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PLENARY LECTURES

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Plenary lecture

SNAPSHOT: A synoptic assessment of temporary-decreased human pressures on key Italian marine areas

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To contain the spread of the SARS-CoV2 coronavirus infection in most European Countries, Europe promoted a shut down of all non-essential economic activities while the population was induced to stay indoors. For about 2,5 months, Europe was forced into the grip of an unprecedented lockdown. This drastic limitation impacted the movement of people with an almost total halt of air and maritime transport. The lockdown took place in a very short time giving way to an unprecedented and unique experiment:

significant reduction of many activities, both industry and services, was paralleled by intensification of a variety of measures to address the problems created by the pandemic. All this produced a significant and transitory modification of the anthropogenic impact on the environment, including the marine-coastal system, especially where anthropogenic pressure was most relevant before the lockdown (and after). The extent of this modification has been explored by a broad component of the Italian scientific community to characterize both the lockdown phase and the ensuing recovery and to produce a broad picture of the response of ecosystems; this activity provided key indications for future sustainable and effective management of the environment. The presentation shows the main conceptual approach and the key results of this research activity, still in progress. The results are clear for many variables (noise, fishing, fluxes of some of the nutrients to the ocean) though we recognise that quantifying the diminution of human pressure is not easy for all parameters in a conservative system that maintains the memory of previous cumulative impacts.

Biosketch

I am Director of Research at the Institute of Anthropic Impacts and Sustainability in the marine environment (IAS-CNR). I received a Ph.D. in Geochemistry (1997) from the University of Palermo. My research is mainly focused on: i) understanding the distribution and pathways of inorganic and organic pollutants in highly contaminated worldwide distributed marine coastal zones and open sea of the Mediterranean basin, ii) investigation of the dynamics of chemical tracers in the present Mediterranean basin and their interaction with lithosphere, atmosphere and biosphere, iii) understanding of natural variability and evolution of paleoclimate and palaeoceanography during the Cretaceous and late Neogene (by multi-proxy analysis of stable isotopes, trace metals, faunal assemblage distribution, etc). I was involved as Principal Investigator in the EUROCEANS, EARTHTIME, JERICO, PERSEUS and SESAME, GTSnext ITN EU, BLUEMED H2020, CIRCLES H2020, ABIOMMED DG/ENV, SHAREMED INTERREG MED and as coordinator and principal researcher in several national and international programs focused on distribution of micro-pollutants in different coastal areas. He is coordinator of the project CISAS (FISR-MIUR), SOS Piattaforme & Impatti Offshore (MiTE), MARINE HAZARD (PON03) and other national research projects (PRIN2018, PNRA2019, etc.). I have served on many international science panels, on Committees of the CNR. He is co-author of several international science plans and co-author of over than 196 papers in peer-review journals in palaeoceanography, stratigraphy and environmental science. I am coordinating the Joint Programming Initiative (Oceans) action 'Science for Good Environmental Status' (2019- 2023) with 14 participating EU countries and aiming to contribute to better understanding and achieving a Good Environmental Status (GES) in a more integrative way, towards a sustainable use of the seas and ocean and support to the Marine Strategy Framework Directive.

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Selected publications

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