

## On the need for coordinated European management actions of Great Cormorant in the EU

### Background

The populations of some protected animal species have been steadily increasing in European rural inland and coastal landscapes for the last decades, well beyond historical recorded levels. This has been positive with respect to the protection of those species but is having collateral consequences creating intense losses on aquaculture farmed stocks and serious impoverishment on natural fish populations.

Although the changes of population size of the two subspecies (*Ph. carbo carbo*; *Ph. carbo sinensis*) and the different subpopulations of *Phalacrocorax carbo sinensis* are not uniform, there is a wide scientific consensus that the overall population size of this migratory bird species is steadily increasing and is currently the largest that has been recorded in the last century. Scientific evidence also proves that the breeding areas of the subpopulations are so far from feeding and wintering areas, that the location of source and effect are spatially distant from each other. Currently, the number of Cormorant breeding pairs exceeds 400,000, bringing the total close to 2 million individuals in Europe based on latest Europe wide monitoring by BirdLife International in 2015. This dramatic increase led to the change of the conservational status of the species to Least Concern by IUCN and the removal from the Annexes of the Birds Directive (2009/147/EC) and only keep the species generally protected under the Article 1.

Although the scientific literature gives a wide range of daily fish consumption of the Great Cormorant there is also consensus that the average fish consumption is about 500 g/day. It means that the European population consumes at least 1,000 tons of fish daily. The great cormorants cause various direct and indirect losses to fish farms. Direct financial losses are the consumption of commercially raised fish and in the yield of juveniles by predation, while indirect financial losses are caused through stress, low welfare, lower weight gain on commercially farmed fish because of wounding, harming and lowering production efficiency. Another important indirect effect of cormorant predation is that it threatens the maintenance of the complex ecosystem services provided by extensive pond and lagoon aquaculture, as well as contribute to the biodiversity loss, which is created and maintained by the results of these production systems.

Beside the damages in fish farms, the booming population of cormorant is suspected to be a key driver behind the population loss of several endangered fish species in European natural waters such as eel and sterlet as well as other important species such as grayling and brown trout. Currently it causes an important issue to achieve the good ecological status of these surface waters by Water Framework Directive.

Beyond the above mentioned, several important facts must be highlighted concerning the predation of Great cormorant. (1) Without active interventions the cormorant is able to eradicate the entire