

Economic aspects of electric pulse fishing

Hans van Oostenbrugge, Arie Mol, Arie Klok, Jos op de Weegh, Geert Hoekstra



WAGENINGEN
UNIVERSITY & RESEARCH



Following a decision by the European Parliament to ban electric pulse fishing, the Dutch Ministry of Agriculture, Nature and Food Quality asked Wageningen Economic Research to briefly list the major economic aspects of Dutch electric pulse fishing. The table of facts below was compiled from data sources from the Netherlands Enterprise Agency (RVO) and Wageningen Economic Research. Most data relate to the situation as at 31 December 2016. Electric pulse fishing is of major economic value for the Dutch cutter-fishing industry. A blanket ban on electric pulse fishing would therefore have a significant economic impact on the cutter-fishing industry generally and individual fishing companies in particular.

Number of cutters and exemptions

Table 1 Number of active cutters with an exemption for electric pulse fishing (as at 21-31-2016)

	Euros/ middle-sized	Large	Flyshoot	Shrimps	Total
Used exemptions for electric pulse fishing	20	56		2	78
Exemptions for electric pulse fishing that are not in use as at 31 December 2016*		1		1	2
Unused exemptions for electric pulse fishing	4				4
Total number of exemptions for electric pulse fishing	24	57		3	84
Overall fleet size (both with and without exemptions)					
Used exemptions for electric pulse fishing	54	69	14	143	280

Source: Nederlands Register van Vissersvaartuigen (Dutch national fishing fleet register), processed by Wageningen Economic Research.

Explanatory note

Euro/middle-sized: Vessels with an engine power between 270 and 1,500 hp that are used for several types of fishing. One cutter in this group has an exemption that allows electric pulse fishing for shrimps as well

Large Vessels with an engine power of over 1,500 hp that mainly catch flatfish by means of beam trawl fishing, electric pulse fishing, or twin rig trawling.

Flyshoot: Vessels used for flyshoot fishing

Shrimps: Vessels with an engine power of 300 hp or less that are mainly used for shrimp fishing.

** These two exemptions (which were in force before) are assigned to vessels with a specific registration number which were no longer mentioned under that number on the fleet list as at 31 December 2016.*

Table 2 Number of active cutters per home port that are using an exemption for electric pulse fishing (as at 12-31-2016)

	Number of exemptions for electric pulse fishing	% of overall electric pulse fishing (84)	Total number of cutters	% of cutters used for pulse fishing out of the total number of cutters in each port
Arnemuiden	10	12	10	100
Breskens	1	1	3	33
Goedereede	12	14	15	80
Harlingen	1	1	9	11
Den Helder	3	4	10	30
Katwijk	5	6	6	83
Ouddorp	4	5	4	100
Scheveningen	2	2	6	33
Stellendam	1	1	3	33
Tholen	3	4	4	75
Texel	9	11	15	60
Urk	20	24	61	33
Vlissingen	3	4	3	100
Wieringen	3	4	48	6
Yerseke	1	1	8	13
Not in use as at 31 December 2016*	2	2		
Other ports			75	
Total	80	95	280	
Unused	4	5		

Source: Nederlands Register van Vissersvaartuigen (Dutch national fishing fleet register), processed by Wageningen Economic Research.

** These two exemptions (which were in force before) are assigned to vessels with a specific registration number which were no longer mentioned under that number on the fleet list as at 31 December 2016.*

Landings and value

Table 3 Weight of landings (live weight, * 1,000 kg) and value of landings (* 1,000 euros) in 2016

Fish species	Total cutter fleet	Cutters using electric pulse fishing	% of electric pulse fishing out of total
Weight (* 1,000 kg)			
Plaice	33,639	9,602	29
Sole	9,547	7,144	75
Other fish	41,306	6,405	16
Total catch	84,494	23,152	27
Value (* 1,000 euro)			
Plaice	53,899	15,366	29
Sole	99,539	74,557	75
Other fish	189,735	20,279	11

Source: VIRIS (Fish Registration and Information System) database, processed by Wageningen Economic Research.

Investments

Table 4 Average acquisition cost of electric pulse fishing system per vessel (value in euros * 1,000)

	Average per vessel (* 1,000 euro)	Number of vessels (at the end of 2016)	Total (* 1,000 euro, based on the fleet in 2016)
Small and middle-sized cutter	250	23	5,750
Large cutter	350	57	19,950

Source: Bedrijveninformatienet (Farm Accountancy Data Network), Wageningen Economic Research

Fuel consumption

Table 5 Fuel consumption (in litres) per day at sea for cutters with engines between 1,500 and 2,000 hp.

Beam trawls	SumWing	Pulse fishing	Beam trawls
7,900 (2011)	6,700 (2011)	3,900 (2011)	7,900 (2011)
7,300 (2016)	6,000 (2016)	4,100 (2016)	7,300 (2016)

Source: Bedrijveninformatienet (Farm Accountancy Data Network), Wageningen Economic Research

Employment

Number of FTE for vessels used for electric pulse fishing (2016):

Euro/middle-sized: 80

Large: 342-399

Total FTE for the Dutch cutter fleet: 1,135.

The trend noticed in 2017 that more vessels were manned with a double crew, led to an increase in the number of FTE

Accountability

The information presented in this document is based on data from the Netherlands Enterprise Agency.

- Technical data from the vessels listed in the Dutch national fishing fleet register (NVR)
 - Landing data from the VIRIS (Fish Registration and Information System) database
- Economic data are based on the data from Wageningen Economic Research's Farm Accountancy Data Network.

To ensure the consistency of the data, data from 2016 were used for all analyses. For more information, please see www.visserijncijfers.nl (in Dutch).

Contact

Wageningen Economic Research Hans van Oostenbrugge
P.O. Box 29703 Senior researcher
2502 LS The Hague T +31 (70)3358 239
www.wur.eu/economic-research E hans.vanoostenbrugge@wur.nl

2018-024