

One Health Target for the Post-2020 Biodiversity Framework

Proposed successor to Aichi Biodiversity Target 14 on Ecosystem Services (“*By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities and the poor and vulnerable.*”)

Current Aichi Biodiversity Target 14 broadly refers to health and well-being. A more direct and measurable link to health would help convey the explicit benefits of biodiversity to the health and development sector, reinforcing biodiversity mainstreaming. Currently, health sector targets are overwhelmingly reactive and largely overlook the contribution of environmental degradation to ill health and well-being; thus, it is crucial the biodiversity community make these links apparent to show relevance. The shared drivers of biodiversity loss and disease emergence, as well as other poor health outcomes, create opportunities for health and biodiversity community to meaningfully collaborate (Karesh et al. 2012; WHO-CBD 2015), including toward early warning systems and risk reduction for health security (SDG target 3.d).

The “One Health” approach recognizes the connections between the health of humans, animals and the environment. Without this integrated perspective, biodiversity’s essential contributions are widely under-valued. Improved measurements that relate the human cost of diseases, in particular vector-borne diseases like dengue, malaria, which accounts for more than 200 million cases worldwide (WHO 2019), will focus on key ecosystem factors, including biotic (e.g. community composition and abundance) as well as abiotic factors (Keith et al. 2015).

At species and ecosystem scale: For the latter, tools like the IUCN Red List of Ecosystems, which assesses the risk of ecosystem collapse (analogous to species extinction), that could lead to loss of ecosystem services including the maintenance of human health, can be used to assist countries and regional bodies in prioritizing protection status. In an assessment of priority conservation strategies to protect threatened ecosystems (Ferrer-Paris et al. 2019, *Conservation Letters*), nearly all actions would yield directly beneficial outcomes for health promotion (via water security and quality, prevention of soil erosion and resulting injuries, etc.)

Draft indicators:

- Assessment, protection and restoration of ecosystems designated as threatened under the Red List of Ecosystems
- Number of countries with biodiversity considerations integrated into relevant national multisectoral strategies (e.g. National Action Plans for Health Security)
- Number of countries with health impacts – and subsequent economic impacts - included as part of environmental impact assessments and safeguard processes
- Trends in habitable freshwater systems to assess water availability and quality
- Assessment of country-level ecosystem service values (Costanza et al.)
- Assessment of the volume and identity of wildlife involved in legal and illegal trade
- Number of invasive alien species introduced that could decrease the health of both ecosystems and humans

The ‘One Health’ framing of this indicator will promote clarity of purpose for human and animal health sector engagement and relevance in National Biodiversity Strategies and Action Plans,

and the alignment with national One Health coordination bodies will promote clear pathways for biodiversity mainstreaming.

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Key References:

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