



*Consiglio Nazionale delle Ricerche*

ISMAR - Istituto di Scienze Marine

Sede Secondaria di Roma

Via Fosso del Cavaliere 100

00133 Roma, Italy

Tel +39 06 45488634 Fax +39 06 45488291

[direzione@ismar.cnr.it](mailto:direzione@ismar.cnr.it)

C.F. 80054330586 - P.IVA 02118311006



## **Seminar**

**Angela Landolfi**  
**Research Scientist**  
**CNR-ISMAR**

**11:00 - 11 June 2020 - Webex**

### **Title**

**Anthropogenic-driven changes of ocean biogeochemistry**

### **Abstract**

Fixed nitrogen (N) limits productivity across much of the low-and-mid latitude ocean. Changes in the magnitude of its inventory have contributed to the past variability of the air-sea CO<sub>2</sub> gas exchange. In this presentation, using an earth system model (ESM) of intermediate complexity (UVic2.9), I will first investigate the global N inventory regulatory mechanisms, which challenge our current paradigms and place important constraints on our efforts to represent the N cycle in models used for climate projections. I will then show how anthropogenic driven perturbations, such as global warming, ocean deoxygenation, and N inputs to the ocean, affect the oceanic fixed-nitrogen inventory and ocean biogeochemistry exerting a significant influence on the climate system by controlling marine productivity and the oceanic emissions of the green-house-gas N<sub>2</sub>O.

Venezia  
Arsenale - Tesa 104 - Castello 2737/f  
30122 VENEZIA  
Tel +39 041 2407927  
Fax +39 041 2407930  
[direzione@ismar.cnr.it](mailto:direzione@ismar.cnr.it)

Lerici  
Forte Santa Teresa  
19032 SP  
Tel +39 0187 978300  
Fax +39 0187 970585  
[segreteria@sp.ismar.cnr.it](mailto:segreteria@sp.ismar.cnr.it)

Napoli  
Calata Porta di Massa,  
80133 NA  
Tel +39 081 5423846  
Fax +39 081 5423887  
[segreteria@na.ismar.cnr.it](mailto:segreteria@na.ismar.cnr.it)

Bologna  
Via P. Gobetti, 101  
40129 BO  
Tel +39 051 6398891  
Fax +39 051 6398939  
[segreteria@bo.ismar.cnr.it](mailto:segreteria@bo.ismar.cnr.it)

Trieste  
Area Science Park  
SS 14, Km 163,5 Ed. Q2  
34149 Basovizza TS  
Tel +39 040 3756871 -2  
[segreteria@ts.ismar.cnr.it](mailto:segreteria@ts.ismar.cnr.it)