

World Fire Congress Communities of Practice

Topic Abstracts — 2026 London Congress

1. Climate-Driven Large-Scale Events: Response and Resilience

Fire services on every continent are confronting a transformed threat environment. Climate change is not a future problem — it is reshaping the fireground, the floodplain, and the storm-impact zone today, accelerating the frequency and severity of events that exceed the planning assumptions, resource capacities, and tactical doctrines of even the most well-resourced fire and rescue services.

Climate change is intensifying drought and fire-favorable weather conditions globally, lowering vegetation moisture and preconditioning landscapes to burn more regularly, intensely, and severely. During the 2024–2025 fire season alone, more than 100 million people were exposed to fire worldwide. No region is exempt: record fires in South Korea, Türkiye, Spain, and Portugal collectively burned more than 700,000 hectares and displaced tens of thousands of residents, while simultaneous crises unfolded across South America, Central Africa, and boreal Canada.

At the same time, warming oceans and a more energized atmosphere are driving an escalation in destructive storms and flooding. 2025 alone produced 138 tropical systems with 95 named storms, causing nearly 4,000 fatalities and roughly \$49.3 billion in damage worldwide. Hurricane Melissa became one of the most intense Atlantic hurricanes ever recorded, making landfall in Jamaica with winds near 295 km/h — part of a season that saw three hurricanes reach Category 5, the first time that many Category 5 storms had occurred in a single season since 2005. The prior year was no less severe: the 2024 Atlantic season produced 18 named storms, 11 hurricanes, and 5 major hurricanes, causing 442 deaths and \$131 billion in damage — the third-costliest Atlantic season on record, while the 2024 Pacific typhoon season brought between 1,336 and 1,502 fatalities and nearly \$30 billion in damage. [Munich Re](#)



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Flooding compounds this picture. The number of people globally exposed to flooding has risen steadily, from 28.1 million in 1970 to 35.1 million in 2020 — an increase of nearly 25 percent, and flash floods alone now cause more than 5,000 deaths and roughly \$50 billion in global losses each year. Recent events illustrate the scale: 2024 floods across West and Central Africa killed more than 1,500 people and displaced over a million; flooding in Rio Grande do Sul, Brazil, marked the country's worst flooding in 80 years, affecting more than 1.4 million people; and Storm Boris triggered flash floods across central and eastern Europe in September 2024 that displaced tens of thousands, including river flooding in the Czech Republic statistically expected only once every 100 years. [UNDRR Sustainability](#) [Global](#) [Worldvision](#) [UN NEWS](#)

Fire, rescue, and civil defense personnel are consistently the first responders into these events — conducting swift-water rescue, structural collapse search and rescue, mass evacuation, and shelter operations — often while their own stations, apparatus, and personnel are directly affected by the same storm.

The challenge is not only one of suppression or rescue — it is one of systemic resilience across all hazards. How do fire and civil defense services build mutual aid architectures that cross borders and hazard types? How do communities prepare and adapt to compound and cascading events — where wildfire-scarred terrain amplifies flood and debris-flow risk, or where storm damage precedes a fire-weather event? What pre-positioning, early warning, and evacuation strategies are proving effective across different national contexts and hazard profiles?

This Community of Practice brings together fire, rescue, and civil defense leaders from across the globe to share hard-won lessons from recent catastrophic wildfire, storm, and flood events, compare response doctrines, and collectively advance the frameworks, investments, and international cooperation needed to meet the escalating demands of a climate-altered world.

[UNDRR State of Wildfires](#) [ECMWF State of Wildfires](#) [Copernicus ESSD State of Wildfire](#)