The Importance of the Eel Fishery and its Future

The subject of my speech is the importance of Swedish eel fisheries and its future.

In Sweden there is a silver eel fishery of great importance in the lakes and along the east and south coast. We also catch yellow eel along the east and the west coast. For a goodly number of Swedish fishermen eel fisheries bring a considerable part of their income.

The total catch of eel, caught in coastal waters by professional fishermen, reached in 2004 428 tons (2003, 461 tons). Fresh-water fisheries caught 106 tons (2003, 96 tons) which represents 20 % of the total Swedish catch of eel. Altogether 534 tons were reported in 2004 (557 tons, 2003).

There are other categories involved in eel-fisheries, i.e. those who fish fore recreation, owners of private waters etc, but their catches are not included in the official statistics. Approximately the total catch of eel in Sweden is 40% more than the official statistics indicate.

First of all I would like to make a comment on the press-release given by the Commission the 6th of October this year. The Swedish Fishermen’s Federation has studied the measures included in the Commissions recently suggested recovery-plan for eel. We find it very disappointing that the Commission is prepared to forego the opportunity of creating sustainability in European eel-fishery. The Swedish Fishermen’s Federation has the firm opinion that the action-plan should keep a strong focus on the connection between the sustenance of glass eel for restocking purposes in Sweden and other countries, as this provides the best chance for migration to Sargasso and the healthy reproduction of the European eel population.

With the present proposal from the Commission this "chain of sustainability" is largely a missed opportunity. The Commission vaguely speaks of looking into the possibility to limit the export of glass eel, despite the fact that export undoubtedly implies that the European eel-sector losses a crucial productive capacity. The Swedish eel-fishery shares its opinion with colleagues throughout Northern Europe, and we believe that our ideas can be substantiated by findings in research and analysis of the effects of restocking.

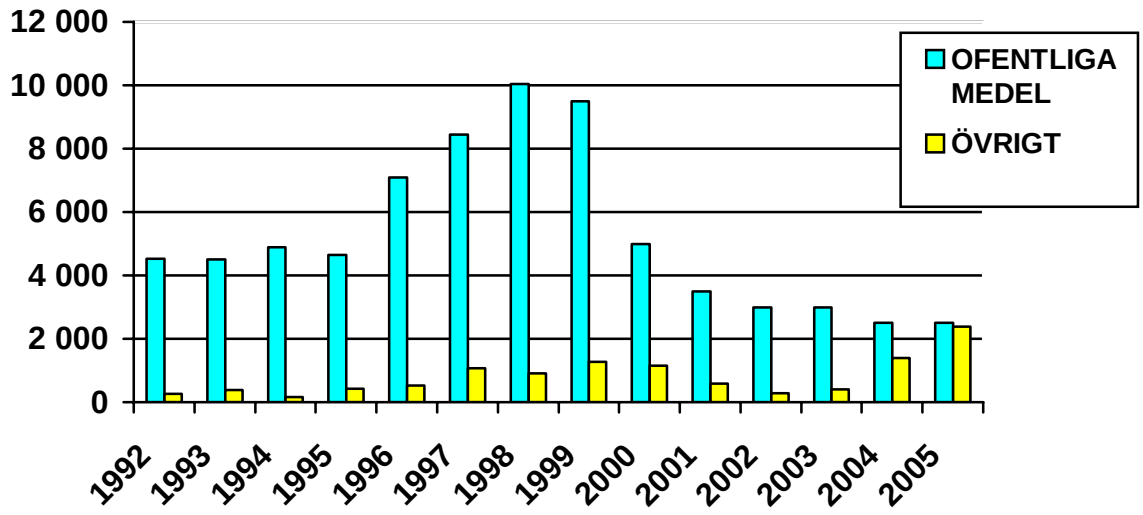
This presentation will address the following issues:

- Restocking
- Effects of restocking
- The people behind the fisheries
- The future for the eel fishery

Restocking

The tradition of restocking dates back to the early 20th century. At that time eel was restocked on the East Coast as well as in freshwater.

Between 1992 and 2005 a series of large restocking projects have taken place in Sweden. The volumes are illustrated in the following graph:



Graph 1. Restocking of eel carried out by the organisation of freshwater-fisheries in Sweden, Svenska Insjöfiskarna AB, thousands of Swedish kronor.

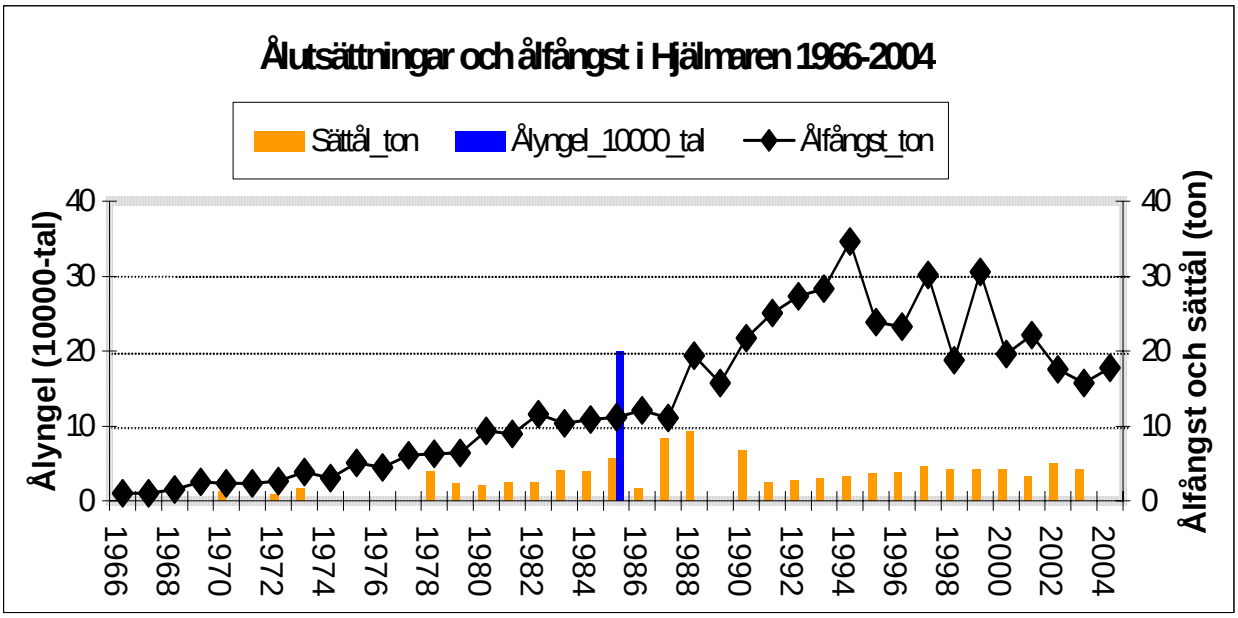
The restocking has been financed by:

1. Public funding
   - price regulation funding up until 1999 (price regulation funds were accumulated by the fishermen and used at their disposal)
   - EU structural funding was used between 1996 and 1999, adding to the funding provided by the price regulation funds.
   - State budget funding
   - Hydropower compensation

2. Additional funding
   - finance from individual fishermen and their organisations
   - funding from fisheries management areas (privately owned waters)

During the last few years it has been difficult to obtain the necessary public funds in order to maintain the volume of the restocking activities. The price regulation funds have been depleted. Prices of glass-eel have increased. Thus less eel has been restocked in recent years. Consequently costs for quarantine have increased as smaller capacities are required.

Results of restockning

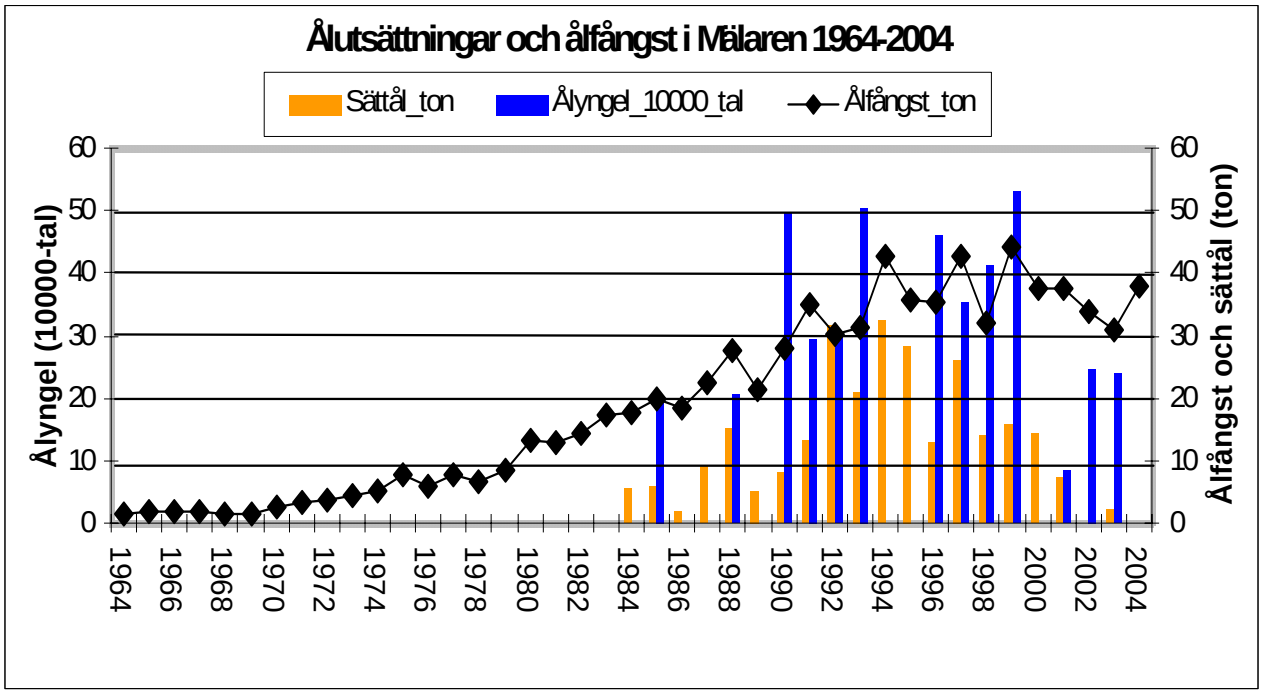


Graph 2. Restocking and catch in Lake Hjälmaren

The graph shows restocking and catches during 38 years, from 1966 to 2004. It shows that there is a powerful increase in catches 10 years after restocking. Increases are not linear but fluctuate in a similar way as general fisheries during each of the years. As Lake Hjälmaren is connected with Lake Mälaren, all eel that grow up are not being caught. Instead, a great deal of the silver eel wanders through Lake Mälaren out into the Baltic Sea. The restocked eel of Lake Hjälmaren has mainly been used for further restocks.

Regarding Lake Hjälmaren I've got statistics covering the years 1914 - 1920 and from 1966 and forward. It is interesting to note that the total catch per year during the period 1914-1920 was 1 ton and during 1966 and 1997 we have a modest increase. In 1994, 34.6 tons were caught in Lake Hjälmaren, which shows that restocking contribute significantly to catches.

There is no doubt that without initiatives taken by Swedish fisheries there would have been hardly any restocking activities.



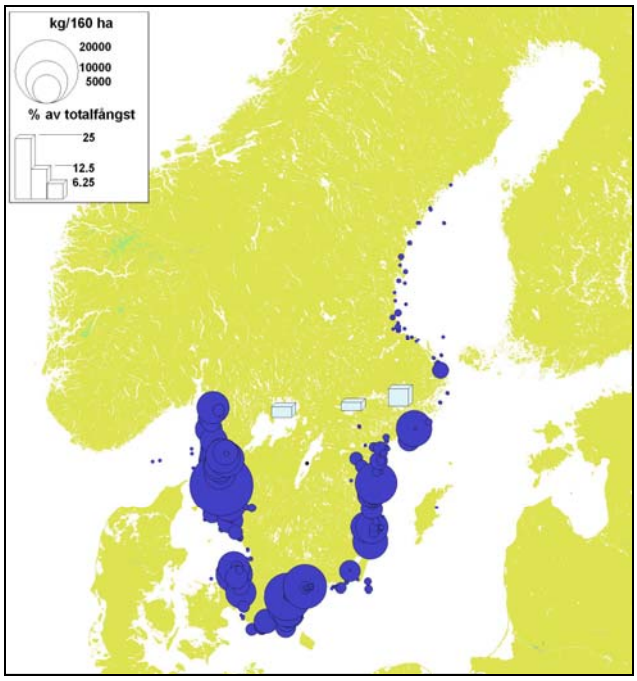
Graph 3. Restocking and catch in Lake Mälaren.

This graph shows 40 years of restocking of eel in Lake Mälaren, where glass eel as well as "sättål" have been used, though recent years mainly glass eel. The graph shows clearly that powerful increases in catch appear 10 years after restocking. In the same way as in Lake Hjälmaren catches vary each year regarding to normal variations in fisheries.

Research results show that the silver eels in Lake Mälaren avoid land. As most of the fishing-gear is placed along the coastline, most eels are able to continue their way out into the saltwater. They are free to continue migration for spawning. The fact that catches is still relatively successful indicate that restocking in Mälaren/Hjälmaren is an efficient way to increase the number of migrating eels.

Definitions
"Sättål" are small-sized (though over minimum size - appr. 10 per kilo) yellow-eel, caught along the west coast of Sweden and restocked in lakes and along the east coast. Recent years restocking is only permitted in lakes directly connected with the open sea because of risk for IPN.

Glass eel
Eel caught in England and - after quarantined required by Swedish regulations - restocked. One kilo of glass-eel contains appr. 1,000 individuals.

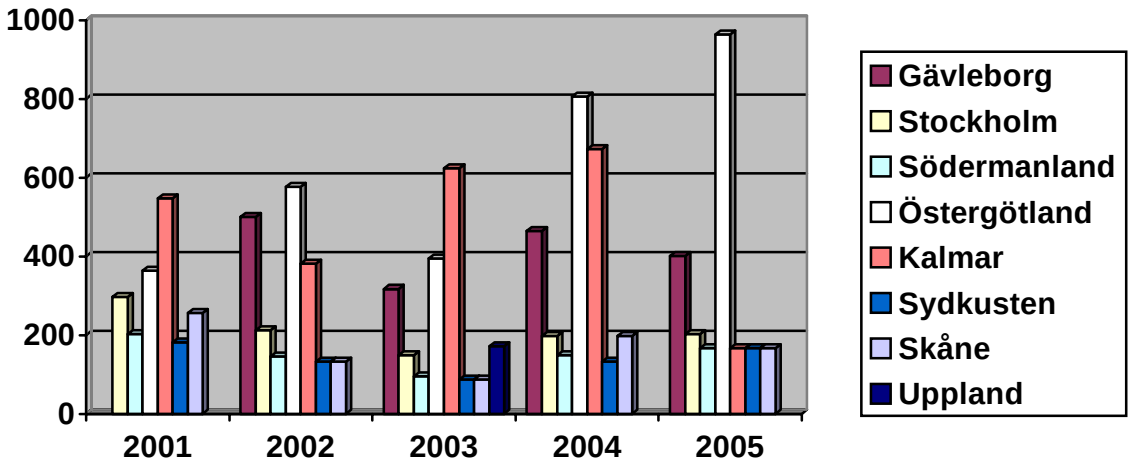


Graph 4. The yield of eel fisheries per aerial unit along the coast.

The Swedish coastal eel-catches in 2004 where in level with the fisheries four years ago. This graph shows clearly how important restocking has been to maintain eel-fisheries along the coasts.

Apart from Lake Vänern "sättål" (yellow eel) have been restocked along the coast from Västernorrland in the north and further south and in lakes in Östergötland, Småland och Skåne. I insist that without restocking the Swedish eel catches would have been on a significantly lower level during the past 10 years. Restocking favour eel-fisheries as well as migration of silver eel to the spawning areas in the Atlantic Ocean.

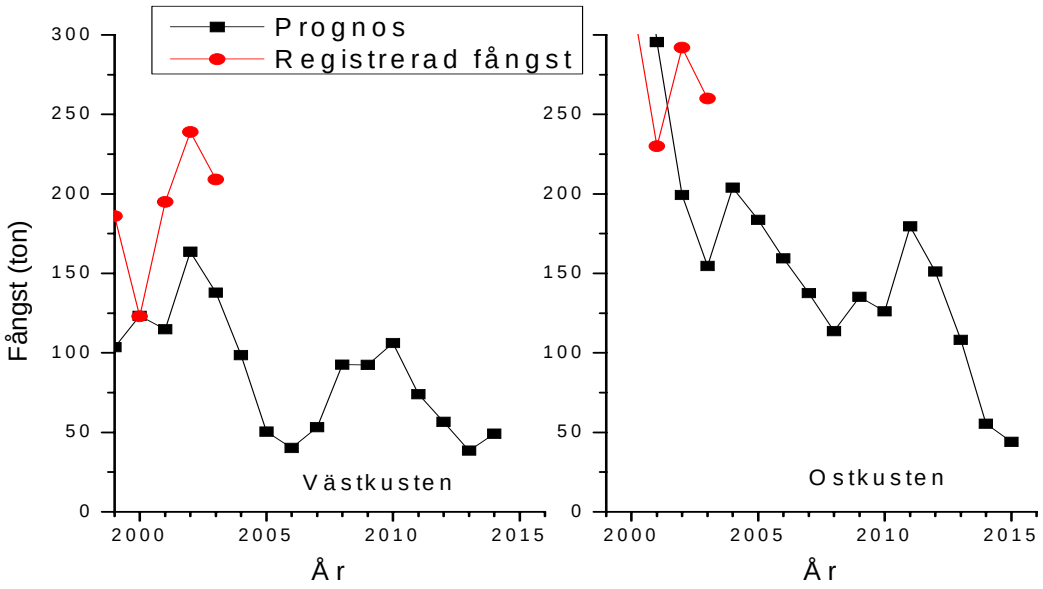
The following graph shows coastal restocking after the year 2000.



Graph 5. Coastal restocking of eel 2001 - 2005, thousands of Swedish kronor

These eels are still on growth and have not yet influenced the statistics.

Predictions for the eel fisheries
This graph indicates the difference between estimated and actual catch of eel. During the last few years eel-fisheries have reached better results than predicted, which shows the great importance of restocking both for eel-fisheries and the migration of silver-eel to spawning-areas. Note that catches reach above prediction, a fact that shows clearly how important restocking is. The Swedish restocking-efforts have even favoured eel-fisheries in other countries surrounding the outlets from the Baltic Sea.



Graph 6. Prediction for eel-fisheries on the Swedish west- and east coast

Keep in mind that only catches made by licensed professional fishermen are reported. Other types of fishermen do - of different reasons - participate in eel-fisheries. This "grey-zone"-fishery represent more than 40% of the total Swedish eel-catch.

In Sweden there is also another very effective "eel-fisherman". The bird called cormorant, have spread over Sweden and Europe like an explosion in very few years and within EU there are now hundreds of thousands of couples. Clearly, there is one way to increase migration of silver-eel to the Sargasso Sea: decrease the number of birds and their consumption of eel. Their fishery is not as big as the activities of the grey-zone, but pretty close.

The Fishermen
The fishing industry in Sweden amounts to approximately 2000 fishermen, according to the most recent statistics. 200 fishermen fish in freshwater, 17 of the total number are women and the median age in 2005 was 50 years.

Most fishermen live in areas which are the object of regional structural funds, with the aim of supporting the local labour market.

The coast
Almost a third of the fishermen on the Swedish East coast are involved in the eel fishery, receiving all of their income or parts of it from the eel segment. All in all 162 fishermen

received more than half their income from eel, and their catches represent 84 per cent of the total eel catch.

Freshwater fisheries
In freshwater fisheries approximately half of the fishermen report eel as part of their total catch. Of this category around 25 fishermen received more than a third of their total income from the eel fishery, in monetary terms.

Most of the eel that is caught is being fished from boats in the size < 10 metres, and in this category the eel fishery represent approximately 25 per cent of the value of the total catch.

It should be noted that the eel fishery is a small scale fishery along the coast and in freshwater lakes and waterways. This fishery plays an important role in local rural economies along the coast and there is significant political interest to support the development of this fishery which has been described as selective and sustainable and well integrated in rural development efforts.

The Importance of the Eel Fishery
Sometimes statistical data and descriptions based on figures and numbers may convey the wrong impression. In comparison with other species the eel fishery has actually proven to be relatively constant over the last few years, and thus has provided many fishermen in coastal and freshwater fisheries with a stable base and regular income as other fisheries has fluctuated and been unreliable. Consequently the eel fishery is a necessary precondition for many fishermen as they chose to become full-time fishermen, providing products for a larger market. Without the relative stability of the eel fishery they are not ready to take the step into professional fishery along the coast or in inland waters, involving many other types of species as well.

The value which is recorded in fisheries statistics is the value of landed fish as it is bought from the fishermen by a fish-trader. However, many eel fishermen keep their catch and smoke it, preparing it for sale directly to the final consumer. In that process, the eel gets a much higher value than the value recoded in the statistic, which represent the fresh fish only. In some cases, the smoked eel is sold to a fish-trader who provides the larger fish-market with products and thus even more value is added to the original product.

Thus the value of the eel catch is much higher than is understood by the simple figure of landed eel. Eel also plays an important role in local culture, being an integral part of food culture and along the South coast many events and festivities are arranged with the eel playing the “main character”.

The Future of the Eel Fishery
In the beginning of this talk I commented on the EU proposal for a recovery plan for the European eel, submitted on October 6. I have some additional views.

I share the view of the Commission regarding the migration of silver eel, but I seriously question the proposal that the fishery should be stopped on a part-time basis and that the export of glass-eel around the world should continue. Evidently all knowledge regarding the eel and the eel fishery has not reached Brussels yet.

Despite all I have a positive outlook on the future. Although the natural influx of eel has decreased in Scandinavia over the last 20 years, I am not fully convinced that the research community has found the definite explanation for this change to have taken place. In my opinion we must search for a more nuanced solution than simply explaining the decrease by the fishery. There are many other changes in the environment that could affect the eel population - but we still don't know which ones, it may range from physical disturbances to or climate change?

However there are many possibilities to increase migration of silver eel to the Sargasso, but Sweden and other member states need to use the resource which enters Europe in a more sustainable fashion. There are many suitable habitats for eel in the young stages in the Swedish lakes and most likely in many lakes in surrounding countries.

The large restocking projects which have been initiated by the Swedish eel fishery sector have had significant effects on the migration of eel from freshwater to salt water environments. This is proof of the potential in restocking. The most sensible course of European eel management is restocking of glass-eel in European waters that provide the best conditions for migration. A secondary option is to use glass-eel in aquaculture within the EU. To export glass-eel for cultivation in other parts of the world is not a sustainable choice.

I want to stress one point; glass-eel caught for the purpose of aqua-culture will never reach the Sargasso. They will not contribute to the reproduction of the stock. A glass-eel caught and restocked in Swedish waters, however, stands a good chance of migrating through the Skagerrak and further on to the spawning grounds in the Atlantic in its silver eel life-stage.

Substantial restocking projects is the basis for continued fishing while, at the same time, providing the opportunity for large numbers of silver eels to migrate back to the Sargasso for reproduction. In addition, an end to all illegal fishing will strengthen the chain of sustainability for the European eel stock.