

The Crucial Importance of Linking Health and Biodiversity

Jean Perras





Health and Biodiversity

Facts (IUCN):

- 1.6 million of species known (potential 12 - 118 M)
- The abundance of species has declined by 40% between 1970 and 2000
- Species present in rivers, lakes and marshlands have declined by 50%
- In the North Atlantic, fish have declined by 66% in the last 50 years



Health and Biodiversity

Facts (IUCN):

- Since 2000, 6 million hectares of primary forest have been lost each year
- In the Caribbean region, hard coral cover has declined from 50% to 10% in the last three decades
- Of the world's 5,490 mammals, 79 are extinct or extinct in the wild, with 188 critically endangered, 449 endangered and 505 vulnerable

Health and Biodiversity

Facts:

- *New Census of Marine Life*: 6000 new species (lots of viruses, bacterias, etc.)
- Several thousands of plant species are used in traditional and modern medicine
- Majority of human beings use traditional medicine – its cheaper, has proven efficiency over centuries

Health and Biodiversity

Key issues:

- Rapid change in biodiversity since WWII
- Emerging infectious diseases
- Disappearance of medicinal plants
- Disappearance of bees and their role of pollinators
- Disappearance of other unknown species



Health and Biodiversity

Key issues:

- On-going issue of food security
- Climate change is there to stay
- Children health indicators – children are more at risk
- Fertile soil loss



Health and Biodiversity

Key issues:

- Need to preserve for future generation species that now do not seem to be important – might need in future for vaccine, food, food supplement
- As important as studying relationship between biodiversity and economics



Health and Biodiversity

Key issues:

- Lost of species are found in forests, in bottom of seas, coral reefs – if we do not care for them, species become extinct.
- How will we create new medicine with extinct species?
- How will we tackle poverty and health issues?



Health and Biodiversity

Key issues:

- Losing species=losing the fight against present/future diseases + capacity to research
- Disruption and changes in human health – i.e. endocrine disrupters = changes in wildlife and human health
- Biodiversity loss due to change in ecosystems brings changes in human condition and economy



Health and Biodiversity

- Pesticides, coolants, lubricants, electric components, plastic, flame retardant, soft toys all have impact on human reproductive system, neurological system.
- Also impact on environment
- When insufficient scientific evidence is present, it is important to apply the precautionary principle



Health and Biodiversity

Why we need to protect our biodiversity:

- Provides food, water, wood (building/heating)
- Essential to food security
- Regulates climate, watersheds
- Part of the economy – tourism, medicinal
- Part of spiritual, recreational and educational world
- Integral part of mitigation of natural disasters



Health and Biodiversity

Why we need to protect our biodiversity:

- Clean water (filter)
- Carbon sequestration
- Loss of plant and animal biodiversity hampers our present and future capacity to heal certain diseases (old and future)
- It could create new diseases



Health and Biodiversity

Why we need to protect our biodiversity:

- Prevent natural disasters and associated costs
- It could increase food insecurity
- Fundamental for people who depend on biodiversity and environment to survive
- To sustain life



Health and Biodiversity

Causes:

- Local/regional land use planning
- Urban sprawl
- Overutilization of surface and groundwater
- Overfishing in oceans
- Climate change



Health and Biodiversity

Causes:

- Invasion of alien species
- Overutilization of pesticides
- Genetic modification to organisms
- Overutilization of petroleum base substances
plastic
- Unsustainable consumption

Health and Biodiversity

Causes:

- Exposures to contaminants - residues of chemicals found in fruits, vegetables, grains, beverages, meats, dairy products, drinking water, ground water, surface water, and the impact on health

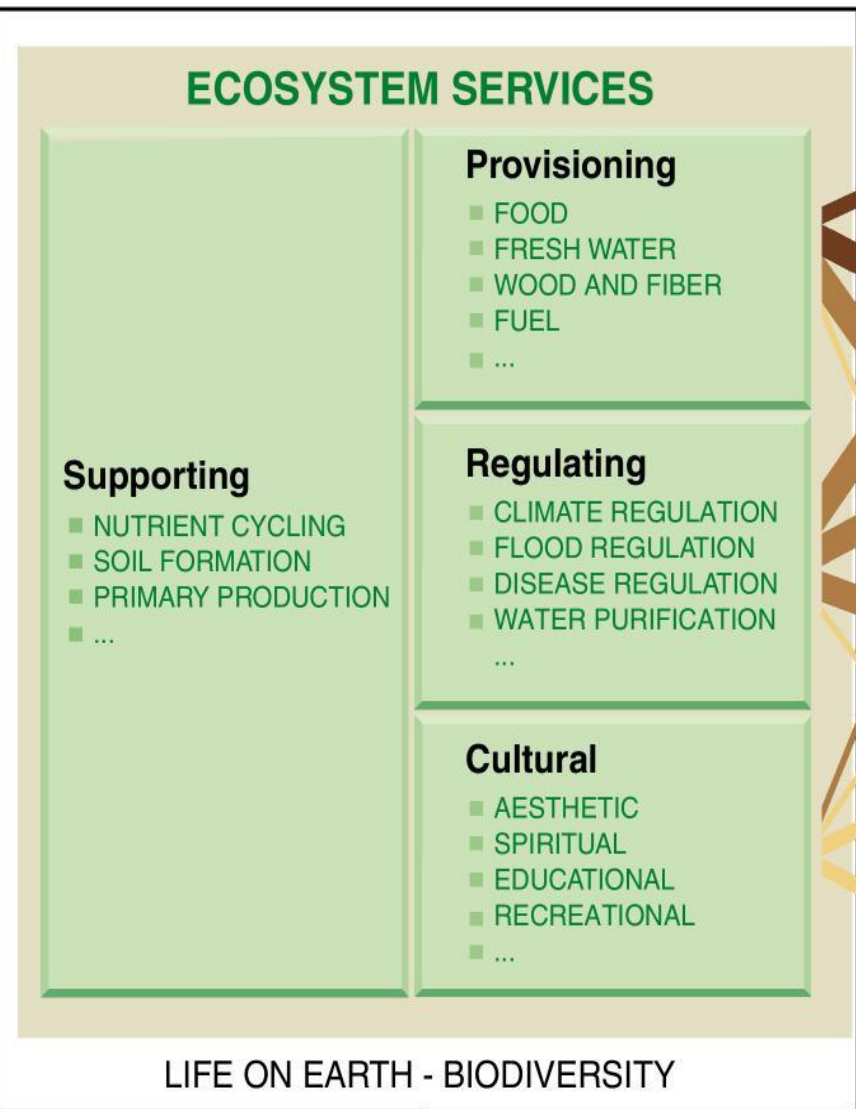


Health and Biodiversity

Causes:

- Climate change is set to be one of the major drivers of species extinctions in the 21st century
- More than a third of plant and animal species could be at risk with changes in climate

CONSTITUENTS OF WELL-BEING



ARROW'S COLOR
Potential for mediation by socioeconomic factors

- Low
- Medium

ARROW'S WIDTH
Intensity of linkages between ecosystem services and human well-being

- Weak
- Medium

Source: Millennium Ecosystem Assessment

Health and Biodiversity

Solutions:

- Need a comprehensive long-term strategy
- Conservation and sustainable use
- Precautionary principle
- Science is needed – more research
- Coordination is essential
- Full adherence to *Convention on biodiversity*



Health and Biodiversity

Solutions:

The Convention on Biodiversity has three main objectives:

1. To conserve biological diversity
2. To use biological diversity in a sustainable way
3. To share the benefits of biological diversity fairly and equitably.



Health and Biodiversity

Solutions:

- Protecting/mitigating by all levels of governments, universities, research centers and private sector
- Strategic alliance between health and environment is fundamental
- Policy, research, and development strategy : creating a sustainable future



Health and Biodiversity

Solutions:

- Leadership from all levels of government: enlightened political decisions
- Legislate/public policy/rules
- Cities and villages need to take leadership on land-use planning and sustainable development



Health and Biodiversity

Solutions:

- People's participation - Utilization of internet - new social medias
- Mobilisation and partnership
- Take time to think
- Educate and communicate – formal and informal
- Bring back biodiversity to the urban areas



Health and Biodiversity

Solutions:

- Pesticide-free and GMO-free agriculture
- Less garbage, more recycling and composting
- More urban transit/other type of *slow* mobility
- New energy renewable – solar, geothermal wind



Health and Biodiversity

Solutions:

- Need new indicators for public health decision making process – i.e. link to biodiversity
- Need to integrate environment, society and economics in all decisions
- Watershed management must become a norm
- Water conservation is fundamental
- Set aside protected areas



Health and Biodiversity

Conclusion:

- Biodiversity is **life** and **health**
- We cannot live without biodiversity
- Must have a **global** and **integrated** approach
- Must have a **long-term perspective**
- **Integrate** the world of **health** and the world of **environment**



Health and Biodiversity

Conclusion:

- Must better understand relationship between biodiversity and health
- Need **more research** and joint approach: biodiversity/health issues have no borders!
- **Rethink** how we use chemicals
- **Replace** plastic/chemical (pesticides) with plant material and biodegradable products



Health and Biodiversity

- Biodiversity - is **essential** for **human health**
- It encompasses ecological, social, economic, scientific, educational, cultural, recreational, and aesthetic values
- Necessary to the **sustainable future** for all.



Health and Biodiversity

CEPA tool kit

- The toolkit offers knowledge and skills with fact sheets, checklists and practical examples from all over the world.
- <http://www.cbd.int/cepa/toolkit/2008/cepa/index.htm>



Health and Biodiversity: need to push together!

