

IPBES Biodiversity Status Assessment Summary

In May 2019, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services ([IPBES](#)), a body created and supported by United Nations member states, released its [Summary for Policymakers](#) of the forthcoming *Global Assessment Report on Biodiversity and Ecosystem Service*. **Over 450 expert authors and contributors** synthesize data and information from **15,000 scientific and government sources** to determine the status of biodiversity around the world. The top-line results are sobering and a call-to-action, including:

- **Up to 1 million species are threatened with extinction.** Scientists estimate there are about 8 million species on the planet and 1 in 8 are threatened with extinction now or in the coming decades. This is estimated to be tens to a thousand times higher than normal background extinction rates.
- **Six categories of threats are responsible for the threat of extinction and decline of natural systems.** Those threats are, from most- to least-important (Figure 1):
 - *Land- and sea-use change*, altering natural habitats and processes so that native biodiversity cannot be sustained;
 - *Direct exploitation of species*, through hunting, fishing, or other forms of direct harm;
 - *Climate change*, leading to the shifting or disappearance of fundamental climatic niches;
 - *Pollution*, including plastics, heavy metals, and fertilizers;
 - *Invasive species*, with economic trade responsible for much of the threat; and
 - *Other threats*, such as biotic homogenization as monocultures are created.
- **Over 75% of terrestrial environments and 66% of marine environments have been significantly altered by humans.** Agriculture and urban expansion are the biggest drivers of terrestrial land-use change; more than one-half of marine environments are subject to industrial fishing; and pollution and invasive species are pervasive across both biomes.
- **The numbers of individuals of wildlife and the spatial extent of habitats are in decline.** As a result of the threats and landscape change, species are at risk of extinction and generally declining at alarming rates. This means a >20% average decline in population sizes of native species (including an estimated 82% decline of mammal biomass), and habitats like live coral reefs have declined by 50%.

The biodiversity declines have serious consequences for human well-being, such as:

- **Human-caused degradation has reduced the productivity of nearly ¼ of the land surface, and half a trillion dollars of global crops are at risk from pollinator loss.** Although we can currently produce enough to feed the human population, population growth combined with ongoing degradation threatens global food security. Replacing declining ecosystem services will be cost prohibitive.
- **One-third of marine fisheries are overfished, 60% are fished at capacity, and just 7% are fished below capacity.** At these rates, fisheries collapse and loss of important community diversity that buffers current and future environmental change are significant threats to a major source of nutrition.
- **Most Aichi Biodiversity Targets will be missed, and half of Sustainable Development Goal metrics are declining.** These consensus-based metrics of natural and social system goals illustrate the broad consequences of the declining status of our planet's systems.

Last, and critically, the report describes that **nature can be conserved while meeting societal goals, but will require transformative change that builds on synergies between sustainability and growth** (Figure 2).

Terrestrial and marine ecosystems must be protected, but many species will also depend on restoration to prevent their extinction. Policies that address the ultimate drivers of global change by targeting key leverage points can and must be developed and implemented to effect the necessary transformative change.

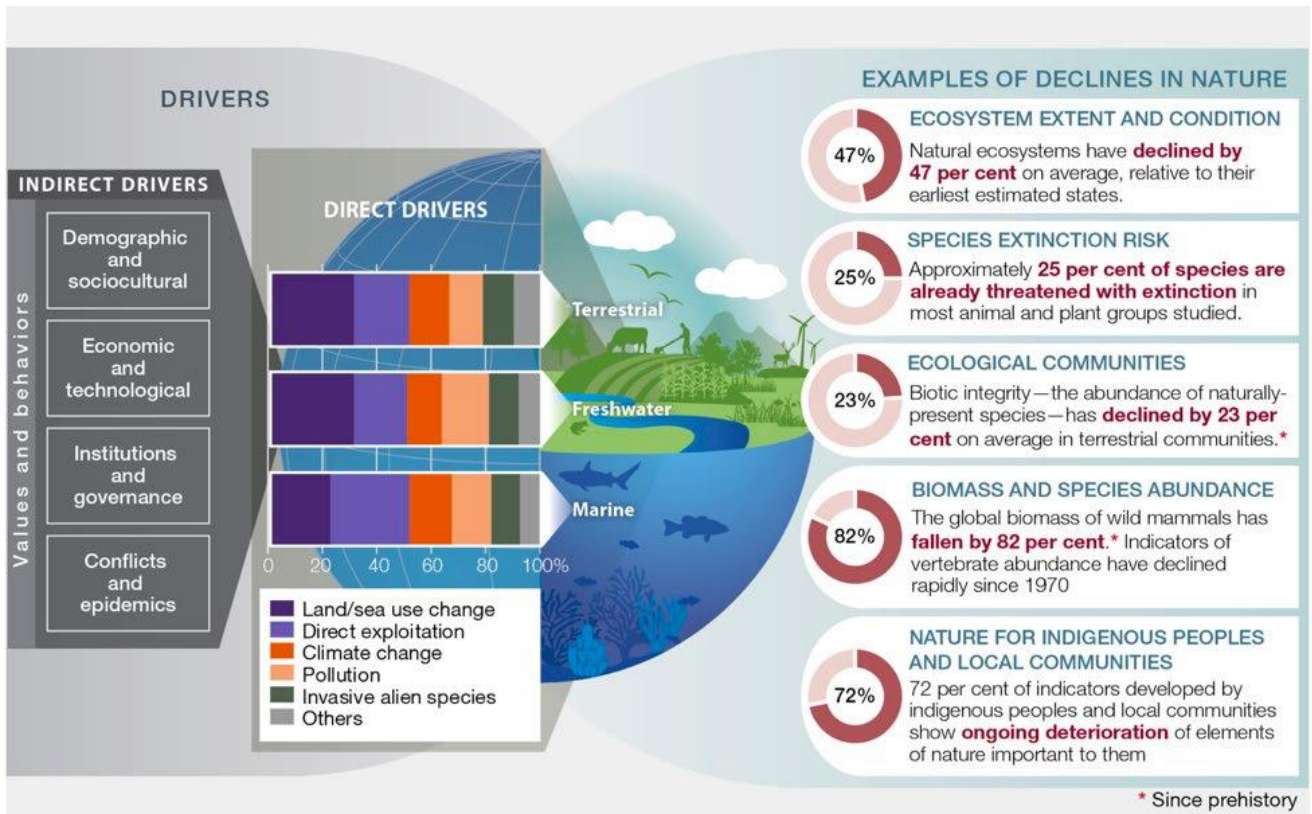


Figure 1. Declines in biodiversity and ecosystem processes are driven by a few well-known causes. (IPBES)

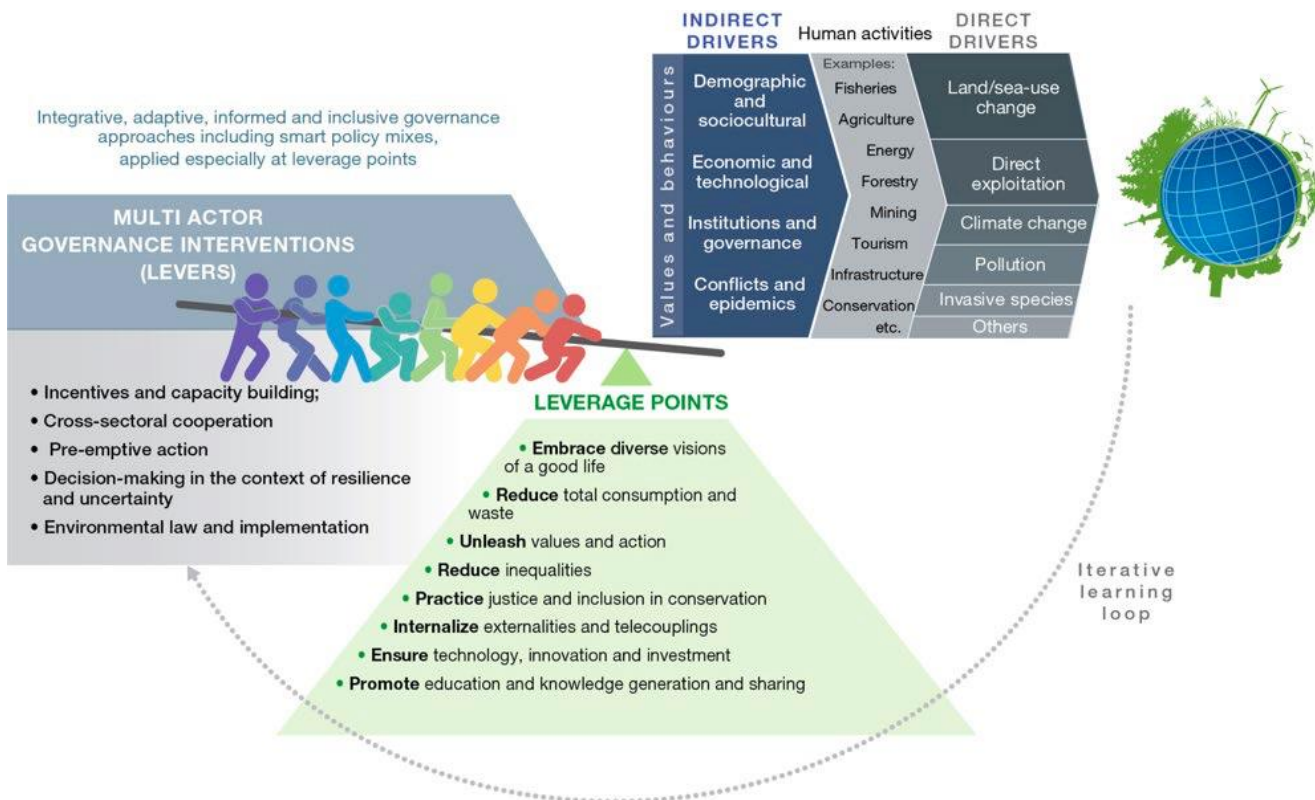


Figure 2. Nature can be conserved while meeting societal goals if human systems are transformed in key areas that integrate synergies across leverage points. (IPBES)