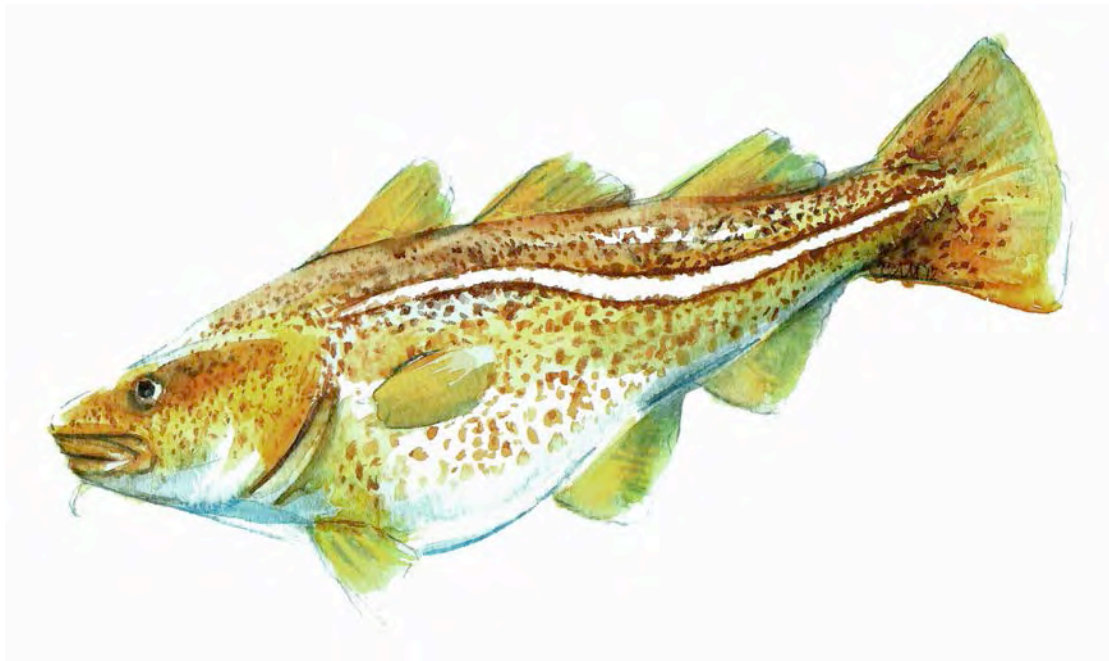


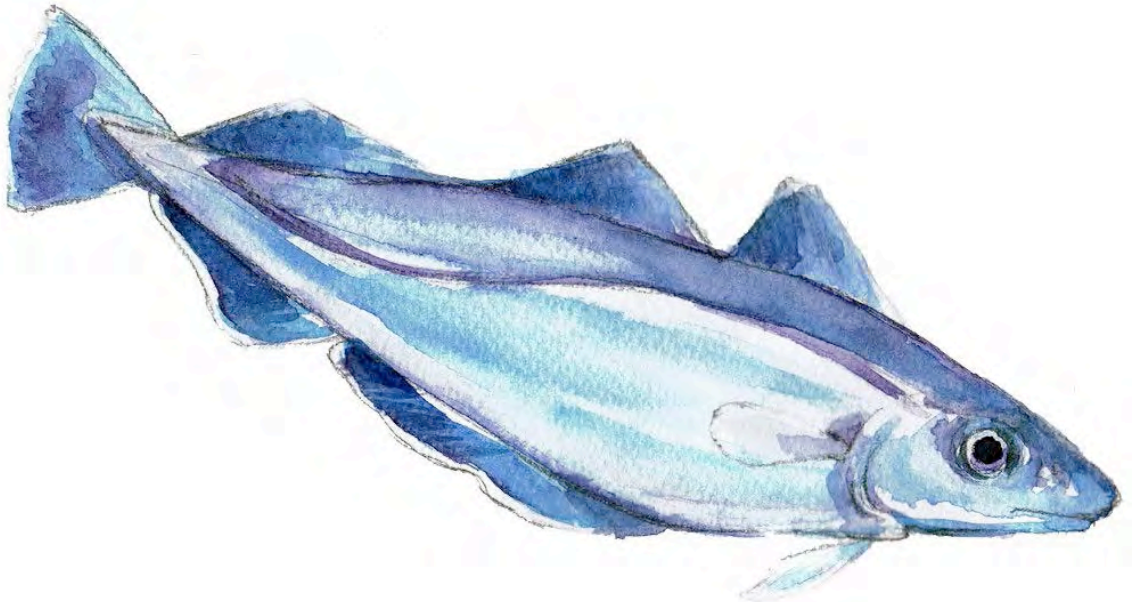


Irish Wildlife Trust's Guide to Sustainable Seafood



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Whiting



These fish were once dinnertime favourites but have now been over-fished to the point where recovery in the short to medium term in the Irish Sea is highly unlikely.

The Marine Institute considers that the stock in the Irish Sea has collapsed. Urgent management action is required to rebuild the whiting stock in this area. Scientists stress that the cornerstone of any rebuilding of whiting stocks should be measures that significantly reduce or eliminate the discarding of whiting in the Dublin Bay Prawn fishery.

The state of the West of Scotland and Celtic sea stocks are uncertain, with lack of data and are high levels of discards.

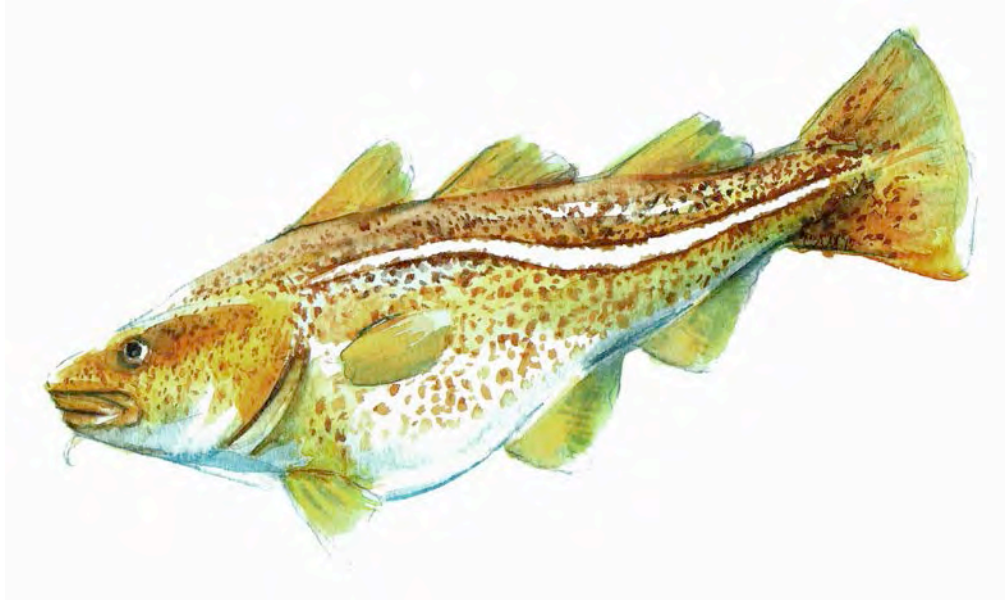


These prawns predominantly arrive on our shores frozen after a long journey, probably from South-East Asia.

There they have been farmed in intensive fisheries that are clearing valuable coastal Mangrove forests, causing marine pollution, and damaging off-shore coral reefs.

They are high in 'carbon miles' and taste of little.

Cod

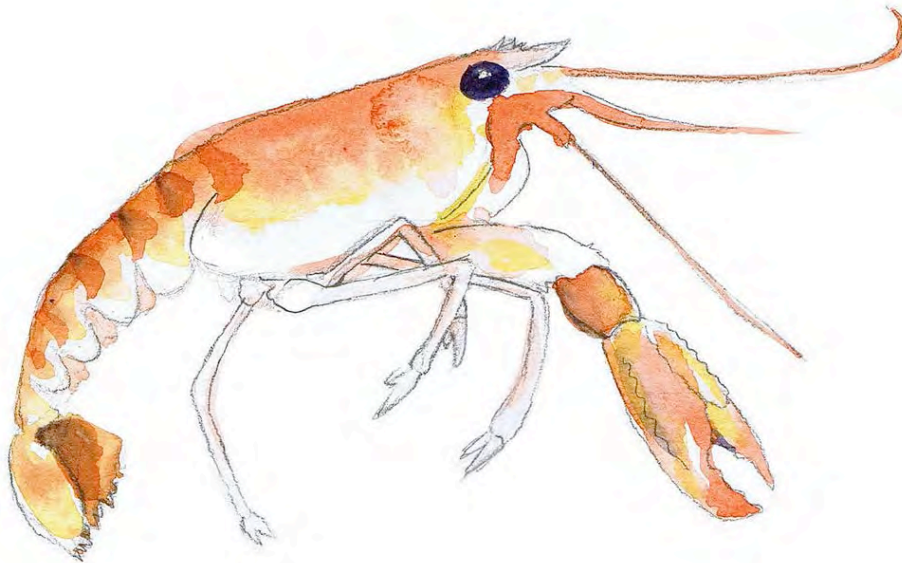


The north Atlantic cod is listed as 'threatened' by the International Union for the Conservation of Nature (IUCN). Quota for cod continues to be given to fishermen because of massive pressure from the fishing industry. This in turn is due to the enormous consumer demand for cod, which also results in considerable scope for illegal landings of this fish. Most cod that are caught today are juvenile fish that have not had a chance to breed. Cod is a top predator in the sea and its absence has resulted in an imbalance further down the food chain. Paradoxically fishermen have benefited from this since the numbers of Dublin bay prawn – the second most important commercially exploited species in Ireland – have exploded.

In the Irish Sea the Marine Institute states that stocks of cod are now 'severely depleted'.

The loss of cod in the sea around Canada has possibly altered the marine ecosystem there permanently. Despite a moratorium on Cod fishing since the early 1990's the stock has not recovered.

Added to this consumers are being duped since recent research has shown that a variety of other fish are being passed off as cod in restaurants and fish and chip shops.

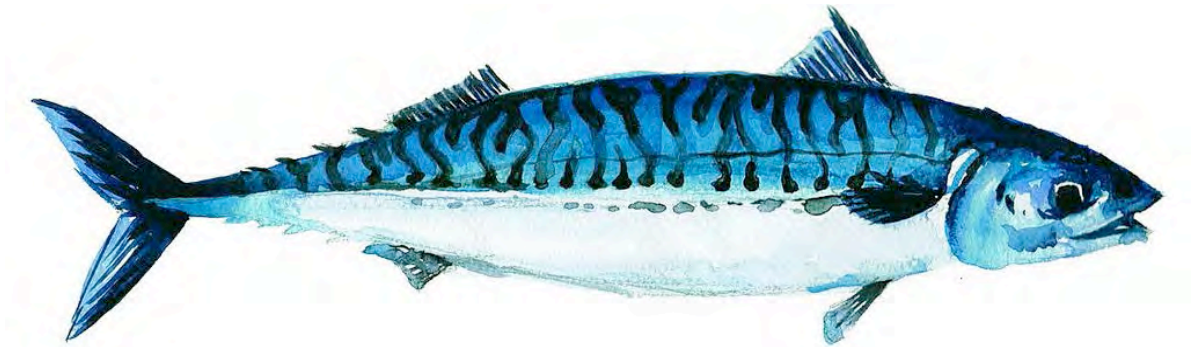


Dublin Bay prawns - or Nephrops - are the second most valuable resource to the Irish fishing industry with an estimated value of €31.5 million in 2011.

They are limited to muddy habitats, and require sediment with a silt and clay content of between 10–100% to excavate its burrows. This means that the distribution of suitable sediment defines the species distribution.

Adult Dublin Bay prawns only undertake very smallscale movements, (a few 100 m), but larval transfer may occur between separate mud patches in some areas. This makes some stocks, particularly those with lower average density, vulnerable to localised depletion. Catch rates and composition vary daily and seasonally between different areas and sexes due to different emergence patterns and underlying population densities. After the onset of maturity male Dublin Bay prawns grow faster and attain a larger size than females. Density limits growth and grounds with high Dublin Bay prawns density ($>0.7/m^2$) have smaller average size than those with low density. Scientific advice is for no increase in catches.

There is a major by-catch problem of juvenile, whiting and haddock as well as many other marine organisms.



The mackerel is the most important commercial fish to Irish fishermen, estimated to be worth over €56 million in 2011.

It is a highly migratory fish that is caught in waters over 200m deep. Because they are pelagic, (i.e. they swim in the water column) fishing for them does not damage the seabed or result in a lot of by-catch. However, concern has been raised that by-catch of Atlantic Salmon smolt (young fish) is a significant concern.

Quotas have not been issued for mackerel since 2008 as agreement cannot be reached between the EU and Iceland/Faroe Islands on the division of the catch. In the absence of this agreement the stock is currently being over-fished.

Only a few years ago we were delighted to promote mackerel as a sustainable seafood choice but overfishing by Iceland and the Faroe Islands has resulted in the fish being stripped of its Marine Stewardship Council sustainability certification.



Plaice is one of a number of flatfish that can be found around the Irish coast and its population appears to be stable. Because they live on the sandy bottom of the sea they are fished by beam trawling – a method that destroys corals, sea fans and anything else that is rooted on the sea floor.

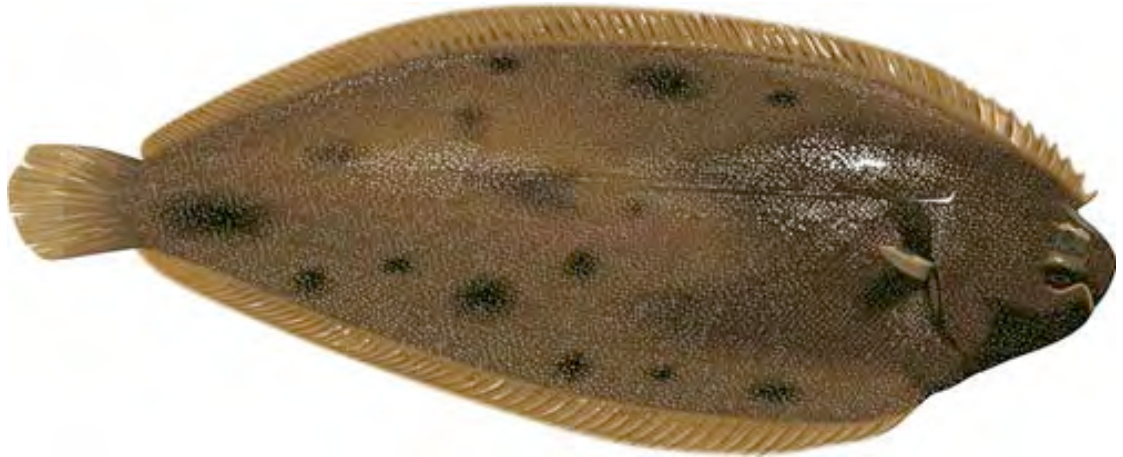
A very high proportion of the catch is discarded. Discard sampling studies have indicated variable discarding rates up to 80% by number.

In the eastern Irish Sea plaice are caught by the mixed demersal fishery, largely UK otter trawlers, and as a by-catch in targeted sole beam trawl fisheries, dominated by Belgian trawlers.

A proportion of the catch is caught by beam trawl fisheries. Beam trawling, especially using chain-mat gear, is known to have a significant impact on the benthic communities, although less so on soft substrates and in areas which have been historically exploited by this fishing method (i.e. where habitats are already degraded).

According to the Marine Institute more technical measures should be introduced to reduce discards. Also catches need to be reduced as the stock is currently being over-fished.

Sole

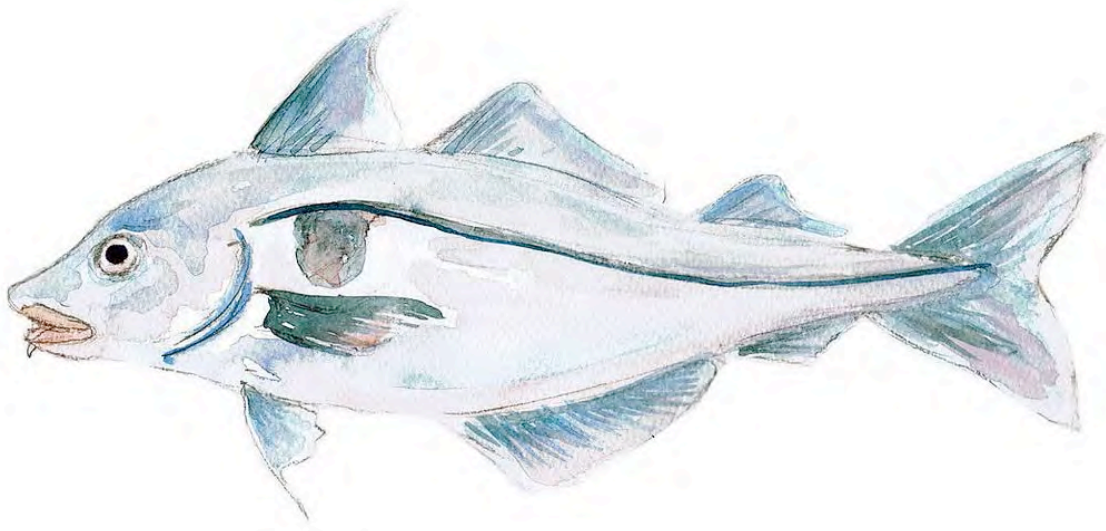


The spawning stock in the Irish Sea has been declining since 2001. Sole are predominantly caught by beam trawl fisheries, often in a mixed fishery with other flatfish as well as fish such as cod and haddock.

Information from observer trips indicates that the discarding of sole is between 0 and 8% in weight. Although discard rates of sole are low in these fisheries, discard rates of other (commercial and non-commercial) species can be considerable. Beam trawling, especially using chain-mat gear, is known to have a significant impact on the benthic communities, although less so on soft substrates.

Celtic sea stocks are being harvested sustainably according to the 'maximum sustainable yield' (MSY) and precautionary approaches.

Haddock



The status of this stock is uncertain due to lack of data but is thought that this stock is being over-fished. Based on precautionary considerations catches in 2012 should be reduced, and there should be further uptake of technical measures to reduce discards.

Discarding is a serious problem for this stock. The discard rates for all fleets in 2010 were 92-100% for one-year-olds, 22-96% for two-year-olds and 3-68% for three-year-olds by number.



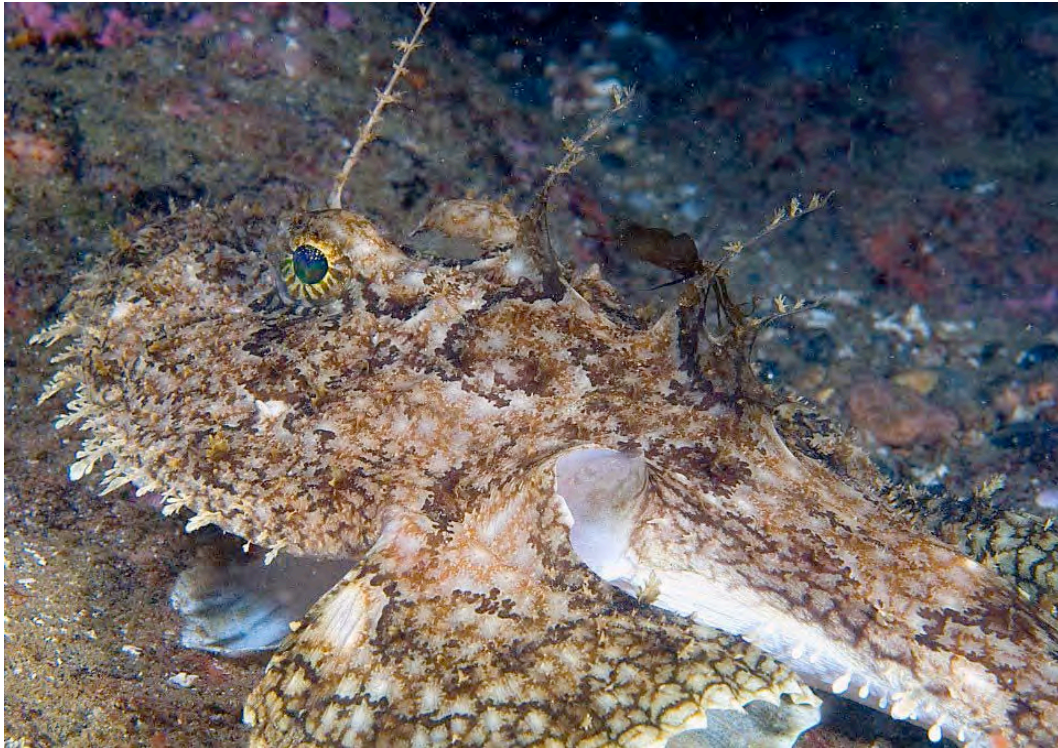
Wild Atlantic salmon is a protected species under the EU Habitats Directive and the sale of this once abundant fish is now prohibited. The end of drift netting for Salmon has caused considerable hardship to local coastal communities that have been left without a livelihood.

Salmon numbers have declined significantly since the 1970's and this has been attributed to poor survival rates at sea. This is thought to be due to the effects of climate change. The salmon is now classed as 'vulnerable' in the Red List of fish (King et al., 2011).

Few people can now remember what wild salmon tastes like. Salmon in supermarkets and restaurants is now farmed and on the surface this seems like a perfect solution to addressing problems of over-fishing. However, fish farms bring their own environmental problems including pollution with fish faeces and introducing parasites, particularly Sea lice, to wild fish. There may also be problems with genetic contamination when farmed fish cross with their wild relatives. Added to that environmental assessments required under EU law have never been carried out for fish farm operations across the west of Ireland.

While farmed salmon today is marketed as organic, the origin of their food is generally either unknown, or from stocks of feed that are known to be fished unsustainably. The IWT believes that 'organic' is an inappropriate label for these products.

Monkfish



The Monkfish, or Anglerfish, is a ferocious looking predator that has a mouth about twice as big as its body. What is presented to consumers is the fish's tail, which contains the firm, tasty flesh.

ICES advises on the basis of the precautionary considerations that catches should be reduced. Monkfish mature at large size and a large proportion of the catch consists of immature fish. This makes the stock susceptible to 'recruitment over-fishing', i.e. catching too many young fish, and management measures are required to ensure sufficient numbers to survive to spawning size.

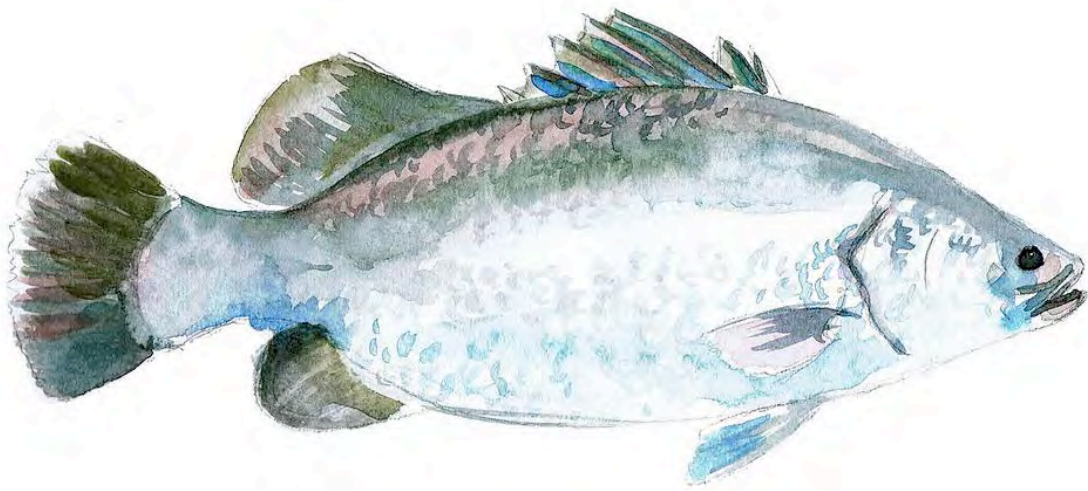
Scallops



These distinctive shellfish are considered plentiful in Irish waters but unfortunately the method of harvesting, dredging, is indiscriminate and damaging to marine habitats.

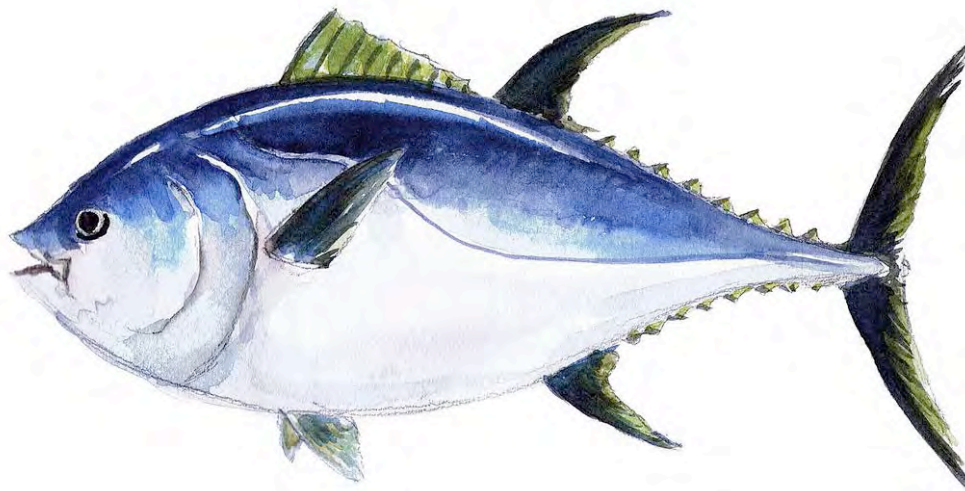
Dunnes Stores sells sustainably harvested scallops so ask for these at the counter. These are collected by divers that hand-pick them from the seafloor and therefore cause no damage to other organisms or habitats.

Sea Bass



There is currently a moratorium on the fishing of sea bass by Irish fishermen and it is prohibited to sell wild sea bass in Irish shops or restaurants. The sea bass that is sold in supermarkets is imported farmed stock, probably from Greece, but it is no harm to ask just to be sure.

The issue of fish farming adds another dimension, as huge quantities of fish need to be caught as feed for captive fish. Imported fish from distant locations also add 'food miles' and is therefore contributing to climate change.



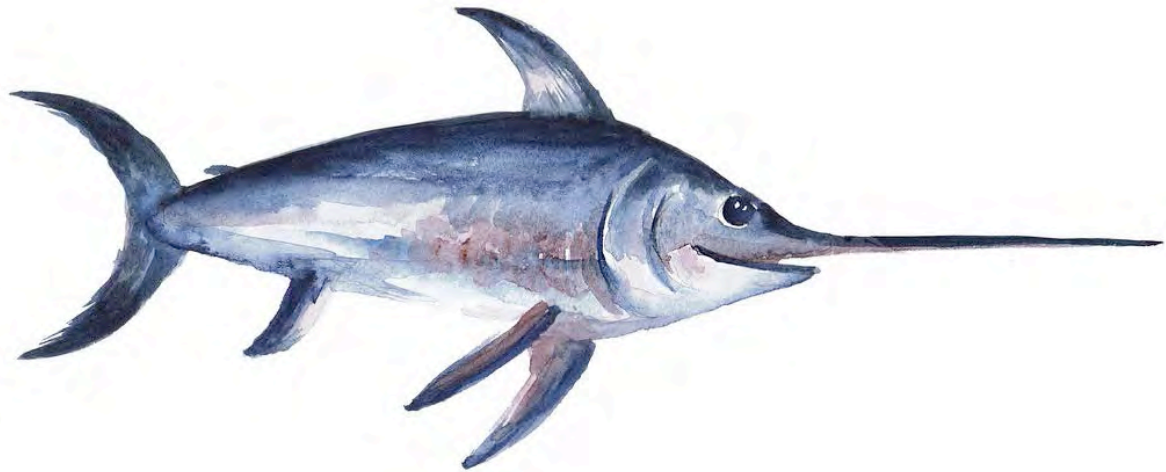
The plight of the blue-fin tuna has been given a lot of publicity in recent years. Its population has plummeted as a result of mismanagement and a flagrant disregard for scientific advice. This situation continues and so blue-fin should not be eaten for the time being.

IWT research has shown that most fillet tuna in Irish supermarkets is of the yellow-fin variety however this is difficult to tell since labels frequently only refer to a generic 'tuna'. The tuna in cans is predominantly skipjack tuna (although again the species of tuna is not always identified) and it is accepted that there are still plenty of these to go around. There are problems with how tuna are fished. This is done using a method known as 'long-lining' where by huge lengths of fishing line, perhaps tens of kilometres long, are baited and trawled through the sea. The hooks routinely catch not only tuna, but also sharks, turtles and a variety of other sea creatures.

Up to 90% of the world's sharks and marine predators have been lost in the past 50 years resulting in a dramatic man-induced alteration of the food chain. Recently tuna have started to be caught using rod and line and this virtually eliminates the by-catch. Unfortunately consumers are not told how their tuna is caught.

Look out for the 'Fish For Ever' logo in some supermarkets as their tinned tuna comes from skipjack tuna that is caught with pole and line only.

Bluefin tuna was proposed to be added to Appendix 1 of CITES in 2009 (the Convention against Trade in Endangered Species). However this proposal was rejected. Appendix 1 designation covers species that are considered to be threatened with extinction. Trade in whole or parts of Appendix 1 listed animals would be permitted only in exceptional circumstances. However this was blocked by Japan and other countries who cynically served blue-fin tuna at a reception!



Most of the swordfish taken by the U.S. fishing industry are juveniles. Recently, the US government took measures to protect juvenile north Atlantic swordfish stocks by closing swordfish nursery areas to fishing. Coupled with an international swordfish recovery plan (1999), swordfish populations are on the road to recovery. The swordfish is currently listed as data deficient with the World Conservation Union (IUCN). There is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status.

In the Atlantic, the Mediterranean stock is considered to be overfished. The stocks of the north and south Atlantic are considered to be well-managed (ICCAT 2009). Globally, this species has shown a 28% decline over three generation lengths (20 years). The only stock that is not considered to be well-managed is the Mediterranean, which comprises less than 10% of the species' global range. It is therefore listed as Least Concern, as it is below the threshold for a threatened category under Criterion A1.



Coley is another name for Pollock or Saithe.

Pollock has a preference for wrecks and rocky bottom, making it difficult to catch with trawls and therefore poorly suited for monitoring by research surveys. Data on growth and maturity, as well as more information from the fisheries are needed.

Juvenile Pollack are found in shallow coastal waters and may therefore be protected from fisheries in the early life stages. Pollock is found mostly close to the shore over hard bottom. It usually occurs at 40-100 m depth, but is found down to 200 m. A maximum size of 130 cm, a maximum weight of 18.1 kg and a maximum age of 15 years are reported.

Most Pollock in the Celtic Sea is caught by trawls and gillnets, and other gears come to complement the landings, such as trolling line, seine nets or beam trawl. More studies need to be done before the status of this stock can be determined. The Marine Institute therefore advises a precautionary approach to fishing.

The status of the Coley stock is unknown and there is no ICES advice for this stock. The Marine Institute advises that there is no scientific basis for the current TAC (total allowable catch), which is far in excess of recent annual landings. Landings have been in decline since the early 1990s. Studies need to be carried out to evaluate the exploitation status and stock structure of Coley.

Ireland, as the main participant in this fishery, has an opportunity to develop and implement a management strategy for mixed fisheries in this area.



Mussels are now farmed but have not been associated with the environmental problems of salmon farms. In fact Irish mussels are labeled with a sustainability mark meaning they can be eaten with a clear conscience.

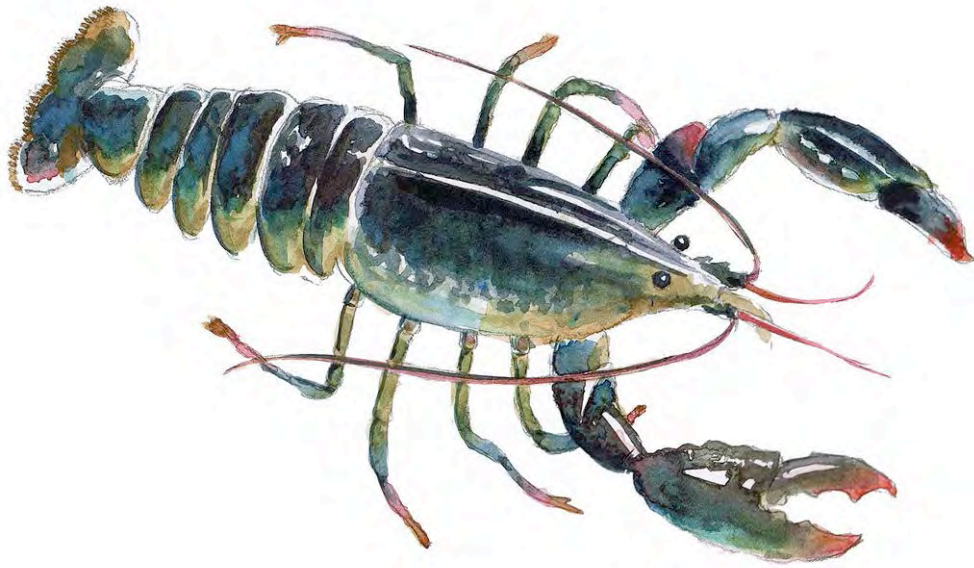
Mussels are exceptionally good value, tasty and easy to cook.



In 2001 an emergency recovery plan was introduced to rebuild stocks of hake. To-date it appears that this plan is effective with numbers increasing. Hake, like cod, is a predator that feeds on other fish, so its decline has been linked to changes in the ecosystem that have seen increases in the populations of species further down the food chain.

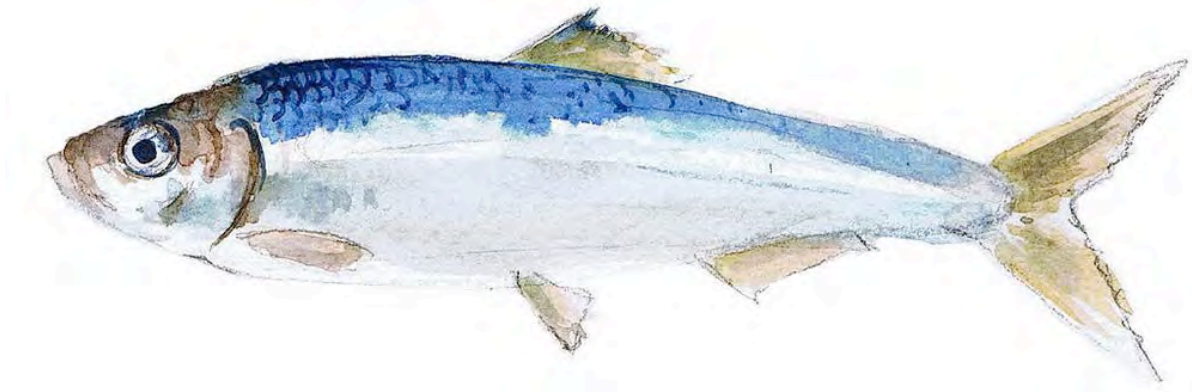
The northern hake has been managed for several years by means of a recovery plan in 2004 (EC 811/2004). A revised assessment has been developed by ICES, giving a new perspective of historical stock trends and invalidating previously defined precautionary reference points. Rules in the recovery plan are no longer implementable so there is a need to develop a new multi-annual plan for this stock. (Stock book 2011)

The total allowable catch (TAC) was overshoot considerably between 2001 and 2005 but since 2006 landings have been below the TAC.



In 1994 a scheme was started in Galway Bay to mark the tails of young female lobsters with a notch. They were thrown back so they could continue to breed. This has been remarkably successful and has resulted in bigger, and more, lobsters in the pot.

Since lobsters are caught in pots, collecting them does no harm to sea floor habitats or other marine life.



Herring was once a mainstay of the Irish fish diet but are now very uncommon at the fish market. They are an important prey species in the ecosystem and also one of the dominant plankton-eating fish. They are therefore a vital link in the marine food web.

Activities such as aggregate extraction and dumping of dredge spoil disturb or pollute herring spawning beds. The Marine Institute advises that such activities should not take place in spawning grounds during the spawning period (October to February) and should only take place at other times of the year if they can be shown not to have a negative impact on stock dynamics and larval production of herring. Placement of fish farm cages in spawning grounds should only be permitted if it can be shown that they do not impact on individual spawning beds.

There may also be proposals to build wind farms on known spawning grounds. Other negative impacts may include benthic fishing and marine energy construction projects.

In 2012 Celtic sea herring received Marine Stewardship Council sustainable fisheries certification.