

## Health Effects and Associated Socio-economic Costs of Increasing Temperatures and Wildfires - A Global Assessment



On-going climate change will have widespread impact on virtually all parts of human society and environment. Particularly devastating are the extreme episodes, such as heat waves, storms, cold spells, etc. Considering heat waves, the risk of vegetation fires increases during periods of extreme heat and no rain, which can cause strong air pollution. Extreme heat increases the rates of death (mortality) and can exacerbate various diseases (morbidity). When heat coincides with air pollution, synergistic effects on human health can be stronger than that caused by air pollution or high temperatures alone. The health risk varies by region, population vulnerability, urban and rural environment and other factors. Populations at highest risk include older adults, children, socially isolated individuals, and individuals with chronic diseases.

HEATCOST, an international project lead by CICERO (Norway), will investigate the connection between extreme weather events, first of all, heat waves, with occurrence and strength of vegetation fires, finally evaluating the impact of the combined weather and air pollution on human health. Specifically, HEATCOST will connect global changes in cardiovascular and respiratory mortality and morbidity due to extreme heat and air pollution (including the impact of wildfires) under selected climate scenarios. The study will use both actual air quality and weather observations from the past and model computations covering both past and the future. Special attention will be given to satellites, which provide comparatively uniform data all over the globe.

Facing the climate- and pollution- related challenges, human society need to adapt to the new conditions, but can also act pre-emptively in order to reduce the stress and its impact. Health effects due to heat and air pollution are largely preventable but the adaptation measures should

be tailored to limit both the stress on sensitive groups and the individual vulnerability.

HEATCOST will consider a variety of adaptation strategies and estimate the associated costs.

HEATCOST builds on the on-going Horizon-2020 project EXHAUSTION, which quantifies the health effects of climate change in Europe. HEATCOST will expand to the global scale and quantify the health risks attributable to heat and air pollution (with a focus on air pollution from wildfires) in the main parts of the world.

**More information:**

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