



Divecha Centre for Climate Change
INDIAN INSTITUTE OF SCIENCE
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DIVECHA CENTRE SEMINAR

Title: "Wildfire and ecosystems: what will happen in the future?"

Sepaker: Prof. Sandy P. Harrison, Leverhulme Centre for Wildfires, Environment and Society and Department of Geography and Environmental Science, University of Reading, UK

Date: 26 November 2020 (Thursday)

Time: 4:30 PM (IST)

Venue: ONLINE using Zoom

Abstracts:

Wildfire is part of the natural system and is essential for maintaining habitat and species diversity in numerous ecosystems. However, recent extreme wildfire events have been a serious threat to biodiversity and conservation efforts. Recent changes in wildfire regimes also pose a problem for ecosystem-based efforts to mitigate climate change. Where wildfires collide with human societies, the costs in terms of losses of property, livelihoods and lives are escalating. Wildfire is often expected to increase in a warmer world, but this is based on extrapolating measures of "fire danger"; that depend only on weather. Ecosystem properties that influence fuel loads, flammability and post-fire recovery are equally important. Human modifications of the landscape, both through changes in land use and through management of natural ecosystems, also play a role. Recent declines in burnt area in some fire prone regions are attributed to land-use change. Prediction of future changes in wildfire regimes depend on (a) understanding the complex and interacting controls on fire and (b) incorporating this understanding in process-based models. In this talk, I will explore the paradox that there appears to be an overall decline in the area affected by wildfires while at the same time the size and intensity of individual fires is increasing. I will then summarise our current understanding of what determines the occurrence and intensity of wildfires and assess how far existing fire-enabled vegetation models incorporate this understanding. Finally, I will outline our current understanding of future changes in wildfire regimes and how we can make these projections more reliable.

ALL ARE WELCOME