



ACCADEMIA NAZIONALE DEI LINCEI

XXII GIORNATA MONDIALE DELL'ACQUA

Conference

THE MEDITERRANEAN SYSTEM: A HOTSPOT FOR CLIMATE CHANGE AND ADAPTATION

21-22 MARCH 2023

International Scientific Committee: Roberto BASSI (Linco, Università di Verona), Paola BONFANTE (Linco, Università di Torino), Bruno CARLI (Linco, IFAC-C.N.R.), Paola MALANOTTE RIZZOLI (Chair, MIT), Michael NORTON (EASAC Environment Program Director), Fernando SANSÒ (Co-Chair, Linco, Politecnico di Milano), Giovanni SEMINARA (Linco, Università di Genova), Dino ZARDI (Università di Trento), Christos ZEREFOS (Academy of Athens, Greece)

PROGRAMME

Because of its strategic location, surrounded by European countries in the north, the North African and Middle Eastern countries in the south-east, the Mediterranean region is obviously economically and socially very important. Its scientific importance has furthermore been recognized in the latest IPCC AR6 report, "The physical science basis", 2021, chapter 10, section 10.6.4, with the statement "The Mediterranean is expected to be one of the most prominent and vulnerable climate change hotspots". Hence it is urgent to examine the adaptation measures required by this imminent climatic changes to mitigate their effects. Because of its small dimensions and of its position, the Mediterranean is amenable to easily conducted observational surveys aimed to investigate ocean-atmosphere interactions as well as the dynamics of the currents responsible for ocean heat transport. The latter one is arguably the major factor controlling climate over decadal to centennial time scales. The consequences range from progressive sea level rise to meteorological and marine extreme events, droughts and desertification, among others. It is crucial to provide to the policy makers a most accurate and credible scenario of the factors controlling public health, agricultural and industrial productivities as well as of the increase of disastrous events. The symposium aims to present to the international scientific community a comprehensive picture of well-established knowledge as well as of the still open questions, due either to lack of necessary data or to methodological deficiencies.

Tuesday, 21 March

9.15 Welcome addresses

Propaedeutic introduction (in Italian)

chair: Fernando SANSÒ (Co-Chair, Linco, Politecnico di Milano)

9.30 Dino ZARDI (Università di Trento): *Interazioni tra atmosfera e oceano*

10.20 Intervallo

10.50 Paola MALANOTTE RIZZOLI (MIT): *Oceanografia fisica e Clima*

11.40 Massimo LIVI BACCI (Linco, Università di Firenze): *Le rive affollate del Mediterraneo*

12.30 Intervallo

14.00 Giorgio PARISI (Linco, Sapienza Università di Roma): *Opening of the International Conference*

Session 1: Geodesy

chair: Fernando SANSÒ (Co-Chair, Linco, Politecnico di Milano)

14.15 Jérôme BENVENISTE (ESA-ESRIN): *What are the tools and methods to observe sea surface height from space in the Mediterranean?*

14.45 Marie-Hélène RIO (ESA-ESRIN): *How well can we measure the Mediterranean Sea circulation from Space?*

15.15 Riccardo BARZAGHI (Politecnico di Milano): *How can geodetic methods improve the estimate of the currents in the Mediterranean Sea?*

15.45 Intervallo

Session 2: Physical Oceanography
chair: Paola MALANOTTE RIZZOLI (MIT)

- 16.15 Stefan RAHMSTORF (Potsdam Institute for Climate Impact Research) - Head of Earth System Analysis): *Are we approaching a tipping point of the Atlantic Ocean circulation?*
- 16.45 Paola MALANOTTE RIZZOLI (MIT): *Does the Mediterranean salt tongue affect the Atlantic Meridional Overturning Circulation? What are the changes and projections in the Mediterranean physical properties?*
- 17.15 Sofia DARMARAKI (University of Athens): *Does Climate change impact the physical drivers behind marine heatwaves in the Mediterranean Sea?*

Wednesday, 22 March

Session 3: Meteorology and atmospheric dynamics
chair: Dino ZARDI (Università di Trento)

- 9.00 Piero LIONELLO (Università del Salento, Lecce): *Is climate change in the Mediterranean basin peculiar compared to other regions?*
- 9.30 Silvio DAVOLIO (Institute of Atmospheric Science and Climate, CNR-ISAC, Bologna): *To what extent the knowledge of meteorological high-impact phenomena can support the interpretation of climate change effects in the Mediterranean?*
- 10.00 Erika COPPOLA (Abdus Salam International Centre for Theoretical Physics, Trieste): *How can we make an assessment of a specific hazard at the regional scale and how can the uncertainty estimation strengthen climate projections?*
- 10.30 Intervallo

Session 4: Risks from Climate Change
chair: Lars WALLØE (University of Oslo)

- 11.00 Mirko ORLIĆ (Croatian Academy of Sciences and Arts): *How to disentangle sea level rise and a number of other processes influencing coastal floods?*
- 11.30 Marco ANZIDEI (Istituto Nazionale di Geofisica e Vulcanologia, Roma): *Is there awareness of the expected scenarios of sea level rise along the Mediterranean coasts among the population, stakeholders and policy makers?*
- 12.00 Marco MARANI (Università di Padova/ Duke University): *"The future is not what it used to be". How do we prepare for changing climate driver extremes?*
- 12.30 Intervallo

Session 5: Round Table on Adaptation: Technical challenges and policies
Moderator: Michael NORTON (EASAC Environment Program Director)

- 14.00 Keynote address
- Pier VELLINGA (Vrije Universiteit Amsterdam): *Climate change and sea level rise: what can we learn from flood protection of sinking deltas, including the Netherlands and Venice?*
- 14.30 Anny CAZENAVE (Académie des Sciences, France), Goneri LECOZANNET (Bureau de Recherches Géologiques et Minières, Orléans): *How can we adapt to sea level rise in the Mediterranean Sea region?*
- 14.40 Francisco GARCIA NOVO (Real Academia de Ciencias, Spain): *Land-sea interactions in the Mediterranean: How can we take advantage of multiple influences on the Mediterranean basin climate, biodiversity, environments, cultures, people, religions, languages...?*
- 14.50 Fausto GUZZETTI (CNR): *Can we reduce disaster risk in a changing climate?*
- 15.00 Mirko ORLIĆ (Croatian Academy of Sciences and Arts): *Could hiatuses influence the perception of climate change again?*
- 15.10 Christos ZEREFOS (Academy of Athens, Greece): *Which are the most vulnerable cultural and natural UNESCO heritage sites in the Mediterranean?*
- 15.20 Intervallo
- 15.50-17.30 Round Table Discussion

ROMA - PALAZZO CORSINI - VIA DELLA LUNGARA, 10
Segreteria del convegno: convegni@lincei.it - <http://www.lincei.it>

Tutte le informazioni per partecipare al convegno sono disponibili su:

All the information to participate in the conference is available on:

<https://www.lincei.it/it/manifestazioni/xxii-giornata-mondiale-dellacqua-2023>

Nel rispetto delle limitazioni imposte per l'emergenza Covid-19, il numero dei posti in sala sarà limitato
In compliance with the limitations imposed for the Covid-19 emergency, the number of seats in the hall will be limited
(vedi/read more: <https://www.lincei.it/it/news/misure-fronteggiare-lemergenza-epidemiologica>).

Per partecipare al convegno è necessaria l'iscrizione online - Online registration is required to attend the conference

https://docs.google.com/forms/d/e/1FAIpQLSefkxML9XjcwFmv1-U_pb4nVTGDS_XGSaPwIYQAdhHppMmlpg/viewform?usp=send_form

Fino alle ore 10 è possibile l'accesso anche da Lungotevere della Farnesina, 10

I lavori potranno essere seguiti dal pubblico anche in streaming

Until 10 am it is possible to access the Symposium Hall from Lungotevere della Farnesina, 10

It will be possible to attend the Symposium also in streaming