



World Health
Organization



**HIGHLIGHTS BRIEF
ON WHO- IUCN
REPORT ON
DESIGNING NATURE-
BASED SOLUTIONS
FOR HUMAN HEALTH**

2023

HIGHLIGHTS BRIEF

In July 2022, the UN General Assembly passed a groundbreaking resolution affirming the universal human right to access a clean, sustainable, and healthy environment. This resolution calls upon countries, international entities, governments and the private sector to increase their endeavours in guaranteeing a clean and healthy environment for all while addressing the triple planetary crisis confronting our planet: the climate crisis, biodiversity loss, and pollution.

The interconnected and interdependent connection between human health and a healthy environment is becoming increasingly clear. An unhealthy environment can result in a myriad of significant negative health outcomes for humans and given this fluid and symbiotic relationship between the two, cross-sectoral cooperation, as well as the dismantling of the barriers between the conservation and public health sectors, should be encouraged to attain healthier ecosystems and healthier people.

Acknowledging that human health and a healthy environment are interconnected and interdependent, the concept of Nature-based Solutions (NbS) can act as a way to bridge the gaps between conservation and public health for holistic approaches. NbS are actions to protect, sustainably manage and restore natural or human-modified ecosystems, offering benefits for both environmental preservation and human well-being. Adopting NbS as a means to tackle human health issues derived from an unhealthy environment aligns with One Health, an integrated approach that recognises the interdependence of animal, ecosystem and human health.

The purpose of the joint WHO-IUCN report is to break the silos between conservation, climate and health sectors, and explore the interplay between biodiversity conservation and global public health while highlighting how NbS can yield mutual benefits.

The report offers ten key recommendations, briefly summarized in this highlights brief:

10 KEY RECOMMENDATIONS





Recommendation I: Biodiversity, healthy ecosystems, and a stable climate are essential to achieving good health outcomes. The intricate relationship between biodiversity, healthy ecosystems, and a stable climate significantly influences human well-being. Life on Earth, encompassing everything from the tiniest microorganisms to the largest ecosystems, plays a profound role in sustaining and enhancing physical, mental and social health. Recognizing this interconnectedness underscores the crucial role of biodiversity, healthy ecosystems, and climate stability, and collaborative efforts like the One Health approach emphasize their significance. Global agreements such as the Kunming-Montreal Global Biodiversity Framework, the Paris Climate Agreement, and the Nagoya Protocol in Access to Genetic Resources and their Fair and Equitable Sharing of Benefits Arising from their Utilizations all contribute significantly in recognizing and preserving these vital connections. Nature-based solutions (NbS) emerge as pragmatic approaches addressing societal challenges, benefiting both people and biodiversity. There are various examples of how NbS- such as biodiversity and plant conservation, reforestation, marine protection, sustainable agriculture, amongst others- can support improved health outcomes, such as the reduction of diseases, better nutritional health, food security, physical activity promotion, and improved mental health, etc.. By restoring and conserving ecosystems, NbS initiatives serves as instrumental tools in mitigating climate change, enhancing biodiversity, ensuring access to clean air and water, and bolstering food security.

Recommendation II: Educate and empower health professionals to engage in nature-based solutions. The integration of NbS into academic curricula is crucial and should cover various topics such as the health benefits of green spaces, the ecological determinants of health, and the role nature plays in disease prevention and management, amongst others. Implementing case-based learning that showcases practical applications of NbS in healthcare settings can significantly enhance public knowledge. Several existing initiatives promote nature prescriptions in healthcare, offering practical resources to integrate Nb interventions as a complementary approach, such as the Nature Rx and PaRx initiatives, and Scotland's Nature Prescriptions show patient support and health improvements, demonstrating outdoor therapy benefits. Fostering collaborative efforts among medical schools, public health departments, and environmental science departments is essential. This collaboration facilitates the exchange of knowledge, expertise, and resources, offering a more comprehensive approach to health education. The International Federation of Medical Students' Association acknowledges the role of medical students beyond conventional patient care and advocates integrating environmental health into medical education for better prevention and care.

Recommendation III: Redesign food systems to be nature-positive, resilient and to sustain healthy communities. The global food system, a major contributor to the economy, but also a major driver of environmental degradation and malnutrition urgently necessitates a transformative redesign. A fundamental shift toward nature-positive and climate-resilient food production systems are fundamental pre-requisites to building resilient, sustainable and healthy food systems. As we embark on the redesign of food systems, it is also imperative to prioritize strategies that minimize plastic waste, promote sustainable packaging alternatives, and raise awareness about the extensive impacts of plastic pollution on ecosystems, human health, and the climate. A nature-positive approach integrates agricultural practices mirroring natural ecosystems, fostering soil health, crop diversity and ecosystem restoration. Addressing soil and water pollution is also essential to ensuring food safety and security. In tandem, sustainable aquaculture, such as bivalves and seaweed farming, offers a viable avenue to bolster food supplies while minimizing environmental impacts. Redesigning food systems must also prioritize climate resilience through crop diversification, and promoting local and sustainable crops. Empowering communities by supporting food sovereignty, traditional food systems and safe cultural practices, is crucial for improving dietary diversity and addressing health inequalities in many communities, including Indigenous Peoples. Transformative actions, emphasizing biodiversity, sustainability, resilience, and equity, are imperative for cultivating healthier and sustainable food systems.

Recommendation IV: Use nature-based solutions to support access to safe water, sanitation, hygiene, and waste management. With an estimated 1.5 billion people lacking proper access to toilets and at least 1.7 billion consuming faecally contaminated water, the urgency to implement NbS in WASH cannot be overstated. The holistic approach of NbS offers innovative solutions through natural filtration, watershed management, and water source protection, ensuring safer access to clean water. The success of initiatives like the New York City Watershed Agreement demonstrates the potential of NbS to secure safe water access to vast urban populations. Similarly, in the realm of sanitation and hygiene, NbS such as the Tiger Worm Toilet system in India have proven to be effective, offering sustainable and affordable waste treatment alternatives while addressing the limitations of traditional sanitation approaches. Furthermore, in waste management, the Semakau Landfill in Singapore showcases the efficacy of integrating NbS with biodiversity and nature conservation to address urban waste challenges. Embracing NbS across these domains will not only enhance public health, but also ensure environmental preservation and the establishment of resilient and sustainable communities worldwide.

Recommendation V: Integrate urban ecosystems with public health planning. An estimated 8.34 million people die each year due to fine particulate and ozone air pollution with approximately 5.13 million deaths per year due to ambient air pollution from fossil fuel use. The need to integrate urban ecosystems with public health planning in order to rectify this situation is vital and there are various ways to do this, notably green spaces. Green spaces not only aid in air purification, but also significantly contribute to promoting physical activity and mental well-being, offering opportunities for recreation, stress reduction, and fostering social connections, crucial in urban settings where access to nature is limited. Blue spaces are likewise crucial and the regulation of water quality by wetlands and watershed plays a critical role in flood resilience and disease prevention. In addition, local biodiversity roles in air purification, temperature regulation, and nutrient cycling can reduce the risk of non-communicable diseases in cities. Initiatives such as Cities with Nature and Healthy Parks, Healthy People in Australia, Europe, and Canada exemplify a holistic approach to urban health by integrating urban ecosystems into public health planning, advocating for green infrastructure, parks, and sustainable transportation, making urban development sustainable. Such

case studies underscore the potential of integrating green and blue spaces into urban planning, reflecting the synergy between environmental health and human well-being. Embracing such integrative approaches stand to create more resilient, healthier, and more equitable cities globally.

Recommendation VI: Redesign energy and transport systems to integrate green-gray infrastructure to support health. Integrating green-gray infrastructure within energy and transport systems presents a pivotal opportunity not only to improve public health, environmental sustainability, and social equality, but also to synergise with NbS for enhanced planetary health in our transition to a net-zero future. Presently, conventional transportation and energy systems negatively impact air quality, exacerbate climate change, and widen health disparities. However, the application of green-gray infrastructure, aligned with a Just Transition framework, addresses these issues through a combination of natural and engineered elements. The Eco-Safe Roads Project in Nepal showcases the effectiveness of these principles, enhancing safety, engaging communities, fostering economic growth, and addressing health issues.

Recommendation VII: Place equity at the centre of the design, governance, and implementation of nature-based solutions for health. Neglecting equity in NbS planning risks exacerbating health disparities and excluding Indigenous Peoples and other communities from reaping the intended health benefits. Emphasising community engagement, land tenure rights of Indigenous Peoples, cultural relevance, and universal access to nature within NbS initiatives is crucial. Additionally, the IUCN Global Nature-based Solutions Standard, focusing on environmental conservation and social safeguards, offers a blueprint centred on equity and community involvement. The Pimachiowin Aki project in Canada illustrates how equity, particularly through Indigenous-led initiatives, generates far-reaching health, cultural, and economic benefits. Examples such as this one underscores the symbiotic relationship between cultural heritage, environment and human health.

Recommendation VIII: Empower Indigenous Peoples and under-resourced communities to safeguard human health and well-being. Acknowledging the invaluable ancestral wisdoms held by Indigenous Peoples, a paradigm shift is essential to recognize their pivotal role in ensuring collective planetary health and resilience. However, it is often the case that these communities face multifaceted health challenges, rooted in historical injustices and systemic disparities. To address this, the recent resolution at the 76th World Health Assembly underscores the urgent need to bridge these disparities, emphasising Indigenous Peoples' equal right to attain the highest standard of health and emphasises equitable access to quality health services, traditional medicine, and cultural heritage. Examples in the Peruvian Amazon, the Health in Harmony initiative in Gunung Palung, and the Arramat Project in Mali demonstrate the value of respectfully empowering Indigenous Peoples, and engaging them in decision-making and policy advocacy, to forge their own transformative paths to address health disparities and optimize health outcomes.

Recommendation IX: Support/enable youth leadership and innovation in nature and health decision-making. Engaging youth in decision-making processes is not just symbolic; it is a critical step toward fostering a fairer, more sustainable future and steering humanity toward a healthier coexistence with nature. The power of youth-led movements initiatives such as Fridays for Future and the Global Youth Position Statement on Nature-Based Solutions exemplify the potential of youth as change agents.

Empowering youth by engaging them in global decision-making processes, and interdisciplinary education programs like One Health Young Leaders and Communicators initiative and providing financial support, such as the Global Youth Climate Action Fund, proves instrumental in fostering innovative solutions. Youth platforms like YOUNGO or Youth4Nature demonstrate the significance of integrating youth perspectives into decision-making forums.

Recommendation X: Finance inclusive nature-based solutions that prioritize health outcomes.

The existing global finance gap, estimated at over US\$700 billion for fully harnessing the potential of NbS, requires immediate attention and innovative approaches. Green bonds, exemplified by the success of the Netherlands' Sovereign Green Bond, offer a robust method to secure funding for NbS projects that prioritize both environmental and health benefits. Blended finance strategies, illustrated through the Meloy Fund for Sustainable Community Fisheries, effectively mitigate risks and attract private sector capital to support projects critical for global food security, nutrition, and environmental health. Furthermore, insurance policies tailored for natural assets, as seen in the Mesoamerican Coral Reef insurance, significantly enhance disaster resilience, thereby safeguarding public health in the face of climate-change induced disasters. By employing and tailoring financing mechanisms, and aligning them with the United Nations Sustainable Development Goals the potential of NbS can be more fully realized.

Conclusion: The WHO-IUCN Report on NbS for Health underscores the critical relationship between human health and the environment, emphasising the reciprocal impacts of the triple planetary crisis on human health and the adverse effects of poor health on ecosystems. The report stresses the urgency of integrating NbS into healthcare, food systems, urban planning and financial mechanisms, among others. It also urges active collaboration among key actors encompassing governments, international organizations, Indigenous Peoples, civil society, academia, the health sector and healthcare professional, the private sector, and the broader public whose collaborative synergy can be a pivotal driver in successfully integrating NbS solutions. This is a pivotal moment to act collectively, realizing the potential of NbS in nurturing a planet that sustains life and health for the future.

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