# Animal acoustic activity decline shows forest fire pollution wreaks havoc on wildlife

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Pollution impact of forest fire haze. Credit: Benjamin Lee

Forest fires in Southeast Asia during the El Niño droughts of 2015 caused considerable disruption to the biodiversity of the region due to

the smoke-induced 'haze' they created, according to new research led by Benjamin Lee at the University of Kent and the National Parks Board in Singapore.

In the first study of its kind Benjamin, who completed his PhD at the Durrell Institute of Conservation and Ecology (DICE) at Kent, monitored wildlife acoustic activity in Singapore before, during and after the major forest fires that hit the region in 2015.

The data showed there was a dramatic drop in acoustic activity by as much as 37.5% during the haze as animals were affected by the pollution . It took a further 16 weeks after the haze had dissipated before acoustic levels showed even a partial recovery.

Furthermore, the researchers said it is highly likely the damage to wildlife was even greater in locations closer to the fires, where air pollution levels were 15-times higher than those in Singapore.

Tropical Asia experiences fires and haze annually, which cause significant human health problems and economic damage across the region. The 2015 event was one of the worst on record.

The findings indicate that large-scale air pollution events, such as those caused by forest or peatland fires, have a far greater impact on biodiversity that previously thought and that preventing such events occurring is paramount.

Benjamin was assisted in his research by Dr Matthew Struebig and Dr Zoe Davies from DICE.

The paper, Smoke pollution disrupted biodiversity during the 2015 El Niño fires in Southeast Asia, has been published in the journal *Environmental Research Letters*.

**More information:** Benjamin P Y-H Lee et al, Smoke pollution disrupted biodiversity during the 2015 El Niño fires in Southeast Asia, *Environmental Research Letters* (2017). DOI: 10.1088/1748-9326/aa87ed

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