



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 (Linceo, Università di Verona), Paola BONFANTE (Linceo, Università di Torino), Bruno CARLI (Linceo, IFAC-C.N.R.), Paola MALANOTTE RIZZOLI (Chair, MIT), Michael NORTON (EASAC Environment Program Director), Fernando SANSÒ (Co-Chair, Linceo, Politecnico di Milano), Giovanni SEMINARA (Linceo, 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

Session 1: Propaedeutic introduction

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 (Linceo, Università di Firenze): *Le rive affollate del Mediterraneo*

12.30 Intervallo

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

Session 2: Geodesy

14.15 Jérôme BENVENISTE (ESRIN): *Long-term watching the sea surface from space*

14.45 Marie-Hélène RIO (ESRIN): *The Mediterranean Sea circulation from synergistic use of satellite and in situ data*

15.15 Riccardo BARZAGHI (Politecnico di Milano): *GeoMed 2: the Geoid of the Mediterranean*

15.45 Intervallo

Session 3: Physical Oceanography

- 16.15 Stefan RAHMSTORF (Potsdam Institute for Climate Impact Research (PIK) - Head of Earth System Analysis): *The Atlantic Overturning Circulation- a critical tipping element of our climate*
- 16.45 Paola MALANOTTE RIZZOLI (MIT): *The Mediterranean sea: a part of the global ocean and a laboratory for global processes*
- 17.15 Sofia DARMARAKI (University of Athens): *Mediterranean marine heat waves: past variability and future evolution*

Wednesday, 22 March

Session 4: Meteorology and atmospheric dynamics

- 9.00 Piero LIONELLO (Università del Salento, Lecce): *Overview of climate changes in the Mediterranean system*
- 9.30 Silvio DAVOLIO (Institute of Atmospheric and Climate Science, CNR-ISAC, Bologna): *Climate change effects on typical weather phenomena in the Mediterranean at different scales*
- 10.00 Erika COPPOLA (Abdus Salam International Centre for Theoretical Physics, Trieste): *Climate change and the hydrological cycle in the Mediterranean basin*
- 10.30 Intervallo

Session 5: Risks from Climate Change

- 11.00 Mirko ORLIC (Croatian Academy of Sciences and Arts): *Sea level trends: the historical perspective*
- 11.30 Marco ANZIDEI (Istituto Nazionale di Geofisica e Vulcanologia, Roma): *Sea level rise scenarios along the Mediterranean coasts to 2150*
- 12.00 Marco MARANI (Università di Padova/ Duke University): *Extreme coastal water levels under climate change*
- 12.30 Intervallo

Session 6: Round Table on Adaptation: Technical challenges and policies Moderator: Michael NORTON (EASAC Environment Program Director)

- 14.00 Keynote address
Pier VELLINGA (Vrij Universitat Amsterdam): *Adaptation of coastal regions and cities: The Netherlands and the Venice MOSE*
- 14.30 Annie CAZENAVE (Académie des Sciences, France): *Coastal sea level rise: how to adapt? The case of France*
- 14.40 Francisco GARCIA NOVO (Real Academia de Ciencias, Spain): *Land-sea interaction in the Mediterranean*
- 14.50 Fausto GUZZETTI (Protezione Civile Italiana): *Civil protection challenges in a changing climate*
- 15.00 Mirko ORLIC (Croatian Academy of Sciences and Arts): *Multi-decadal climate variability and adaptation to it*
- 15.10 Christos ZEREFOS (Academy of Athens, Greece): *Adapting cultural resources to climate change*
- 15.20 Intervallo
- 15.50-17.30 Round Table Discussion

Il simposio è organizzato con il contributo di Fondazione Compagnia di San Paolo, Torino

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