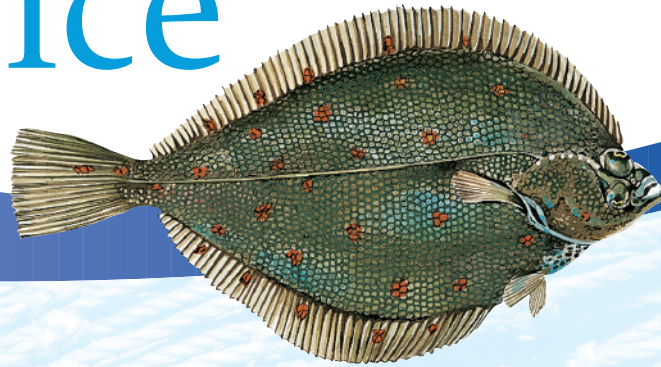


# Responsible sourcing guide

# plaice

## Introduction

Plaice (*Pleuronectes platessa*) is the United Kingdom's most popular commercial flatfish and also the most important flatfish species in Europe. In 2005, people in the UK consumed more than 15,000 tonnes (t) (1) of plaice, worth approximately £32 million at retail. Plaice is purchased fresh, chilled or frozen and obtained from UK and Icelandic sources, as well as from other European countries such as Holland. Plaice is not suitable for aquaculture, given present levels of knowledge and likely return on investment. The similarly-named American plaice (*Hippoglossoides platessoides*) is a separate species and should not be marketed as plaice in the UK. For more information, buyers should consult the Food Standards Agency (2).

### What's being done to protect the stocks?

The FAO has set international standards for responsible fisheries (3). The EU plans to move on from the Common Fisheries Policy to a more holistic Marine Strategy (4). Regional failures to protect fish, such as plaice, have been admitted and new approaches are being put in place.

Of the four assessed stocks of plaice in European waters, only one is assessed as being fished at sustainable levels. The remainder are under a range of management measures which are aimed at reducing the level of fishing and the risks that the levels of stock of mature fish will fall too low. The Faroe and Iceland stocks appear to be stable.

They are all potentially affected by climate change. Management regimes are in place or are being developed to improve plaice stocks' chances of recovery. These include measures designed to reduce mortality of young plaice and international measures aimed at limiting catches. The purpose of this guide is to outline the status of plaice stocks and the measures which are being taken to protect them.

### Buyers' top tips

#### 1) Know your source of supply and stock status

Biological stocks are distinct populations which inhabit geographical areas; each one has a different spawning area but there is some mixing between them. For management purposes, plaice are divided spatially into 'management stocks' which mostly coincide with biological stocks. These areas contain the main fisheries. To understand sustainability issues concerned with your supply, you need to know the management stock from which the fish has been caught. The table on pages 2 and 3 gives a list of stocks and their current status.

#### 2) Have an informed buying policy

Buyers need an informed approach to stock status and management. Although some plaice stocks are considered at risk of depletion, there remain legal fisheries on them. In these situations, fisheries managers have judged that the fishery should remain open. For the main stocks of plaice in this condition, management regimes are in place or being developed to improve the stocks' chances of recovery.

#### 3) Use the Seafish Responsible Sourcing service

Seafish has created an information service [www.seafish.org/b2b/rss](http://www.seafish.org/b2b/rss) to aid buying decisions. This provides background information on sustainability issues and links to other sources of information, including the Responsible Fishing Scheme, aimed at ensuring best quality and environmental practice on board vessels.

# Status of plaice stocks January 2007

## Biology and assessments

The table (right) gives an overall picture of the status of, and advice for, European plaice stocks. It shows the major fisheries, the catch limits or Total Allowable Catch (TAC) for each stock in 2007 and the corresponding recommendations of independent scientific advisers. The two do not always coincide since managers may have to take into account broader issues than single stock assessments.

Studies of plaice biology have a long history, with some of the earliest studies of migrations dating back to the early years of the Twentieth Century. Small plaice are most common in inshore areas, such as sandy bays and estuaries. They migrate further offshore as they grow larger and older (5). Different size and age classes tend to separate out in the habitat.

## Precautionary approach

This approach forms part of the FAO Code of Conduct for Responsible Fisheries (3) and details of its implementation by ICES are given in reference 6. The approach sets out to maintain a big enough spawning stock to enable reproduction for sustainable commercial harvesting. A risk assessment of the stock falling outside these limits during the assessment period is carried out. The stock is classified into the following categories:

- 1) Inside safe biological limits; harvested sustainably at full reproductive capacity;
- 2) At risk of reduced reproductive capacity and/or being harvested unsustainably; or
- 3) Suffering from reduced reproductive capacity and/or being harvested unsustainably (not enough parent stock and/or too much fishing mortality).

Stocks in categories 2 and 3 could justify a recovery or rebuilding programme. Plaice are caught together with other species in mixed fisheries, thus managers may have to compromise between the conflicting demands of the various stocks. Some stocks are managed using a precautionary TAC (7). This means that although there is no scientific assessment, there are catch limits, usually based on previous catches. They can be modified based on evidence provided to the EU by a member state making the request.



Name and location;  
keyed by colour to  
Figure 1 (far right)

Agreed TAC  
(references 8 and 9)  
2007 (t)

Advisory TAC  
2007 (t)

Management  
authority

Scientific advice and  
management

### EUROPEAN PLAICE STOCKS [www.ices.dk](http://www.ices.dk)

#### Inside safe biological limits 'harvested sustainably'

Name and location	Agreed TAC 2007 (t)	Advisory TAC 2007 (t)	Management authority	Scientific advice and management
ICES VIIa Irish Sea	1,849	6,500	EU	This stock is classified as being within safe biological limits. The status of this stock has been improving over the previous five years. However, these results should be considered with some caution since there is a discrepancy between the research vessel data which indicates an improving situation, not reflected in the commercial data (10).

#### At risk of reduced reproductive capacity and/or being harvested unsustainably

ICES IV North Sea	50,261	32,000	EU-Norway	The ICES advice is devised to rebuild the stock to within safe biological limits. All year classes since 2003 are weak so recommended TACs are likely to reduce over the coming years. Management measures include a restricted area, the 'plaice box', in the southern North Sea, where fishing by large beam trawlers is restricted. This stock is now subject to a recovery plan for both plaice and sole in the North Sea (10, 14).
-------------------	--------	--------	-----------	---

Name and location;  
keyed by colour to  
Figure 1 (far right)

Agreed TAC  
(references 8 and 9)  
2007 (t)

Advisory TAC  
2007 (t)

Management  
authority

Scientific advice and  
management

EUROPEAN PLAICE STOCKS – CONTINUED [www.ices.dk](http://www.ices.dk)

**At risk of reduced reproductive capacity and/or being harvested unsustainably – continued**

ICES VIIId,e English Channel	5,050	VIIId <4,000 VIIe < 580	EU	The TAC is set for the combined east and west Channel. However, there is some uncertainty as to whether this is appropriate, since east Channel plaice (VIIId) migrate to and from the south North Sea. Plaice is considered at risk of over fishing in the Western Channel (VIIe). Information in the eastern Channel is too poor to enable an assessment within the precautionary approach, however; the indications are that the stock has been stable since 1998.
---------------------------------	-------	----------------------------	----	---

**Suffering from reduced reproductive capacity and/or being harvested unsustainably**

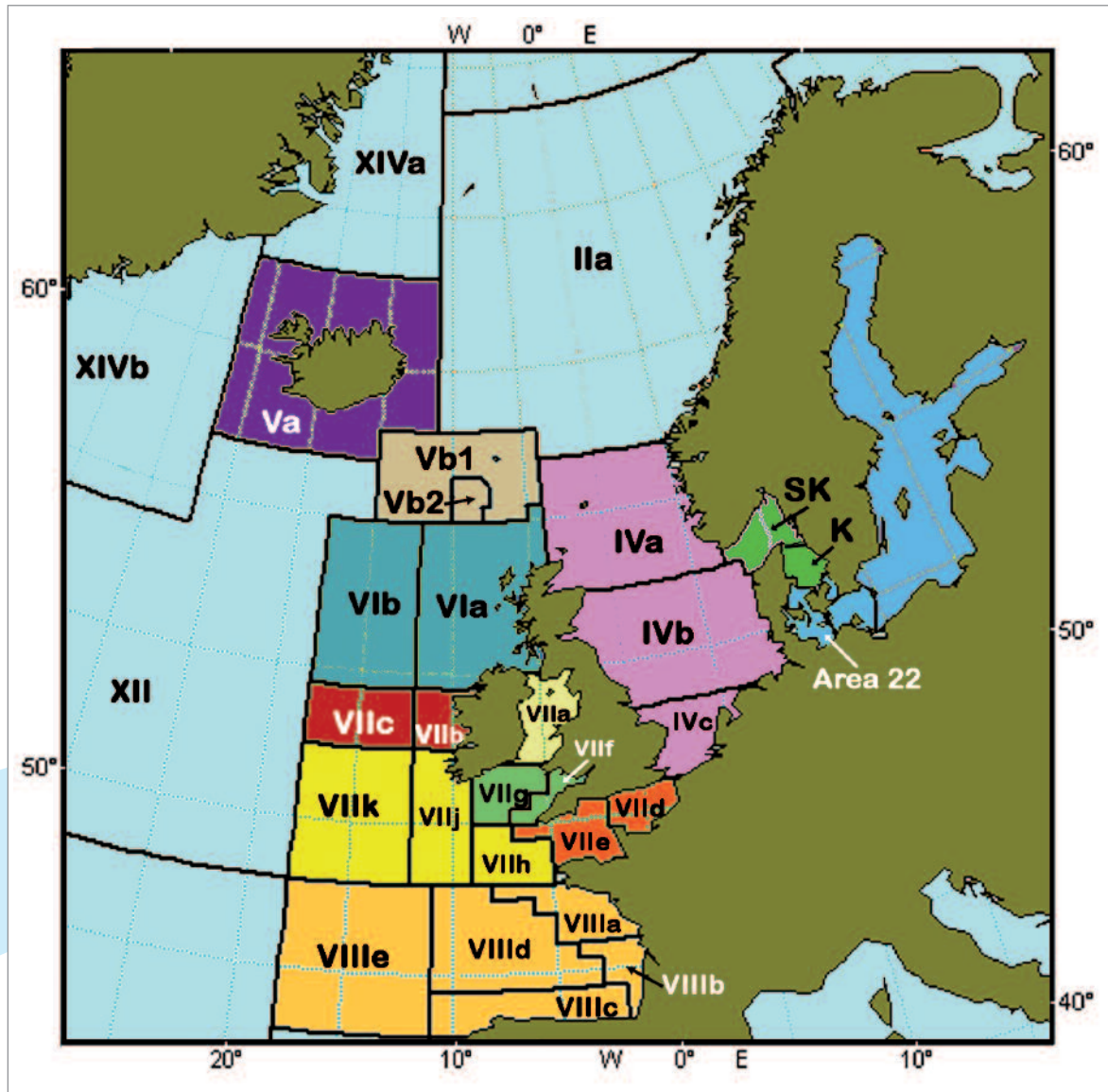
ICES VIIIf,g Celtic sea	478	380	EU	If the proposed TAC cannot be agreed, ICES recommends the implementation of a recovery plan. This means that the nations exploiting the stock meet and agree on a management plan over several years, designed to improve the stock's prospects for recovery.
-------------------------	-----	-----	----	---

**Reference points not fully defined**

ICES IIIa Skagerrak-Kattegat	10,625	<9,600	EU-Norway	The stock boundaries are arbitrary in this area and the populations of plaice may mix between the North Sea and Baltic. It has not been possible to carry out a full analytical assessment on plaice in this area. Survey and other information indicates that there has been an increase in abundance over the last 6-7 years and ICES recommends catches of no more than 9600t based on the average of the last four years. The species is taken in directed, as well as mixed, fisheries with cod; it is recommended that monitoring by-catch and discards for cod should continue.
ICES Baltic 22-32	3,766		EU	Landings were 2,220t in 2005 and previously fluctuated between 270t and 2,800t over the last 15 years. There are no assessments, reference points or management objectives for this stock, which is mostly fished in area 22. It is believed that stock density is affected by migration from the Kattegat. Precautionary TAC only.
ICES VIIb,c West of Ireland	122	55	EU	The state of the stock is unknown, but landings show a declining trend in recent years. No assessment was performed due the short time series of data. Although the state of the stock is unknown, ICES considers that there may be evidence for its decline.
ICES VIIh-k	337	196	EU	Catches should be no more than the recent average (2003-2005) in order to avoid an expansion of the fishery until there is more information to facilitate an adequate assessment.
ICES VIII, IX and X	448			No assessment; precautionary TAC only.
ICES VI, Vb EC waters only and international waters of XII and XIV	786			No assessment; precautionary TAC only.
ICES Vb Faroese waters	Effort limits	375 (Catch 2005)		Although the stock is not assessed it has sustained a stable catch of 300-500t per annum in recent years. The fishery is well defined with the number of boats limited to 12 by licensing.
ICES Va Icelandic waters	6,000*	5,000	Iceland	The abundance index for the fishable stock showed a decline in the past decade but the stock seems to be improving slowly (II).

\* Sept 06-Sept 07; Icelandic fishing year





**Figure I:** Management stocks for plaice (*Pleuronectes platessa*)

### Plaice fisheries

Plaice is caught predominantly by demersal towed gears, otter trawls, beam trawls and anchor seines in mixed fisheries. Of these, anchor seines can probably be regarded as the most specialised for targeting plaice.

In beam trawl fisheries, plaice is targeted along with sole, thus the stock management of these species is closely linked. When the primary target is sole, beam trawlers are permitted to use cod-end mesh sizes of 80mm. Although this

makes for good selectivity of sole, a much larger mesh size would be more suitable for plaice because of its wider body shape. This leads to discarding of undersized (less than 27cm) plaice. Changes in the spatial distribution of effort, due to recent fuel price rises, have resulted in a concentration of fishing effort in the southern North Sea. This is where concentrations of juveniles and adult spawning fish are found.

### International organisations

**ICES:** International Council for the Exploration of the Sea. Responsible for providing scientific advice for NE Atlantic Fishery Management

**EU:** The European Union is responsible for fisheries management within its Exclusive Economic Zone.

**FAO:** The Food and Agriculture Organisation of the United Nations aims to achieve food security for all and ensure people have regular access to enough high quality food to lead active, healthy lives. The FAO acts as a neutral forum where all nations meet as equals to negotiate agreements and debate policy.



## Management and conservation measures

### Spatial management

Due to the habitat preference of juvenile plaice for inshore and estuarine areas, conservation of plaice stocks is closely bound up in the management of these areas. However, the separation is not precise and, in heavily fished stocks, the juvenile fish will constitute the most abundant group in the stock, so are likely to be targeted.

Beam trawlers are restricted to a maximum aggregate beam length within the 12 mile limits of most European territorial waters and also within the 'plaice box' (see Figure 2 and reference 8). An increase in beam trawling above 1998 levels is not allowed in these areas. There are also areas, such as the Skagerrak, where beam trawling is banned.

The 'plaice box' was established in 1989 and closed fully in 1995 (12). Although the distribution of juvenile plaice has changed since its inception, there are still around 70% of juvenile plaice within the box. It is difficult to establish precisely to what extent the box has helped plaice stocks. However, the 'plaice box' is an important aspect of plaice conservation in the North Sea. Efforts to conserve nature in the Wadden Sea and along other coastlines should also benefit the habitats for juveniles of this species.

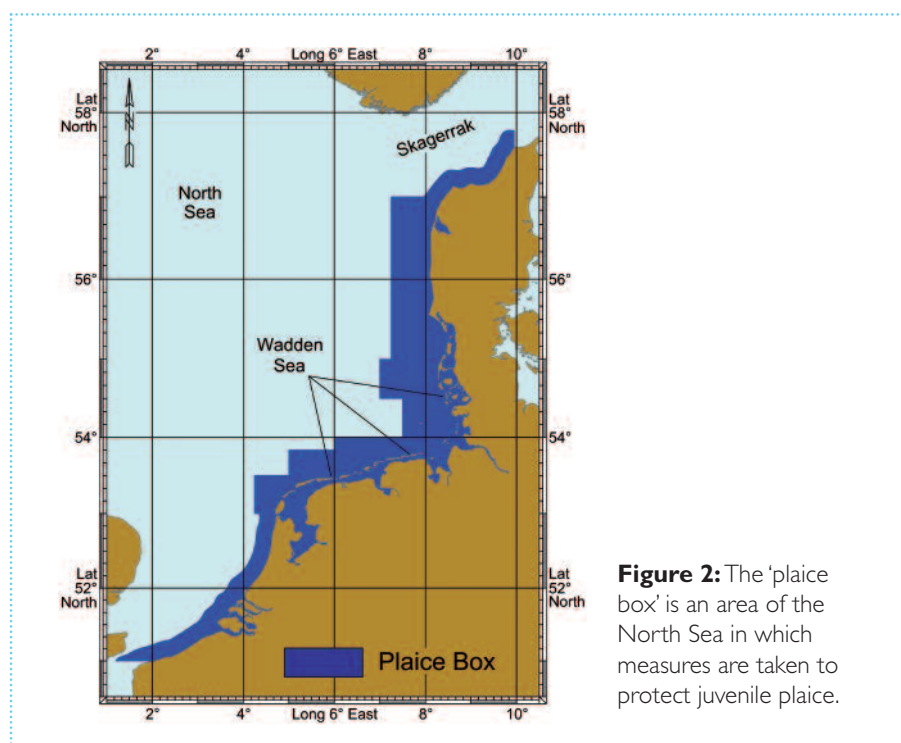
### Technical measures

Shrimp trawl fisheries occur in inshore and estuarine areas where juvenile fish, including plaice, live. It is estimated that if this source of mortality were reduced, an increase in catch of adult plaice of around 15% could result (13). Regulations have been introduced to compel the use of technical measures (12) to reduce the by-catch of juvenile fish in this fishery.

### Recovery plan

In January 2006, the European Commission adopted a stock recovery plan for plaice and sole in the North Sea (14), defining target levels of fishing mortality.

This will allow high yields in the long term, reduce discarding and allow a reduced biological risk to the stocks. Fishing mortality will be reduced by 10% year on year until the target levels have been reached, while annual variations in TACs will be kept within a 15% increase or decrease. The agreed TAC for 2007 is a 13% reduction on the previous year. Other measures will include effort limitation (days at sea for beam trawlers) plus specific control and monitoring measures, such as weighing at landing, prior notification of landing, separate stowage of plaice and sole, and transport documentation.



**Figure 2:** The 'plaice box' is an area of the North Sea in which measures are taken to protect juvenile plaice.



