

The Netherlands
Eel Management Plans
of
the Dutch Ministry of LNV
and
the Dutch inland fishers

a comparison of effectiveness of both plans.



Combinatie van Beroepsvissers



PO IJsselmeer
(Nederlandse Vissersbond)

Summary

The plan of the Dutch eel fishers (CvB and PO IJsselmeer) as compared to the plan of the Dutch Ministry (LNV) results in:

- a. **more *female* silver eel escapement (for reproduction),**
- b. better data gathering (basis for good eel stock management),
- c. more effective control of illegal (eel)fishing,
- d. less loss of income for the inland fishers (protection of their livelihood),
- e. an active role for the inland fishers in fishery management (promotes co-management),
- f. the inland fishers to take responsibility for eel stock management

The comparison of these two management plans shows that the effectiveness of the plan of the eel fishers has clearly better perspectives than the plan of the Ministry of LNV.

Introduction

The Netherlands has two eel management plans to achieve the recovery of the eel stock. Both plans propose the development of management measures at the regional level that will replace the measures below. Both plans include stocking of the glass-eel in well managed areas. The plans differ on the following point:

- 1) The plan of the Dutch Ministry of LNV (Agriculture, Nature and Food safety), involving a yearly fishing ban in the three most lucrative months for the Dutch eel fishers (September till November).
- 2) The plan of the Dutch inland fishers (CvB - Association of Inland Fishers, and PO IJsselmeer), involving 157 ton *female* silver eels, of which 50 ton of the best quality, to be captured in the inland waters and released in the open sea for migration.

In the following, the effectiveness of both plans is compared to show which plan has the most positive perspective for the recovery of the eel stocks and a sustainable eel fishery management.

Differences in Analysis and Approach between the two plans.

Problem	Plan of Ministry	Plan of inland fishers
Turbines of pumping stations damage or kill silver eels migrating to the sea	<p>Acceptance of current loss of 20 % of silver eels by destruction.</p> <p>Expectation that in the long-term (20 – 30 years) all 4600 pumping stations will be made "eel friendly".</p>	Immediate action to catch migrating female silver eels in front of pumping stations and release them into the sea
Pollution (PCB's, dioxins) in several water bodies prevents a successful reproduction of the eel	Expectation that in long term the Water management authorities will clean up water bottoms and decontaminate water bodies	Immediate action to release silver eels from identified 'clean' (not polluted) water bodies.
Swim bladder parasite causes mortality of migrating eels on their way to the Sargasso Sea	<p>Quality of silver eels is not considered in the plan.</p> <p>No assessment of silver eel quality differences between the water bodies.</p> <p>Consequently no perspective for improvement of eel management plan.</p>	<p>Priority to escapement of good quality silver eels.</p> <p>Identification of water bodies with low or no incidence of swim bladder parasites, to increase the release of good quality silver eels from these areas.</p> <p>Good future perspective for improvement of eel management plan.</p>
Considerable illegal fishing (poaching) with recreational and professional gears	<p>No extra police effort to combat illegal fishing.</p> <p>Fisher's role as watchdog on the water disappears during a 3 months fishing ban.</p>	Illegal fishing combated by joined efforts of professional and recreational fishers and police in regional management boards.
No reliable data of eel catches available for policy and research purposes.	<p>Catch registration starts off only in 2010.</p> <p>No separate recording of red and silver eel.</p>	Immediate start off of registration of silver eel catches.

Differences in contribution to the eel reproduction success

There is a common understanding that eel management plans should focus on increasing the number of eels for reproduction (in the Sargasso Sea). It is assumed the number of males is ***not*** a limiting factor for the reproduction success of the eel (IMARES, 2008).

Therefore both plans are compared on escapement success of *female* silver eels.

Result	Plan of Ministry	Plan of inland fishers
Extra escapement of silver eels (regardless of sex), on top of usual number of escaping silver eels.	<i>Estimated</i> escapement of - 244 ton according to calculations of Ministry of LNV - 186 ton according to calculations of inland fishers (CvB) , based on data provided by Ministry of LNV	<i>Guaranteed</i> escapement of 157 ton of <i>female</i> silver eels
Extra escapement of <i>female</i> silver eel¹	149 ton	157 ton
Extra escapements of good quality <i>female</i> silver eel	Not known	At least 50 ton, well-monitored

Notes:

- 1) An increase of legal minimum size of eel to e.g. 35 cm (as proposed by several member states) will only affect the quantity of male silver eels, but will only minimally increase the number of migrating females.

Differences in other results between the two plans

Result	Plan of Ministry	Plan of inland fishers
Livelihood of fishers (entire inland fishery sector)	Gross income loss of: <ul style="list-style-type: none"> • Silver eel: € 860.000² • By-catch of other fish: € 1,5 million³ 	Gross income loss of: <ul style="list-style-type: none"> • Silver eel : € 300.000⁴ • additional expenses for transport, control and inspection of quality and quantity of silver eel for release in the sea.
Data gathering on the entire fish stocks	Current fish stock monitoring programs with assistance of professional inland fishers using fykes, will discontinue during 3 months fishing ban.	Current fish stock monitoring programs will continue and inland fishers contribute to the monitoring of the fish stocks.
Decentralisation of fish stock management and co-management	No consideration of roles and responsibilities of the inland fishers in the management of the eel stock. Fishing ban will demoralize fishers for eel management.	Fishers take responsibility for the recovery of the eel stock and actively participate in fishery management
Co-operation between scientists and fishers.	No co-operation.	Fishers deliver valuable data for fish stock monitoring and fishery management plans.

Notes:

- 2) In total approx. 240 ton of silver eel will not be caught (*LEI 2005*). Considering the current market price of € 6.50/KG, this implies an income loss for the fishers of € 1.56 million. Allocated compensation is only € 700,000, leaving the fishers with a yearly income loss of € 0.86 million
- 3) EIM, 2003 reported the total annual income of the inland fishery sector at € 15-17 million, of which around €10 million is from eel. The announced fishing ban for the September, October and November, also will affect the considerable income from by-catches in these months. The income from silver eel fishery and by-catches in the Netherlands is estimated for €3.25 million (EIM,2003).
- 4) Income loss : 157 tons x current market price (€ 6,5/kg) = € 1 million
 Compensation : € 700,000
 Net income loss : € 300,000.

Eel stock management in the future

- A thorough eel stock management – in particular in areas that produce good quality *female* silver eel – still needs to take shape in both plans.
- There are subsidies available for stocking glass eel in well managed areas. In these areas the fishers will continue to fish for their livelihood, under the condition that an effective eel stock management regime will guarantee the escape of a substantially higher number of good quality female silver eels to the open sea.
- Such management regimes will include the participation of fishers in the combat of illegal fishing and the gathering of data for monitoring and scientific purposes.
- It will also include local regulations for the increase of the minimum mesh size and/or allocation of quota for yellow eel.
- In some areas the option of a partial decommissioning of the (silver) eel fishery should be seriously explored.
- But first and for all, there is the urgent need to obtain more insight in the present condition of the eel stocks and the eel fishery.
- It is common knowledge that due to the differentiation in water bodies in the Netherlands, the situation differs widely per area. However, with the present plan of the Dutch Ministry of LNV it will not be possible to develop effective eel stock management tools based on reliable scientific data.