



Association pour la santé environnementale du Québec  
Environmental Health Association of Québec

## **ECO-JOURNAL**

September 2020

*Julien Lanouette-Babin*

### **Species loss in the world**

#### **What are the factors causing this phenomenon? Are humans at risk?**

All around the world, many species live together in diverse areas and they are affected by different environmental conditions (climate, vegetation, topography, etc.). But for decades, we have witnessed and deplore the loss of several species, both animal and plants, and the situation does not appear to be able to be reversed. So, how can we explain this loss of life? According to recent UN reports, the contributing factors are: (1) changes in land and sea use; (2) direct exploitation of organisms; (3) climate change; (4) pollution and (5) invasive alien species. In this article, I will cover the five factors that are responsible for the majority of this loss on Earth.

The first two factors are related to human activities. These activities have left the Earth struggling to sustain life, due to the demands that humans have on

**Association pour la santé environnementale du Québec / Environmental Health Association of Québec  
(ASEQ-EHAQ)**

C.P. 364, Saint-Sauveur, Québec J0R 1R0 / P.O. Box 364, Saint-Sauveur, Québec J0R 1R0

☎ 514-332-4320 ☎ 450-227-4143 bureau@aseq-ehaq.ca / office@aseq-ehaq.ca

[www.aseq-ehaq.ca](http://www.aseq-ehaq.ca) / [www.EnvironmentalSensitivities.com](http://www.EnvironmentalSensitivities.com) / [www.ecoasisquebec.ca](http://www.ecoasisquebec.ca)



the planet. A major publication released in 2005 reported diversity loss between 10% and 30% of mammals, birds and amphibian species which were threatened with extinction. One cause of this extinction was the increased land use for agriculture or for building cities that resulted in habitat loss and a degradation of habitats for native species. Other causes were overexploitation and unsustainable use of resources; in other words, this translates to harvesting renewable resources (wild animals, agricultural fields, fish stocks, forests, etc.) in a non-sustainable way. These two factors that contribute to species loss, is still present in Canada (refer to the last report of the World Wildlife Fund).

Factors 3 and 4 are interlinked. The increased load of nutrients through chemical fertilizers and the use of pesticides, which end up in estuaries and coastal waters cause increasingly larger harmful algal blooms, dead zones and fish kills. But these are not the only types of contaminants that are introduced into the environment that cause adverse changes. Pollution can also take the form of other chemical substances or energy (noise, heat, light) and is found in multiple forms including in the air and from plastic, thermal, radioactive or visual pollution. One of these polluting substances, carbon dioxide, causes an increase in the acidity of the ocean and has effects on marine ecosystems. Additionally, this gas is related to global warming and climate changes. These two phenomena cause heat and drought stress on organisms and result in loss of animal and plant species.

The explanation of the last factor of species loss is explained as follows: an invasive species is a nonindigenous species (that normally do not live in a particular region) that spreads from the point of introduction and becomes



abundant. Sometimes, the impact of these species is an advantage; for example, when biologists use non-native species for ecosystem services (pollination, biocontrol, etc.). At other times, they affect the invaded habitats adversely, causing environmental, ecological, or economic damage. A good example to illustrate the negative side of these species is with the ballast waters discharged by every ship in the ocean. These waters contain a variety of biological material (plants, animals, etc.) and often include non-native or exotic species. When they are discharged at the next port, they can cause extensive ecological and economic damage to aquatic ecosystems.

Another species of concern and worth mentioning are humans. A question that comes to mind is: are we also at risk of disappearance? The answer is yes and encompasses all of the above including the following reasons:

1. Effects of pollution on human health leading to increased chronic illness.
2. Lands becoming uninhabitable due to heat, drought and flooding.
3. Food shortages due to extreme climate events.
4. One of the health effects of pollution is also loss of fertility.
5. Increase in developmental disorders in children, which are linked to pollution.
6. Man cannot exist without diversity of nature—including bees which are disappearing.

In closing, if you, as a citizen, want to contribute to halting this loss of species, there are several ways you can be effective, such as:

- buy only what you need;



- consume without wasting;
- support organic agriculture and ecological products that respect the planet;
- research your choices;
- use regional or local resources and diminish your carbon footprint on Earth;
- protect wild species by adopting concerted resource management methods (such as is done in Tanzania for example).

**Online links (in English):**

- Commercialization of Smallholder Production in Tanzania: Implications for Sustainable Resources Management, by C. Sokoni. The Geographical Journal, 174(2), 158-161. Composed in 2008. <http://www.jstor.org/stable/40205213>
- Massive extinction for human activity, by Anup Shah, Global issues – social, political, economic and environmental issues that affect us all, last update on January 19th, 2019, <https://www.globalissues.org/article/171/loss-of-biodiversity-and-extinctions#MassiveExtinctionsFromHumanActivity>
- What is eutrophication, National ocean service, National ocean and atmospheric administration, US department of commerce, last update on March 6th, 2020, <https://oceanservice.noaa.gov/facts/eutrophication.html>
- UN Report: Nature's Dangerous Decline 'Unprecedented'; Species Extinction Rates 'Accelerating' – United Nations Sustainable Development, Sustainable development goals, article wrote on May 6th, 2019, <https://www.un.org/sustainabledevelopment/blog/2019/05/nature-decline-unprecedented-report/>
- Living planet report Canada: Wildlife at risk. Currie J., Snider J. and Giles E., World Wildlife Fund Canada. Produced in 2020. <https://wwf.ca/living-planet-report-canada-2020/>



- Overexploitation, Wikipedia, the free encyclopedia, last modification made on May 28th 2020, <https://en.wikipedia.org/wiki/Overexploitation>
- Ballast water discharge and the environment, Wikipedia, the free encyclopedia, last modification made on August 6th 2020, [https://en.wikipedia.org/wiki/Ballast water discharge and the environment](https://en.wikipedia.org/wiki/Ballast_water_discharge_and_the_environment)
- Land use, Wikipedia, the free encyclopedia, last modification made on August 10th 2020, [https://en.wikipedia.org/wiki/Land use](https://en.wikipedia.org/wiki/Land_use)
- Biodiversity loss, Wikipedia, the free encyclopedia, last modification made on August 28th 2020, [https://en.wikipedia.org/wiki/Biodiversity loss](https://en.wikipedia.org/wiki/Biodiversity_loss)
- Invasive species, Wikipedia, the free encyclopedia, last modification made on August 28th 2020, [https://en.wikipedia.org/wiki/Invasive species](https://en.wikipedia.org/wiki/Invasive_species)
- Pollution, Wikipedia, the free encyclopedia, last modification made on August 30 2020, <https://en.wikipedia.org/wiki/Pollution>