



# Biodiversity and Health:

## *CBD SBSTTA-27/9*

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#### PREVENTING DISEASE THROUGH HEALTHY ENVIRONMENTS

A global assessment of the burden of disease from environmental risks

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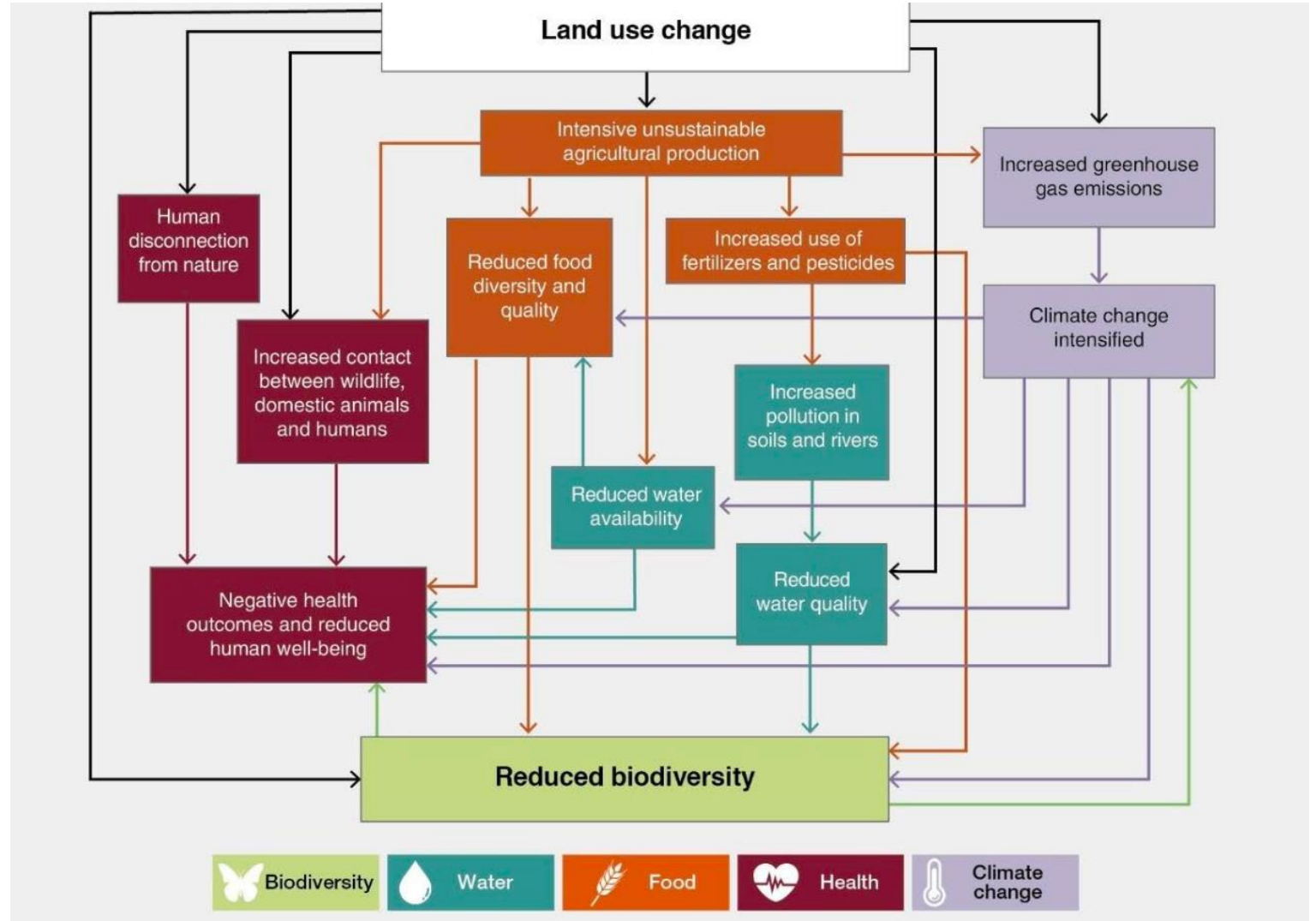


**Biological Diversity (Art. 2)** “...**variability** among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems **and** the **ecological complexes** of which they are part; this includes **diversity** **within** species, **between** species, and **of** ecosystems.

- Nature loss (& climate change) are public health emergencies.
  - They drive disease outbreaks, food insecurity, and climate-related disasters
- 1 in 4 premature deaths linked to preventable environmental factors.

**Health is our most powerful argument and  
Nature our most powerful ally!**

# Pressures & Interconnections (IPBES Nexus)





# CBD Biodiversity & Health Decisions Key Milestones (2010–2026)

- **2010:** COP 10 (Nagoya): Strategic Plan adopted with Aichi Target 14, linking ecosystems to health, livelihoods and well-being.
- **2012:** COP 11 (Hyderabad): Requested establishment of a Joint Work Programme with WHO.
- **2014:** COP 12 (Pyeongchang), Decision XII/21: Welcomed progress on CBD–WHO State of Knowledge Review; invited integration of biodiversity–health linkages in NBSAPs; requested work on indicators.
- **2016:** COP 13 (Cancún), Decision XIII/6: Took note of SoK Review key messages; welcomed CBD–WHO MoU; strengthened Joint Work Programme; established Interagency Liaison Group; requested One Health guidance and metrics.
- **2018:** COP 14 (Sharm El-Sheikh), Decision 14/4: Welcomed biodiversity-inclusive One Health Guidance; adopted Annex on Biodiversity & Health; requested indicators and a draft Global Action Plan.
- **2022:** COP 15/II (Montreal): Decision 15/29 encouraged further integration of One Health; Decision 15/4 adopted KMGBF, recognizing One Health and other holistic approaches.
- **2024:** COP 16 (Cali), Decision 16/19: Adopted Global Action Plan on Biodiversity & Health (23 voluntary actions); called for strengthened work on indicators, awareness, cooperation; welcomed One Health Guidance.
- **2026:** COP 17 (Expected): To consider SBSTTA-27 outputs, including biodiversity–health indicators aligned with the KMGBF.

# Biodiversity and human health

**Health** "is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity".

**Biological diversity** (biodiversity) is "the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems."

**Biodiversity underpins ecosystem** functioning and the provision of goods and services that are essential to human health and well being.

The links between **biodiversity and health** are manifested at various spatial and temporal scales. Biodiversity and human health, and the respective policies and activities, are interlinked in various ways.



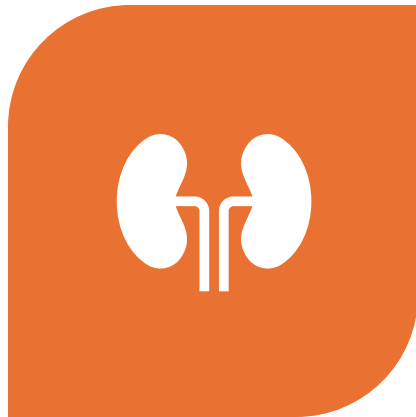
**Direct drivers** of biodiversity loss include land-use change, habitat loss, over-exploitation, pollution, invasive species and climate change. Many of these drivers affect human health directly and through their impacts on biodiversity.

**Women and men** have different roles in the conservation and use of biodiversity and varying health impacts.

**Human population** health is determined, to a large extent, by social, economic and environmental factors.

**The social and natural** sciences are important contributors to biodiversity and health research and policy. Integrative approaches such as the Ecosystem Approach, Eco-health and One Health unite different fields and require the development of mutual understanding and cooperation across disciplines.

# Nutrition & Water



2 BILLION PEOPLE SUFFER FROM  
ANEMIA (WHO)



LOSS OF AGROBIODIVERSITY →  
MALNUTRITION, NCD RISKS



FORESTS & WETLANDS FILTER  
WATER; UNSAFE WASH: 1.4M  
DEATHS (WHO)

# Air, Heat & Mental Health



URBAN GREENING LOWERS  
OBESITY, CARDIOVASCULAR &  
MENTAL HEALTH BURDENS



GREEN SPACE REDUCES  
DEPRESSION (OR 0.89), ANXIETY  
(OR 0.94)



GREEN/BLUE SPACE REDUCES  
HEAT-RELATED HOSPITAL  
ADMISSIONS

# Infectious Diseases & Spillover risks

## Ecosystem integrity regulates disease

- Healthy ecosystems buffer pathogens and vectors
- Degradation increases human–animal–livestock contact

## Zoonotic risk

- >60% of emerging infectious diseases are zoonotic
- Land-use change, fragmentation, and wildlife trade are key drivers

## Case examples

- Deforestation linked to higher malaria incidence
- Forest clearing contributed to Nipah virus outbreak in Malaysia

## Primary prevention

- Maintaining ecosystem integrity reduces spillover risk
- Prevention at source is more cost-effective than outbreak response



# Medicines & Traditional Knowledge Systems

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~60,000 SPECIES USED FOR  
MEDICINAL/NUTRITIONAL  
PURPOSES (WHO)



>50% OF MODERN CANCER  
DRUGS FROM NATURAL  
COMPOUNDS



BIODIVERSITY SUSTAINS  
TRADITIONAL MEDICINE  
SYSTEMS

# Global Action Plan on Biodiversity and Health

The plan proposes voluntary actions...to mainstream biodiversity and health interlinkages

## General Actions

- Knowledge sharing
- cross sectoral coordination
- Intergenerational equity
- policy coordination and mainstreaming



## Actions for mainstreaming B&H linkages in the implementation of the KMGBF

**Land and sea use** (T 1, 2, 3)

Species management (T 4, 5, 9)

**Invasive alien species** (T 6)

**Pollution** (T 7)

**Climate change** (T 8)

**Agriculture, aquaculture, fisheries, and forestry** (T 10)

Nature's contributions to people (NCPs) (T 11)

**Urban areas** (T 12)

**Access and benefit-sharing**, biosafety, and biotechnology (T13, 17)

Mainstreaming (T 14, 15, 18)

Consumption (T 16)

Means of implementation (T 19, 20)

Knowledge and engagement of people (T 21, 22, 23)

# Draft Recommendation

## Inputs

### WHO Pandemic Hub

- CITES Trade Database
- Global Health Security Index
- Indigenous health metrics

## Assessment

- Useful but not biodiversity–health specific
- Need links to drivers, ecosystems
- FPIC for Indigenous metrics

## Timeline

- Jul 2025: work launched
- Sep 2025: expert consultation
- Nov–Dec 2025: peer review
- COP 17 (Oct 2026): draft indicators

## Awareness & Cooperation

- Webinar: 339 participants
- Awareness materials & COP 16 video
- Quadripartite discussions

## Draft Recommendations

- Finalize indicators for COP 17
- Share lessons via CHM
- Welcome IPBES biodiversity–water–food–health assessment
- Continue cooperation with WHO, Quadripartite, others