

“Biodiversity is not a luxury, but a fundamental pre-requisite for our well-being...It is the foundation of our food systems and our health. We cannot afford to overlook our dependence on Nature or take her abundance for granted.”

Dr Cristiana Paşca Palmer, Executive Secretary of the Convention on Biological Diversity. 2019 (1)

Sir David Attenborough explores the biodiversity crisis as 1 million plant and animal species face extinction. Click here to view the BBC Extinction The facts.

<https://www.bbc.co.uk/iplayer/episode/m000mn4n/extinction-the-facts>

Introduction to the problem and scale

- Research has established nine planetary boundaries, which if crossed, could generate irreversible environmental changes and drive the planet into a much less hospitable state. In the case of biodiversity loss, we have not only crossed the boundary but have entered a high-risk zone. (2)
- Global populations of mammals, birds, amphibians, reptiles and fish have decreased on average by 68% between 1970 and 2016. (3)
- Despite broad environmental policy efforts, species extinction rates are increasing. (4) 42% of terrestrial invertebrates, 34% of freshwater invertebrates, and 25% of marine invertebrates are considered at risk of extinction. Around 1 million plant and animal species are now threatened with extinction. (5)
- Continued rates of biodiversity loss may lead to the extinction of 40% of the world's insect species over the next few decades. (6)
- Insects provide pollination, natural pest control, and nutrient recycling and are critical to the functioning and stability of ecosystems. (7)
- More than 75% of global food crops rely on insect/animal pollination. (8)
- Between \$235 billion and \$577 billion in annual global crop output is at risk as a result of pollinator loss. (9)
- 75% of humanities' food is currently generated from only 12 plants and 5 animal species. (10)

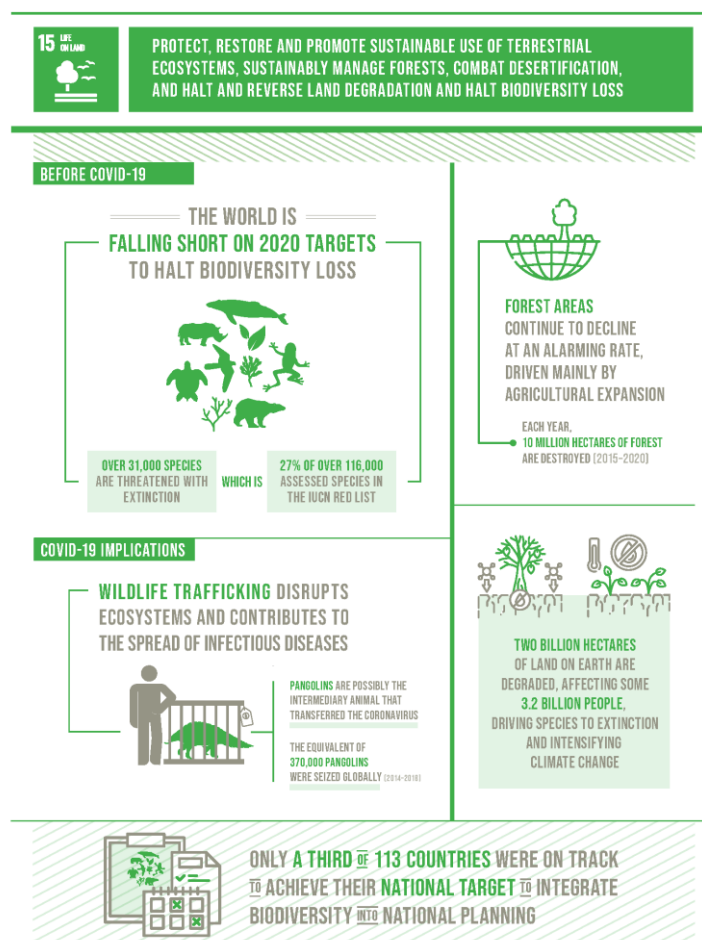
Link to intensive animal farming

- The UN Convention to Combat Desertification (UNCCD) states that livestock production is “perhaps the single largest driver of biodiversity loss.” (11)
- Industrial agriculture’s huge demand for animal feed has fuelled the intensification of crop production, leading to biodiversity loss. (12)
- Intensive crop production uses large amounts of pesticides, decimating the insects on which farmland birds depend for food. The use of insecticides and herbicides has also played a major role in the decline in pollinators, such as bees. (13) (14)
- Intensive farming and its monocultures, lead to the loss of abundance and diversity of the wildflowers on which pollinators feed.
- Plant and animal species are also negatively impacted by the loss of hedgerows due in part to changes in farming practices. (15)

- Thousands of plant and animal species are threatened within the Amazon and Cerrado as the agricultural industry expands for beef and soy production.
- Approximately 420 million hectares of forest have been lost due to change in land use since 1990. With the rate of deforestation estimated at around 10 million hectares per year. (16)
- Over 90% of the world’s fish stocks are either overfished (33.1%) or fished to maximum sustainable levels (59.9%). (17)
- Almost 70% of landed forage fish are processed into fish meal and fish oil (FMFO) representing 20% of the world’s total catch of wild fish (18) which in turn is used to feed cattle, pigs, and farmed fish such as salmon, trout and bass.
- Hypoxic zones (“dead zones”) in oceans refers to a state of reduced oxygen in the water. These can occur naturally, but scientists are concerned with their increased size caused by human activity. The primary cause is nutrient pollution which is threatening marine life. (19)
- Since the 1960’s, low oxygen areas in the open ocean has increased by 4.5 million km² with over 500 additional sites located in other water bodies. (20)
- Reducing meat and dairy consumption would enable cropland to be farmed less intensively and halt the expansion of farmland into wildlife habitats, allowing biodiversity to be restored.

Link to the relevant SDG’s

- **SDG 15:** Life on Land: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss. (21)



<https://unstats.un.org/sdgs/report/2020/>

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