

# Global Changes and Water Resources: Past, Present and Future

Workshop  
Pisa, May 26-27 2022

University of Pisa Earth Sciences Department  
Via S. Maria 53  
Room C - First floor

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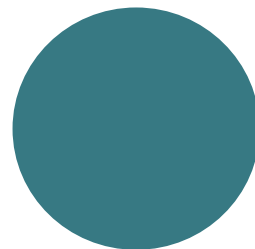
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Teams Platform





- Global warming represents the main challenge for present and future generations. An important consequence of ongoing temperature increase concerns water resources, particularly in terms of shifts in precipitation patterns and snow cover, as well as regional changes in the frequency of flooding and droughts. These changes will have important social and economic implications which needs to be assessed in order to support the long-term protection of both environment and society. A deep understanding of past, present and possible future scenarios of changes in water resources is therefore a fundamental prerequisite for a well-grounded approach to cope with climate changes. For this reason, the “Master degree programm in environmental sciences of the University of Pisa” and their students have organized a two-day workshop held by outstanding international experts from various disciplines (e.g. paleoclimatology, archaeology, physical modelling, geochemistry, water management). The aim is to illustrate to the broad audience of different stakeholders (academic, students, PhD students, policy makers), the background and complexity of the main climate issues and water resources, and how different approaches can provide important information on our near future. The initiative can be followed also in telematic.
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Kaskawulsh Glacier, Canada

## **Thursday 26th May**

10.00-10.30 Welcome and Introduction

10.00 – 10.05 Giovanni Zanchetta (University of Pisa)

10.05 – 10.15 Lisandro Benedetti Cecchi (Vice Rector for Research, University of Pisa)

10.15 - 10.30 Kevin Guillaume (Secretary general Circle U., Université catholique de Louvain, Belgium)

### **Session 1 - Chair Monica Bini**

**10.30 – 11.10 Bernardo Gozzini** (LAMMA Toscana, Italy)

- "Global warming and regional impact: the case of Tuscany"

**11.10 – 11.50 Piero Lionello** (MedClivar, University of Salento, Italy)

- "The relation between climate change in the Mediterranean region and global warming"

**11.50-12.10** *Coffee-break*

**12.10 – 12.50 Silvio Gualdi** (Centro Euro-Mediterraneo Cambiamenti Climatici - CMCC, Italy)

- "Climate Predictions and their applications in the Mediterranean region"

**12.50 – 13.30 Antonello Provenzale** (IGG-CNR Pisa)

- "Climate Change and wildfires: from the Mediterranean to the Arctic"

**13.30-14.30** *Lunch break*



## Thursday 26th May

### Session 2 – Chair Gianni Zanchetta

**14.30 – 15.10 Jelena Lukovic** (University of Belgrade)

- “A later onset of the rainy season in California”

**15.10 – 15.50 Jay Famiglietti** (University of Saskatchewan, Canada)

- “Global groundwater depletion as viewed from space”

**15.50 – 16.30 Viviana Re** (University of Pisa)

- “Insights and opportunities driven by transdisciplinary socio-hydrogeological approaches”

**16.30 – 17.10 Laura Imburgia** (UNESCO WWAP)

- “Designing gender-responsive water policies that support climate resilience and sustainable development”

**17.10 – 17.50 Karen Villholth** (Water Cycle Innovation, South Africa)

- “One Water – how to engage youth in global water action”



Jordan River catchment, Israel





Salalah Plain, Oman

**Friday 27th May**

**Session 3 - Chair Viviana Re**

**9.30 – 10.10 Russell N. Drysdale** (University of Melbourne, Australia)

- “Australian hydroclimate: linking past with the present and future”

**10.10 -10.50 Marnik Vanclooster** (Université Catholique de Louvain, Belgium)

- “Uncertainty propagation in the climate information-knowledge chain”

**10.50 – 11.20 Neil Roberts** (University of Plymouth, UK)

- “Impact of Holocene hydro-climatic changes on Mediterranean lakes and wetlands”

**11.20 – 11.50** *Coffee-break*



Rub Al Khali region, Oman

**Friday 27th May**

### **Session 4 - Chair Adriano Ribolini**

**11.50 – 12.30 Mira Bar-Matthews and Alan Matthews** (Hebrew University of Jerusalem - Geological Survey of Israel)

- “Partitioning the roles of temperature and hydrological changes on speleothem  $^{18}\text{O}$  during Terminations in the Eastern Mediterranean region”

**12.30 – 13.10 Raymond S. Bradley** (University of Massachusetts, USA)

- “Late Quaternary abrupt climate change in the Tropics and Sub-Tropics: the continental signal of Tropical Hydroclimatic Events (THEs)”

13.10-14.30 *Lunch break*

### **Session 5 – Chair Elisa Pellegrini**

**14.30 – 15.10 Adam Izdebski** (Palaeo-Science & History” Independent Research Group, Max Planck Institute for the Science of Human History, Jena, Germany)

- “Beyond one-way determinism: water, floods and miracles in late antiquity in the Mediterranean”

**15.10 – 15.50 Barbara Stenni and Ilaria Crotti** (Ca’Foscari University Venice, Italy)

- “Past climate postcards from Talos Dome deep ice (East Antarctica)”

**15.50 – 16.30 Carlo Baroni and Maria Cristina Salvatore** (University of Pisa, Italy)

- “Glaciers and water resources over Alpine area”

**16.30 – 17.00 Wrap up and closing remarks**



Master Degree in Environmental  
Science

Earth Sciences Department

University of Pisa

CIRSEC-Centre for Climate  
Change Impact

## Credits

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Scientific committee and  
organizer:

Monica Bini, Elisa Pellegrini,  
Viviana Re, Adriano Ribolini,  
Giovanni Zanchetta

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Teams Platform