FACE briefing

The development of an AHM for the Pochard

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FACE - European Federation for Hunting and Conservation

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Key takeaways

- Assessing the sustainability of Pochard hunting in the EU should be performed at flyway population level.
- The Pochard has two flyway populations covering the EU, and they have been increasing and stable over the last decade, so has been the EU wintering population trend.
- These trends are key parameters to be taken into account when discussing the sustainability of hunting.
- The conservation priority appears to be to increase reproductive success on EU breeding grounds (e.g., nest success and breeding female survival).

What is Adaptive Harvest Management?

Adaptive harvest management is a modern response to ensuring sustainable harvest of wild resources, such as game species. It provides a systematic approach to setting hunting regulations that allows for adapting over time based on management objectives, resource monitoring and data analyses. Scientific data is used to inform decisions and improve resource management in the face of uncertainty by learning from management outcomes and reducing the uncertainty. See FACE's info note on Adaptive Harvest Management.

Following the European Commission's work over the past few years in the framework of the EU Task Force on the Recovery of Birds, three species have been selected for the development of EU Adaptive Harvest Management plans (AHM): the Common Quail (*Coturnix Coturnix*), the Common Pochard (*Aythya ferina*) and the Eurasian Wigeon (*Mareca penelope*). These plans are currently being developed.

This FACE briefing draws on the key parameters to be taken into account during the AHMs development phase, for each species.

Ecological considerations

At flyway level, Pochards wintering in the EU are part of two populations, the "North-east Europe/North-west Europe" population and the "Central & NE Europe/Black Sea & Mediterranean" population.

The Pochard "North-east Europe/North-west Europe" population is estimated at 150.000 individuals (in late winter, *i,e.*, after most harvest has taken place, but before breeding). This population has been stable over the last decade, after having increased between the 70's and 80's, then decreased in the late 90's after a period of stability.

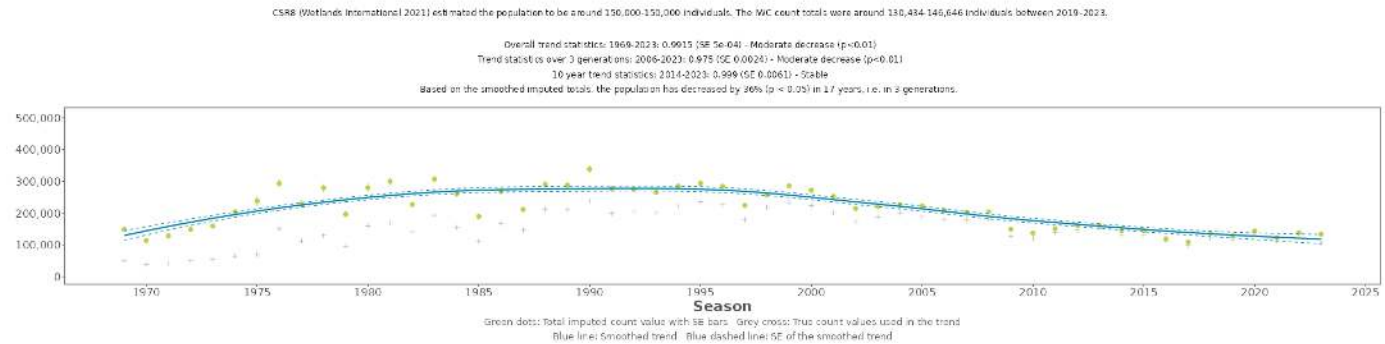

Figure 1: Pochard "North-east Europe/North-west Europe" population trend. Source: Conservation Status Report 9.

The other population is the "Central & NE Europe/Black Sea & Mediterranean" population, estimated at 530 thousand individuals (in late winter, *i.e.*, after most harvest has taken place, but before breeding). This population has been increasing over the last decade, after decrease between the 90's and approximately 2005.

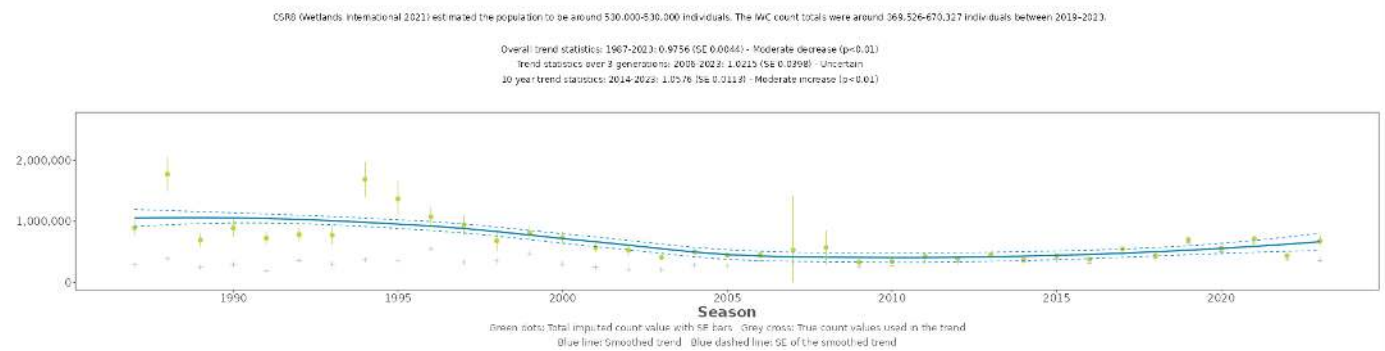

Figure 2: Pochard "Central & NE Europe/Black Sea & Mediterranean" population trend. Source: Conservation Status Report 9.

It is, however, important to highlight that, as is the case for other migratory ducks, these populations are management units in practice rather than biological populations (i.e., biologically distinct populations).

Another important source of information is the EU wintering trend, based on the arbitrary geographical area of the EU (*i.e.*, the trend of Pochard numbers present in the EU in winter). This trend has been increasing over the last decade. This is consistent with the flyway trends above which have been stable or increasing over the last decade.

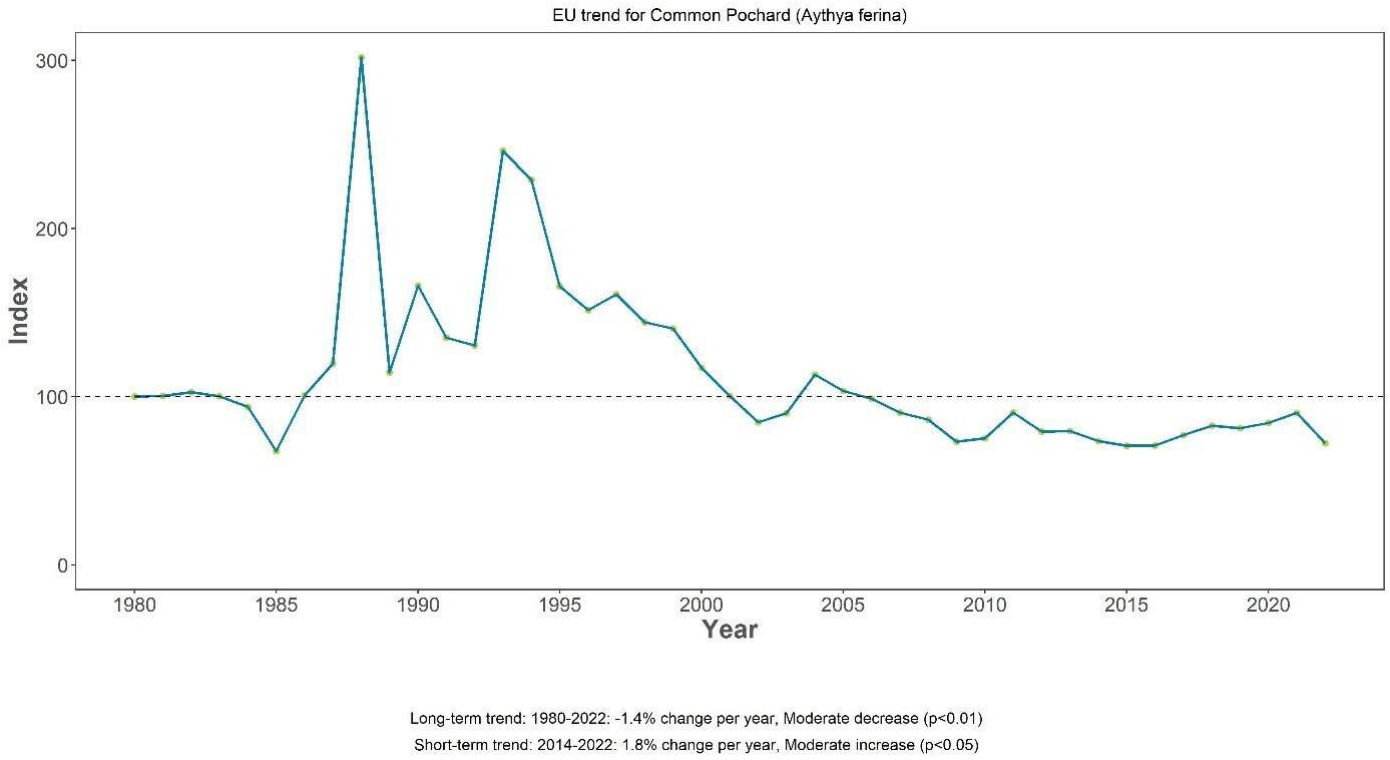

Figure 3: Pochard's EU wintering trend. Source: International Waterbird Census, Wetlands International.

These trends at flyway level and at EU level in winter are the most relevant information when assessing the sustainability of hunting, as hunting occurs in winter, when migrants are present. It is therefore adequate to rely on the wintering trends to assess the outcome of management actions by comparing the predictions with observations.

Importantly, the EU breeding trends are decreasing, an important factor influencing population status. This is an important conservation issue linked to the availability of quality breeding habitats in the EU and other limiting factors, but not to hunting practices. The Pochard has a wide breeding range, and the EU represents only a small part of it (see Pochard's distribution map, Figure 4).

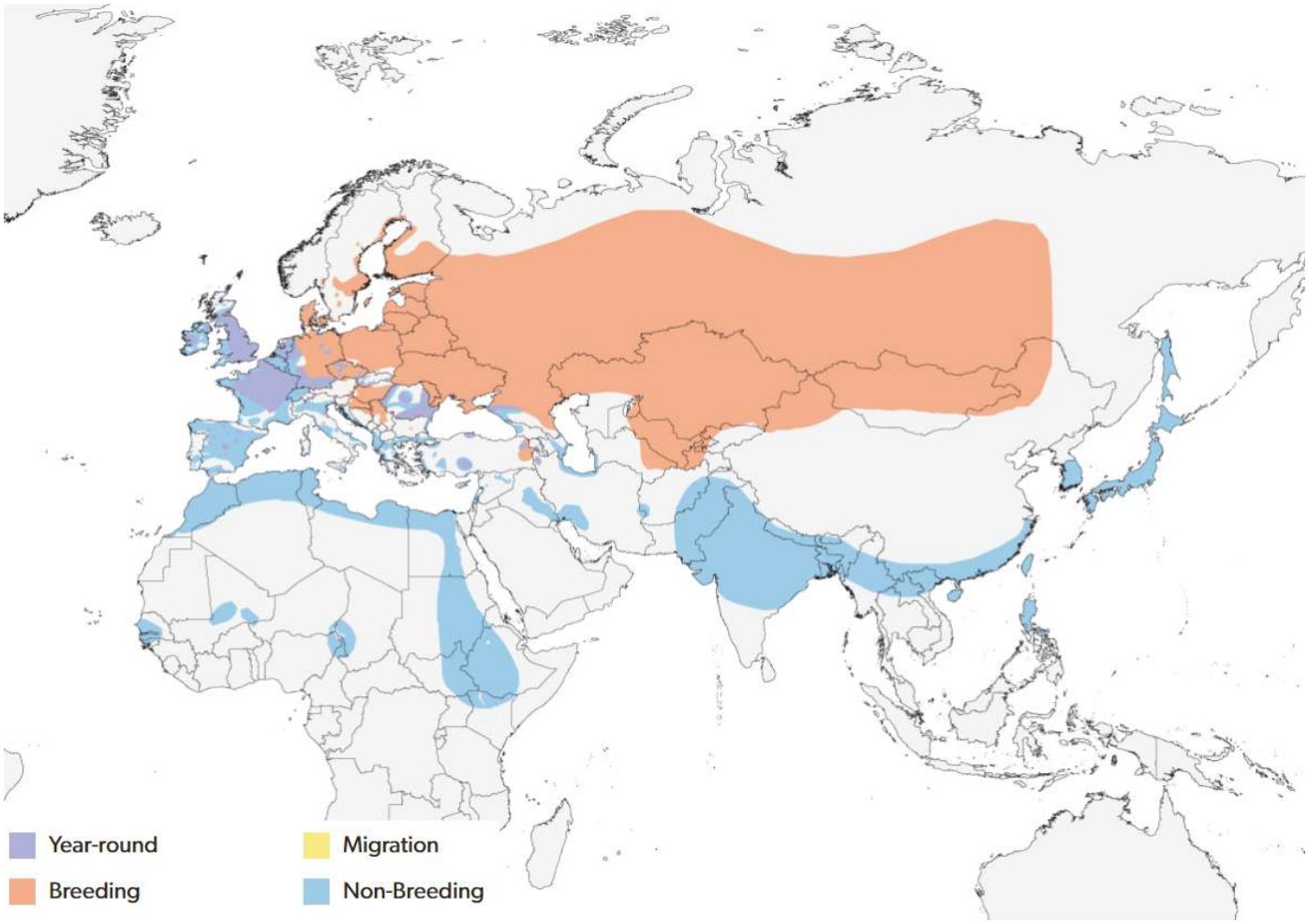

Figure 4: Pochard's distribution map. Source: Cornell Lab of Ornithology.

Reduced reproductive success is a critical demographic parameter for waterbird populations, including the Pochard (see Christensen & Fox, 2014). For the Pochard, two important factors contributing to this are the loss of quality breeding habitats (e.g., intensification of aquaculture or abandonment of fishponds, agriculture intensification leading to drainage, loss of extensively grazed wet pastures, eutrophication, …) and predation on breeding grounds (nest and females). This indicates that priority actions should take place on breeding sites primarily via habitat and predation management. In parallel to ensure sustainable harvest with the development of the AHM.

If well-designed, some key European policies can make a difference in the coming years, and hunters have been long-standing actors in the conservation and restoration of habitats for waterbirds across the EU (for example, see here) and regarding predation management, especially from Invasive Alien Species (for example, see here).

In addition, natural population fluctuations should be acknowledged, as a variety of factors can impact population trends. For example, competition for resources and space takes place between all species and one species might increase at the expense of another, even positive changes in land use (such as cleaner waters flowing into the sea) can negatively impact bird species (those depending on mussels for example). One should not expect all bird species to increase at the same time.

Technical considerations

The models developed for the Pochard's AHM will be required to forecast the effect of different harvest scenarios on the species population trend. In addition to the population trends, it is important to identify the main drivers of population dynamics. In the framework of the EU Task Force on the Recovery of Birds, the Pochard was identified as a r-selected species (i.e., species typically relying on short life cycles and high productivity, in contrast to K-selected species, *i.e.*, long-lived with low productivity), therefore the most important factor for its population dynamics is expected to be productivity during the breeding season, rather than survival. However, as the survival of breeding females is an important parameter of breeding success, this parameter can also be expected to be an important driver of population dynamics. As hunting's potential effects are related to survival outside of the breeding season, hunting is not expected to be a major driver of population dynamics, especially if males would be targeted. The development of the AHM will be required to clarify this.

The importance of breeding success in the Pochard's population dynamics is a critical piece of information when discussing international conservation efforts priorities as it indicates that the priority is to invest in the conservation and restoration of quality breeding habitats in EU Member States where significant numbers of Pochards are breeding (see Pochard's breeding abundance in Europe, Figure 5), as well as to take action towards key factors limiting the Pochard's breeding success, such as predation of breeding females and nests or chicks by invasive species such as the Raccoon dog or native predator species. This could directly contribute to addressing the Pochard's unsecure EU status.

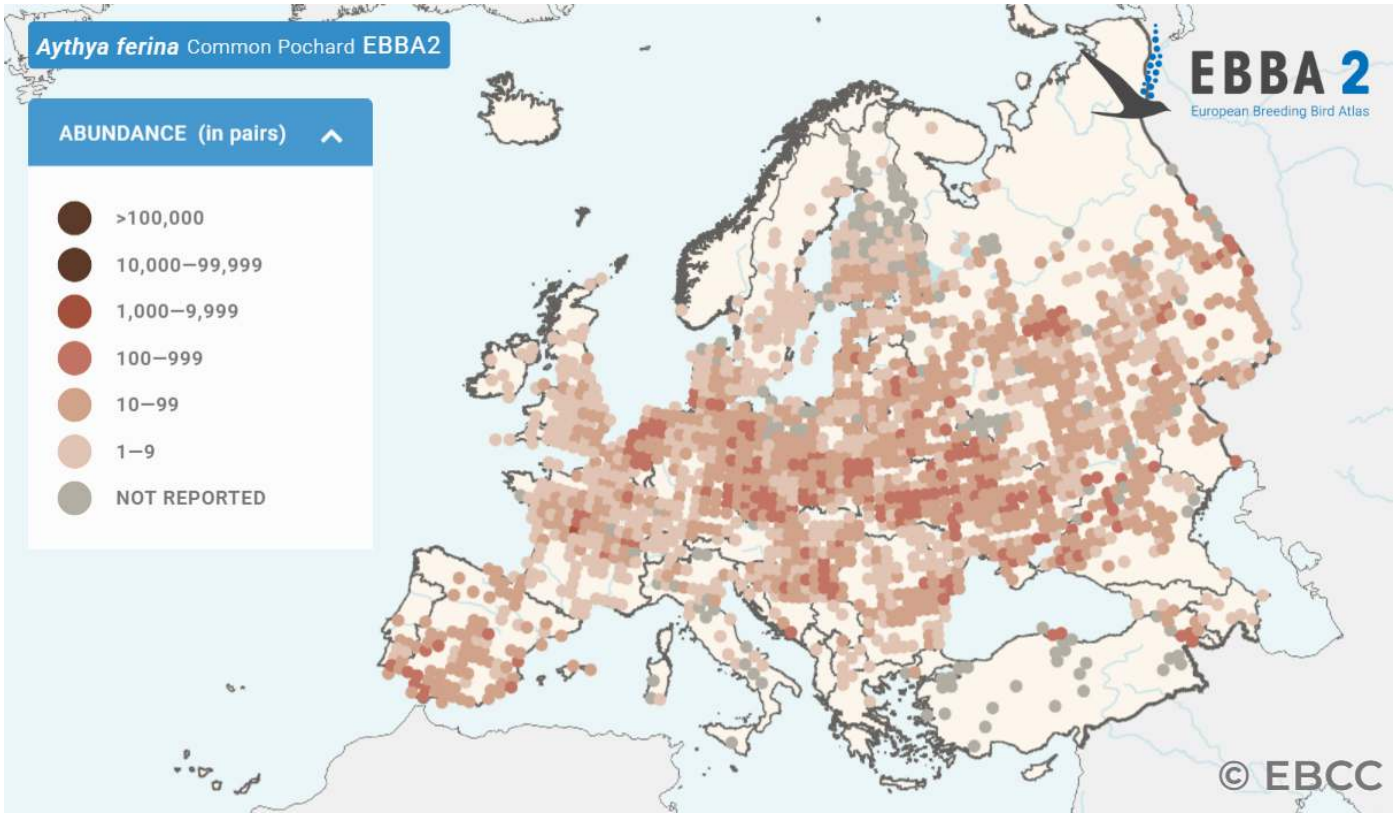

Figure 5: Pochard's breeding abundance and distribution in Europe. Source EBBA2.

Conclusions

As an evidence-based organization, FACE welcomes the development of Adaptive Harvest Management for the Pochard as a way forward in ensuring sustainable hunting and strongly advises that these key insights are taken into consideration by all actors taking part in the development of this plan to ensure sound decision-making and buy-in from stakeholders.

The Pochard's population trend over the last decade, at flyways and EU wintering levels, which shows a rather good situation, is a key parameter to take into account when designing management options.

Finally, it must be well recognized that hunting is only one of many factors potentially influencing populations but that the most crucial driver is the availability of quality breeding habitat and conditions. Therefore, FACE stresses that the management of harvest via this AHM is not the solution to population recovery without significant action on breeding grounds.