (source Scholar citations, google scholar accessed on 22 September 2022)

List of publications (last 10 years)

Peer-reviewed

- Azzurro, E., Ballerini, T., Antoniadou, C., Aversa, G. D., Souissi, J. B., Blašković, A., ... & Schembri, P. J. 2022. ClimateFish: A Collaborative Database to Track the Abundance of Selected Coastal Fish Species as Candidate Indicators of Climate Change in the Mediterranean Sea. *Frontiers in Marine Science*, 9, 910887.
- Rizzo, L., Minichino, R., Virgili, R., Tanduo, V., Osca, D., Manfredonia, A., ... & Crocetta, F. 2022. Benthic litter in the continental slope of the Gulf of Naples (central-western Mediterranean Sea) hosts limited fouling communities but facilitates molluscan spawning. *Marine Pollution Bulletin*, 181, 113915.
- Agnetta, D., Badalamenti, F., Colloca, F., Cossarini, G., Fiorentino, F., Garofalo, G., ... & 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*, 1503.
- Druon, J. N., Gascuel, D., Gibin, M., Zanzi, A., Fromentin, J. M., Colloca, F., ... & Martinsohn, J. 2021. Mesoscale productivity fronts and local fishing opportunities in the European Seas. *Fish and Fisheries*, 22(6), 1227-1247.
- Geraci, M. L., Colloca, F., Di Maio, F., Falsone, F., Fiorentino, F., Sardo, G., ... & Vitale, S. 2021. How is artificial lighting affecting the catches in deep water rose shrimp trawl fishery of the Central Mediterranean Sea? *Ocean & Coastal Management*, 215, 105970.
- Barbato, M., Barria, C., Bellodi, A., Bonanomi, S., Borme, D., Četković, I., ... & Mazzoldi, C. 2021. The use of fishers' Local Ecological Knowledge to reconstruct fish behavioural traits and fishers' perception of conservation relevance of elasmobranchs in the Mediterranean Sea. *Mediterranean Marine Science*, 22(3), 603-622.
- Cardinale, M., Colloca, F., Bonanno, A., Scarcella, G., Arneri, E., Jadaud, A., ... & Herrera, J. G. 2021. The Mediterranean fishery management: A call for shifting the current paradigm from duplication to synergy. *Marine Policy*, 131, 104612.
- Milisenda, G., Garofalo, G., Fiorentino, F., Colloca, F., Maynou, F., Ligas, A., ... & 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, 610241.
- Bevilacqua, S., Airoidi, L., Ballesteros, E., Benedetti-Cecchi, L., Boero, F., Bulleri, F., Colloca F. & Terlizzi, A. 2021. Mediterranean rocky reefs in the Anthropocene: Present status and future concerns. *Advances in Marine Biology*, 89, 1-51.
- Macher, C., Steins, N. A., Ballesteros, M., Kraan, M., Frangoudes, K., Bailly, D., ... & Ulrich, C. 2021. Towards transdisciplinary decision-support processes in fisheries: experiences and recommendations from a multidisciplinary collective of researchers. *Aquatic Living Resources*, 34, 13.
- Scannella, D., Geraci, M. L., Falsone, F., Colloca, F., Zava, B., Serena, F., ... & Vitale, S. (2020). A new record of a great white shark, *Carcharodon carcharias* (Chondrichthyes: Lamnidae) in the Strait of Sicily, Central Mediterranean Sea. *Acta Adriatica: International Journal of Marine Sciences*, 61(2), 231-238.
- Piroddi, C., Colloca, F., & Tsikliras, A. C. 2020. The living marine resources in the Mediterranean Sea large marine ecosystem. *Environmental Development*, 36, 100555.

- Despoti, S., Milisenda, G., Ligas, A., Bentes, L., Maynou, F., Vitale, S., ... & Giannoulaki, M. 2020. Marine spatial closures as a supplementary tool to reduce discards in bottom trawl fisheries: Examples from southern European waters. *Fisheries Research*, 232, 105714.
- Falsone, F., Scannella, D., Geraci, M. L., Vitale, S., Colloca, F., Di Maio, F., ... & Fiorentino, F. 2020. Identification and characterization of trammel net métiers: A case study from the southwestern Sicily (Central Mediterranean). *Regional Studies in Marine Science*, 39, 101419.
- Di Lorenzo, M., Vizzini, S., Signa, G., Andolina, C., Boscolo Palo, G., Gristina, M., ... & Colloca, F. 2020. Ontogenetic trophic segregation between two threatened smooth-hound sharks in the Central Mediterranean Sea. *Scientific Reports*, 10(1), 1-15.
- Colloca, F., Carrozzì, V., Simonetti, A., & Di Lorenzo, M. 2020. Using local ecological knowledge of fishers to reconstruct abundance trends of elasmobranch populations in the Strait of Sicily. *Frontiers in Marine Science*, 7, 508.
- Di Maio, F., Geraci, M. L., Scannella, D., Falsone, F., Colloca, F., Vitale, S., ... & Fiorentino, F. 2020. Age structure of spawners of the axillary seabream, *Pagellus acarne* (Risso, 1827), in the central Mediterranean Sea (Strait of Sicily). *Regional Studies in Marine Science*, 101082.
- 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*, 9(1), 1-14.
- Geraci, M. L., Di Lorenzo, M., Falsone, F., Scannella, D., Di Maio, F., Colloca, F., ... & Serena, F. 2019. The occurrence of Norwegian skate, *Dipturus nidarosiensis* (Elasmobranchii: Rajiformes: Rajidae), in the Strait of Sicily, central Mediterranean. *Acta Ichthyologica et Piscatoria*, 49(2), 203-208.
- Colloca, F., Scannella, D., Geraci, M. L., Falsone, F., Battista, G., Vitale, S., Di Lorenzo M., Bono, G. 2019. British sharks in Sicily: records of long distance migration of tope shark (*Galeorhinus galeus*) from North-eastern Atlantic to Mediterranean Sea. *Mediterranean Marine Science*, 20(2): 309-313
- Follesa, M. C., Marongiu, M. F., Zupa, W., Bellodi, A., Cau, A., Cannas, R., Colloca F.,... & Carbonara P. 2019. Spatial variability of Chondrichthyes in the northern Mediterranean. *Scientia Marina*, 83(S1), 81-100.
- Colloca, F., Milisenda, G., Capezzuto, F., Cau, A., Garofalo, G., Jadaud, A., ... & Ordines F. 2019. Spatial and temporal trend in the abundance and distribution of gurnards (Pisces: Triglidae) in the northern Mediterranean Sea. *Scientia Marina*. 83(S1): 101-116
- Ventura, D., Colloca, F., & Ardizzone, G. 2019. Settlement evidence of the Mediterranean parrotfish *Sparisoma cretense* (Teleostei: Scaridae) in the Central Tyrrhenian Sea (Giglio Island, Italy). *BioInvasions Records*, 8(2), 413-418.
- Carrozzì, V., Di Lorenzo, M., Massi, D., Titone, A., Ardizzone, G., & Colloca, F. 2019. Prey preferences and ontogenetic diet shift of European hake *Merluccius merluccius* (Linnaeus, 1758) in the central Mediterranean Sea. *Regional Studies in Marine Science*, 25, 100440.
- Agnetta, D., Badalamenti, F., Colloca, F., D'Anna, G., Di Lorenzo, M., Fiorentino, F., ... & Pipitone, C. 2019. Benthic-pelagic coupling mediates interactions in Mediterranean mixed fisheries: An ecosystem modeling approach. *PloS one*, 14(1), e0210659.
- Vitale, S., Enea, M., Milisenda, G., Gancitano, V., Geraci, M. L., Falsone, F., ... & Colloca, F. 2018. Modelling the effects of more selective trawl nets on the productivity of European hake (*Merluccius merluccius*) and deep-water rose shrimp (*Parapenaeus longirostris*) stocks in the Strait of Sicily. *Scientia Marina*, 82(S1), 199-208.
- Vitale, S., Milisenda, G., Gristina, M., Baiata, P., Bonanomi, S., Colloca, F., ... & Sala, A. 2018. Towards more selective Mediterranean trawl fisheries: are juveniles and trash excluder devices effective tools for reducing undersized catches?. *Scientia Marina*, 82(S1), 215-223.
- Geraci, M. L., Scannella, D., Falsone, F., Colloca, F., Vitale, S., Rizzo, P., ... & Fiorentino, F. 2018. Preliminary study on the biological traits of the Por's goatfish *Upeneus pori* (Chordata:

- Actinopterygii) off the southern coast of Lampedusa Island (Central Mediterranean). *The European Zoological Journal*, 85(1), 232-242.
- Elahi, R., Ferretti, F., Bastari, A., Cerrano, C., Colloca, F., Kowalik, J., Ruckelshaus M., Struck A. & Micheli, F. 2018. Leveraging vessel traffic data and a temporary fishing closure to inform marine management. *Frontiers in Ecology and the Environment*, 16(8): 440–446, doi: 10.1002/fee.1936.
- Brown, E. J., Vasconcelos, R. P., Wennhage, H., Bergström, U., Støttrup, J. G., van de Wolfshaar, K., Milisenda G., Colloca F., Le Pape, O. 2018. Conflicts in the coastal zone: human impacts on commercially important fish species utilizing coastal habitat. *ICES Journal of Marine Science*, 75(4): 1203–1213.
- Pipitone V., Colloca F., 2018. Recent trends in the productivity of the Italian trawl fishery: The importance of the socio-economic context and overexploitation. *Marine Policy*, 87: 135–140.
- 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. Biomass HotSpot distribution model and spatial interaction of two exploited species of horse mackerel in the south-central Mediterranean Sea. *Hydrobiologia*, 821 (1), 135-150.
- Libralato, S., Colloca, F., Gücü, A. C., Maravelias, C., Solidoro, C., Villasante, S., & Cardinale, M. 2018. Challenges and Opportunities for The EU Common Fisheries Policy application in The Mediterranean and Black Sea. *Frontiers in Marine Science*, 5, 299.
- Marino I.A.M., Finotto L., Colloca F., Di Lorenzo M., Gristina M., Farrell D.E., Zane L., Mazzoldi C., 2018. Resolving the ambiguities in the identification of two smooth-hound sharks (*Mustelus mustelus* and *Mustelus punctulatus*) using genetics and morphology. *Marine Biodiversity*, 48 (3), 1551-1562.
- Di Lorenzo, M., Sinerchia, M., & Colloca, F. 2018. The North sector of the Strait of Sicily: a priority area for conservation in the Mediterranean Sea. *Hydrobiologia*, 821 (1), 235-253.
- Lucchetti, A., Carbonara, P., Colloca, F., Lanteri, L., Spedicato, M. T., & Sartor, P. 2017. Small-scale driftnets in the Mediterranean: Technical features, legal constraints and management options for the reduction of protected species bycatch. *Ocean & Coastal Management*, 135, 43-55.
- Criscoli, A., Carpentieri, P., Colloca, F., Belluscio, A., & Ardizzone, G. 2017. Identification and Characterization of Nursery Areas of Red Mullet *Mullus barbatus* in the Central Tyrrhenian Sea. *Marine and Coastal Fisheries*, 9(1), 203-215.
- Cantafaro, A., Ardizzone, G., Enea, M., Ligas, A., & Colloca, F. 2017. Assessing the importance of nursery areas of European hake (*Merluccius merluccius*) using a body condition index. *Ecological Indicators*, 81, 383-389.
- Scannella D., Falsone F., Geraci M.L., Frogliola C., Fiorentino F., Giusto G.B., Zava B., Insacco G., Colloca F., 2017. First report of Northern brown shrimp *Penaeus aztecus* Ives, 1891 in Strait of Sicily. *BioInvasions Records*, vol. 6(1).
- Sabatella, E. C., Colloca, F., Coppola, G., Fiorentino, F., Gambino, M., Malvarosa, L., & Sabatella, R. 2017. Key Economic Characteristics of Italian Trawl Fisheries and Management Challenges. *Frontiers in Marine Science*, 4, 371.
- Colloca, F., Scarcella, G., & Libralato, S., 2017. Recent Trends and Impacts of Fisheries Exploitation on Mediterranean Stocks and Ecosystems. *Frontiers in Marine Science*, 4, 244.
- Colloca F., Enea M., Ragonese S., Di Lorenzo M., 2017. A century fishery data documenting the collapse of smooth-hounds (*Mustelus* spp.) in Mediterranean Sea. *Aquatic Conservation: Marine and Freshwater Ecosystems*, 17:1145–1155.
- Carpentieri, P., Serpetti, N., Colloca, F., Criscoli, A., & Ardizzone, G., 2016. Food preferences and rhythms of feeding activity of two co-existing demersal fish, the longspine snipefish, *Macroramphosus scolopax* (Linnaeus, 1758), and the boarfish *Capros aper* (Linnaeus, 1758), on the Mediterranean deep shelf. *Marine Ecology-An Evolutionary Perspective*, 37(1), 106-118. <https://doi.org/10.1111/maec.12265>.

- Ligas A., Colloca F., Mannini A., Sartor P., Sbrana M., Voliani, A. & Belcari P., 2015. Modelling the growth of recruits of European hake, *Merluccius merluccius* (L., 1758), in north-western Mediterranean using Generalized Linear Models. *Fishery Bulletin* 113: 69-81.
- 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* 130, 188-204.
- Colloca F., Garofalo G., Bitetto I, Facchini MT, Grati F., 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* 10(3): e0119590. doi:10.1371/journal.pone.0119590.
- Albouy C., Velez L., Coll M., Colloca F., Le Loc'h F., Mouillot D., & Gravel D., 2014. From projected species distribution to food web structure under climate change. *Global Change Biology*, 20: 730–741, doi: 10.1111/gcb.12467.
- Colloca F., Mastrantonio G., Jona Lasinio G., Ligas A. & Sartor P., 2014. *Parapenaeus longirostris* (Lucas, 1846) an early warning indicator species of global warming in the central Mediterranean Sea. *Journal of Marine System*, 138: 29-39.
- Sartor P, Colloca F., Maravelias C., & Maynou F., 2014. Critical assessment of the current understanding/knowledge towards the framework of Ecosystem Approach of Fisheries in Mediterranean and Black Sea. *Scientia Marina*: 78 (S1) : 19-27.
- Colloca F., Cardinale M., F. Maynou, Giannoulaki M., Scarcella G, Jenko K., Bellido J.M. & Fiorentino F., 2013. Rebuilding Mediterranean fisheries: a new paradigm for ecological sustainability. *Fish and Fisheries*, 14 (1), 89-109.
- Gaertner J-C, Maiorano P, Mérigot B, Colloca F, Politou C-Y, et al. 2013. Large-Scale Diversity of Slope Fishes: Pattern Inconsistency between Multiple Diversity Indices. *PLoS ONE* 8(7): e66753. doi:10.1371/journal.pone.0066753.
- 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*, 147: 290– 295.
- Rätz H.J., Charef A., Abella A.J., Colloca F., Ligas A., Mannini A. & Lloret J. 2013 A medium-term, stochastic forecast model to support sustainable, mixed fisheries management in the Mediterranean Sea. *Journal of Fish Biology*, 83(4), 921-938.