The integration of Biodiversity and Health in the SDGs

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Three objectives:

1. **Conservation** of biological diversity

2. **Sustainable use** of its components

3. **Fair and equitable sharing** of benefits arising from the sustainable use of genetic resources
What is Biodiversity?

Biological Diversity (Art. 2)

“…includes all plants, animals, microorganisms, the ecosystems of which they are part, and the diversity within species, between species, and of ecosystems.”

Decision V/4 para 11
Strategic Plan for Biodiversity 2011-2020: Vision

By 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people.
5 strategic goals and 20 Targets

Mission
Take effective and urgent action to halt the loss of biodiversity in order to ensure that by 2020 ecosystems are resilient and continue to provide essential services, thereby securing the planet’s variety of life, and contributing to human well-being, and poverty eradication.

Target 14: ...Ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded...
### Relevance of the Strategic Plan to the health sector

<table>
<thead>
<tr>
<th>Biodiversity and Health Topic</th>
<th>Health Sector</th>
<th>Biodiversity Sector (Aichi Biodiversity Target)</th>
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<td><strong>1. Food</strong></td>
<td><strong>Direct responsibility</strong></td>
<td>T1; T14 T2 (poverty reduction) T4 (sust. production/consumption) T5 (reduce habitat loss) T6 (sustainable harvesting) T7 (sustainable management) T13 (genetic diversity)</td>
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| Species, varieties and breeds incl. domesticated and wild components | • Recognize and promote dietary diversity, food cultures and their contribution to good nutrition  
• Recognize synergies between human health and sustainable use of biodiversity (e.g. moderate consumption of meat)  
**Indirect responsibility:**  
• Promote sustainable production harvesting and conservation of agricultural biodiversity | |
| Diversity of diet | | |
| Ecology of production systems | | |
| Total demand on resources | | |
| **2. Water**                 | **Direct responsibility:** | T1; T14 T5 (reduce habitat loss) T8 (reduce pollution) T9 (invasive alien species) T11 (protected areas) |
| Water quantity, quality and supply | • Integrate ecosystem management considerations into health policy  
**Indirect responsibility:**  
• Promote protection of ecosystems that supply water and promote sustainable water use | |
| **3. Disease regulation**    | **Direct responsibility:** | T1; T14 T2 (poverty reduction) T5 (reduce habitat loss) T8 (reduce pollution) T9 (invasive alien species) |
| Ecosystem integrity and diversity | • Integrate ecosystem management considerations into health policy  
**Indirect responsibility:**  
• Promote ecosystem integrity | |
| **4. Medicine**              | **Direct responsibility:** | T1; T14 T2 (poverty reduction) T5 (reduce habitat loss) T13 (genetic diversity) T16 (Nagoya Protocol) T18 (local/traditional knowledge) |
| Traditional medicines        | • Recognize contribution of genetic resources and traditional knowledge to medicine  
**Indirect responsibility:**  
• Protect genetic resources and traditional knowledge  
• Ensure benefit sharing | |
| Drug development             | | |
| (genetic resources and traditional knowledge) | | |
| **5. Physical, mental and cultural well-being** | **Direct responsibility:** | T1; T14 T2 (poverty reduction) T11 (protected areas) T12 (preventing extinctions) T13 (genetic diversity) T18 (local/traditional knowledge) |
| Physical health benefits     | • Integrate ‘value of nature’ into health policy  
**Indirect responsibility:**  
• Promote protection of values, species and ecosystems | |
| Benefits for mental health   | | |
| Cultural/spiritual enrichment | | |
| **6. Adaptation to climate change** | **Indirect responsibility:** | T1; T14; T15 (ecosystem resilience) T3 (reduce negative subsidies) T5 (reduce habitat loss) T8 (reduce pollution) T10 (vulnerable ecosystems) |
| Ecosystem resilience and Genetic resources (value of ‘options’ for adaptation) | • Promote ecosystem resilience and conservation of genetic resources | |
Mid-term review of progress

1. Moving away from Target
2. No progress towards target
3. Progress towards target, but not to achieve it
4. On track to achieve Target
5. On track to exceed Target

No clear evaluation
Insufficient information to evaluate progress
Co-benefits of PAs

- Water treatment plants
- Flood control systems
- Carbon sinks
- Traditional Medicines
- Food and nutrition security
- Trade & Livelihoods

PAs more than resources → Systems

More than bugs & animals → Life supporting Services
Drivers of biodiversity loss – health impacts

• **Land-use change:** Leading driver of disease emergence in humans; reduction in resiliency, elevated climate change impacts

• **Overexploitation and Destructive Harvest:** Loss of ecosystem services and subsistence food sources; global epidemics through spread of disease

• **Pollution:** Bioaccumulation of toxins in food chain; respiratory diseases; chemical exposures; changes to microbial communities and development of antimicrobial-resistant infections

• **Invasive alien species:** Changes in species competition and displacement, leading to impaired ecosystem functions, e.g. food and water sources; disease introduction to humans, native wildlife and agricultural species

• **Climate Change and Ocean Acidification:** Shifts in species and pathogen range; extreme weather disasters; food security threats
Political will, capacity, resources, competing interests...
Ongoing Social Challenges

- Vulnerable groups are also those most reliant on biodiversity & ES and least covered by social protection mechanisms (e.g. health insurance).
- Few resources for combating global environmental change & little voice in decision making.
- Facing environmental changes driven by economic processes in other parts of the world.
- Especially vulnerable to disease risk as a result of multiple stresses.
Toward the SDGs

- Food Security
  - Crop diversity
  - Pest resistance
  - Pollination
  - Medicinal uses
  - Protective factors

- Governance, cultural, & Equity issues
  - Access to resources for livelihoods

- Biodiversity
  - Bio-fuels
  - Carbon sequestration
  - Wetland & soil regulation
  - Crop diversity

- Energy
  - Bio-fuels
  - Carbon sequestration

- Clean Water
  - Wetland & soil regulation

- Human Health
  - Medicinal uses
  - Protective factors

- Access to resources for livelihoods

- Protective factors

- Biodiversity

- Access to resources for livelihoods

- Human Health

- Food Security

- Energy

- Clean Water
Global Opportunities

Raise Awareness

Decision Making

Building Capacity

Partnerships

Connecting Global Priorities: Biodiversity and Human Health
A State of Knowledge Review

Forthcoming CBD-WHO flagship publication
The Convention on Biological Diversity (CBD) and the World Health Organization (WHO) embarked on this ambitious project in October 2016. Following a decision adopted at the 38th session of the Conference of the Parties to the CBD calling for the establishment of a joint work programme on biodiversity and human health jointly led by these two UN agencies. The CBD and WHO have since been working with experts from Bioversity International, COHAB Initiative, DIVERSITAS, Earthwatch Institute, the Food and Agriculture Organization of the United Nations (FAO), FIOCRUZ, Harvard School of Public Health, IUCN, United Nations University (UNU), WFP, and Conservation International, Health and Ecodynamics. Analysis of Linkages (HEALTH), and many other organizations and experts to prepare a state of knowledge review on Biodiversity and human health.

Biodiversity for Sustainable Development
PROSPECTING KOREA 2014

Ministério da Saúde
FIOCRUZ
Fundação Oswaldo Cruz

Pan American Health Organization
World Health Organization
Bioversity International
UNIVERSITY
Unique Mainstreaming Opportunities

• Great motivator for policy change
  – Holistic, inclusive, cross-sectoral approaches
  – Strengthen local capacity
  – Link policies to PAs as a delivery mechanism for health
  – Promote ABS of genetic resources
  – Ensure bd values are conserved within and outside Pas
  – Evaluate and consider implications of ecosystem degradation for EID
  – Raise awareness of risks of EIDs from wildlife
  – Raise awareness & maximize co-benefits of Pas
  – Many more!
Thank You

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