

The problems:

- Overexploited/weak fish stocks
- Adult birds eat mainly fish
- Feces from colonies kill green plants
- Effects on other birds (Caspian tern)
- Effects on biodiversity??
- → Concern and resistence



The Swedish Roxen report

- 1992: first established colonies in lake Roxen
- 1999: 908 couples nesting (March September)
- Fish both species composition and size distribution has changed
- Angling heavily restricted (bag limit etc.). One commercial fisherman left.



Aqua reports 2014:10

Mellanskarven i Roxen

Förändringar i fisksamhället och mellanskarvens (Phalacrocorax carbo sinensis) föda

The Swedish Roxen report

Recommended outtake of fish: 3-6 kg/ha (100 x 100 m)

Commercial fisheries: 0,85 kg/ha

• Cormorants: 7,50 kg/ha

Conclusion: cormorants take the major part of the fish stock and has an effect on the stocks. Cormorants probably the main reason that most of the fish doesn't reach reproductive size

Suggestions: manage the cormorants to get the fish outtake back to sustainable levels, by:

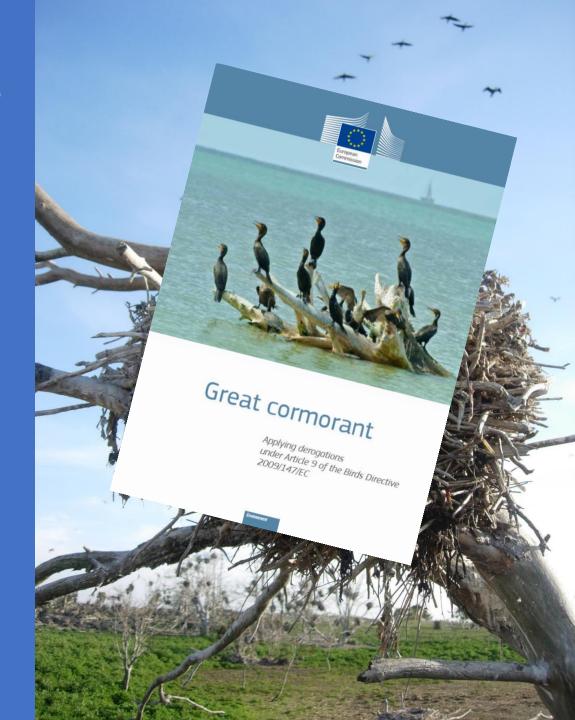
- lowering the nesting/breeding results (but how?)
- Scaring off migrating cormorants
- Good documentation

Why improve management?

- Fast expansion of the continental cormorant (*Phalacrocorax carbo sinensis*) in Europe

 → historically high population numbers (*Finland 1996-2002: 10 → 16 007 br. pairs*)

 → significant impact on (the recovery of) local fish stocks
 - → breeding sites vs. landowner interest concern and resistance
- Highly protected but why today?
 sub-species complexity
- Cormorant vs. fish stock management
- Lack of cooperation between MS
- Management uncertainties in member states



Why a Nordic cooperation?

• The geographical distribution of the continental cormorant implies a regional approach









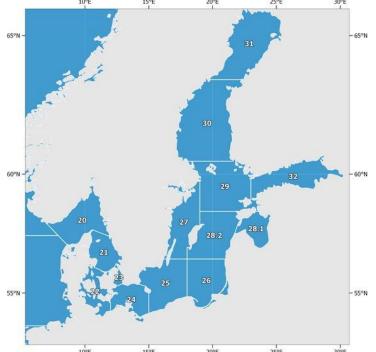
















What do we want?

- The protection of weak fish stocks and threatened fish species shall be considered more important than the protection of species with a positive stock status
- In areas of importance for fisheries, especially angling and angling tourism, more active measurements shall be carried out if the cormorants cause a considerable damage on the fish stocks (limit/eliminate colony).
- The national authorities handling cormorant management in the Nordic countries shall be given the responsibility to survey and follow up the effect of the cormorant populations on the fish stocks.
- National councils (like in Denmark)
- Nordic (+ Germany) cooperation/forum/council between the authorities
- European strategy "BEST PRACTICE"

To protect fish resources! Bottom-up perspective!

