

Unnatural disasters

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Global wildlife is facing an unprecedented threat from natural disasters exacerbated by climate change, warn scientists in a paper published in *Trends in Ecology and Evolution*.

Hurricanes, [droughts](#), flooding and [wildfires](#) are predicted to increase in frequency and severity – but despite being able to spot human populations at risk, there is currently no mechanism for identifying vulnerable animal populations.

Now scientists from the Zoological Society of London (ZSL) have come up with a method to identify populations likely to experience drastic changes in their population size when faced with extreme events. By assessing three separate factors – sensitivity, exposure and adaptability – scientists will be able to predict which species have a chance of bouncing back from [natural disasters](#), and which species might struggle to recover.

"As climate change leads to more frequent and severe natural disasters, we need to identify animals at risk of being washed away in a flood, or destroyed by wildfire. We can then prioritise and adapt current management practices to guarantee the survival of those vulnerable populations," says Eric Isai Ameca y Juarez, lead author from ZSL.

Spotting vulnerable populations can be tricky, as what might be a catastrophe for some species could be good news for others. In France in 1999, hurricane Lothar led to an increase in the availability of winter food for roe deer. However, two years later in Belize, more than 40 percent of the black howler monkey population was wiped out when

hurricane Iris destroyed their rainforest habitat.

Dr Nathalie Pettorelli, senior author from ZSL says: "Extreme natural events represent a growing threat to biodiversity, and this might be particularly true for populations already under pressure due to habitat degradation or overexploitation. We propose a way to acknowledge this growing threat and carry out vulnerability assessments, in the hope that these will be taken into account when evaluating species extinction risk".

The proposed method will support previous work to assess [species vulnerability](#) to [climate change](#) and enable scientists to quantify the impact of increasing occurrence and severity of extreme events on animal populations.

More information: 'Natural population die-offs: causes consequences for terrestrial mammals' will be published early online in "Trends in Ecology and Evolution" on Thursday 22 December 2011 ([DOI: 10.1016/j.tree.2011.11.005](https://doi.org/10.1016/j.tree.2011.11.005)).

Provided by Zoological Society of London

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