

**Press release**

Monday 30 March 2015

**STRICTLY EMBARGOED UNTIL 1900GMT 01/04/15**

**Biodiversity damage mapped by global land-use study**

Humanity's use of land for agricultural production has come at a cost to local ecosystems worldwide, but some of the damage can be reversed, according to a major collaborative research project from the Natural History Museum, United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC), and British universities.

A global network of contributors has submitted data from every continent, providing the most complete picture yet of the effects of land-use by humans. The team of scientists assessed changes in biodiversity from 1500 until the present day. Over 280 publications have been consulted, with 26,593 species considered by researchers.

The study, published this week as an article in *Nature*, revealed that by 2005 land-use change had caused a decrease of 13.6% in the average number of species found in local ecosystems, compared to the pre-industrial era. Most of the loss has come in the last 100 years.

The team concluded that, if human impacts continue to grow as they have been, future losses in biodiversity will be concentrated in biodiverse but economically poor countries.

Achim Steiner, UN Under-Secretary-General and Executive Director of the UN Environment Programme (UNEP) said:

“As our understanding of the human impact on ecosystems and the escalating loss of species grows so must our willingness to change course. The adoption of robust policy frameworks that support the emergence of effective carbon markets and land-use practices for the preservation of natural habitats are but one example of the opportunities we must seize.”

Lead author of the study, Tim Newbold of UNEP's World Conservation Monitoring Centre, said:

“The worst-case scenario we have mapped would have a severe impact upon most regions of the planet. Our models predict that rapid agricultural expansion, particularly in poorer countries, will cause rapid further losses of biodiversity. However, other scenarios give a much more positive outcome for biodiversity, especially for poorer countries.”

**Our Patron: HRH The Duchess of Cambridge**

The Natural History Museum Cromwell Road London SW7 5BD United Kingdom +44 (0)20 7942 5000 [www.nhm.ac.uk](http://www.nhm.ac.uk)

Researchers found that the worst-affected areas had lost one in three of their species, enough to substantially impact the functioning of those environments.

Lead scientist, Andy Purvis of London's Natural History Museum, said:

"These findings are a significant milestone in understanding our impact on the planet. They show that what happens next is completely down to us. If we carry on as we are, numbers of species will fall by nearly 3.4% on average by 2100. But if society takes concerted action, and reduces climate change by valuing forests properly, then by the end of the century we can undo the last 50 years of damage to biodiversity on land."

### Notes for editors

- The study 'Global effects of land use on local terrestrial biodiversity' will be published by *Nature* on 2 April 2015.
- The Natural History Museum welcomes more than five million visitors a year and is also a world-leading science research centre. **Through its unique collection and unrivalled expertise it is tackling the biggest challenges facing the world today. It helps enable food security, eradicate disease and manage resource scarcity. It is studying the diversity of life and the delicate balance of ecosystems to ensure the survival of our planet.** For more information go to [www.nhm.ac.uk](http://www.nhm.ac.uk)
- Universities involved in this research paper include; University of Sussex, University College London, Imperial College London, and University of Swansea.
- Additional research bodies include; Microsoft and UNEP's World Conservation Monitoring Centre.
- This work was funded by the UK's Natural Environment Research Council (NERC).
- The United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC) is the specialist biodiversity assessment centre of the United Nations Environment Programme (UNEP), the world's foremost intergovernmental environmental organisation. The Centre has been in operation for over 30 years, combining scientific research with practical policy advice. [www.unep-wcmc.org](http://www.unep-wcmc.org)
- Localised data (e.g., country-level estimates of biodiversity losses to date) are available upon request. Please contact the Natural History Museum Press Office if this is required.

**For further information, please contact the Natural History Museum Press Office**

**Tel: 020 7942 5654**

**Email: [press@nhm.ac.uk](mailto:press@nhm.ac.uk)**

**(Not for publication)**

**Or**

**Camellia Williams, Communications Officer, UNEP-WCMC**

**Tel: +44 (0)1223 814656**

**Email: [camellia.williams@unep-wcmc.org](mailto:camellia.williams@unep-wcmc.org)**

**Our Patron: HRH The Duchess of Cambridge**

The Natural History Museum Cromwell Road London SW7 5BD United Kingdom +44 (0)20 7942 5000 [www.nhm.ac.uk](http://www.nhm.ac.uk)