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Copernicus Climate Change Service workshop in Prague to probe potential for a European attribution service

The Copernicus Climate Change Service (C3S) is hosting an attribution workshop on 10-11 October in Prague, Czech Republic. The meeting will be a starting point for an operational attribution service that would help the public understand how climate change affects extreme weather events, such as Hurricane Harvey, or the severe drought in Italy last summer.

The two-day workshop aims to define the requirements for an operational attribution service and to determine the viability of implementing it as part of the planned evolution of C3S, which is run by the European Centre for Medium-Range Weather Forecasts (ECMWF).

"The purpose of the workshop is to understand the state of research in attribution science and to assess whether the research has advanced sufficiently to become an operational service," says Dr. Dick Dee, Deputy Head Copernicus Climate Change Service at ECMWF.

In August and September, Hurricanes Harvey (Category 4), Irma (Category 5), the most powerful hurricane ever recorded in the Atlantic Ocean, and Maria (Category 4) devastated large parts of the U.S., Caribbean islands such as Barbuda, St. Martin, the U.S. Virgin Islands, Cuba and Puerto Rico. Almost 7 million residents of Florida were ordered to evacuate, and Hurricane Maria battered Puerto Rico, knocking out power to the entire island. In Italy last summer, one of the worst droughts in 60 years affected almost two-thirds of the country, causing billions of euros in damage to agriculture, numerous wildfires, and water restrictions in urban areas. In July, the Vatican's 100 fountains were switched off as water rationing was imposed on Rome's residents.

Therefore, the emerging science of extreme event attribution aims to establish the role of climate change in the occurrence and magnitude of heat waves, floods, storms and drought with some defined level of confidence. Since the attribution of localised weather events to human made forces is never obvious due to various uncertainties, the scientific conclusions are expressed as degrees of probability, such as "extremely likely" or "very likely." This is ascertained by physical understanding, long-term observational data, and computer models that







simulate alternative scenarios without the effects of external "forcing" factors, such as greenhouse gases, solar radiation and aerosols.

"The impact of Harvey was clearly compounded by the effects of climate change, such as sea level rise and the large amount of water in the atmosphere. That definitely made the impact of the hurricane tremendously worse than it would have been otherwise," Dr. Dee says.

An operational attribution service would provide the media with a better understanding of extreme weather events than ad-hoc studies currently offer. It would help insurers, engineers and European decision makers to quantify the risks associated with climate change through timely assessments of such events for an audience beyond the scientific community. Users of the service would also include the legal profession, which will play a central role in establishing whether governments or companies are liable for damages stemming from weather events that caused foreseeable harm.

The expected outcome of the C3S workshop is a set of recommendations addressing service scope and ambition; communication; requirements on input data, including accuracy and timeliness; and any other aspects of implementation and delivery. Attendees will include scientists and potential users of the service, such as media representatives and legal practitioners.

The Ministry of the Environment of the Czech Republic is a co-sponsor of the workshop. Registration for this workshop is by invitation only.

Notes for editors

Members of the media are invited to interview Copernicus representatives and scientists, including Jean-Noël Thépaut, Head Copernicus Climate Change Service, ECMWF; Dick Dee, Deputy Head Copernicus Climate Change Service, ECMWF; Peter Stott, Leader Climate Monitoring and Attribution Team, Met Office; and Petr Štěpánek, Department of Climate Modelling and Scenarios Development, Global Change Research Institute CAS. Interview requests should be sent to the media contacts listed below.

Copernicus is the European Commission's flagship Earth observation programme. It delivers freely accessible operational data and information services which provide users with reliable and up-to-date information related to environmental and security issues.

C3S is run by European Centre for Medium-Range Weather Forecasts (ECMWF) on behalf of the European Commission. ECMWF also operates the Copernicus Atmosphere Monitoring Service (CAMS). ECMWF is an independent intergovernmental organisation, producing and disseminating numerical weather predictions to its 34 Member and Co-operating States.

Academic and environmental institutions from across Europe, including national meteorological services, play an integral part in making Copernicus a success.







The Copernicus Climate Change Service website can be found at

https://climate.copernicus.eu/

The Copernicus Atmosphere Monitoring Service website can be found at

http://atmosphere.copernicus.eu/
The ECMWF website can be found at

https://www.ecmwf.int/

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