

# Briefing: Why make the same mistake twice? Dealing with the human-cormorant conflicts

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## Background

Until the 1970's, the Great Cormorant was under severe threat of extinction due to human persecution with only a handful of colonies existing in the Netherlands, Sweden and Denmark, with the total population in Europe consisting of no more than a few thousand pairs. This, in combination with habitat loss, led to a dramatic decline in Great Cormorant numbers.



Image 1. Cormorant in flight

In 1979, the Great Cormorant was added to the list of birds to be protected under EU law - under the Birds Directive (2009/147/EC) making it illegal to deliberately capture and kill them, disturb them, destroy their nests or take their eggs. As a result, in the past 30 years, the number of breeding and overwintering Great Cormorants has successfully increased significantly across Europe. However, at the same time, the EU has also seen a surge in aquaculture and fisheries. Since the cormorant survives on fish, aquaculturists and fishers have often considered cormorants as potentially jeopardising their business, particularly aquaculture managers.

## What is the problem?

Aquaculture managers and fishermen often see cormorants as a threat to their livelihoods and as a result, eradication is often their preferred solution. Apart from the fact that there is a lack of objective scientific data on the alleged impact of cormorants on commercial fisheries and fish farms, lethal intervention can lead bird populations to a threatened level again. This is counterproductive to the efforts that have been made, including EU investment, to restore populations of cormorants.

## What can be done?

The EU strives to find a balance between nature and business, and this should include non-lethal techniques to resolve the conflict between cormorants and humans. A wide range of effective alternatives have been developed both to reduce the vulnerability of fish to predation and to deter cormorants from feeding.

**Fish refuges:** Such techniques attempt to alter the 'quality' of foraging opportunities available to cormorants by trying to make fish less easy for birds to catch. The underlying principle is that if fish are difficult to catch, then the birds may choose to feed on other waters where the fishing is easier. During winter, cormorant numbers can increase significantly at inland fisheries. Increasing the amount of cover for fish in winter through addition of artificial refuges is an effective way of reducing fish availability to cormorants. Studies carried out in the UK showed that this measure decreased fish consumed by cormorants by up to 67%.



Image 1. Fish refuges help decrease the availability of fish to cormorants

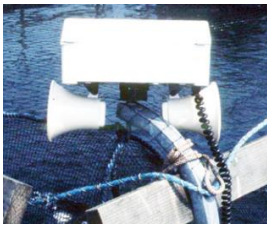
**Habitat modification techniques:** An extension of the techniques described above, these tools aim to make sites less attractive to cormorants for roosting, nesting or feeding. Such tools will never stop cormorants from roosting, breeding or feeding altogether but, at a site-specific level, they may reduce or eliminate cormorant presence in an area and prevent birds 'colonising'. They may also help to make foraging sites less attractive to birds thus encouraging them to move elsewhere.



*Image 2. Netting is an effective type of exclusion technique*

**Exclusion techniques:** These tools involve excluding the birds from the fish. Not surprisingly, they work best when fish are concentrated in relatively small areas. Thus, they are ideal for land-based ponds or raceway fish farms where if appropriately used, netting enclosures can be fixed permanently. At other sites, such as fish farm cages in open bodies of water, anti-predator netting can be hung in 'curtains' and by positioning wires, ropes or mesh barriers across waters it may be possible to make it difficult, or impossible, for cormorants to land on, or take off from, the water's surface.

**Scaring techniques:** The basic philosophy behind methods to scare birds away from a fishery is that cormorants are startled sufficiently to move to other foraging sites by means of auditory, visual or even chemical deterrents.



*Image 3. Sonic scaring device.*



*Image 5. Hedgehog fish refuge.*

As a last resort, where non-lethal measures are not effective alone, shooting a small number of cormorants as a method of scaring them may be appropriate. This should be under a licence administered by the relevant authorities and following an assessment to demonstrate that serious damage to the fishery is occurring as a result of predation by cormorants.

Various initiatives, including the RedCAFe and the InterCAFE projects, led by the Commission, and the European Parliament's study on conflicts with cormorants, have already opened an informed dialogue on cormorants. Future discussions on this issue should catalyse these findings including supporting for a multi-stakeholder approach to resolve conflicts.



*Image 6. Interactions between cormorants, fish and fisheries (C) European Commission*