



Tommaso Russo

Associate Professor of Ecology

Professional Summary

- I try to contribute to the achievement of a Sustainable Development through the ecology applied in marine environments
- My research lines are dedicated to the study of the human impact on marine ecosystems through fishing and pollution
- Over the years, I have focused mainly on overfishing, physical impact on substrates and biocenosis, loss of biodiversity and the drivers that regulate the behavior of fishers
- My approaches range from the use of satellite data to DNA, passing through statistics and artificial intelligence, since I'm an innate nerd and I love math and computer science
- I like to develop new methodological approaches and open-source models in the R environment
- I think Ecology is the science of complexity and can only be applied with solid interdisciplinary bases

Education

- 2005 - Doctor of Philosophy in Evolutionary Biology and Ecology. Thesis title: New insights into larval finfish ecomorphology: shape and trophic habits changes during ontogenesis. Institution: University of Rome Tor Vergata. Advisor: Stefano Cataudella
- 2001 - Master's Degree (MSc) in Biological Science. Institution: University of Rome Tor Vergata. Advisors: Eugenio Fresi, Stefano Cataudella. Final grade: 110/110 summa cum laude

Memberships

- Since 2018 - Board of the School of Doctorate in Evolutionary Biology and Ecology. <http://http://www.dottoratobee.uniroma2.it/>
- Since 2010 - Inter-University Consortium of Marine Science - CoNISMA. <http://www.conisma.it>

Roles

- 2021 - Italian National Focal Point for the FAO AdriaMed Project. <http://www.faoadriamed.org/>
- 2021 - Chair of the ICES Review group RGTRADE3 following the request by the European Commission to deliver “advice on a set of management options to reduce the impact of mobile

*Department of Biology - University of Rome Tor Vergata &
CoNISMa*

• [✉ Tommaso.Russo@Uniroma2.it](mailto:Tommaso.Russo@Uniroma2.it)
• www.tommasorusso.org • [in tommasorusso](https://www.linkedin.com/in/tommasorusso) • [🐦](https://twitter.com/tomecomod)
[tomecomod](https://www.tomecomod.com) [📺](https://www.youtube.com/channel/UC...) [tommaso-russo](https://www.youtube.com/channel/UC...)

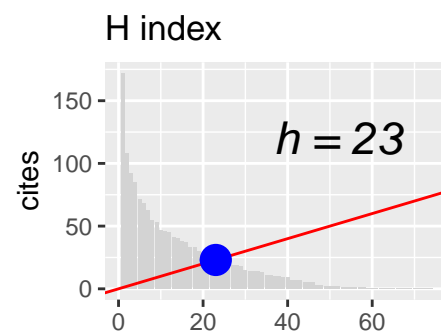
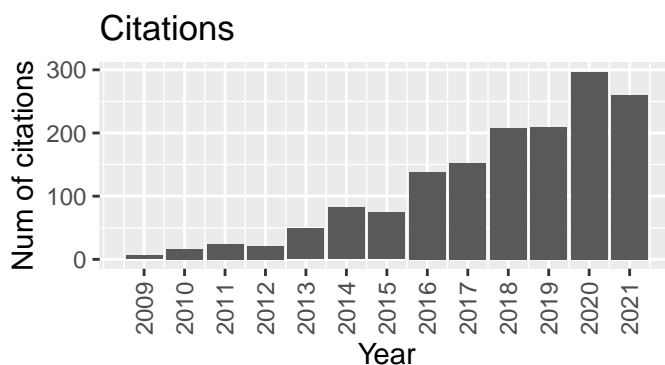
bottom contacting fishing gears on seafloor habitats, and for each option provide a trade-off analysis between fisheries and the seafloor”

- 2021 - Panelist for the Natural Environment Research Council (NERC) and the Economic and Social Research Council (ESRC) within the Sustainable Management of UK Marine Resources research programme <https://nerc.ukri.org/research/funded/programmes/marine-resources/>
- 2010 - ongoing - Involved as reviewer for more than 20 International ISI Journals including: Science, Nature Communications, ICES Journal of Marine Science, Biological Journal of the Lynnean Society, Hydrobiologia, Journal of Sea Research, and Deep Sea Reserch Part II: Topical Studies in Oceanography
- 2010 - ongoing - Involved as invited expert in several Expert Working Groups of the Scientific, Technical and Economic Committee for Fisheries (STECF - <https://stecf.jrc.ec.europa.eu/>)

Teaching activity

- Class of Ecology - First level Master Degree in Biological Science - Department of Biology - University of Rome Tor Vergata
- Class of Informatics Methods for Biology - Second level Master Degree in Evolutionary Biology, Ecology and Applied Anthropology
- Class of Ecology - Second level Master Degree in Health and safety sciences - Department of Biomedicine and Prevention, University of Rome Tor Vergata
- Class of Fisheries Biology and Aquaculture - Second level Master Degree in Evolutionary Biology, Ecology and Applied Anthropology

Citations



Research Projects and Grants

- MAREA Project - tenders MARE/2009/05 - LOT 1 – Mediterranean (<http://mareaproject.net/contracts/10/overview/>) - Task 4.2 Coordinator: Development of a statistical spatial approach for the identification of stocks and related boundaries
- Flag Project RITMARE – WP2 AZ2 (<http://www.ritmare.it/>) - Action Leader: Modelling of commercial stocks with particular emphasis to the role of fishing effort by VMS data
- MANTIS: Marine protected Areas Network Towards Sustainable fisheries in the Central Mediterranean - European Commission , DG MARE Agreement number – SI2 - 721911WP Role: Leader Modelling of spatial interaction between target species and fisheries including connectivity among Marine Managed Areas. <http://jadran.izor.hr/mantis/index.html>

Department of Biology - University of Rome Tor Vergata & CoNISMa

☎ +39 329 0734943 • ✉ Tommaso.Russo@uniroma2.it

🌐 www.tommasorusso.org • [in](#) [tommasorusso](#) • [tw](#) [tomecomod](#)

👤 [tommaso-russo](#)

- H2020 Research Project MINOUW Applying science, innovation and partnership to reduce discards in European fisheries. <http://minouw-project.eu/>
- ABIOMMED – Support coherent and coordinated assessment of biodiversity and measures across Mediterranean for the next 6-year cycle of the MSFD implementation. https://ec.europa.eu/environment/marine/projects/index_en.htm

Selected Publications

1. Casabianca, S., Bellingeri, A., Capellacci, S., Sbrana, A., Russo, T., Corsi, I., & Penna, A. (2021). Ecological implications beyond the ecotoxicity of plastic debris on marine phytoplankton assemblage structure and functioning. *Environmental Pollution*, 118101. <https://doi.org/10.1016/j.envpol.2021.118101>
2. Franceschini, S., Cau, A., D’Andrea, L., Follesa, M. C., & Russo, T. (2021). Eating Near the Dump: Identification of Nearby Plastic Hotspot as a Proxy for Potential Microplastic Contamination in the Norwegian Lobster (*Nephrops norvegicus*). *Frontiers in Marine Science*, 8. <https://doi.org/10.3389/fmars.2021.682616>
3. Russo, T., Maiello, G., Talarico, L., Baillie, C., Colosimo, G., D’Andrea, L., Maio, F. D., 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*, 31(2). <https://doi.org/10.1002/eap.2273>
4. D’Andrea, L., Parisi, A., Fiorentino, F., Garofalo, G., Gristina, M., Cataudella, S., & Russo, T. (2020). smart R: An r package for spatial modelling of fisheries and scenario simulation of management strategies. *Methods in Ecology and Evolution*, 11(7), 859–868. <https://doi.org/10.1111/2041-210x.13394>
5. Casabianca, S., Capellacci, S., Ricci, F., Andreoni, F., Russo, T., Scardi, M., & Penna, A. (2020). Structure and environmental drivers of phytoplanktonic resting stage assemblages in the central Mediterranean Sea. *Marine Ecology Progress Series*, 639, 73–89. <https://doi.org/10.3354/meps13244>
6. Paradis, S., Pusceddu, A., Masqué, P., Puig, P., Moccia, D., Russo, T., & Iacono, C. L. (2019). Organic matter contents and degradation in a highly trawled area during fresh particle inputs (Gulf of Castellammare, southwestern Mediterranean). *Biogeosciences*, 16(21), 4307–4320. <https://doi.org/10.5194/bg-16-4307-2019>
7. Russo, T., D’Andrea, L., Franceschini, S., Accadia, P., Cucco, A., Garofalo, G., Gristina, M., & al., et. (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*, 6. <https://doi.org/10.3389/fmars.2019.00542>
8. Russo, T., Carpentieri, P., D’Andrea, L., Angelis, P. D., 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*, 6. <https://doi.org/10.3389/fmars.2019.00153>
9. Pierdomenico, M., Russo, T., Ambroso, S., Gori, A., Martorelli, E., D’Andrea, L., Gili, J.-M., & Chiocci, F. L. (2018). Effects of trawling activity on the bamboo-coral *Isidella elongata* and the sea pen *Funiculina quadrangularis* along the Gioia Canyon (Western Mediterranean, southern Tyrrhenian Sea). *Progress in Oceanography*, 169, 214–226. <https://doi.org/10.1016/j.pocean.2018.02.019>

Department of Biology - University of Rome Tor Vergata & CoNISMa

☎ +39 329 0734943 • ✉ Tommaso.Russo@uniroma2.it

🌐 www.tommasorusso.org • **in** [tommasorusso](https://www.linkedin.com/company/tommasorusso) • **tw** [tomecomod](https://twitter.com/tomecomod)

👤 [tommaso-russo](https://www.github.com/tommaso-russo)

10. Cianchetti-Benedetti, M., Dell’Omo, G., Russo, T., Catoni, C., & Quillfeldt, P. (2018). Interactions between commercial fishing vessels and a pelagic seabird in the southern Mediterranean Sea. *BMC Ecology*, 18(1). <https://doi.org/10.1186/s12898-018-0212-x>
11. Amoroso, R. O., Pitcher, C. R., Rijnsdorp, A. D., McConnaughey, R. A., Parma, A. M., Suuronen, P., Eigaard, O. R., Bastardie, F., Hintzen, N. T., Althaus, F., Baird, S. J., Black, J., Buhl-Mortensen, L., Campbell, A. B., Catarino, R., Collie, J., Cowan, J. H., Durholtz, D., Engstrom, N., . . . Jennings, S. (2018). Bottom trawl fishing footprints on the world’s continental shelves. *Proceedings of the National Academy of Sciences*, 115(43), E10275–E10282. <https://doi.org/10.1073/pnas.1802379115>
12. D’Onghia, G., Calculli, C., Capezzuto, F., Carlucci, R., Carluccio, A., Grehan, A., Indennidate, A., Maiorano, P., Mastrototaro, F., Pollice, A., Russo, T., Savini, A., Sion, L., & Tursi, A. (2017). Anthropogenic impact in the Santa Maria di Leuca cold-water coral province (Mediterranean Sea): Observations and conservation straits. *Deep Sea Research Part II: Topical Studies in Oceanography*, 145, 87–101. <https://doi.org/10.1016/j.dsr2.2016.02.012>
13. Eigaard, O. R., Bastardie, F., Hintzen, N. T., Buhl-Mortensen, L., Buhl-Mortensen, P., Catarino, R., Dinesen, G. E., Egekvist, J., Fock, H. O., Geitner, K., Gerritsen, H. D., González, M. M., Jonsson, P., Kavadas, S., Laffargue, P., Lundy, M., Gonzalez-Mirelis, G., Nielsen, J. R., Papadopoulou, N., . . . Rijnsdorp, A. D. (2016). The footprint of bottom trawling in European waters: distribution, intensity, and seabed integrity. *ICES Journal of Marine Science*, 74(3), 847–865. <https://doi.org/10.1093/icesjms/fsw194>
14. Lucchetti, A., Pulcinella, J., Angelini, V., Pari, S., Russo, T., & Cataudella, S. (2016). An interaction index to predict turtle bycatch in a Mediterranean bottom trawl fishery. *Ecological Indicators*, 60, 557–564. <https://doi.org/10.1016/j.ecolind.2015.07.007>
15. 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*, 9(1). <https://doi.org/10.1371/journal.pone.0086222>
16. Russo, T., Baldi, P., Parisi, A., Magnifico, G., Mariani, S., & Cataudella, S. (2009). Lévy processes and stochastic von Bertalanffy models of growth, with application to fish population analysis. *Journal of Theoretical Biology*, 258(4), 521–529. <https://doi.org/10.1016/j.jtbi.2009.01.033>

Softwares

1. D’Andrea, L., Russo, T., & Cataudella, S. (2020). smartR: Spatial Management and Assessment of Demersal Resources for Trawl Fisheries. *The Comprehensive R Archive Network - CRAN*. <https://cran.r-project.org/web/packages/smartR/index.html>
2. D’Andrea, L., Russo, T., Parisi, A., & Cataudella, S. (2020). vmsbase: GUI Tools to Process, Analyze and Plot Fisheries Data. *The Comprehensive R Archive Network - CRAN*. <https://cran.r-project.org/web/packages/vmsbase/index.html>

Books

1. Russo, T., Colosimo, G., Fanelli, C., Franceschini, S., & Parisi, A. (2021). Un viaggio nell’ambiente R. *Github*. <https://tommaso-russo.github.io/libroR/index.html>

Department of Biology - University of Rome Tor Vergata & CoNISMa

☎ +39 329 0734943 • ✉ Tommaso.Russo@uniroma2.it

🌐 www.tommasorusso.org • **in** [tommasorusso](https://www.linkedin.com/company/tommasorusso) • **tw** [tomecomod](https://twitter.com/tomecomod)

👤 [tommaso-russo](https://github.com/tommaso-russo)