

HOW HUNTERS' ACTIONS IN WETLANDS CONTRIBUTE TO THE RAMSAR CONVENTION AND THE WATER FRAMEWORK DIRECTIVE?

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WHAT IS A WETLAND?

In 1971, the Convention on Wetlands of International Importance, called the Ramsar Convention, defined wetlands as “areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres”. Concretely, wetlands are every natural or artificial area where water (saline or fresh) is in contact with the soil, no matter the country, the altitude, the climatic zone and if the water covers the soil or if it is present either at or near the surface of the soil. It includes mangroves, peatlands, marshes, rivers, lakes, deltas, floodplains, flooded forests, and coral reefs but also dams, reservoirs, rice paddies, wastewater treatment ponds and lagoons (Matthews, 2013; EPA, 2016; Wetlands International, 2016).

This article focuses on freshwater wetlands in Europe. It discusses wetland loss as well as legal and policy approaches to conserving wetlands and improving water quality. It concludes by discussing the link between hunting and wetland conservation.

STATE AND PERCEPTION OF WETLANDS

- It is estimated that, during the twentieth century, the global extent of inland wetlands decreased by 69-75%. Furthermore, the WWF Freshwater Living Planet Index shows that between 1970 and 2010, 757 freshwater species of mammals, birds, reptiles, amphibians and fishes declined by 76% (Gardner et al., 2015).
- A survey from the European Commission in 2012 aimed to determine which environmental issues Europeans are most concerned about. The main result was water pollution (European Commission, 2016).

CAUSES OF WETLANDS LOSS AND DEGRADATION

Historically, wetlands were considered to be both harmful (e.g. to public health by hosting diseases) and economically unproductive, therefore some countries such as France introduced several laws to encourage the drainage of wetlands (Derex, 2001). Today, wetlands are regarded as being ecologically important habitats, producing multiple benefits/services to society.

In recent decades, the drivers of wetland loss are different but not less present. Between 2000 and 2006, the causes of wetland loss in Europe were:

- conversion to forestry (49%) and agriculture (35%),
- changes due to natural and multiple causes (12%)
- urban sprawl (4%) (European Environment Agency, 2012).

In the Mediterranean, urbanisation is a significant factor as it consumes agricultural areas, which are then pushed onto natural habitats such as wetlands (Gardner et al., 2015).

According to the Global Nature Fund (2016), the main causes of degradation of European wetlands are:

Water pollution:

Agriculture, sewage and industry can cause water pollution via toxics, other products and eutrophication (excessive richness of nutrients in a body of water).

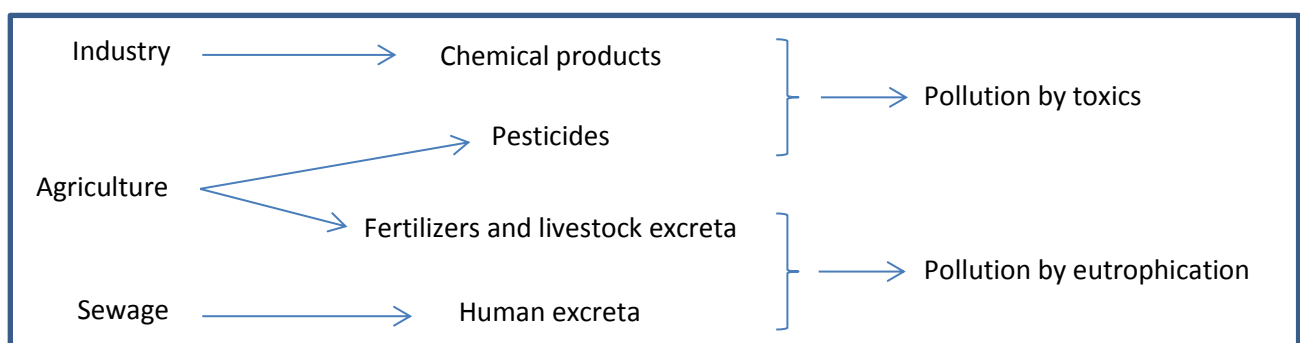


Figure 1. Some drivers of wetland loss and degradation

Hydrological alterations:

Drainage, water extraction and water diversion structures (for example, via construction of channels, ditches and levees) can alter soil chemistry and the presence of plants and animal communities, negatively affecting wetland ecosystems.

Sedimentation:

Sedimentation usually comes from erosion of agricultural soils and affects water quality by reducing biological production of wetlands and by changing the structure of wetlands.

Invasive Alien species:



Figure 2. *Lagarosiphon major* an invasive alien species being removed from Lough Corrib, Ireland.

Many invasive alien species affect wetland habitats and species. These species can create damages such as altering habitat structure, reducing biodiversity, or altering nutrient regimes and food webs. Invasive alien species may add pressure to local species by aggression, altering ecosystems/habitats or by feeding themselves. Control of those species (which are various and sometimes numerous in wetlands) is necessary to preserve indigenous ones.

THE RAMSAR CONVENTION & THE EU WATER FRAMEWORK DIRECTIVE

To reduce those damages, an intergovernmental treaty and a European directive were set up:

THE RAMSAR CONVENTION:

The mission of this Convention is “the conservation and wise use of all wetlands through local and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world” (Ramsar, 2016) which aims to stop and reverse the loss and degradation of wetlands and services to people. Initially, in 1971, 18 countries signed the Convention. Presently, it counts 2241 Ramsar sites dispersed on 169 signatory countries (Ramsar, 2016).



THE EU WATER FRAMEWORK DIRECTIVE (WFD):

This Directive was set up in 2000 after the results of a European survey highlighted the concern of Europeans about water quality and their desire to participate in water protection and conservation (European Commission, 2012). This Directive has two purposes:

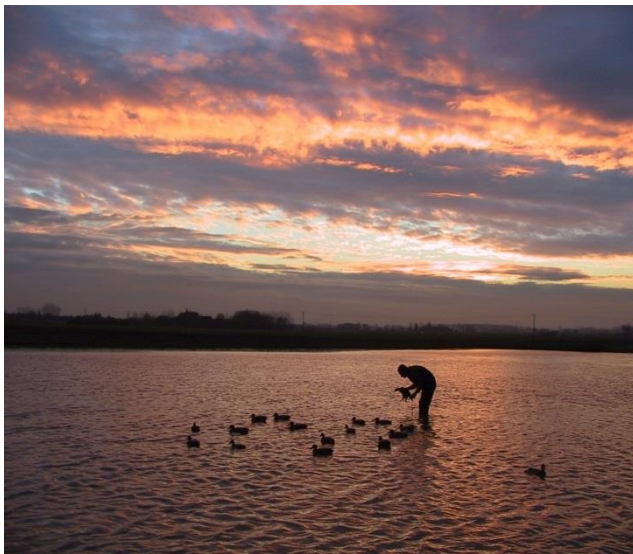
- i. Cleaning European waters by protecting all forms of water, restoring the ecosystems associated, reducing pollution in water bodies and guaranteeing sustainable water usage by individuals and businesses (EU-Lex, 2015);
- ii. Involving the citizen in the actions (European Commission, 2016).

THE BENEFITS OF WETLANDS

Wetlands provide:

- A fresh water supply for people as drinking water, for industrial use and for irrigation by recharging groundwater;
- Fish and fishery products;
- Water purification by lagooning;
- Biodiversity: Wetlands are the transition between terrestrial and aquatic systems. Because of their particularity, they may host lots of different species: specially adapted species and both aquatic and terrestrial species (EPA, 2016). Many species, especially aquatic plants and birds but also mammals, invertebrates or amphibians depend on wetlands (European Commission, Silva *et al.*, 2007). About 10% of the European Red List of Birds are waterbirds listed between vulnerable and critically endangered, according to IUCN (BirdLife International, 2015).
- Aestheticism and recreation;
- Regulation of global climate by sequestering and releasing significant amounts of carbon;
- Floods reduction, groundwater recharge and river flows regulation: Wetlands act as sponges to retain water during wet periods and release it slowly during dry periods (Millennium Ecosystem Assessment, 2005).

HUNTING AND CONSERVATION



Land owners and land users can play an important role in wetland conservation. Farmers, anglers and hunters with a personal interest in wetlands can be motivated to create and restore wetlands for various purposes. Although hunting contributes to species mortality, it is important to recognise the role of hunting in species and habitat conservation. The beneficial consequences of game management are most evident with sedentary species, however, it is also the case many wetlands have been actively managed for migratory waterfowl (e.g. Camargue in France). There is also management of bogs directly linked to the hunting of Snipe *Gallinago gallinago* in France (European Commission, 2008).

In this context, allowing the hunting of a species can provide a strong incentive to manage habitats and address other factors contributing to population declines, therefore contributing to the objective of restoring populations to favourable status. Furthermore, steps taken to improve the condition for target species can not only enhance the sustainable yield, but also benefit a range of other animals and plants that have similar ecological requirements

HUNTERS' ACTIONS IN WETLANDS

Of the 208 projects currently listed in the FACE [Biodiversity Manifesto](#) (BDM), 90 are active on wetland conservation actions: 47 are dedicated to it and the rest are active in several types of habitats, but include wetlands. Actions conducted in wetlands include:

- Restoration or creation of wetlands;
- Management and maintenance;
- Monitoring of the populations (plants and animals);
- Control of invasive alien species;
- Education programs for schools and students (FACE, 2015).

Many of these projects provide habitat for migratory birds and therefore contribute to the development of green infrastructure¹ by expanding networks between natural areas. In terms of species' research, some projects are focused on the Eurasian Beaver (*Castor fiber*). Although the presence of this mammal may generate some controversy, encouraging the presence of the Eurasian Beaver brings several benefits: it contributes to the preservation and reintroduction of a protected species that creates natural wetlands, which are attractive for other species (and for people). Finally, these projects create awareness within local communities about wetland ecosystems preservation, which is essential to ensure wetlands remain conserved in the future.

CONCLUSION

It may be interesting to underline that of the 90 FACE BDM wetland-focused projects, only 3 are occurring on Ramsar sites. However, all projects contribute to, whether the hunters/managers are aware or not, the goals of the Ramsar Convention and the Water Framework Directive. FACE will continue to ensure that hunters are aware of the wider benefits of their actions, including climate change mitigation, enhancing recreation areas and biodiversity conservation.

¹ Green Infrastructure is a process established by the European Commission to develop a network of nature areas and improve ecological quality at the global level. See more at: http://ec.europa.eu/environment/nature/ecosystems/index_en.htm

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