



North Sea brown shrimp

In the Netherlands, the brown shrimp or the Dutch shrimp (*Crangon crangon*) is the most important product from fishery for crustaceans. Shrimps are cooked onboard the shrimp-fishing vessel, and then they are delivered to the purchasers onshore. Those companies ensure that the larger part of those prawns are peeled and packaged in consumer packaging. The supermarket channel accounts for a large part of the deliveries to the consumer. In 2007, Dutch auctions brought a total of 9,551 tonnes of consumption shrimps onto the market, with a value of more than 36.6 million Euro. As the fishing grounds form part of important nature areas, the fishery activities take place under strict conditions. Shrimp fishermen and nature and environmental organisations are working together on sustainability and certification by the Marine Stewardship Council (MSC).

There are many different types of shrimp all over the world, of which three hundred are used for human consumption. The North Sea brown shrimp (*Crangon crangon*) is considered to be one of the best-known species of all. This shrimp species used to be known as the Dutch shrimp, but is also known as the grey shrimp (Belgium) and the brown shrimp (United Kingdom). The North Sea brown shrimp is a crustacean that belongs to the Crangonidae family, and has a fine taste. This shrimp species occurs in the coastal waters of England, Belgium, the Netherlands, Germany, and Denmark.

The autumn is the most important catch period for the brown shrimp. Off the Dutch coast, the shrimps are also caught in the sandy and muddy beds of the Wadden Sea and Zeeuwse coastal waters.

The facts in brief

- There is no stock survey for brown shrimps, and therefore the international fishery scientists of ICES cannot assess the stock. Although natural circumstances cause considerable fluctuations in the stocklevels, fishery scientists have thus far never expressed concerns about the size of the stocks or too great a fishing effort.
- Two or three times a year the female shrimp lays eggs, sometimes as many as 25,000. After two months the eggs hatch and the larvae float away. The largest part becomes food for other sea inhabitants, such as flatfish, whiting, and cod. Brown shrimp fishery can take place all year round, but the landings are most sizeable in early spring and during the autumn months. In view of the natural fluctuations in the stocks, the North Sea brown shrimp is a true natural product. See figure 1.

The Netherlands has issued 215 shrimp-fishing licences, of which 60 fishermen only fish for shrimps. The remaining 155 fishermen fish for shrimps part of the year, whilst the rest of the year they fish for other species, such as plaice, sole, and langoustines.

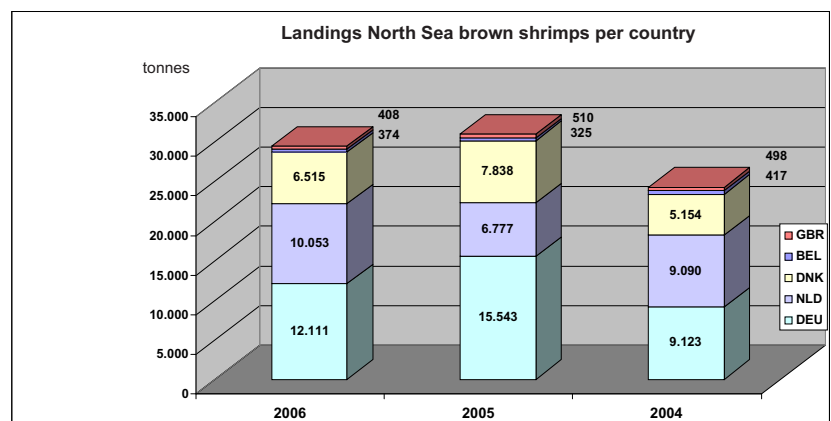
- Fishery for North Sea brown shrimps takes place with relatively small fishing vessels (18-24 metres long) that are fitted with special shrimp fishing gear, the shrimp trawl. The caught shrimps are rinsed and sorted (sifted) onboard, and the included undersized fish and shrimps that are not good enough for the market are returned to sea immediately. The shrimps are then cooked onboard in equipment on deck.

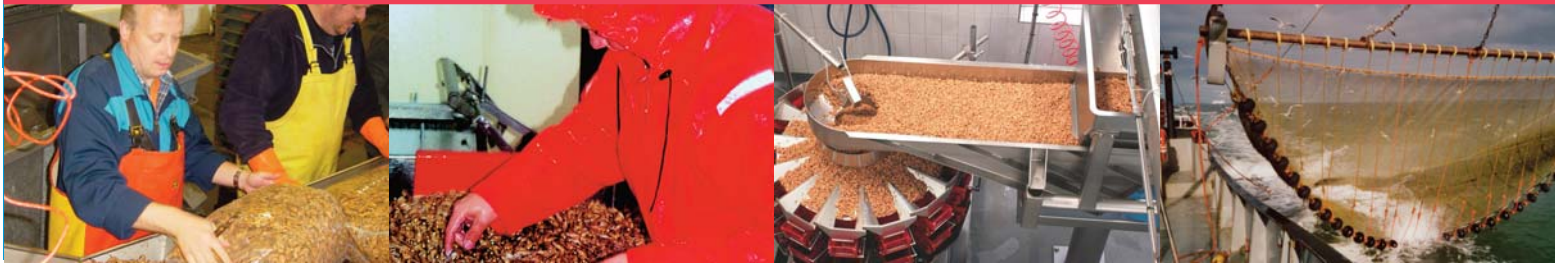
Figure 1: Overview of landings to shrimp auctions B, DK, NL and DE.

Social debate

Nature organisations such as the WWF and the North Sea Foundation have put the North Sea brown shrimp in the green column of their fish-purchase guide, the Viswijzer. The message is that it is 'an excellent choice', because the species is not under threat and is relatively insensitive to the fishing effort. The fishing gear is light.

However, nature organisations are a little concerned about putting back the undesirable bycatch of young flatfish in particular.





Bycatch and discards

Apart from the species a fishery actually wants to catch, fishermen also catch other species. This bycatch can be split into a desired and an undesired bycatch.

A desired bycatch consists of commercially interesting fish species that may be landed, whilst the undesired bycatch is the catch the fisherman puts overboard again.

These so-called discards consist of commercial species for which the fisherman has no quota or that are smaller than the compulsory minimum size. Other discards are species that are not interesting from a commercial point of view, or other by catch organisms, such as seabed animals.

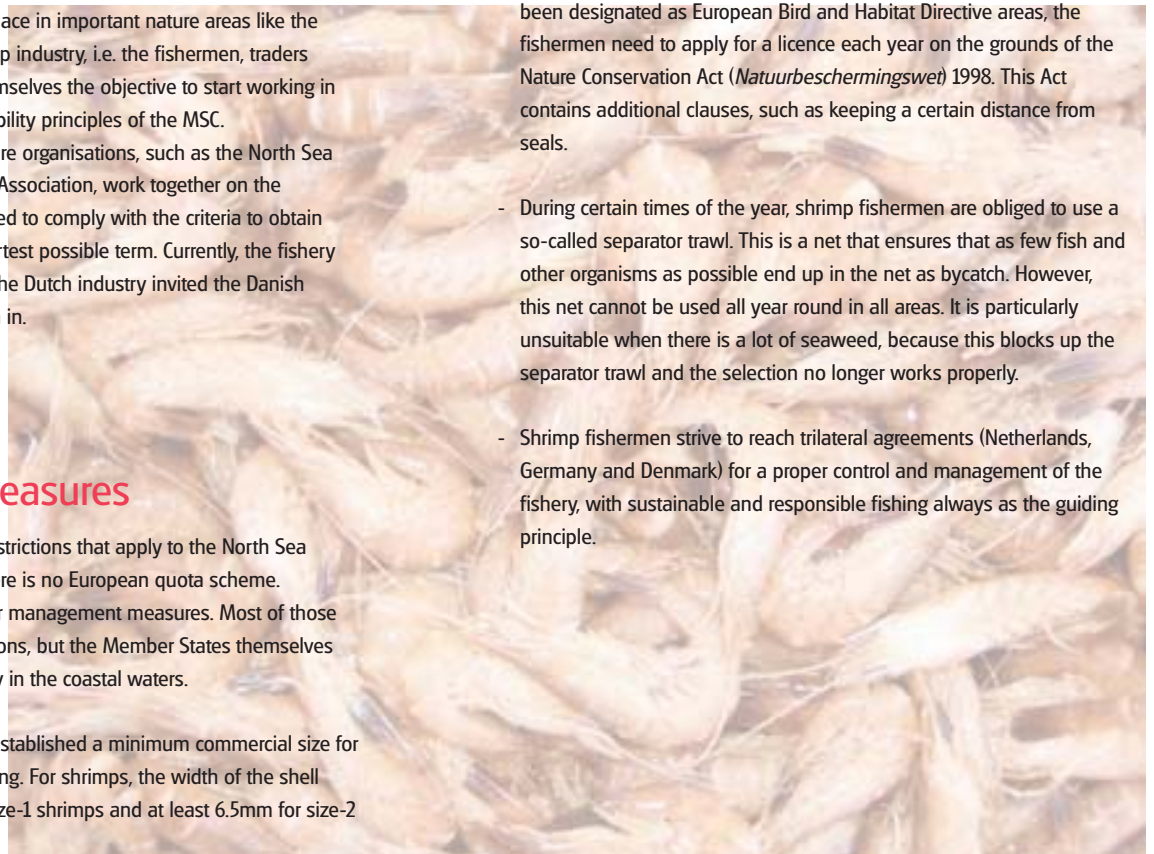
- Although shrimp fishery is known to have relatively large amounts of discards periodically, the data for the Dutch fleet are as yet insufficient to be able to quantify the discards¹. Management measures are taken to reduce the existing discards.
- As the shrimp fishery takes place in important nature areas like the Wadden Sea, the Dutch shrimp industry, i.e. the fishermen, traders and processors, have set themselves the objective to start working in accordance with the sustainability principles of the MSC. The shrimp industry and nature organisations, such as the North Sea Foundation and the Wadden Association, work together on the improvements that are required to comply with the criteria to obtain the MSC certificate in the shortest possible term. Currently, the fishery is in the certification stage². The Dutch industry invited the Danish and German industries to join in.

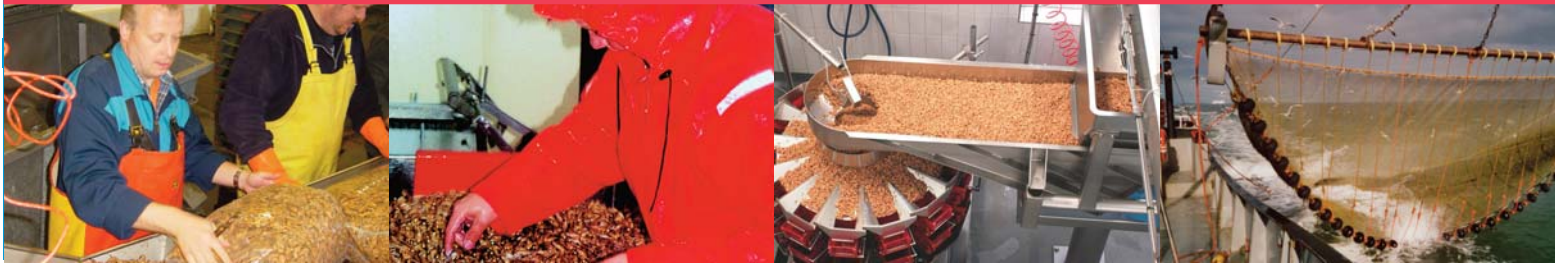
Management measures

There are no maximum catch restrictions that apply to the North Sea brown shrimp, which means there is no European quota scheme. However, there are various other management measures. Most of those measures are European regulations, but the Member States themselves are responsible for fishery policy in the coastal waters.

- The European legislator has established a minimum commercial size for marketing shrimps after landing. For shrimps, the width of the shell must be at least 6.8mm for size-1 shrimps and at least 6.5mm for size-2 shrimps.

- In the Netherlands and in other EU Member States, shrimp fishery may only be carried out by vessels that comply with the European requirements for fishing in the 12-mile zone for fishing in coastal waters and the Wadden Sea. This concerns a maximum permitted engine capacity and provisions regarding the size of the fishing gear and the netting.
- Specific to the Dutch shrimp fishery, the government has stipulated that a vessel that wishes to be eligible for a shrimp licence must be equipped with adequate sorting equipment.
- In the Netherlands there is a limit on the number of shrimp-fishing licences that are granted for fishing in the Wadden Sea or other coastal waters, respectively. This limit serves to co-ordinate the fishing effort for shrimps in the coastal zone. This licensing procedure takes into consideration the fact that the fishing grounds are nature areas and also takes account of other forms of fishery, such as mussel farming in the Wadden Sea.
- As the most important shrimp fishing grounds in the Netherlands have been designated as European Bird and Habitat Directive areas, the fishermen need to apply for a licence each year on the grounds of the Nature Conservation Act (*Natuurbeschermingswet*) 1998. This Act contains additional clauses, such as keeping a certain distance from seals.
- During certain times of the year, shrimp fishermen are obliged to use a so-called separator trawl. This is a net that ensures that as few fish and other organisms as possible end up in the net as bycatch. However, this net cannot be used all year round in all areas. It is particularly unsuitable when there is a lot of seaweed, because this blocks up the separator trawl and the selection no longer works properly.
- Shrimp fishermen strive to reach trilateral agreements (Netherlands, Germany and Denmark) for a proper control and management of the fishery, with sustainable and responsible fishing always as the guiding principle.





Marketing and processing

On arrival at one of the seven Dutch shrimp auctions - Lauwersoog, Zoutkamp, Harlingen, Den Oever, Stellendam, Colijnsplaat, and Breskens – the shrimps are checked on the minimum commercial sizes established by the EU. This check is supervised by employees from the Dutch Fish Products Board (*Productschap V/s*). The width of the shell is the standard for the measurement.

In the Netherlands, the sizing checks are carried out with the compulsory shaking/sifting installations that are available in the shrimp auctions. The shrimps must also be examined on the EU standards for freshness. The employees of the Dutch Fish Products Board carry out the freshness tests and at the same time they examine the shrimps on the basis of Dutch food legislation.

Besides the nearly 10 million kilos of North Sea brown shrimps landed by fishermen in the Netherlands, there are also landings from Germany, Denmark, and England. In total some 33 million kilos of shrimps are traded each year, of which 85% is peeled. France accounts for the bulk of unpeeled shrimps, whilst Belgium's specialities of shrimp-filled tomatoes and the shrimp croquette make it the most important sales area for the Dutch industry with 50% of peeled shrimps, followed by Germany (25%).

The remainder stays in the Netherlands or is exported to other countries in Europe. Shrimp consumption is rising in the Netherlands - in 2002, 7% of all

households bought brown shrimps, but by 2006 this number had almost doubled. Supermarkets account for most purchases with 55%, whilst the traditional fish trade, specialised fishmongers or market stalls, account for 40%. Shrimps are sold fresh (natural), chilled (also natural, but in modified atmosphere packaging), and frozen.

The shrimps are mainly peeled in Morocco - every week, lorries drive up and down with shrimps that are kept in climate-controlled conditions. Benzoic acid and/or sorbic acid are added to the shrimps to conserve them safely - not more than 0.6% in accordance with the EU standard. There are also intensive bacteriological laboratory tests. Each year, the peeling centres return approximately 9 million kilos of peeled North Sea brown shrimps to the processing companies in the Netherlands. Part of that is frozen, whilst the rest is packaged for further distribution without interrupting the chilling process. North Sea brown shrimps are portioned in the quantities in demand by the purchaser – the wholesaler, the supermarket, the specialised fishmongers.

WOULD YOU LIKE TO KNOW MORE?

If you would like to know more about shrimps and/or the measures taken by the Dutch fishery sector, please visit www.pvis.nl where you will find more information.



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References

¹ SGS (2006). Brown shrimp (*Crangon crangon L.*) fishery in the Wadden Sea and North Sea. MSC preassessment report. SGS, Spijkenisse.

² http://www.msc.org/html/content_1419.htm