

Maria Cristina Fossi

SCIENTIFIC LEADERSHIP PROFILE

Maria Cristina Fossi is Full Professor of Ecology and Ecotoxicology at the University of Siena (UNISI) and since 2000 is Scientific Director of the Biomarker Laboratory (CIBM). She gave a key contribution to the development of the biomarker approach in terrestrial and marine ecotoxicology. Her research has focused on: development of ecotoxicological test in bioindicator organisms for off-shore and on-shore oil extraction (ENI-IT), evaluation of endocrine disruptors in marine species, assessment of cetacean ecotoxicological status in Mediterranean Sea, Gulf of California, Indian Ocean and investigation on presence and effect of macro and microplastics and plasticizers in Mediterranean ecosystems. Since 1991 she developed innovative diagnostic tools for ecotoxicological assessment of threatened species (marine mammals, birds, reptiles) bringing to the establishment of methods (non-destructive biomarker approach) currently acknowledged as golden standard at the international level. Thanks to her work on skin biopsies, she is a world reference for the assessment of ecotoxicological risk in cetaceans. Since 2001 she published the first papers on effects of on Endocrine Disruptors in Mediterranean marine top predators (large pelagic fish and cetaceans) and long-living organisms (sea turtles). In 2012 she provided the first evidence worldwide on the effects of microplastics on baleen whales. She is author or co-author of over 650 original papers (articles, review articles, chapters and books, abstracts in national and international conferences) and she is editor of 6 books. She is involved in several international scientific organizations (e.g. Past-president of SETAC Italian Branch, International Whaling Commission, SC Pelagos Sanctuary, SC One Ocean Foundation, etc). Her lab has a central position for research on marine litter on Mediterranean Sea and a key role in the implementation of the EU MSFD at national level (D8-D10). She has been panel member for evaluation of projects for EU Commission (eg. BONUS) and international institutions (eg: MISTRA (Sweden), Barcelona Convention, CIEMS, JPI Oceans). She was involved in the organization of more than 24 International Conferences and as Invited speakers in more than 45 Conferences. During her scientific activities she has coordinated 27 national and international research projects and she participates as PI at 64 research expeditions in the Mediterranean Sea, Chile, Argentina, Mexico and Australia. She is involved in intense scientific communication and dissemination activity (media, magazines, web, film – “A Plastic Ocean”) about the ecotoxicological effects of contaminants in the Mediterranean fauna and in particular on the emerging topic of the effects of microplastics in endangered charismatic species. Since 2013 she has been the scientific coordinator of the "Plastic Busters" project, born as part of the United Nations Sustainable Development and Solution Network (SDSN) and elected as Flagship Project of Mediterranean-SDSN. The project, which involves 15 Mediterranean Partners, is devoted to monitoring and mitigating the impact of plastics in the Mediterranean and has received the "label" in 2016 from Union for the Mediterranean (UfM). The project is recently financed by Interreg MED EU Programme (Plastic Busters MPAs). H-index = 32, Citations 3289 (Scopus).