



CO>SEA

Col-Laboratorium for Socio-Environmental Analysis of the Ocean

CO>SEA is a research team based at the Sapienza University of Rome (Department MEMOTEF) in collaboration with Raw-News Visual Production Agency (UK), working through a transdisciplinary network of researchers and professionals.

The team advances interdisciplinary, intersectoral, and international collaboration in Marine Social Geography, Oceanography, and Visual Documentation, investigating the socio-ecological transformations affecting the global ocean and their reverberations in local seas, as well as the relationships between human and non-human societies and marine environments.

CO>SEA promotes sustainable marine governance grounded in the needs identified by local communities. Through citizen science initiatives, participatory action research, and visual documentation, the team works to restore and strengthen a culture of respect for the ocean as a shared common good. Its research framework considers the sea both as a conceptual and physical space for rethinking human relationships within complex and evolving ecological systems.

The team develops radically participatory processes for the collective identification, documentation, and communication of socio-environmental challenges, supporting collaborative exploration of potential solutions. Core methodologies draw on participatory citizen science, where knowledge production and interpretation are undertaken collaboratively by researchers and non-professionals. Research activities combine ethnographic inquiry, cultural geography, visual methods, and oceanographic approaches, enabling broader public engagement with marine environments that are often physically and cognitively inaccessible to lay citizens. This approach mobilizes local and tacit knowledge, addresses place-based environmental concerns identified by stakeholders, and contributes to international research networks and local transformation processes.

The activities of the CO>SEA research team are endorsed by the UN Ocean Decade and recognized by the European Commission through the [European Commission Prize for Citizen Science 2024](#). Since 2023, the team has coordinated several European and international initiatives, including [“SeaPaCS - Participatory Citizen Science against Marine Pollution”](#) (IMPETUS4CS, Horizon Europe, 2023), [“Tentacular Thinking. Experiencing underwater assemblages of nature-culture”](#) (Culture Moves Europe, 2024), [FishArt- Participatory Art for environmental sustainability and aesthetic transformation of Anzio Fishermen’s Harbour”](#) (New European Bauhaus Cross-KIC Connect, 2024), and [“CoSea Lab – Collective Laboratories for Sea Sustainability in the Gulf of Anzio, Italy”](#) (Sapienza Research Funds). The team currently coordinates the Horizon Europe project [PartArt4OW. Participatory Art For Society Engagement with Ocean and Water”](#).



PartArt4OW is a EU Mission Ocean project aimed at strengthening the emotional connection between society, oceans, and inland waters, raising awareness of the challenges they face, and fostering sustainable policies for their protection and restoration. The project builds a transdisciplinary and trans-European network of artistic and creative communities, supporting communities and policymakers in working towards sustainable ocean and water management.

Grounded in the belief that art and the creative sector can contribute to the EU Mission Starfish 2030 priorities, PartArt4OW mobilizes artists, citizens, scientists, and other stakeholders to realize 19 multi-stakeholder Participatory Art Initiatives (PAIs). These initiatives are showcased during public events known as PartArt4OW Demo Days. Selected PAIs receive ongoing economic, scientific, and managerial support to implement their activities locally, aligned with guidance from the PartArt4OW Accelerator Program, which provides training, mentoring, and capacity-building.

To enhance ocean literacy and support the PAIs across Europe, PartArt4OW organizes stakeholder engagement activities, including the creation of a European Stakeholders Map, ecosystem-building initiatives for mutual learning, and the establishment of a PartArt4OW Ambassadors Network. Participants are actively involved in co-learning exercises and in shaping these networks to strengthen connections among creative, scientific, and civic communities.

A central feature of the project is the PartArt4OW Sailing Lab, a fully equipped sailing vessel designed for ecosystem-building, research, dissemination, and visual documentation. In summer 2026, the Sailing Lab will cruise the north-west Mediterranean for approximately forty days, documenting the PAIs, hosting dialogues, exhibitions, and events with European citizens, and highlighting the role of arts, social sciences, humanities, and arts (SSHA) in marine research and sustainable transformation. The Sailing Lab will culminate its journey at the PartArt4OW Demo Day in Badalona (Barcelona), connecting artists, scientists, civic society actors, and local communities working at the intersection of participatory art, science, and ocean sustainability.

Coordinators profiles

Chiara Certomà is Assistant Professor of Political and Economic Geography at Sapienza University of Rome (Department MEMOTEF) with over twenty years of research and project experience in environmental governance, social innovation for sustainability, and participatory research methods. Her work focuses on citizen science, digital participation, and collaborative governance in urban and marine socio-ecological systems. She has extensive experience coordinating and contributing to European research projects, leading more than 12 national and international projects and participating in over 10 additional initiatives, including programmes under Horizon Europe, Horizon 2020, European Cooperation in Science and Technology (COST Actions), and Italian PRIN National Excellence funding schemes. She currently coordinates the Horizon Europe project PartArt4OW – Participatory Art for Ocean and Water (2024–2027; €1.99 million), part of the EU Mission “Restore our Ocean and Waters”. She also coordinated SeaPaCS – Participatory Citizen Science against Marine Pollution, supported by the IMPETUS programme, which received the 2024 EU Prize for Citizen Science – Diversity & Collaboration Award and contributes to initiatives of the UNESCO Ocean Decade. Previously she was Marie Skłodowska-Curie Individual Fellow at Ghent University (2017–2019), funded by Horizon 2020, leading the project CROWD_USG – Crowdsourcing Urban Sustainability Governance. Her publication record includes more than 40 peer-reviewed scientific articles, as well as four authored monographs and several edited volumes published with international presses such as Routledge and Palgrave Macmillan. Certomà has taught and conducted research at several international institutions including The Open University, Université Paris 1 Panthéon-Sorbonne, the Rachel Carson Center for Environment and Society in Munich, University of Natural Resources and Life Sciences Vienna, University of Salzburg, Warsaw University of Life Sciences and University of Waikato. She is an active member of international research networks including the Earth System Governance Project and the Marine Social Science Network, contributes to initiatives linked to the UN Ocean Decade, and is a signatory of the EU Mission

Ocean Charter. Her work combines interdisciplinary social science research with policy-relevant approaches to participatory sustainability governance and citizen engagement in environmental decision-making.

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Luisa Galgani is currently a researcher at the University of Siena, Italy (part-time, fixed-term contract) and a freelance consultant in the domain of aquatic pollution in the remaining time. With her background in biological oceanography and marine/aquatic biogeochemistry, she has been collaborating with the European Commission Mission Ocean and Waters since 2022 as ex-ante external expert (e.g. [Portfolio analysis, EU mission “Restore our Ocean and Waters by 2030”](#)) as well as evaluator in MSCA Postdoctoral Fellowships and Horizon Europe proposals. She is the recipient of 2 MSCA Fellowships (project POSEIDOMM IF, Grant 702747 and PLOCEAN GF, Grant 882682) and has joined several EU funded projects over the years. After a PhD in Natural Sciences from the University of Kiel, Germany, and a broad experience in marine and aquatic sciences, her academic research investigates the anthropogenic impacts on marine and freshwater ecosystems, and in particular on carbon cycling and air-sea interaction processes with possible climatic effects, integrating citizen science approaches to improve data collection and promote public engagement. Since 2016, she has trained several citizen scientists in data acquisition for aquatic pollutants, and she is a member of the Italian [“Citizen Science Observatory”](#). Lately, she has developed interest and some expertise in DNA metabarcoding and metagenomics studies (with bioinformatics, in progress) to elucidate the role of microbial plastic biofilm in carbon processing in marine environments. She is the co-chair of the recently funded SCOR Working Group SPASS [“Small Plastics in the Ocean’s Interior: coherent Analysis and Synthesis for better Scrutiny”](#), as well as [SOLAS](#) (Surface Ocean Lower Atmosphere Study) National Contact Point for Italy (since 2023), a member of the [ASLO Education and Engagement Committee](#) (since 2017), and more recently she joined the Editorial Board of [npj Emerging Contaminants](#) as Associate Editor.

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Federico Fornaro is an Italian director, photojournalist, and visual researcher working at the intersection of visual ethnography, marine social geography, and participatory citizen-science methodologies. With more than 23 years of international field production experience, he integrates professional documentary practice with interdisciplinary research to investigate complex socio-environmental challenges. Fornaro is the Founder and Director of Raw-News Visual Production Agency, an international visual documentation collective operating between Italy and the United Kingdom. His work has contributed to global media networks including NBC, CBS, PBS, Al Jazeera, Sky, France24, Euronews, and ITN, documenting conflicts, humanitarian crises, and socio-political transformations across the Middle East, Central and South Asia, and Africa. A former member of the founding operational team of Al Jazeera English, he contributed to the establishment of the network and led the launch of its Kabul bureau in Afghanistan, developing expertise in complex field logistics and audiovisual data acquisition in remote or high-risk environments. His current research focuses on ocean–society relationships, combining visual ethnography, maritime exploration, and citizen science to investigate the socio-cultural territorialization of marine environments. He contributes to several European research initiatives including Horizon Europe and PRIN programmes, representing over €2.2 million in collaborative funding. His work on the SeaPaCS project received the 2024 European Union Prize for Citizen Science (Diversity & Collaboration Award). A solo offshore sailor (Mini Transat 2013) he has been granted the Esprit Marine Prize in 2013 and licensed ocean skipper, he integrates maritime expertise with participatory marine research aligned with the UN Ocean Decade.

Website: <https://www.raw-news.net/>

Sapienza University of Rome

The Sapienza University of Rome is the second largest university in the world and one of the most renowned. CO>SEA team is encapsulated in MEMOTEF Dep. located in the School of Economics, the Department include 50 professors and researchers, and hosts two PhD programmes. The Department has a long experience in transdisciplinary research based on the application of both quantitative and qualitative methods, and in the participation and coordination of large scale international research projects. It will contribute to this project thanks to its expertise in economic geography and economic statistics and policy analysis and evaluation. Sustainability provides the main framework for this research including, recently, studies on social innovation, community economies and community-based initiatives, de-carbonisation, the sharing economy.

Selected academic products

- C.Certomà (2025, ed.) “Blue Kinships. An exploration of Society & the Ocean”, Palgrave MacMillan, New York
- C.Certomà, Fornaro F. (2025) “Salt lingers in the blood. Toward an Oceanic Sense of Place” , J-Reading, 2, 51-64
- C.Certomà (2025) “I felt as someone special today”. Advancing marine citizen science through participatory and critical geography explorations”, *Local Environment*, 1– 22, <https://doi.org/10.1080/13549839.2025.2513888>
- C. Certomà, F. Fornaro “Plastisphere in Chthulucene. “Staying with the problem” in oceanic natureculture assemblages” in C.Certomà (2025, ed.) “Blue Kinships. An exploration of Society & the Ocean” Palgrave MacMillan, New York
- Pang Q., Wu P., Galgani L., Wang X., Zhang Z., Yuan T., Wang H., Zhang Y.*(2025). The potential impacts of plastic on the marine carbon cycle. *Nature Sustainability*, <https://doi.org/10.1038/s41893-025-01632-7>.
- L. Galgani*, E. Tzempelikou I. Kalantzi, A. Tsiola, M. Tsapakis, P. Pitta, C. Esposito, A. Tsotskou, I. Magiopoulos, R. Benavides, T. Steinhoff, S. A. Loisele (2022). Marine plastics alter the organic matter composition of the air-sea boundary layer, with influences on CO₂ exchange: a large-scale analysis method to explore future ocean scenarios. *Science of the Total Environment*, 857(3), 159624, <https://doi.org/10.1016/j.scitotenv.2022.159624>.
- L. Galgani*, I. Gossmann, B.M. Scholz-Böttcher, X. Jiang, Z. Liu, L. Scheidemann, C. Schlundt, A. Engel (2022). Hitchhiking into the Deep: How Microplastic Particles are exported through the Biological Carbon Pump in the North Atlantic Ocean. *Environ. Sci. Technol.* 2022, 56, 22, 15638–15649, <https://doi.org/10.1021/acs.est.2c04712>.

Selected visual products

- F.Fornaro (2023) “[SeaPaCS Participatory Citizen Science for Marine Pollution](#)”
- F.Fornaro (2025) “[CoSea Critical Visions from the Sea](#)”
- F.Fornaro (2025) “[Blue Kinships: An Exploration of Society & the Ocean](#)”