

# WeatherLive: From One Extreme to Another

Saturday 16 October 2021



## Speaker Abstracts and Biographies

### Conference Chair

Prof Liz Bentley, CEO, RMetsS



**Biography:** As Chief Executive of the Society, Liz works with the Council of Trustees to give vision, direction and leadership to its programmes of work. She first joined the Royal Meteorological Society in 2008 as Head of Communications and became Chief Executive in 2013. Liz has had a successful career in Meteorology working with the Met Office, BBC Weather Centre and the Ministry of Defence after studying a PhD in mathematics at the University of Manchester.

“I was born in Yorkshire and I’m sure my upbringing on top of the Pennines, where the weather can be a little more extreme, is one of the main reasons why I became so fascinated by the weather. A career in meteorology was inevitable even before I had left school. After studying a PhD in mathematics at the University of Manchester, I applied for a job with the Met Office. First as a research scientist, and then training to be a weather forecaster at the Met Office College in Reading. After forecasting at RAF Brize Norton, I headed off to Shoeburyness to become Senior Met Officer at the Army range based on Foulness Island. The job including weather forecasting as well as acoustic prediction, something I had specialised in during my PhD.

“I then went to work at the Met Office College, first as a forecasting instructor becoming Chief Instructor in 1999. I project managed the move of the Met Office College from Reading down to Devon. In 2002, I jumped at the opportunity to manage the BBC Weather Centre at TV Centre in London, managing a team of over 30 Broadcast Meteorologists and the contract between the BBC and the Met Office. In 2006, I started work at the Ministry of Defence looking after their environmental research programme - covering everything from the seabed out into space.

“I joined the Royal Meteorological Society as Head of Communications in 2008 and in 2010 I took on a new role as Head of the Weather Club – which is the public outreach arm of the Royal Meteorological Society. In 2013, I became Chief Executive at the Society and in July 2014 was granted the title ‘Professor’ from the University of Reading.”

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### Going to the Extremes: A UK and Global Overview of Recent Weather Extremes

Dr Christopher White, Head of the Centre for Water, Environment, Sustainability and Public Health, University of Strathclyde

**Abstract:** A succession of record-breaking extreme weather-driven events have occurred over the last year. There have been serious floods in China and western Europe, heatwaves and drought in North America, flash floods in London, and wildfires in the sub-Arctic, to name just a few. The State of the UK

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Climate 2020 report – the annual assessment of UK climate trends, variations and extremes published by RMetsS – indicates that extreme events are becoming more commonplace in the UK. August 2020, for example, saw temperatures hit 34°C on six consecutive days across southern England, including five nights where temperatures stayed above 20°C. In the future, British summers are likely to see temperatures greater than 40°C regularly, even if global warming is limited to 1.5°C. Further afield, the Canadian national temperature record was shattered in June 2021, with 49.6°C recorded in Lytton, British Columbia – a town that was all but destroyed by wildfires a few days later – which was several degrees above the previous temperature records for the region. Ahead of COP26 in Glasgow next month, in this presentation, we'll discuss some of the extreme weather events that have happened both in the UK and globally over the past year, placing them in the context of longer-term trends and our increasing understanding about the impacts of climate change.



**Biography:** Dr Chris White is the Head of the Centre for [Water, Environment, Sustainability and Public Health](#), which undertakes fundamental and applied research that provides novel solutions to some of the most pressing global environmental challenges, including net zero and the circular economy, water and waste, environmental health, and climate resilience.

He leads the Engineering for Extremes research group that focuses on understanding extreme weather events and hydro-meteorological hazards such as floods and droughts, their impact on the built and natural environments in a changing climate, and the development and application of climate services for improved decision-making and climate resilience.

His research interests are cross-disciplinary, including the emerging fields of multi-hazard compound and cascading events, impact-based forecasting, and the prediction and application of predictions on extended-range weather and climatic timescales. He is part of the Management Committee of the [European COST Action CA17109](#) on compound events, and is co-leading a new applications sub-project of the World Meteorological Organization's WWRP/WCRP [S2S Prediction Project](#).

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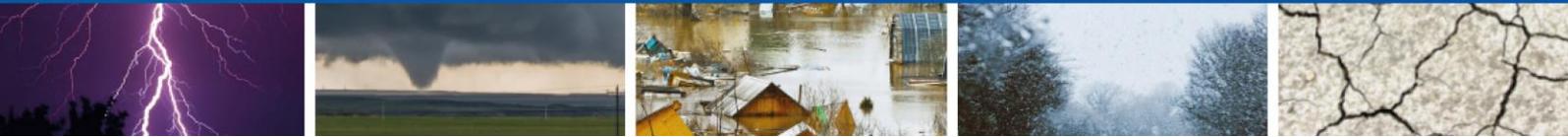
## Flood Forecasting, Warning and Information in a Changing Climate

Jo Coles, National Flood Forecasting Duty Manager, Environment Agency

**Abstract:** My session will walk you through how we go about producing a flood forecast and how we are adapting this in a changing climate. Flood forecasting underpins our flood warning service that we provide to the public. The impacts of climate change and extreme weather means it is becoming more important than ever for people to be aware of what our flood warnings are and how the information we provide can be used so that you can stay safe during a flood.

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**Biography:** Jo is a Chartered Scientist and Fellow of the Royal Meteorological Society with a background in meteorology, operational flood forecasting and flood incident management. Jo currently works at the Environment Agency in the Evidence and Risk department as a Senior Team Leader, leading a national team of highly skilled flood modellers and forecasters. She also has an operational role as a National Flood Forecasting Duty Manage. Jo recently wrote a blog for Met Matters <https://www.rmets.org/metmatters/flood-forecasting-factfile>

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## The Silent Killer: Heatwaves

Tyler Roys, Senior Meteorologist, AccuWeather

**Abstract:** Heatwaves are one of the top weather-related killers globally. How are various countries identifying them? How do they impact our society? And what does the future of heatwaves look like?



**Biography:** Tyler Roys is a meteorologist with nearly a decade of experience, starting his career at AccuWeather the week before Hurricane Sandy struck the U.S. Tyler has been the Lead European Forecaster since 2015 and has shared his extensive knowledge of forecasting for Europe internally, as well as at the 2019 European Conference on Severe Storms in Krakow, Poland. Recently he has been expanding his knowledge on Long Range Forecasting, as a member of the team that creates AccuWeather seasonal outlooks. Outside of work, he is involved with 4-H, Penn State sports, and his church in various leadership capacities.

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## Monitoring Extreme Global Wildfires

Dr Mark Parrington, Senior Scientist, Copernicus Atmosphere Monitoring Service, European Centre for Medium-Range Weather Forecasts

**Abstract:** Wildfires are a significant component of the Earth system, emitting large quantities of trace gases and aerosols, which can have impacts on the atmosphere, influencing global atmospheric composition and air quality. The Copernicus Atmosphere Monitoring Service uses satellite observations of active fires around the world each day to estimate the smoke emissions and track the air quality impacts. This presentation will describe fire emissions around the world during 2020-2021, showing how smoke can be transported between continents and how the information provided by CAMS can be used to better understand the impacts on the atmosphere.

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**Biography:** Mark Parrington is a Senior Scientist in the Copernicus Atmosphere Monitoring Service (CAMS) Development Section at ECMWF. He holds a DPhil in Atmospheric Physics from the University of Oxford and has more than 15 years' experience of working with Earth observation data. Prior to joining ECMWF, in September 2013, he worked on many aspects of applying Earth observation data, in situ measurements and numerical modelling to atmospheric chemistry and air quality research.

His role in the CAMS team is to monitor the near-real-time wildfire emissions and global atmospheric composition products, to diagnose potential issues in the CAMS system and also to identify significant events related to atmospheric composition that are relevant for communication and media.

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## How We Warn for Extremes?

Dr Will Lang, Head of Civil Contingencies, Met Office

**Abstract:** Ten years ago, the Met Office's National Severe Weather Warning Service (NSWWS) pioneered the impact-based approach which is now regarded as best practice worldwide. This presentation explores how this methodology helps identification and communication of weather extremes and considers some of its strengths and weaknesses. We will consider what the ultimate purpose of a warning service should be, and how NSWWS will evolve in the coming years to remain world-leading and relevant in the face of growing societal awareness of risk, and increasing frequency and severity of extremes. Storm naming and the launch of NSWWS Extreme Heat warnings this summer will be presented as examples of new ways to communicate extremes.



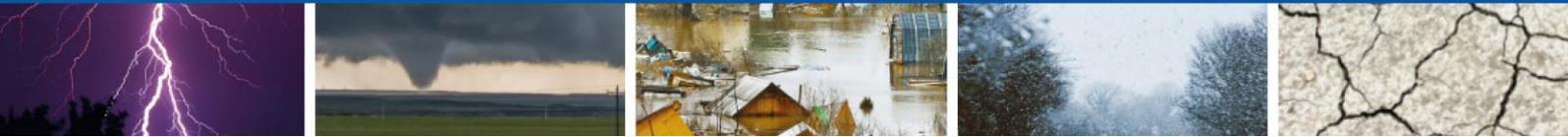
**Biography:** Will Lang leads the Met Office's National Severe Weather Warning Service (NSWWS) and the team of Civil Contingencies Advisors which advises the resilience community, including local and national government. He has over twenty years of experience in operational forecasting roles within the Met Office, including as Chief Forecaster and Chief Hydrometeorologist. In recent years he has specialised in forecasting strategy, building warning services across partnerships, and the effective communication of severe weather risks, including the development of the Met Office's new Extreme Heat warnings launched this summer.

Will has a prominent role internationally. Within the World Meteorological Organization, he chairs the Expert Team responsible for guidance on service delivery and impact-based forecasting. Within the European EUMETNET consortium he has been a contributor to the design of the collaborative Meteoalarm warnings platform, and played a leading role in creating the storm-naming system now widely recognised across Europe.

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## What is the COP About?

David Warrilow OBE, Climate Change Advisor

**Abstract:** In November 2021, the UK will host the 26th Conference of the Parties to the UN Framework Convention on Climate Change in Glasgow. The meeting, referred to as COP 26 in shorthand, has been delayed by a year due to COVID19 restrictions. In this talk I will outline explain what the COP is for, how it works, what it feels like to be involved and what it is hoped it will achieve.



**Biography:** For over 20 years David Warrilow was a senior government science advisor and international negotiator on climate change and environmental issues. He led the UK delegations to the Intergovernmental Panel on Climate Change (IPCC) and was the science lead for the UK and EU at the United Nations Framework Convention on Climate Change (UNFCCC). Prior to this he undertook research at the Met Office on observing systems, hydrometeorology, and climate modelling of land surface processes.

Since retiring he has worked closely with the Royal Meteorological Society and became its President between 2018 and 2020. David continues to write and speak about climate change issues.

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## Announcement of Weather Photographer of the Year

Dan DePodwin, Director, Forecast Operations, AccuWeather



**Biography:** Dan has over a decade of experience in the field of meteorology. A Penn State graduate, Dan began his career at AccuWeather as an Operational Meteorologist in 2011. In the years since, he has worked in a variety of areas including forecast operations, leading both small and large teams, forging relationships with public and private partners, data agreements, forecast accuracy and radio spectrum challenges.

Most recently, Dan moved into a role as director of Forecast Operations for AccuWeather which combines his passion for the weather and passion for developing people. In this role, he is responsible for the 60 meteorologist State College forecasting operation which delivers accurate and actionable forecasts for thousands of AccuWeather business customers and over a billion consumers around the world. An active member of the American Meteorological Society, Dan serves on the Board of Private Sector Meteorologists as well as the Committee on Radio Frequency Allocations. Outside of work, Dan is an avid musician, playing saxophone in a local community band.