



## **Global trends in wildfire – perceptions and realities in a changing world**

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Wildfire has been an important process affecting the Earth's surface and atmosphere for over 350 million years and human societies have coexisted with fire since their emergence. Many consider wildfire as an accelerating problem, with widely held perceptions both in the media and scientific papers of increasing fire occurrence, severity and resulting losses. Whilst fire and associated impacts have indeed increased in some regions, such parts of western North America, Canada and Russia, fire has been decreasing in other regions such as African savannas. Overall, global area burned appears to have changed little over past decades, and there is increasing evidence that there is less fire in the global landscape today than centuries ago. Regarding fire severity, limited data are available. For the western USA, they indicate little change overall, and also that area burned at high severity has overall declined compared to pre-European settlement. Direct fatalities from fire and economic losses also show no clear trends over the past three decades. Trends in indirect impacts, such as health problems from smoke or disruption to social functioning may indeed be on the rise, however, they remain insufficiently quantified to be thoroughly examined.

Notwithstanding these general observations, the changes in global fire distribution are of concern due to, for example, their detrimental impacts on peat and soil carbon stores in boreal and some tropical regions, or air pollution levels in SE-Asia. These and other impacts are likely to accelerate in a future warmer climate. This presentation aims to contribute to reducing misconceptions in fire trends and to facilitating a more informed understanding of the realities of global fire.