



LEVERHULME

Centre for **Wildfires**,
Environment and **Society**

ARCTIC WILDFIRES AS A CASCADING RISK TO COMMUNITIES

Arctic Circle Assembly, Reykjavik, 8-10 Oct 2026

Session: Sat. 10th October — 09:45 - 10:40am, Room TBC

Moderator: Adriana Ford, a.ford@imperial.ac.uk

Summary: Arctic wildfires are increasing rapidly, with consequences that extend far beyond burned areas. This session explores Arctic wildfires as a cascading risk to communities, ecosystems, and health, bringing together perspectives on air quality, climate impacts, and environmental contamination. Speakers will examine how wildfire emissions affect Arctic air quality and climate feedbacks, and how fires in mineral-rich or industrially impacted regions can mobilise toxic substances, creating new exposure pathways for people and ecosystems. The session highlights emerging risks, health inequalities, and key knowledge gaps, and discusses why Arctic wildfires require more integrated scientific and policy responses. By framing wildfires as a system-wide risk rather than a single-issue problem, the session aims to foster dialogue across disciplines and inform future Arctic research and decision-making.

AGENDA

09:45-09:55 Arctic Wildfires as a Cascading Risk to Communities

Dr Adriana Ford

09:55-10:05 Climate Impacts and Feedbacks of Arctic Wildfires

Prof Apostolos Voulgarakis

10:05-10:15 Arctic Wildfire Emissions and Air Quality Impacts

Dr Mark Grosvenor

10:15-10:25 Toxic Metals Mobilised by Arctic Wildfires and Implications for Health

Luke Richardson-Foulger

10:25-10:40 Moderated Discussion and Audience Q&A



Dr Adriana Ford

Contact: *a.ford@imperial.ac.uk*

Affiliation: Leverhulme Centre for Wildfires, Environment and Society;
Imperial College London, United Kingdom

Biography: Dr Adriana Ford is Senior Centre Manager of the Leverhulme Centre for Wildfires, Environment and Society, a global interdisciplinary research centre spanning four UK universities. Based at Imperial College London and King's College London, she is an interdisciplinary environmental scientist whose work explores relationships between people and nature. Over the past seven years, her work has focused on the human dimensions of wildfires and fire governance, particularly equitable approaches to wildfire management. Adriana coordinates a network of more than 70 academics, postdoctoral researchers, and PhD students across the Centre, supporting research, partnerships, and knowledge exchange across science, policy, and practice. She has helped foster international dialogue on high-latitude wildfires through the High-Latitude Fires, Climate and Environment (HiFACE) workshops at Arctic Science Summit Week (2022, 2024) and the Seventh International Symposium on Arctic Research (ISAR-7), and is coordinating a collaborative review of high-latitude wildfires and their cross-system impacts.



Prof Apostolos Voulgarakis

Contact: *a.voulgarakis@imperial.ac.uk*

Affiliation: Leverhulme Centre for Wildfires, Environment and Society,
Imperial College London, United Kingdom; Technical University of Crete,
Greece

Biography: Professor Apostolos Voulgarakis is Professor of Climate Change and Atmospheric Environment and AXA Chair in Wildfires and Climate at the Technical University of Crete, and Professor of Global Climate and Environmental Change at Imperial College London. He is also Associate Director and a founding director of the Leverhulme Centre for Wildfires, Environment and Society. His research focuses on the interactions between wildfires, climate change, atmospheric chemistry, and air quality, using Earth system models to understand how fires influence the environment at regional and global scales. He has previously held research positions at NASA's Goddard Institute for Space Studies and Columbia University and contributed to assessments of climate change for the Intergovernmental Panel on Climate Change (IPCC). His current work includes improving the representation of wildfire and peatland emissions in climate models and investigating the feedbacks between fire, atmospheric composition, and climate.



Dr Mark Grosevnor

Contact: *mark.grosvenor@kcl.ac.uk*

Affiliation: Leverhulme Centre for Wildfires, Environment and Society, King's College London, United Kingdom

Biography: Dr Mark Grosvenor is a Research Associate in the Leverhulme Centre for Wildfires, Environment and Society and King's Earth Observation and Wildfire research group at King's College London. His research focuses on wildfire emissions, air quality impacts, and the processes that control the release of gases and particulate matter from fires. He currently leads the operation of the Fire Emissions Testing Chamber (FETCh), an experimental facility used to investigate wildfire smoke and improve understanding of fire emissions. Mark has extensive experience studying wildfires across a range of ecosystems, including high-latitude and boreal regions, with research interests spanning wildfire emissions, smoke impacts, fire ecology, and environmental change. Prior to joining King's, he worked at the University of Exeter's wildFIRE Lab, where he combined laboratory management with research in fire ecology. His work helps improve understanding of how wildfires affect atmospheric composition, air quality, ecosystems, and communities in a changing climate.



Luke Richardson-Foulger

Contact: *luke.richardson-foulger@kcl.ac.uk*

Affiliation: Leverhulme Centre for Wildfires, Environment and Society, King's College London; PhD Student, United Kingdom

Biography: Luke Richardson-Foulger is a final-year PhD student at King's College London, specialising in Earth observation and environmental monitoring of wildfires. His research focuses on wildfire emissions in the northern boreal, investigating the unique and cascading risks that fire can pose to air quality, human health and emergency responders. In particular, his work examines how fires affecting contaminated landscapes can exacerbate and modify exposure risks for firefighters and vulnerable populations. His research has combined both field and laboratory analysis to tackle large scale environmental monitoring problems.