



## News

**Pollution 'devastating' China's vital ecosystem, research shows**

The startling extent to which human-made pollution is devastating China's vital ecosystem's ability to offset damaging carbon emissions has been revealed. A pioneering new international study, led by the University of Exeter, has looked at the true impact air pollutants have in impeding the local vegetation's ability to absorb and store carbon from the atmosphere. The study looked at the combined effects that surface ozone and aerosol particles -- two of the primary atmospheric pollutants linked to public health and climate change -- have on China's plant communities' ability to act as a carbon sink. It found that ozone vegetation damage -- which weakens leaf photosynthesis by oxidizing plant cells -- far outweighs any positive impact aerosol particles may have in promoting carbon uptake by scattering sunlight and cooling temperatures. While the damage caused to these vital ecosystems in China is not irreversible, the team of experts has warned that only drastic action will offer protection against long-term global warming. The study is published in the journal Atmospheric Chemistry and Physics. Professor Nadine Unger, from the University of Exeter's Mathematics department and co-author of the paper said: "We know that China suffers from the highest levels of air pollution in the world, and the adverse effects this has on human health and climate change are well documented." What is less clearly understood, however, is the impact it has on the regional carbon balance. The land ecosystems in China are thought to provide a natural carbon sink, but we didn't know whether air pollution inhibited or promoted carbon uptake.....[Read more...](#)

**Date:** 01 June 2017

**Source:** <https://www.sciencedaily.com/>

**Earning a living in a changing climate: The plant perspective**

There are many ways to make a living in a suitable climate but far fewer in a less suitable one. That may seem obvious for people living under various socio-economic stresses, but new research shows it also applies to the world's plants -- many of which are resorting to dramatic 'last-stand' strategies to survive in deteriorating environmental conditions. Ecologists used a big data approach to test the links between climate suitability and persistence strategies for nearly 100 populations of over 30 species of trees and herbs growing on 3 continents and 16 countries across the globe. Some of these data were gathered over the duration of a decade, allowing the ecologists to pinpoint and trust emergent patterns linked to climate change with greater confidence. What they found is that while many species are able to persist in less favourable climate conditions, those same species often do so by adopting last-stand strategies such as shrinking in size and temporarily suspending reproductive and growth effort. This merely helps them to survive instead of thrive in these less favourable environments. The big-picture message here is that these species -- which include a soapwort and a poppy found in the mountains of Europe, grey alder found in North America and the African mahogany -- are more vulnerable to further changes and to disturbances such as wildfires or pest outbreaks.....[Read more...](#)

**Date:** 14 June 2017

**Source:** <https://www.sciencedaily.com/>

## NEWSBULLETIN COMMITTEE

**Executive Editor**

Dr. Pankaj Kumar Srivastava

[pankajk@nbri.res.in](mailto:pankajk@nbri.res.in)

**Compiled By**

Dr. Priya Srivastava, Er. Diwakar Saini, Krishna Mohan

**NBRI ENVIS Node:** <http://www.nbrienvis.nic.in>

**NBRI Website:** <http://www.nbri.res.in>

**ENVIS Cell:** <http://envis.nic.in>

**Ministry of Environment & Forests:** <http://envfor.nic.in>

*The Environmental Information System at Eco-Auditing Laboratory, National Botanical Research Institute is focussed on "Plants & Pollution". This is the E-mail Publication that Feature News, Information and Events Related to Plants & Pollution.*

*The Focus of ENVIS has been on Providing Environmental Information to Decision Makers, Policy Planners, Scientists and Engineers, Research Workers, etc. all over the World.*

*Eco-Auditing Group is Involved in R & D on Eco-Monitoring, Environmental Impact Assessment, Eco-Friendly Models that are Technologically and Economically Feasible for Phytoremediation of Polluted Lands and Polluted Waters etc.*