

Forests Reduce Health Risks, New Global Report Confirms

- Forests, trees and green spaces play a vital role in ensuring a healthy life for all on a global scale.
- The health benefits of forests and trees, ranging from physical and mental well-being to overall mortality reduction, far outweigh the adverse effects on health. As health threats, such as forest fires, are mainly caused by human activities, urgent action is needed.
- In order to address health challenges, it is important to recognize the close links between human health and the health of other species, of ecosystems, and of the planet as a whole.

Vienna, March, 21, 2023 - The global scientific evidence of the multiple types of benefits that forests, trees and green spaces have on human health has now been assessed by an international and interdisciplinary team of scientists. The outcome is presented in a major report titled “**Forests and Trees for Human Health: Pathways, Impacts, Challenges and Response Options**” by the Global Forest Expert Panels (GFEP) Programme of the [International Union of Forest Research Organizations](#) (IUFRO). IUFRO unites more than 15,000 scientists in more than 630 member organizations – mainly public research centers and universities – in 115 countries and is a member of the International Science Council.



*Forests and trees offer shade, food and water in regions suffering increasingly from drought and heat, such as Morocco, but are threatened at the same time.
Photo A. Buck, IUFRO*

Existing evidence strongly supports a wide range of physical, mental, social and spiritual health benefits associated with forests and green spaces. They have positive effects, e.g., on the neurodevelopment in children, on diabetes, cancer, depression, stress-related disorders, cognitive aging and longevity, and are critical for enhancing social interactions, recreation and relaxation. Although all life stages are impacted, starting from the prenatal stage, the significant effects on children are particularly important, not least because of repercussions in later life.

Evidence highlighted in the report includes that no less than 24% of global deaths (and 28% of deaths among children under five) are due to negative environmental factors such as air pollution and extreme weather events. Premature death and disease can be prevented through healthier environments worldwide.

Forests, trees and green spaces not only provide healthier environments but also numerous goods and services, including medicines, nutritious foods, and other non-wood forest products that contribute to human health. Medicinal plants, which are particularly important to Indigenous Peoples and Local Communities (IPLCs), provide basic health care for 70% of the world's population.

Forests, trees and green spaces also help reduce the negative health impacts of climate change. In cities, for example, green spaces and trees have a significant cooling effect, which is particularly important as more frequent heat waves are expected, greatly increasing the risk of heat stress and heat stroke.

This peer-reviewed assessment is the most comprehensive on this topic to date and has been carried out by the **Global Forest Expert Panel (GFEP) on Forests and Human Health** in the frame of the IUFRO-led Joint Initiative of the **Collaborative Partnership on Forests (CPF)**. A total of 44 scientists and experts have contributed to this assessment, with a core Expert Panel of 16 scientists with diverse expertise, including forestry, ecology, landscape design, psychology, medicine, epidemiology and public health. Authors and reviewers are from across the globe and represent different genders.

The scientists took a broad view of forests, trees outside forests and green spaces, and looked at them in diverse contexts, with a focus on urban, rural, and forest-dependent communities. Equally, they took a broad perspective of human health, including all aspects of people's physical, mental, spiritual and social health and well-being, while also considering links to the health of other beings and ecosystems.

"The report underpins a One Health perspective, which recognizes that the health of humans, animals, plants, and the wider environment are closely linked and interdependent. It suggests that decision-makers in forest, health and related domains should also adopt more integrative perspectives for addressing forest-human health relations. By linking forest and human health policies and strategies, new and innovative solutions for health and forest challenges can be identified," says Panel Chair **Cecil Konijnendijk**, University of British Columbia, Canada.

The report highlights the important contribution of forests and trees to the United Nations' 2030 Agenda for Sustainable Development and its goals, particularly Goal 3 (SDG 3), which aims to "ensure healthy lives and promote well-being for all at all ages."

While most of the health outcomes of forests, trees and green spaces are positive, there are also some negative impacts that need to be considered and mitigated. Human health can be impacted adversely through allergies, diseases transmitted by animals or reduced air quality because of forest fires, for example. Global crises such as climate change, land-use change, urbanization and biodiversity loss endanger the important role that forests and trees provide as 'safety nets' for the food security and livelihoods of vulnerable populations.

These negative impacts are mostly due to factors such as disturbed relationships between forests and people, poor forest conservation and management, or inappropriate choice of tree species in areas where people live. Decision-makers should promote and enhance positive forest and tree health outcomes while minimizing and managing potential negative impacts, especially on vulnerable populations.

A solution to the malaria epidemic, for example, is not to eliminate the forest and wetland habitats of the mosquitos transmitting the disease - deforestation can actually increase the malaria risk - but to invest in sustainable forest management and urbanization processes that avoid loss of natural habitats.

Another example of a misconception related to harmful consequences of nature is the attribution of the increase in pollen allergies to urban forests and green spaces. In fact, allergic diseases are more prevalent in high-income countries, often caused by unhealthy lifestyles disconnected from nature, and exacerbated by climate change as warmer temperatures prolong the pollen season.

As the acceleration of negative global trends and challenges including climate change and pandemics alters and intensifies the importance of forest-human health relations, urgent action is required. Climate change, urbanization and lifestyles that are disconnected from nature are among the main reasons behind many of the health challenges that societies around the world are facing today, including malnutrition, cardiovascular diseases and mental health problems. Environmental and climate disruptions have also led to a surge in life-threatening diseases such as Ebola or avian flu. Land-use change is estimated to have caused the emergence of more than 30% of new diseases since 1960.

These trends are not only putting human health at risk but also that of forests and trees as they are among the drivers behind wildland fires, heavy storms and forest pests, for example. It is therefore crucial to improve the understanding of the role of nature in providing benefits to humans, and consequently, the role that ongoing nature destruction is playing in increasing health hazards.

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About IUFRO

The International Union of Forest Research Organizations ([IUFRO](#)) is a non-profit and non-governmental worldwide network of forest scientists, who work together on a voluntary basis to enhance the understanding of the ecological, economic and social aspects of forests and trees. IUFRO unites more than 15,000 scientists in more than 630 member organizations – mainly public research centers and universities – in 115 countries and is a member of the International Science Council. The organization was founded in Germany in 1892 and has been headquartered in Vienna, Austria, since 1973. The [26th IUFRO World Congress](#) will take place in Stockholm, Sweden, in 2024.

About GFEP

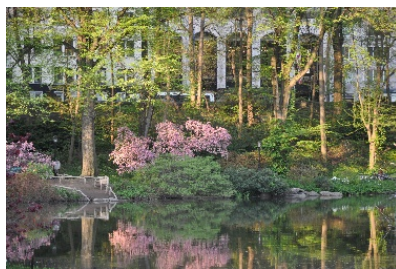
IUFRO's Global Forest Expert Panels ([GFEP](#)) Programme, established in 2007, combines diverse expertise to assess scientific knowledge about the role of forests and trees in achieving global goals and inform political decision making, mainly intergovernmental conventions and agreements of the United Nations (UN). GFEP primarily produces global scientific assessments conducted by interdisciplinary expert panels that unite leading scientists from around the world. Up to 2022, eight thematic reports and several related global and regional policy briefs have been successfully completed on a wide range of topics including food security, water, and climate change mitigation.

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Forests and trees that provide a source of food and medicine are both highly important in rural contexts. Plant foods from the forest may make important contributions to iron intake and reduce the risk of anaemia in women. A study undertaken in 35 countries found that forest cover is associated with reduced anaemia, stunting and diarrhoeal diseases in children.

Photo J. Parrotta, IUFRO: Medicinal plants offered on a market in India.



Forests, trees and green spaces help reduce the negative health impacts of climate change. In cities, green spaces and trees offer significant cooling effects, which is especially important as more and more heat waves are expected in the future. They also encourage social interaction and provide places for rest and relaxation.

Photo J. Parrotta, IUFRO: Central Park in New York offers oases of calm amidst the hustle of the city.



Nature tourism is an important economic sector in many regions of the world. Especially in densely forested countries, where great importance is attached to the care of forests and nature, this form of tourism has great potential. Exercise in nature such as hiking or cycling has a positive effect on mental and physical well-being and also promotes the appreciation of nature.

Photo N. Grima, IUFRO: Forests offer spaces for physical exercise and relaxation in nature.



Global drivers such as climate change, land use changes, urbanization and unsustainable forest management are putting both human and forest health at risk globally. Human health does not exist without forest health.

Photo N. Grima, IUFRO: Wildfires threaten forests, biodiversity and people. They also contribute to respiratory health problems.