



## Welcome to the 2024 GIFT workshop! 14-17 April 2024 – EGU General Assembly - Vienna

The general theme of this year's GIFT workshop is "The Changing Climate of Our Planet". The many events that have affected our Earth these last two years (huge fires in California, Greece and Canada, floods over Europe, North Africa and China, severe droughts almost all over the globe) have clearly shown that the climate of our Earth is changing. The events have been highlighted in the press, of course, but usually in a journalistic way, not really focusing on the origin of them.

This has certainly motivated the choice of our general theme, with the objective of giving you scientific information about what the main causes for these climate changes might be, particularly which fraction can be attributed to human activities and which other fraction may arise from natural sources.

We are well aware that the many aspects of climate change cannot be explored in the two and a half days workshop. But we hope to explore at least the main factors affecting climate, and, therefore, we have secured a panel of top scientists to address you.

The workshop will start with a panel, led by two scientists who have had a major role in the Intergovernmental Panel on Climate Change (IPCC), Valerie Masson-Delmotte and Piers Forster, who will in turn address you on different aspects before answering your questions.

We then will have a presentation of the ICOS (Integrated Carbon Observation System) project by Elena Saltikoff, who is the Head of Operation of this programme. As you certainly know, the increase in concentration of Carbon Dioxide in the atmosphere is one of the major causes of the increase of its temperature, but maybe you don't know how this concentration is continuously measured worldwide, and this is precisely the aim of this presentation.

The importance of studying past climate changes will then be the object of a presentation by Fátima Abrantes, with the study of marine sediments collected off the continental margin of Portugal.

Fabio d'Andrea will take us a bit into the future, describing the way in which we can now predict possible future climate changes, in particular the occurrence of extreme events.

The way in which the ocean and the clouds react to global warming is crucial to understand the sensitivity of the climate system to CO<sub>2</sub> increase. Sabrina Speich will introduce us to this aspect of climate change which is usually rather unknown by the general public.

We will then examine how climate change has caused a significant loss in biodiversity.

We will also welcome Julia Pongratz who will introduce us to the effects of the global land use on our climate.

Our final presentation will be given by Koen De Ridder who will examine some of the effects of climate change on urban climate, a topic of very high interest, when considering the increasing fraction of world's population in cities and megacities.

Following a tradition of the GIFT workshops, the presentations will be intermixed with hands-on activities, animated by Davide Faranda, Sally Soria-Deng, EDUMED Observatory and our team of "Geosciences Education Field Officers".

And, of course, we will have a presentation of posters by those of you who wish to present 'Teaching climate change at school', and by the various scientists participating to the General Assembly of EGU, who have an interest in education.

As every year, and previously to the workshop, GIFT participants are most welcome to a guided tour at the Vienna Museum of Natural History by Mathias Harzhauser and Oleg Mandic on Sunday afternoon.