

SIMONA MASINA



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RESEARCH INTERESTS

Role of the ocean in the global climate system. Numerical modelling and data assimilation in global ocean models.

WORK EXPERIENCE

2023-present	Director of the Institute for Earth System Predictions Centro Euro-Mediterraneo sui Cambiamenti Climatici
2008-2023	Research Division Director (Ocean Modeling and Data Assimilation Division) Centro Euro-Mediterraneo sui Cambiamenti Climatici
2008-2022	Senior Researcher Istituto Nazionale di Geofisica e Vulcanologia
2000-2007	Researcher Istituto Nazionale di Geofisica e Vulcanologia Head of "Global Ocean and Climate" group
1996-2000	Researcher Centro Nazionale delle Ricerche

EDUCATION AND TRAINING

1989	B.A. (Physics) University of Modena, Italy	110/110 cum laude
1993	Master of Arts M.A. (Atmospheric and Oceanic Sciences) Princeton University, N.J, U.S.A.	
1996	Ph.D. (Atmospheric and Oceanic Sciences) Princeton University, N.J, U.S.A.	

RESEARCH INDICATORS

ORCID: <https://orcid.org/0000-0001-6273-7065>

	<i>h index</i>	<i>Citations</i>
 SCOPUS	46	6976
 Web Of Science	46	6741
 Google Scholar	55	10220
 ResearchGate	52	9571

Mother tongue(s) Italian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
	Replace with name of language certificate. Enter level if known.				
French	B1	B2	A2	A2	A2
	Replace with name of language certificate. Enter level if known.				

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Job-related activities

2024-present Member of the Faculty Board of the Ph.D. Programme on Future earth, climate change and societal challenges
Bologna University, Bologna

2024-present Chair of the Scientific Board of Mercator Ocean International (MOI)

2023-present Member of the CLIVAR Research Focus on Marine Heatwaves in the Global Ocean

2022-present Member of the NEMO Steering Committee

2021-present Member of the OceanPredict Science Team (OPST)

2018-present National scientific qualification as Full Professor for SC04/A4 (Geophysics)

2011-present Member of the BFM <https://cmcc-foundation.github.io/www.bfm-community.eu/> Steering Committee

2021-2025 CMCC representative of the Italian Oceanographic Commission (COI)

2018-2024 Member of the Mission Advisory Group of Phase-0 and Phase-A Harmony EE10 Candidate Mission

2018-2023 Member of the Scientific Board of Mercator Ocean International (MOI)

2006-2024 Member of the Faculty Board of the Ph.D. Programme on Science and Management of Climate Change, Cà Foscari University, Venice

2015-2016 Vice President of the the Italian Society for Climate Sciences

2013-2018 Member of the CLIVAR Ocean Model Development Panel (OMDP)

2013-2016 Executive Board Member of the Italian Society for Climate Sciences (SISC)

2013-2016 Area Editor (Physical Oceanography and Climatology) of Annals of Geophysics

2011-2013 Associate Editor of Annals of Geophysics

2008-2021 INGV representative of the Italian Oceanographic Commission (COI)

Teaching activities

2020-present Lecturer, Ph.D. Programme in Future Earth, Climate Change and Societal Challenges, Università di Bologna

2007-2020 Contract Professor, Ph.D. Programme in Science and Management of Climate Change. Università Ca' Foscari (Venice)

National and International projects

2024-2028 H2020 "ObsSea4Clim" Ocean observations and indicators for climate and assessments. CMCC PI (€ 598.750)

2017-2019 (renewed to 2025) Provision of meteo-marine forecast to an Italian Oil and Gas Company. Responsible (€ 2.65M)

2020-2025 H2020 "AtlantECO" Atlantic ECOSystem assessment, forecasting & sustainability. CMCC PI (€ 355.141)

2019-2023 H2020 "EuroSEA" Improving and Integrating European Ocean Observing and Forecasting System for Sustainable use of the Oceans. CMCC PI (€ 525.625)

2019-2021 CMEMS GLO-RAN. CMCC Contract Manager (€ 300.000)

2016-2019 Copernicus GLO-RAN. CMCC Contract Manager (€ 240.000)

2016-2019 CMCC Strategic Projects (€ 140.000 per year)

2015-2020 H2020 "Crescendo". CMCC PI (€ 556.635)

2012-2015 EU "MyOcean2" and "MyOcean Follow on" (*Prototype Operational Continuity for the GMES Ocean Monitoring and Forecasting Service*). CMCC PI and WP leader (€ 564K)

2014-2015 PRACE project "ENSEmble-based approach for global OCEAN forecasting (ENS4OCEAN)", PRACE 8th regular call, Resource Awarded: 13,000,000 core hours on MareNostrum @ BSC, Spain

2011-2014 EU "GEOCARBON" (*Operational Global Carbon Observing System*). CMCC ANS Division PI (€ 95.000)

2010-2015 National Project "GEMINA" (Miur/Mattm). (€ 1.629.000,00). ANS Division leader.

2009-2013 EU "COMBINE" (*Comprehensive Modelling of the Earth System for Better Climate Prediction and Projection*) (€ 95.000,00).

2007-2011 EU "CIRCE" (*Climate Change and Impact Research: the Mediterranean Environment*). WP Leader.

2005-2008 EU "DYNAMITE" (*Understanding the Dynamics of the Coupled Climate System*). INGV PI (€ 223.520,00).

2002-2004 EU-EESD "ENACT" (*ENhanced ocean data Assimilation and Climate predicTion*). INGV PI (€ 183.969,00).

2001-2003 EU-EESD "PREDICATE" (*Mechanisms and PREDictability of Decadal Fluctuations In Atlantic-European ClimATE*). INGV PI (€ 180.000,00).

1999-2001 EU-CEO "GANES" (*Global Assimilation applied to modelling of European Shelf seas*).

Publications
(10 most
relevant in the
last 5 years)

1. Capotondi, A., Rodrigues, R.R., Sen Gupta, A. *et al.* A global overview of marine heatwaves in a changing climate. *Commun Earth Environ* **5**, 701 (2024). <https://doi.org/10.1038/s43247-024-01806-9>
2. Dayan, H., McAdam, R., Juza, M., **Masina, S.**, & Speich, S. (2023). Marine heat waves in the Mediterranean Sea: An assessment from the surface to the subsurface to meet national needs. *Frontiers in Marine Science*, *10*, 1045138.
3. Patrizio, C. R., Athanasiadis, P. J., Frankignoul, C., Iovino, D., **Masina, S.**, Famooss Paolini, L., & Gualdi, S. (2023). Improved extratropical North Atlantic atmosphere–ocean variability with increasing ocean model resolution. *Journal of Climate*, *36*(24), 8403–8424.
4. McAdam, R., **Masina, S.**, & Gualdi, S. (2023). Seasonal forecasting of subsurface marine heatwaves. *Communications Earth & Environment*, *4*(1), 225.
5. Morioka, Y., Iovino, D., Cipollone, A., **Masina, S.**, & Behera, S. K. (2022). Decadal Sea Ice Prediction in the West Antarctic Seas with Ocean and Sea Ice Initializations. *Communications Earth & Environment*, *3*(1), 189.
6. Reale, M., Cossarini, G., Lazzari, P., Lovato, T., Bolzon, G., **Masina, S.**, ... & Salon, S. (2022). Acidification, deoxygenation, and nutrient and biomass declines in a warming Mediterranean Sea. *Biogeosciences*, *19*(17), 4035–4065.
7. Lovato, T., Peano, D., Butenschön, M., Materia, S., Iovino, D., Scoccimarro, E., P. G. Fogli, A. Cherchi, A. Bellucci, S. Gualdi, S. **Masina, A.** and Navarra (2022). CMIP6 Simulations with the CMCC Earth System Model (CMCC-ESM2). *Journal of Advances in Modeling Earth Systems*, *14*(3), e2021MS002814. <https://doi.org/10.1029/2021MS002814>
8. Morioka, Y., Iovino, D., Cipollone, A., **Masina, S.**, & Behera, S. K. (2021). Summertime sea-ice prediction in the Weddell Sea improved by sea-ice thickness initialization. *Scientific Reports*, *11*(1), 1–13 <https://doi.org/10.1038/s41598-021-91042-4>
9. Butenschön M, Lovato T, **Masina S**, Caserini S and Grosso M (2021). Alkalinization Scenarios in the Mediterranean Sea for Efficient Removal of Atmospheric CO₂ and the Mitigation of Ocean Acidification. *Front. Clim.* 3:614537. doi: 10.3389/fclim.2021.614537
10. Tsujino, H., Urakawa, L. S., Griffies, S. M., Danabasoglu, G., Adcroft, A. J., Amaral, A. E., ... & Bozec, A. (2020). Evaluation of global ocean–sea-ice model simulations based on the experimental protocols of the Ocean Model Intercomparison Project phase 2 (OMIP-2). *Geoscientific Model Development*, *13*(8), 3643–3708.

Curriculum Vitae in formato europeo di ciascuna risorsa impegnata nell'attuazione del programma di ricerca del CN, redatto in lingua inglese e contenente l'autorizzazione al trattamento dei dati personali (According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV)

Bologna, 12-06-2025

