Report on Health and Biodiversity Demonstrates Human Health Benefits from Protecting Biodiversity

Dossier de
 la rÃ©daction de H2o
March 2015

The report demonstrates that the relationship between biodiversity and human health is extensive and complex.

A ground-breaking report on biodiversity and health, launched today at the 14th World Congress on Public Health, in Kolkata, India, shows the significant contribution of biodiversity and ecosystem services to better human health. The report, Connecting Global Priorities: Biodiversity and Human Health, demonstrates that the relationship between biodiversity and human health is extensive and complex. It outlines the ways that the conservation and sustainable use of biodiversity has positive impacts on human health, including through impacts on water and air quality, nutrition, non-communicable and infectious diseases, and medicines, among others. Prepared by the Secretariat of the Convention on Biological Diversity (SCBD) and the World Health Organization (WHO), the report features contributions from numerous partners and over 100 experts, including Bioversity International, COHAB Initiative, EcoHealth Alliance, Harvard School of Public Health, United Nations University, Wildlife Conservation Society's Health & Ecosystems: Analysis of Linkages and many others.

"We hope this joint report will increase awareness and understanding not only of the intrinsic value of biodiversity, but also as a critical foundation for sustainable development, and for human health and well-being," said Dr. Maria Neira, WHO Director for Public Health, Environmental and Social Determinants of Health. "In particular, it should serve as a useful reference for the definition of the sustainable development goals and the post-2015 development agenda, which represent a unique opportunity to promote integrated approaches to protect human and planetary health." Braulio Ferreira de Souza Dias, Executive Secretary of the Convention on Biological Diversity, and Assistant Secretary-General of the United Nations, said "Despite the clear role that biodiversity plays for human health, and thus for the Sustainable Development Goals, this linkage is not being made in policy forums. Hopefully this new report will help shed some light on this critical issue." The report provides specific examples of the relationship for a number of issue areas including: water, air quality and human health; biodiversity, food production and nutrition; microbial diversity and non-communicable disease; infectious diseases; medicines, including traditional medicine; physical, mental and cultural well-being; pharmaceuticals and biodiversity; climate change and disaster risk reduction; and sustainable consumption and production. Highlights of the report include:

Biodiversity, Food Production and NutritionÂ -
Biodiversity is the basis for crops, livestock and farmed fish and other parts of agricultural production and aquaculture. Genetic diversity within these ensures continuing improvements in food

production, allows adaptation to current needs and ensures adaptability to future ones including climate change. The loss of biodiversity in agro-ecosystems is increasing the vulnerability and reducing the sustainability of many production systems with negative effects on human health. The report also points out that a diversity of species, varieties and breeds, as well as wild food and medicinal sources (fish, plants, bushmeat, insects and fungi) underpins dietary diversity, good nutrition and health. For this reason, reduced access to and global declines in terrestrial, marine and freshwater systems will present major public health challenges for resource-dependent human populations, particularly in low- and middle- income countries. Some dietary patterns that offer substantial health benefits, such as diets characterised by reduced meat consumption could also reduce climate change and pressures on biodiversity.

Microbial Diversity and non-communicable diseases -
Humans, like most living things, have a microbiota - ecological communities of commensal, symbiotic and pathogenic microorganisms that literally share our body space and outnumber our human cells ten to one. The majority of these microbes provide vital functions for human survival. The report points out that interaction with microbes present in the environment are an important part of the healthy maintenance of our human microbiota. Reduced contact of people with the natural environment and biodiversity, and biodiversity loss in the wider environment, leads to reduced diversity in the human microbiota, which itself can lead to immune dysfunction and disease. Considering microbial diversity as an ecosystem service provider may contribute to bridging the chasm between ecology and medicine/immunology, by considering microbial diversity in public health and conservation strategies aimed at maximising services obtained from ecosystems.

Infectious diseases
- Biodiversity plays a complex role in disease emergence, with benefits in some contexts and threats to human health in others. Human changes to and degradation of ecosystems, such as modified landscapes, intensive agriculture and antimicrobial use, may increase the risk of infectious disease transmission. While areas of high biodiversity may, in some cases, contain a high number of potential pathogens and contribute to the spread of disease, in some contexts biodiversity may also serve as a protective factor for preventing or reducing exposure to infectious agents.

Conclusions - The report concludes with recommendation for health and biodiversity strategies. It calls for the creation of coherent cross-sectoral strategies that ensure that biodiversity and health linkages are widely recognized, valued, and reflected in national public health and biodiversity conservation policies. They also need to be coordinated with programs and plans of other relevant sectors. Their implementation could be a joint responsibility of ministries of health, environment and other relevant ministries responsible for environmental health programmes and national biodiversity strategies and action plans. In all cases, they should be developed and implemented with the involvement of local communities. Given the interconnected nature of these challenges, there is a need for policy makers to coordinate their responses. The report suggests that the solution lies in uniting work in social and natural sciences through

integrative and interdisciplinary approaches such as the ecosystem, ecohealth, and One Health approach, in order to develop cooperation and mutual understanding that can lead to the production of knowledge and recommendations that can be used by policy makers and practitioners.

UNEP - 14-02-2015Â