

Is biodiversity conservation key to good mental health?

May 15 2014, by Natalie Clark And Rebecca Lovell



The biodiversity of our planet sustains us. From the air we breathe and the water we drink, to the soil we sow and the fuel we use. But Earth's wonders do more than provide the basic necessities that allow humans to survive and prosper. The desire to experience its natural treasures drives us to spend hard-earned money and time on a variety of pursuits from expensive safaris to sedate bird watching in the garden. This suggests that we receive well-being benefits from these experiences, but how? And should we be concerned about the possible impacts of biodiversity

loss to our well-being?

Research led by the University of Reading, in collaboration with the University of Exeter's European Centre for Environment and Human Health, has warned that [biodiversity loss](#) could threaten the delivery of these well-being benefits with potential repercussions for human [mental health](#). Mental health disorders already affect nearly nine million people in the UK and are projected to cost £88.5 billion by 2026 - therefore, if [biodiversity](#) loss does impact on mental health, it could be even more costly than previously thought.

The shared cultural values we place on biodiversity are evident across the globe. Images of biodiversity and of particular species can be central to our cultural identity. The oak tree and the lion, for example, are strongly associated with the British identity. Further afield, the kiwi fruit is associated with New Zealand and the resplendent quetzal is a bird of legend in Guatemala.

Many people enjoy experiencing nature and are willing to contribute, through charities and public spending, towards its future conservation. Ecotourism is hugely popular and international organisations use the [cultural values](#) we place on enigmatic species to encourage our donations. Furthermore, many of us regularly devote our time to [biodiversity conservation](#) related activities, such as the RSPB's Big Garden Birdwatch in the UK and the Audubon Society's Great Backyard Bird Count in the USA.

The effort we exert into enjoying nature suggests that we benefit from these experiences. However, less biodiversity may mean fewer opportunities to appreciate and value that biodiversity and this could have a significant effect on our well-being and subsequently our mental health. Although we still know very little about these complex culturally mediated relationships, evidence from other aspects of human health

research suggests that health may well be negatively impacted by biodiversity loss.

Firstly, we know that people are sensitive to apparently trivial changes because of existing cultural associations. The colour of a tablet, for example, can affect our reported health outcomes; blue tablets are more effective as depressants, as the colour blue is culturally associated with calm and quietness; and red tablets more effective as stimulants, as the colour red is associated with energy and excitement.

Secondly, an awareness of environmental degradation can negatively affect mental health. Episodes of drought and flooding have been associated with higher levels of depression, anxiety and stress within communities, even for those not directly affected. And thirdly, there is a growing body of evidence to suggest that in comparison to people who spend a greater amount of time in higher quality natural environments, those people who spend less time in such places report greater health problems, decreased feelings of general health, higher levels of stress and slower recovery from illness.

All the evidence points to biodiversity loss having a negative impact on human well-being and health. If we continue to lose species at current extinction rates (which are estimated at 100-1000 times the natural rate) there is a real threat that not only will we continue to degrade global ecosystems, but we will also add to the burden of non-communicable disease, such as mental health illnesses.

Whilst we still know relatively little about the relationship between biodiversity and human well-being and health, it is clear that we need to better understand the mechanisms and how to best conserve biodiversity to reduce the occurrence and costs of ill health. These are important messages for policy makers, both environmental and health. If biodiversity change plays even a minor role in contributing to mental ill-

health, the economic and health costs to society could be enormous.

More information: Natalie E. Clark, Rebecca Lovell, Benedict W. Wheeler, Sahran L. Higgins, Michael H. Depledge, Ken Norris, "Biodiversity, cultural pathways, and human health: a framework," *Trends in Ecology & Evolution*, Volume 29, Issue 4, April 2014, Pages 198-204, ISSN 0169-5347, [dx.doi.org/10.1016/j.tree.2014.01.009](https://doi.org/10.1016/j.tree.2014.01.009).

Rebecca Lovell, et al. "A Systematic Review of the Health and Well-Being Benefits of Biodiverse Environments." *Journal of Toxicology and Environmental Health, Part B: Critical Reviews*. 05 Mar 2014. [DOI: 10.1080/10937404.2013.856361](https://doi.org/10.1080/10937404.2013.856361)

Robert M. May, "Why should we be concerned about loss of biodiversity, *Comptes Rendus Biologies*", Volume 334, Issues 5–6, May 2011, Pages 346-350, ISSN 1631-0691, [dx.doi.org/10.1016/j.crv.2010.12.002](https://doi.org/10.1016/j.crv.2010.12.002).

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