

# Green Infrastructure, Hunting and Climate Change Mitigation

## Climate change in a nutshell

Climate change, considered to be one of the greatest threats to social well-being and economic future, finds its source in greenhouse gas (carbon dioxide, methane, nitrous oxide and water vapor) emission. The main human activities causing greenhouse gas are:

- fossil fuel use,
- deforestation,
- intensive livestock farming,
- use of synthetic fertilizers and
- industrial processes.



In many cases, the above-mentioned activities are used for agriculture. In fact, according to the FAO (Food and Agricultural Organization), agriculture greenhouse emissions have nearly doubled over the past 50 years and may increase by another 30 per cent by 2050.

The consequences of climate change are multiple:

- The average temperature on Earth will increase;
- Some regions will become wetter while others dryer;
- Higher temperatures will lead to glaciers and other ice melting and increasing sea level;
- Therefore, the areas where crops grow best will change and affect the makeup of natural plant communities.

Consequently, while agriculture is a big factor of climate change, it is also the first activity which suffers the consequences of it.

## Consequences of climate change on hunting

Climate change is causing damage at several levels: health, safety, agriculture, fishery are some examples. The consequences it has on hunting is linked to the pressure it causes on biodiversity.



- **Agriculture:**  
Crops become less adapted to their environment and then more sensitive to plagues. The increasing use of chemical inputs/treatments resulting from this issue has a negative impact on farmland biodiversity: wild plants, insects, worms and associated species as perdrix, hare, lapwing or skylark are decreasing.
- **Invasive Alien Species:**  
While native species are becoming less adapted, alien species could take profit of the situation and invade the landscapes, creating even more pressure on the indigenous ones. Invasive alien species are the 3<sup>rd</sup> main cause of biodiversity loss.
- **Habitats:**  
The lack or the excess of precipitations for instance can dry a wetland or erode soils, causing serious damage on habitats specificities and richness leading to the decrease of its associated wildlife.
- **Migration:**  
The cycle of seasons being affected by climate change, it generates displacements in the migration period of some species while hunting legislations are not following.

Climate change has therefore a direct impact on hunting by generating an important pressure on ecosystems and wildlife.

### Green Infrastructure and Climate change mitigation

The European Union developed a strategy to mitigate climate change through several actions in energy, transport, agriculture, research and with the EU Biodiversity Strategy. This strategy aims to halt global biodiversity loss by 2020. Target 2 of the strategy focuses on maintaining and restoring ecosystem services through the creation and expansion of green infrastructures through the EU Strategy on Green Infrastructure.

Green infrastructures have the purpose to come up against habitats fragmentation. They are natural/semi-natural areas especially created to network ecosystems and provide ecosystem services such as water purification, air quality, space for recreation and climate mitigation and adaptation.

Examples of green infrastructures are:

- Corridors linking farmland habitats to enable wildlife movement and deliver food and shelter
- Wetlands creating resting areas for waterfowls on migration pathways
- Ecoducts/green bridges allowing animals to safely cross highways

Green infrastructures are providing multiple climate change mitigation services. The most direct one is the carbon sequestration. Plants, while breathing, remove the carbon from the atmosphere and fix it in the soil organic material. There is the same effect in wetlands with aquatic plants and algae capturing carbon. Increasing the surface covered by plants, healthy soils and wetlands is essential to moderate carbon dioxide in the atmosphere.

As previously quoted, climate change is causing pressure on biodiversity and ecosystems. Green infrastructure are a solution to moderate the pressure by offering food, shelter and movement to an considerable amount of species.

### **Role of hunters in Green Infrastructures**

In Czech Republic, corridors made of native tree, bush and grass species are created by Czech Hunting Association (CMMJ) to increase local biodiversity, facilitate animals migration, create an anti-erosion function and improve water retention and enhancing the aesthetic value of the landscape.

In France, ONCFS (National Office for Hunting and Wildlife) acquired a Natura 2000 site on the Rhin-Rhône migration line and created a reserve for migratory birds. Two ponds with trenches for water supply, two paths and one bridge and several birds observatories have been built.

In the Denmark, the Danish Hunters Association (Danmarks Jægerforbund) led a project for the Grey Partridge conservation in farmlands. They published a document explaining best practices to conduct nature-friendly farming methods and encourage farmers to adopt it.

Hunters significantly contribute to the EU Biodiversity Strategy for 2020 (see the [2015 Report of the FACE Biodiversity Manifesto](#)) by restoring/creating/managing habitats, raising awareness or enforcing laws. While specifically focusing on hunters involvement in green infrastructure, around 70 examples can be found on the [FACE Biodiversity Manifesto](#) website.

### **Sources and References:**

<https://climate.nasa.gov/causes/>

<http://www.un.org/apps/news/story.asp?NewsID=47563#.Wfix0GhSyUk>

<https://whatsyourimpact.org/greenhouse-gas-emissions>

[http://ec.europa.eu/environment/nature/ecosystems/index\\_en.htm](http://ec.europa.eu/environment/nature/ecosystems/index_en.htm)

[https://ec.europa.eu/clima/policies/strategies/2020\\_en](https://ec.europa.eu/clima/policies/strategies/2020_en)

<https://pubs.usgs.gov/fs/2008/3097/pdf/CarbonFS.pdf>

<http://www.biodiversitymanifesto.com/>

*Article composed on 5<sup>th</sup> of June 2017 by Monia Anane, FACE Conservation Policy Officer*

