EGU23 Media Tip Sheet: Climatic impacts on wildfires around the world

The climate crisis is increasing wildfire impacts all over the world. Places that traditionally aren't fire-prone, like Central Europe, will experience more and more fires in the coming decades. Fires are smoldering through the thawing permafrost of the Arctic, to reemerge in sprint. And fires are affecting the health and safety of people and resources like our drinking water. The following presentations and sessions offer more examples.

Feeding the flames: how colonialism led to unprecedented wildfires across SE Australia

British colonization of Australia changed the fire regime. Previously, Indigenous people burned the lands to rejuvenate and clear lands for cultural purposes. "The removal of Indigenous vegetation management has altered woodland fuel structure" by allowing more tree growth, which has led to increased fires like the 2019-2020 Black Summer bushfires that killed billions of animals and caused more than $100 billion in damage, an international team reports.

Monday 24 April 08:45 CEST

Session BG1.2

First results of a field campaign focused on overwintering zombie fires

A new field examination of several sites in the Canadian Northwest Territories shows that so-called zombie fires—those that appear to go out but actually smolder beneath the surface through the winter and reemerge in spring—tend to burn about 6.8 centimeters beneath the surface, and often in the root systems of burned and fallen trees.

Monday 24 April 14:10 CEST

Session BG1.2

Impacts of climate variability and change on regional fire weather in heterogeneous landscapes of Central Europe

Fire danger will increase significantly in the eastern mountain ranges of the Bavarian Forest and the lowlands of the Southern German Escarpment, according to a new modeling study. Other parts of Central Europe and the Alps also face greater fire risk than they do today, scientists report.

Tuesday 25 April 14:00 CEST

Session NH7.2

Health impacts of wildfire smoke in the Arctic

Fires across the Arctic are increasing, leading to negative health impacts across the region. But smoke—especially the most dangerous particles, called particulate matter-2.5—does not stay in the region. This team found that Arctic wildfires are leading to 25,000-55,000 premature deaths yearly, mostly outside of the Arctic.

Tuesday 25 April 15:10 CEST

Session NH7.2

Wildfire threats to groundwater supplies: Implications for pathogen and particulate contaminant transport in porous media

Wildfire-released ash and biochar in a burned area carry heavy metals and other toxic particles downstream, along with excess dissolved organic carbon. Reactions between soils and the increased particulate matter may increase the risk of pathogens like E. coli *and* Crytosporidium parvum *in the region's water supply, researchers report.*

Thursday 27 April 09:05 CEST

Session HS2.3.2

Post-wildfire monitoring for hazard mitigation in Alpine area

When rain falls on denuded slopes, fires increase the potential for landslides. A team used satellite observations, field surveys of burned areas in the Southern Alps, and laboratory rainfall simulations to determine that it takes about seven years for an area to recover to pre-fire landslide conditions.

Friday 28 April 16:50 CEST

Session SSS9.11