

2017 ENCA Climate Change Group recommendations for taking forward the evidence of the links between biodiversity and health in the face of climate change.

The Interest Group on Climate Change of the Network of Heads of European Nature Conservation Agencies (ENCA), and the BioClim project group funded by the German Federal Agency of Nature Conservation (BfN) developed the following recommendations based on the session outcomes and plenary discussions at the joint BfN/ENCA European Conference on “Biodiversity and Health in the Face of Climate Change”.

The conference took place in Bonn, Germany from 27 to 29 June 2017. These recommendations further build on the discussions of an expert workshop at the International Academy for Nature Conservation, Island of Vilm, Germany in October 2016. Both events were organized by the BfN, in cooperation with the ENCA Climate Change Group, and in collaboration with the Helmholtz-Center for Environmental Research – UFZ and the German Centre for integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig. The conference was co-sponsored by World Health Organization (WHO) Regional Office for Europe.

While climate change poses significant challenges to biodiversity and human well-being in Europe, biodiversity in urban as well as in adjacent rural areas can provide health and climate change mitigation and adaptation benefits that can be actively fostered by nature-based solutions. In this context, health is considered in its physical, psychological and social dimension, including socio-environmental equity.

The recommendations focus on ways forward to promote the evidence of the links between biodiversity and health in the face of climate change in order to foster the wider application of nature-based solutions complementary to already established medical or technical measures. The recommendations highlight five key areas for action:

1. Increase the evidence base of the contributions of biodiversity for human health and wellbeing.

This can be achieved by:

- Identifying which aspects of biodiversity can provide benefits for physical, psychological and social health and wellbeing.
- Examining how biodiversity benefits health and wellbeing.
- Understanding how socio-demographical status modifies biodiversity’s effect on health and wellbeing.
- Investigating the human health and wellbeing effects of current biodiversity loss and reduced access to natural environments.
- Investigating the potential negative effects of biodiversity on human health and wellbeing, such as vector-borne diseases and allergenic plants. Identify appropriate management measures to reduce these negative health impacts.
- Investigating the ‘dose’ of biodiversity required for a positive health effect. How much biodiversity is necessary for human health and wellbeing?
- Conducting economic evaluations of biodiversity and human health interventions.

- Developing a standardized monitoring scheme to estimate the health and well-being benefits of the protected area network.

2. **Increase awareness of the human health and wellbeing effects of natural environments and biodiversity.**

This can be achieved by:

- Consolidating the existing research on the health benefits of nature, and the health effects of biodiversity. Highlighting the differences of these effects according to socio-demographical status of the recipients.
- Emphasizing the contribution of biodiversity in tackling our main health problems; demonstrating the facts and synergies regarding the benefits and risks to health.
- Tailoring communication of the health benefits of nature and biodiversity to the interests of different stakeholders, practitioners, and policy-makers.
- Using social media and other platforms to communicate and disseminate simple messages about the health benefits of biodiversity. Working with environmental charities to disseminate these messages to larger audiences.
- Developing guidance for park managers, and landscape architects, and urban planners and designers describing the key features of biodiversity required for increased health and wellbeing.
- Developing guidance for health professionals on how to use natural environments for health promotion as a complement to other already established measures.

3. **Highlight the co-benefits of nature-based solutions for climate change adaptation to policy-makers and regional planning authorities.**

Nature-based solutions for climate change adaptation provide multiple co-benefits for human health, biodiversity, and climate change. These co-benefits need to be emphasised to policy-makers, politicians, and regional planning authorities. This can be achieved by:

- Highlighting the interlinkages of climate change, human health and biodiversity by emphasizing that there are direct (e.g. heat stress) as well as indirect (e.g. spread of vector-borne diseases and allergenic plants) negative impacts of climate change on health and biodiversity, but also promoting the potential health effects of nature based solutions to climate change adaptation.
- Focusing on human health and wellbeing as a *central benefit* of nature-based solutions for climate change adaptation (instead of a co-benefit).
- Emphasizing the *co-benefits* nature-based solutions for climate change adaptation have for the preservation of ecosystem services and biodiversity conservation.
- Highlighting the potential of nature-based solutions to climate change adaptation to addressing social health inequalities in terms of reducing climate change susceptibility.
- Linking Green Infrastructure strategies and/or climate change adaptation strategies to other policies, such as the Healthy City strategy.

4. Foster application of nature-based solutions for climate change adaptation from society and policy

This can be achieved by:

- Understanding what practitioners and policy-makers require in order to implement the research on biodiversity and health. What are the barriers? What kind of tools, guidance, or processes need to be created?
- Developing a “common language” to facilitate understanding and cross-sectoral collaboration.
- Demonstrating successful interventions or projects using case studies to where cross-sector working led to cost-effective and efficient delivery of ecosystem services that provided multiple benefits.
- Building ownership, cooperation and collaboration on biodiversity, health and climate change issues between the different stakeholders. A co-designed framework plan is likely to be the most successful.
- Developing integrated tools of analysis and metrics that bring together the different disciplines, sectors and areas of expertise. Existing decision-making process tools may be useful starting points, e.g. Environmental Impact Assessment and Health Impact Assessment.
- Creating “Sustainable Development Goal-type” indicators to monitor process, success and sustainability, and to provide focus.
- Implementing robust monitoring and evaluation of the effect of nature-based solutions on climate change adaption, human health and wellbeing, biodiversity, and ecosystem services.

5. Effectively design and manage green spaces to ensure people have contact with nature and biodiversity

This can be achieved by:

- Using both land sparing and land sharing approaches, eg. fostering wildlife both in parks or conservation areas as well as in the urban matrix, to provide opportunities for people to interact with nature and obtain its health benefits.
- Managing small urban green spaces to increase the aspects of biodiversity that can be beneficial to human health and wellbeing. It is important for people to have contact with natural environments in their daily life (e.g. on their ways to school or work, around the home).
- Designing larger green spaces and establishing “green corridors” from urban green spaces to rural protected areas to create additional opportunities for recreation and restoration.
- Utilising social and physical interventions to facilitate use, and improve the quality of, green spaces. Access to green space does not necessarily result in its use.
- Focussing interventions on increasing both the biodiversity of the green space, and the amount of time people spend in that green space. Both have been shown to achieve positive health and wellbeing benefits.
- Marketing protected areas as “health hubs” in order to highlight the value they deliver for human health and wellbeing.