

Fact sheet: Beam-trawl fishery

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General

The term beam-trawl fishery refers to traditional beam trawl with a steel boom and tickler chains. Besides these traditional types, various modifications and variants on the beam trawl are on the increase, such as the pulse trawl and the sumwing. See the fact sheet on alternative fishing gear.

Principle

Fishing with a beam trawl is an active fishery method, whereby flatfish are startled from the seabed and end up in drag nets.

Target Species

Flatfish, such as sole, plaice, dab, lemon sole, brill, flounder, turbot and halibut.

Description

In traditional beam-trawl fishery, a net hangs in the water on booms on the starboard and the port side of the cutter. Fishing is carried out with two nets at the same time. During fishing, the two booms are virtually horizontal above the water. Each fishing net is attached to the boom by a fishing line and held open by a beam. These days, the beam is almost always a long steel pipe. So-called beam heads are attached to the ends of the pipe to ensure that the beam and the net remain at the required height above the seabed and to reduce the resistance against the seabed at the same time. Besides the

headrope and the ground rope, a number of tickler chains are also attached to the beam heads. These tickler chains are dragged by the ground rope. The tickler chains serve to startle the dug-in flatfish, so that they come up and swim into the net. The mesh of the net is wider at the beginning than at the end. The small, undersized fish, can escape and the mature fish remain in the net. The mesh width that is used for fishing depends on the target species, but generally it is between 80 and 120mm. After a pull, the net with the codend (the end of the net where the fish collects) is taken up onboard. By opening the codend of the net, the catch drops into a bin. This fish are sorted onboard the cutter for size, cleaned (gutted) and rinsed. Then the fish are put in plastic crates on ice and stored in the cooled fish hold.

Fleet

There is a distinction between cutters with an engine capacity of up to 300hp (221 kW) and cutters with an engine capacity between 300 and 2,000hp. Cutters with an engine capacity of up to 300hp have a maximum length of 24 metres. The fishing gear they use has a maximum width of 2x 4.5 metres. The cutters with an engine capacity that exceeds 300hp are more than 24 metres long and have a maximum gear width of 2x12 metres. Over the past years, the cutter fleet has reduced in size. In 2009, the active fleet consisted of 104 large cutters and 204 smaller cutters, compared with 2002 when there were 157 large and 235 smaller cutters.

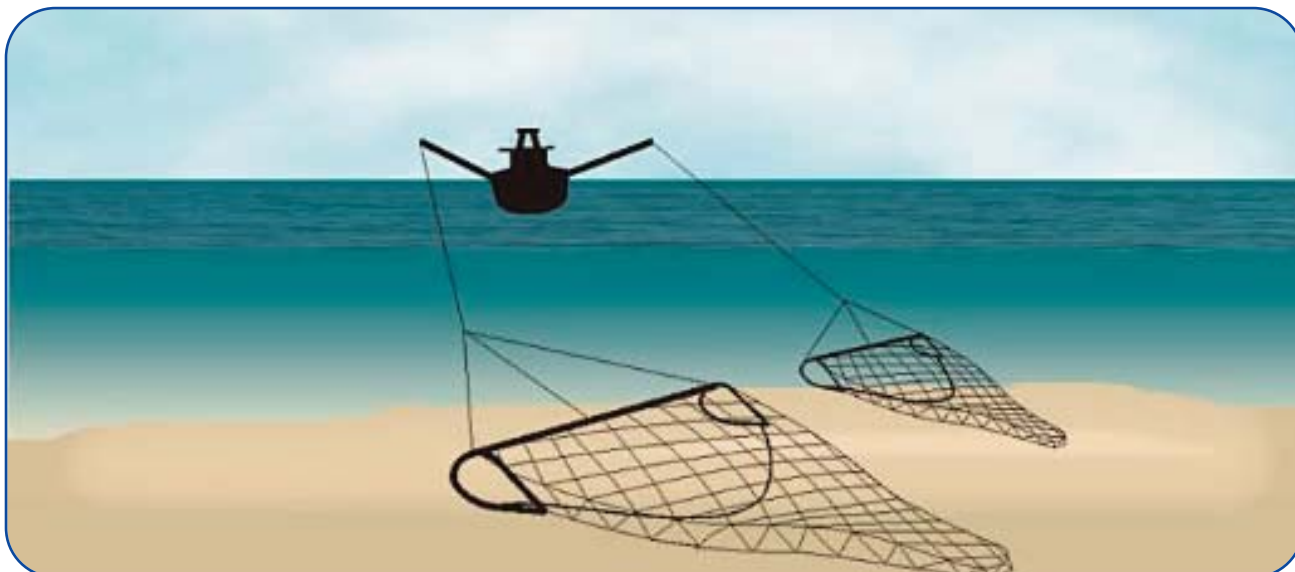


photo: Flying focus



Management

A licence is required for beam-trawl fishery. Fishing within the 12-mile zone, the zone up to approximately 21 kilometres off the coast, and in certain special areas is subject to additional conditions. For many species, such as sole and plaice, a fisherman needs a quota if he wants to land on one of the Dutch or foreign auctions. Each year, the EU determines how much may be caught for most commercial species; these are so-called Total Allowable Catches (TACs). TACs are determined on the basis of scientific advice and indicate how much of a certain species may be caught. The TACs are then divided into national quota, which designate the maximum amount that may be caught of a certain species in a certain area in a country. In the Netherlands, the national quota may be divided into individual quota which may be leased and exchanged between different parties. The scientific advice on the situation of the fish stocks is prepared by ICES, the International Council for Exploration of the Sea. For the so-called species without a quota, a fisherman does not need a quota to be able to land them. They are not governed by TACs either. Besides the quota that apply to some species, fishermen are faced with a maximum permitted deployment of the fleet; the so-called Kilowatt Days. Kilowatt Days are calculated by multiplying the number of allocated days at sea by engine capacity.

The number of allocated Kilowatt days indicates how big the deployment of the fishing fleet may be for a certain fishing-gear category during a certain period.

Where

Beam-trawl fishery takes place in the North Sea; along the entire coast and outside the 12-mile zone – except for some conservation areas. The smaller cutters may carry out their activities inside and outside the 12-mile zone, provided they comply with the additional conditions that apply to fishing within the 12-mile zone.

The larger cutters fish outside the 12-mile zone and outside the plaice box, which is an area north of the Dutch and German Wadden Islands and west of the Danish Wadden Islands, where only smaller cutters are permitted. The deeper parts of the North Sea, and the grounds that are relatively quiet due to a lack of currents and weather influences are fished seldom or very seldom. Furthermore, wind farms are not open to fishing vessels and there is generally no fishing in shipping lanes, because of the nuisance the fishermen could experience from passing shipping traffic.

Sand and gravel extraction areas are also left alone, because there is usually little fish in the years following extraction.

When

Beam-trawl fishery takes place all year round. The target species may differ per period, for example because fishermen take account of the reproductive period of the fish, the spawning period.

Social Debate

The social debate around beam-trawl fishery is concentrated mainly on the undesired bycatch and seabed disturbance. An undesired bycatch consists of commercial species for which the fisherman has no quota, undersized fish (fish smaller than the permitted landing size) or species that are not commercially interesting.

This bycatch cannot be landed and is put overboard (discards).

Beam-trawl fishery disturbs the seabed during fishing. Scientific research has demonstrated that this has a negative effect on some areas and on a number of seabed species. The industry takes the criticism seriously and is working out which areas are and which are not vulnerable to seabed disturbance. The cutter industry is on its way to becoming more sustainable, and reducing fuel consumption, discards and seabed disturbance are key drivers. A range of alternative fishing gear to replace the traditional beam trawl is also gaining popularity. Several scientific studies are being carried out, including into the composition and reduction of the discards, applying larger mesh widths, and escape panels. Fishermen are also sharing their knowledge of important issues in the so-called knowledge networks, led by the LEI and IMARES. Furthermore, fishermen take an active part in the discussions on setting up protected areas.

MSC

A large part of the Dutch cutter fleet has bundled forces and started the MSC assessment process in 2010. This process will ascertain whether the fishery is (1) carried out on healthy stocks, (2) has a minimum effect on the ecosystem, and (3) is carried out as part of a good management plan. Certification is issued by an independent third party.

References

1. Fishery in figures, LEI 2010
2. Marine Stewardship Council, MSC
3. Report 'Bestaande vistuigen als mogelijke alternatief voor de boomkor' (Existing fishing gear as a possible alternative to the beam trawl) RIKZ, 2001
4. Knowledge networks Fishery
5. www.pvis.nl
6. www.vissersbond.nl
7. www.imares.nl

For more information about the fish species, see the fish facts on www.pvis.nl

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