



Università
Ca'Foscari
Venezia

PROJECT ACRONYM AND TITLE : ICCC - Impact of Climate Change on the biogeochemistry of Contaminants in the Mediterranean sea

FUNDING PROGRAMME: PRIN 2017

SCIENTIFIC FIELD: PE10

HOST DEPARTMENT: Department of Environmental Sciences, Informatics and Statistics

SCIENTIFIC RESPONSIBLE: Gabriele Capodaglio

FINANCIAL DATA:

Project total costs	Overall funding assigned to UNIVE
723.420 €	153.800 €

ABSTRACT:

The project proposes an innovative and systematic analysis on the effects of climate change on: i) the Mediterranean circulation, ii) the distribution of plankton, organic matter and main components of C,N,P, Si, biogeochemical cycles, iii) the distribution and chemical speciation of Cd, Cu and Hg, which in their bioavailable forms and relatively high concentrations induce toxic effects on the ecosystem. An ensemble of numerical models will be used to simulate the evolution of hydrodynamic and biogeochemical variables up to 2100 and to investigate and quantify, supported by a wide spectrum of laboratory and in-field experiments, the effects of climate change on the chemical speciation of Cu, Cd and Hg in seawater. Results will include space distribution maps of physical, biogeochemical, and contaminant properties for several representative climatic scenarios, at basin scale and for 3 specific subareas, investigated through field experiments and higher resolution numerical models. The integration of lab and field observations with deterministic and stochastic models coupled to oceanographic models will provide an innovative approach to capture and investigate the biogeochemistry and bioavailability of priority chemical species and assess cumulative impact of climate and pollution.

Start date	End date
03/11/2019	03/11/2022

PARTNERSHIP:

1. Istituto Nazionale di Oceanografia e di Geofisica Sperimentale Coordinator
2. Università degli Studi di PALERMO
3. Consiglio Nazionale delle Ricerche
4. Università Ca' Foscari Venezia