

SPICe Briefing

Sea Fishing: Quotas for 2011

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This briefing has been prepared for members of the Rural Affairs and Environment Committee. It highlights some of the important issues in the autumn 2010 fisheries negotiations at which decisions on fishing quotas and limits on fishing time will be made for 2011.





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EXECUTIVE SUMMARY

Since 1983, the main instrument of the Common Fisheries Policy has been to set Total Allowable Catches (TAC), for certain species in specific sea areas, which fix the total amount of fish that can be landed by the fleets of the EU's Member States each year. This policy has not proven a successful means of managing mixed fisheries, and has contributed to the problem of discarding. Discards are fish that are caught but thrown back into the sea; in most cases the fish are thrown back dead or do not survive. Fish are discarded e.g. because they are too small, are not of marketable species, or because fishermen do not have quota for that species.

Since 2003 recovery plans have been implemented for some of the EU's most threatened fish stocks. Some of these plans have included measures to limit fishing time – fishing effort. From a Scottish perspective, the most important of these plans has been that concerning cod.

TACs are set in an annual cycle culminating in the December Fisheries Council. The publication of scientific advice by ICES in June is the starting point for a series of autumn negotiations at which TACs, quotas, and fishing effort limits are set for the following year. Table 1 on page 8 has details of the important dates in the 2010 negotiations.

The main points from the ICES advice are:

- Cuts are advised for the main quota species of interest to the Scottish fleet, with the exception of West of Scotland monkfish, mackerel and North Sea herring
- A substantial decrease in the TAC for North Sea cod is advised, and a modest decrease for North Sea haddock; these fish are the mainstays of the East coast whitefish fleet.
- A modest cut for North Sea Nephrops and a more substantial cut for West of Scotland Nephrops as the scientific advice seeks to reduce harvest rates in line with a Maximum Sustainable Yield approach. Due to market difficulties, the uptake of quota has been low in 2010. However, reductions in fishing opportunity would be significant should the market recover.
- West of Scotland cod, haddock and whiting stocks are at low levels and show no sign of recovering. Further cuts in the already low quotas for these species seem likely
- The potential to increase the mackerel TAC is likely to be more than offset by the current problem with this stock, described below

Further details of the implications of the ICES advice and the European Commission's proposals for UK quotas are included in table 3 on page 10 of the briefing.

Mackerel is a widely distributed, migratory pelagic species, and is the most valuable species to the Scottish fleet. For the last ten years catches have been managed under a coastal states agreement between the EU, Norway and the Faeroes. While the stock is in good shape, its migration has shifted, and it can now be caught in numbers in Icelandic waters. Iceland has declared a unilateral quota of 130,000 tonnes in 2009 and 2010. The Faeroes have followed suit and unilaterally increased their 2010 quota to 85,000 tonnes, three times their normal share. ICES' estimate of mackerel catches for 2010 is 60% higher than the upper bound of what it had advised would be sustainable. If such additional removals were to continue the sustainability of

the stock would be threatened. The actions of Iceland and the Faeroes have been condemned by the Scottish Government and the European Commission. Iceland is now being included in the coastal states negotiations and the next round of talks take place in London from 12-14 October to try to achieve a deal.

Scientists have advised that stocks of cod, haddock and whiting to the West of Scotland are at very low levels. During the autumn 2008 fisheries negotiations, the European Commission's initial proposals for the West of Scotland were described by the Scottish Fishermen's Federation as amounting to an almost complete shut down of fishing in the area. The outcome from the negotiations for 2009 was a reduction in quotas for these species and the adoption of emergency measures designed to allow fishermen to harvest other stocks while lessening impact on cod, haddock and whiting. In the 2009 negotiations these measures were extended for 18 months to mid 2011. The Scottish Government established a task force to oversee the implementation of these measures. It has worked with the task force during 2009 to develop alternative proposals which it has submitted to the European Commission.

Under a plan to recover cod stocks, limits on fishing days at sea were introduced in 2003 for Scottish fishing boats which carry fishing gears that can catch cod. These limits were initially set monthly, and then annually, and a complicated series of derogations were introduced e.g. to increase the number of fishing days for boats that could prove they had not made significant catches of cod. In 2008, the UK piloted the option of managing fishing effort in terms of a Member State 'kilowatt day' ceiling. The advantage is greater flexibility in allocating fishing effort. Kilowatt days are calculated by multiplying the number of days fished by the sum of the engine power in kilowatts of the vessels.

In 2009, the system of kilowatt days was applied to fleets of all Member States likely to catch cod. The long term cod plan agreed by Member States explicitly links the setting of kilowatt days to the scientific advice on the state of cod stocks covered by the plan. This resulted in a 25% reduction in kilowatt days for 2009, compared to baselines established using data provided by the Member States. For the UK the reference period was average annual effort over the period 2004-2006. In 2010, kilowatt days for whitefish boats were cut further, by 10 percentage points in the North Sea and 25% in the West of Scotland. For 2011, as required by the plan, an additional cut in kilowatt days of 10 percentage points in the North Sea and 25% in the West of Scotland is expected.

The Scottish Government sought to mitigate the impact of kilowatt days cuts through the conservation credits scheme, which seeks to deliver the required reductions in mortality on cod without cutting fishing time. Fishermen are given additional days if they avoid fishing in closed areas (both permanent and temporary closures are used) and if they adopt additional technical measures.

There is agreement that discarding is a waste of resources, and that it should be reduced. The European Commission proposed a discards action plan in 2007. The Commission has said it proposes to tackle the problem of discards in stages, focussing initially on the discarding of the major commercial species. A ban has been imposed on discarding marketable fish (high-grading) in the North Sea since 2009. The Scottish Government has stated that tackling the problem of discards cannot wait until reform of the CFP in 2012. A trial involving the monitoring of discards using CCTV has been initiated.

For some species the scientific advice already includes an assessment of the amount of fish that will be discarded. The Scottish Government has argued that it is possible to "catch less and land more" by allowing fishermen to land the fish they would have otherwise discarded by moving to a system of catch quotas. Fishermen who have agreed to take part in trials of this

approach receive additional quota if they carry CCTV in the fish room of their vessel which allows monitoring to ensure fish are not discarded. These trials have continued in 2010.

LIMITING CATCHES UNDER THE COMMON FISHERIES POLICY

Conservation policy is the most important pillar of the <u>Common Fisheries Policy</u> (CFP) (European Commission a). Since 1983, the main instrument of the conservation policy has been to set annual Total Allowable Catches (TACs) which fix the total amount of fish that can be landed by the fleets of the EU's Member States each year. TACs are set for certain areas of sea, called ICES areas, which are identified with roman numerals. The most important areas for the Scottish fleet are ICES area IV, the North Sea, and ICES area VIa, the West of Scotland¹. The TAC for each stock is shared out in quotas which limit the amount of fish that can be landed by Member States. Quotas are shared out according to the principle of 'relative stability'. This principle guarantees Member States a fixed percentage of a quota in a certain area from one year to the next which is based on historic fishing activity². Member States which have not fished in areas historically do not receive quotas for those areas. The process for setting TACs is outlined in the next section.

Quotas work relatively well when fishermen can catch one species at a time – herring or mackerel are examples of fisheries like this. Quotas have proved a less successful means of managing mixed fisheries when fish of several different species are caught in the same fishery. A good example of this is provided by the demersal³ fishery of the North Sea where each haul will bring up a mixed bag of different species. The main commercial species in the fishery: cod; haddock; whiting; Nephrops⁴; monkfish; saithe; plaice; and sole are caught in different proportions on different fishing grounds at different times of year. If a fisherman's quota for one species is used up, they are allowed to carry on fishing for other species, but any fish they catch for which they do not have quota must be dumped over the side, and very few discarded fish survive. This can mean more fish are caught than the population can sustain and if this happens repeatedly then the population of that species can decline. Fishermen also discard fish for other reasons, e.g. they may discard small fish if they catch larger fish on subsequent hauls (high-grading). Some information on discards is available to scientists, e.g. from sampling on-board fishing vessels, and these data are now increasingly used in assessments, so that quotas take account of total removals from a stock, instead of just the quantities landed.⁵

These problems with have led scientists to advocate for many years that quotas should either be accompanied by or replaced with controls on fishing effort, for example limiting the number of days that fishermen are allowed to be at sea. Controls on fishing effort were introduced following reforms of the CFP in 2002. Since the reform of the CFP in 2002, the EU has begun to take a longer-term approach to fisheries management by managing fisheries under long term plans. Two types of plans are being implemented based on the state of the stocks in question. *Recovery plans* are designed to help rebuild threatened stocks while *management plans* aim to maintain stocks at safe biological levels. The plans contain a formula for calculating TACs on the basis of scientific advice on the state of the stock. EU law requires that recovery plans must also include limits on fishing effort⁶.

From a Scottish perspective, the most important of these has been the plan to recover cod stocks, which has now been replaced with a long-term management plan. In 2003, limits on the

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¹ ICES areas can be further subdivided, so for example, area IVa is the North North Sea. The Scottish fleet also fishes in ICES area VIb Rockall

² When quotas were first introduced a reference period from 1973-78 was used to establish Member States shares in quotas

³ demersal species live close to the sea bottom, e.g. cod, haddock, whiting. Pelagic species live in the mid water e.g. herring, mackerel. Benthic species live on the bottom e.g. flatfish, Nephrops.

⁴ The full scientific name for this species is *Nephrops norvegicus*, common name: Norway lobsters or langoustines

⁵ Scientists from Marine Scotland monitor discards on sampling trips onboard Scottish fishing vessels. ICES has complained about the fact that some countries refuse to provide it with data on discards.

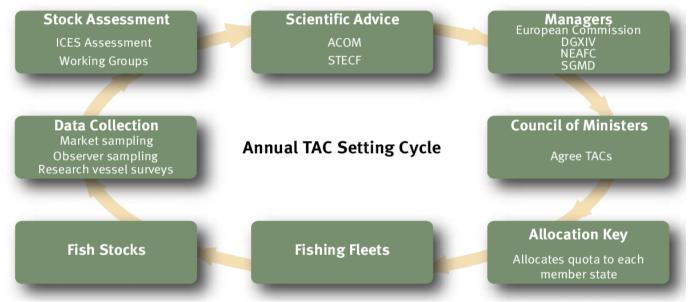
⁶ Unless it can be shown that effort restrictions are not needed for stock recovery

number of days at sea which could be spent fishing for vessels over 10 metres in length that were using fishing gear likely to catch cod were introduced. The long-term management plan also limits fishing effort. The Scottish Government has developed a scheme called "Conservation Credits" which implements the cod recovery plan in Scottish waters and which intends to reward Scottish fishermen with additional effort or days-at-sea where they can demonstrate that they are fishing in a manner which is likely to have a less severe impact on cod.

The Common Fisheries Policy is being reviewed and substantial changes are expected to come into effect at the end of 2012. The European Commission (2009) published a Green Paper on the reform of the policy in April 2009. The Green Paper asked broad questions about the future of the CFP. On TACs it asks whether these should be made more freely tradeable, or whether instead of regulating the quantities landed, the policy should regulate fishing effort instead. The consultation ran until the end of 2009. The Scottish Government (2009) responded to the consultation. The European Commission (2010a) intends to make further proposals for CFP reform by summer 2011.

PROCESS FOR SETTING QUOTAS

TACs are set on an annual cycle, culminating in the December Fisheries Council in Brussels. This annual cycle is shown in the diagram below.



Source: Fisheries Research Services (2009)

EUROPEAN PARLIAMENT'S ROLE

The entry into force of the Lisbon Treaty in December 2009 has changed the content of the autumn fisheries negotiations. The Treaty gives the European Parliament co-decision powers over EU fisheries law. The only exception to the co-decision power are decisions on the fixing and allocation of fishing opportunities, which the Council will continue to decide upon alone, on the basis of a Commission proposal. This is taken to mean TACs, quotas, and any associated effort limits.

⁷ Links to all public responses are available from the European Commission's website: http://ec.europa.eu/fisheries/reform/consultation/received/index en.htm

In the past, the annual TAC regulations have in practice dealt with much more than the fixing and allocation of fishing opportunities – they have included a great deal of so called 'associated measures' - detailed technical measures such as area closures and gear regulation. The ratification of the Lisbon Treaty means the European Parliament has a role in deciding on such measures. The European Commission accounted for this in 2009 when drawing up proposals for TACs and quotas by removing all measures not strictly related to the establishment of fishing opportunities from its proposal for TACs and quotas, and the Commission's proposal for quotas for 2011 will be similarly limited in its subject matter. The technical measures which apply in the West of Scotland were due to expire at the end of 2009. The Council alone could not have agreed to new measures after the entry into force of the Lisbon Treaty, and it would not have been possible to agree measures between the Council and Parliament quickly. The November 2009 Fisheries Council agreed an extension of the existing measures for 18 months by qualified majority (the UK voted against), and they apply until mid 2011.

KEY DATES IN THE 2010 NEGOTIATIONS

Fishing quotas for the Scottish fleet are set during several weeks of negotiations. These include external negotiations about fish stocks which are shared with non-EU Member States including Norway, Iceland and the Faeroes, as well as negotiations between EU Member States which culminate in the December Fisheries Council. Following the 2002 CFP reforms, Regional Advisory Councils were established to advise the European Commission on fisheries management. RACs are composed of representatives of the fishing industry, and other groups with an interest in the CFP, such as environmental NGOs. The following table shows some of the key dates in the autumn fisheries negotiations in 2010.

Table 1 – important dates in fishing negotiations during 2010

17 May	The European Commission (2010b) published its <u>annual policy statement</u>
-	outlining the general approach to setting fish quotas for 2011
29 June	ICES (2010) issued its scientific advice for most North Sea and West of
	Scotland fish stocks of interest to the Scottish fleet
1 October	ICES advice on pelagic stocks, including mackerel
12-14 October	Coastal States negotiations on mackerel, London (EU, Norway, Faeroes)
25-26 October	Fisheries Council meeting in Luxembourg
29 October	European Commission proposal on fishing opportunities for 2011.
8-12 November	STECF plenary meeting
8-12 November	North East Atlantic Fisheries Convention (NEAFC) negotiations on
	fisheries in NE Atlantic in international waters beyond the 200 mile limit.
15-19 November	1 st round of EU/Norway negotiations on North Sea shared stocks,
	including most whitefish stocks, such as cod, haddock & whiting,
	Brussels.
29-30 November	EU Fisheries Council meeting in Brussels to decide quotas for deep sea
	species for 2011 and 2012
29 November – 3	2 nd round of EU/Norway negotiations, Bergen
December	
8-10 December	EU-Faroes negotiations, Faeroes
13-14 December	EU Fisheries Council meeting to decide on fishing opportunities for 2011.

UK QUOTAS IN RECENT YEARS

Fishing quotas are allocated to Member States and it is up to Member States how they allocate quotas to their fishing fleets. In the UK quotas are allocated to producer organisations. Quotas for boats under 10m and for boats which are not members of producer organisations are

managed by fisheries departments. There are not Scottish quotas as such, although there are producer organisations which are exclusively, or mainly, made up of fishing boats registered at Scottish ports. To illustrate how quotas have changed, the table below shows the UK quotas for the seven most important quota species for the Scottish fleet in the waters of most importance to it over the last ten years.

Table 2 – UK quotas for selected species, 2001-10 (tonnes)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
North Sea	North Sea									
cod	20,555	20,377	10,696	9,507	8,674	9,037	7,773	8,628	11,216	13,067
haddock	41,184	59,805	33,257	49,537	44,123	34,574	36,466	31,672	27,507	22,698
whiting	14,363	19,608	7,257	6,784	10,544	9,162	11,297	9,336	8,426	7,391
monkfish	11,495	9,205	6,245	6,157	8,950	8,392	9,233	9,233	9,233	9,233
Nephrops	12,961	13,885	14,005	16,047	18,101	24,380	22,644	22,644	21,513	21,384
herring	40,570	38,101	56,818	65,220	94,941	63,333	50,279	30,025	27,185	24,223
West of So	cotland									
cod	2,322	2,974	1,084	508	485	368	294	241	182	145
haddock1	10,720	10,996	6,455	5,304	7,081	6,294	5,932	4,743	2,747	2,053
whiting	2,580	2,157	1,285	1,032	917	780	585	438	329	246
monkfish	2,033	1,572	1,086	1,220	1,865	1,442	1,586	1,586	1,713	1,713
Nephrops	11,070	11,102	11,065	11,043	12,399	17,257	19,415	19,415	18,445	15,677
herring	21,570	21,571	17,728	17,776	17,788	20,145	20,145	16,036	13,549	14,356
mackerel ²	197,099	202,139	187,596	175,164	128,690	131,713	149,519	136,522	181,694	173,663

Sources: Edwards (2009). Council Regulation 23/2010

Notes: 1. West of Scotland Haddock quota does not include Rockall Haddock - in 2010 UK quota for Rockall Haddock was 4,029 tonnes.

2. Mackerel is UK quota for whole of North East Atlantic stock

The Scottish fishing fleet also has an interest in stocks of plaice, sole, saithe, megrims, and ling among the demersal species (i.e. bottom dwellers) and blue whiting among the pelagic species (i.e. fish that live mid-water between the bottom of the sea and the surface). Lobsters, crabs and scallops which are particularly important for inshore shellfish fisheries, are not regulated by quotas. The Scottish fleet has only very small quotas for industrial species (i.e. fish that are used to make animal food, mainly fishmeal) such as sandeel, Norway pout and sprat.

SCIENTIFIC ADVICE ON STOCKS AND QUOTAS FOR 2011

ICES APPROACH TO SCIENTIFIC ADVICE

ICES advice is informed by three approaches to fisheries management:

- The ecosystem approach, which seeks to take into account the impact of fisheries on the marine ecosystem, and interactions between fish stocks and the marine ecosystem
- The precautionary approach, which seeks to manage the uncertainty of scientific assessment of fish stocks to avoid the risk that they will collapse i.e. decline to a commercially unexploitable level
- The maximum sustainable yield (MSY) approach. Maximum sustainable yield is a broad conceptual objective aimed at achieving the highest yield possible over the long term (an infinitely long period of time). It is non-specific with respect to: (a) the biological unit to which it is applied; (b) the models used to provide scientific advice; and (c) the

management methods used to achieve MSY. The MSY concept can be applied to an entire ecosystem, an entire fish community, or a single fish stock.

One of the commitments of the World Summit on Sustainable Development which the EU Member States signed up to was to: "Maintain or restore stocks to levels that can produce the maximum sustainable yield with the aim of achieving these goals for depleted stocks on an urgent basis and where possible not later than 2015." The MSY approach is becoming increasingly incorporated into ICES advice, as fisheries managers, ICES' clients, seek to meet this commitment.

ICES (2010) has <u>set out</u> in more detail in an introductory section to its June 2010 advice how these three approaches are incorporated into its advice.

ICES ADVICE ON QUOTAS FOR 2011

The table below shows implications of the ICES advice for the quota for the main stocks of interest to the Scottish fleet for 2011. It also indicates the relative value of these stocks by showing the value of landings by Scottish boats in 2009, the most recent year for which data are available, and shows the UK's quota for 2010. Further details of the scientific advice are provided in the Annex.

Table 3 – ICES advice for 2011 and comparisons with 2010 (figures in tonnes)

Stock	Where decided	Landings by Scottish boats 2009	UK quota for 2010	UK quota implied by ICES and/or long term management	Expected Commission Proposal
		(£m)	101 2010	plan for 2011	Гторозаг
NS cod	EU		13,067		
	Norway	16.3		-20	-20
NS	EU		22,698		
haddock	Norway	24.9		-5	-5
NS whiting	EU		7,391		
	Norway	7.4		no specific advice	-15
NS	Dec		21,384		
Nephrops	Council	38.9		-8	-8
NS Herring	EU		24,223		
	Norway	4.7		15	15
Monkfish	Dec	30.7		no specific advice	-15 for North
(NS &	Council				Sea, rollover
WoS)			10,946		West of Scotland
WoS	Dec		15,677		
Nephrops	Council	37		-25	-15
WoS cod	Dec		145	_	
	Council	0.2		No fishing	-25
WoS	Dec		2,053	_	
haddock	Council	2.7		No fishing	-25
WoS	Dec		246		
whiting	Council	0.4		As low as possible	-25
Rockall	Dec		4,029		
haddock	Council	3.6	_	-46	-25
WoS	Dec	2.2	14,356	_	
herring	Council			-8	-8
mackerel	Coastal	135	173,663		
	States			+ 4 to + 13	+ 13

Notes: NS = North Sea; WoS = West of Scotland; Expected Cion Prop = expected European Commission proposal for TACs and Quotas for 2011. Further details of the ICES advice are in the table in the annex

Sources: ICES (2010); European Commission (2010b); Scottish Government (2010).

The main points from the ICES advice are:

- Cuts are advised for all the species shown in the table, with the exception of West of Scotland monkfish, mackerel and North Sea herring
- A substantial decrease in the TAC for North Sea cod is advised, and a modest decrease for North Sea haddock; these fish are the mainstays of the East coast whitefish fleet.
- A modest cut for North Sea Nephrops and a more substantial cut for West of Scotland Nephrops as the scientific advice seeks to reduce harvest rates in line with a MSY approach. Due to market difficulties the uptake of quota has been low in 2010. However, reductions in fishing opportunity would be significant should the market recover.
- West of Scotland cod, haddock and whiting stocks are at low levels and show no sign of recovering. Further cuts in the already low quotas for these species seem likely
- The potential to increase the mackerel TAC is likely to be more than offset by the current problem with this stock, described below

MACKEREL

Mackerel are a migratory widely dispersed, migratory pelagic species. The populations of the NE Atlantic are dispersed from the coastal waters of Morocco, around the coasts of Spain, Portugal, France, Ireland, Britain, the Faeroes and Norway and into the Barents sea. The stock is seen as having three spawning components: the southern component spawns in Spanish and Portuguese waters, the western component spawns in the Bay of Biscay and around Ireland, and the third component, which has become depleted, spawns in the North Sea.

For the last ten years catches of mackerel have been agreed through coastal state negotiations between three parties: the EU; Norway; and the Faeroes. The stock has been successfully managed through these agreements, and is currently at a sustainable level.

Historically Iceland has fished a small amount of mackerel, around 2,000 tonnes a year on average. In recent years, Iceland has reported increased mackerel migrating into its waters, perhaps linked to ocean warming. Iceland has substantially increased its catch of mackerel, to 116,000 tonnes in 2009 and 130,000 tonnes in 2010.

The Faeroes has historically taken a small share of the mackerel quota set by the three coastal states, around 4%. In 2010, following the actions of Iceland, it has increased its quota to 85,000 tonnes, which is 15% of the total catch.

The UK has the largest share of the mackerel quota of the EU Member States, at 173,000 tonnes, mainly fished by Scottish boats, and it is the most valuable species to the Scottish fishing industry, with landings by Scottish boats in 2009 worth £135m. The Scottish mackerel fishery has received Marine Stewardship Council certification.

The actions of Iceland and the Faeroes have been greeted with dismay by Scottish mackerel fishermen, as increasing catches of mackerel without a scientific basis for doing so places the future sustainability of the stock at risk.

The Scottish Government (2010b) has been vocal in <u>criticizing</u> the actions of Iceland and the Faeroes, and in pressing for the EU to take action to resolve the situation. The Cabinet Secretary for Rural Affairs and the Environment, Richard Lochhead MSP, spoke on behalf of the

UK delegation on the issue at the Agriculture/Fisheries Council of the 27 September 2010, the first time a Scottish Minister has spoken on behalf of the UK on fisheries (Scottish Government 2010c). Following the Council, the EU Fisheries Commissioner, Maria Damanaki said:

"The actions by Iceland and the Faroe Islands in setting unilateral quotas for themselves is nothing short of unacceptable. The EU and Norway have built up the stock in the North East Atlantic to a good and sustainable level. The amount of mackerel which Icelandic and Faroese vessels have taken out of the sea this year goes way beyond what they have ever fished before. These actions also defy all the hard efforts of our own industry in trying to protect this stock.

We concluded today that we want to resolve this untenable situation, to avoid that our fishermen would be even worse off in the future.

The Commission has ensured the continuation of the dialogue with the Faroe Islands and Iceland over recent weeks and this process will continue while we are discussing the way ahead with Norway.

We must get the best for our fishing industry while preserving sustainable fish stocks. The Commission considers that we should seek a balanced and fair result for all parties concerned in the form of a long term sharing agreement on mackerel between all Coastal States. In such a long term sharing agreement we should take the migration of mackerel into more northern waters into account. Such an arrangement would have the advantage of delivering stability and certainty on future fishing possibilities for the Union's mackerel industry, because without an agreement we don't know what be situation may be next year.

But we will not seek an agreement at any cost. If we are met with continuing exaggerated quota expectations from either Faroe Islands or Iceland, then the EU will to be ready to act, in particular, in relation to our annual fisheries arrangements with those countries. Now we have to focus on results, on finding a long term agreement on quota shares between the Coastal States that can deliver a good and sustainable outcome." (European Commission 2010c)

The ICES advice includes a table with an estimate of 2010 catches:

Table 4 – ICES estimates of mackerel catches

	Tonnes
EU quota, including Southern and Swedish quota	367,014
Inter-annual quota transfer from 2009 (EU)	7,352
UK-Ireland payback	-18,222
Norwegian quota including Northern quota 1)	181,000
Inter-annual quota transfer from 2009 (Norway)	69,000
Russian quota	45,321
Discards (Previous years estimate)	12,854
ICES estimate of EU, Norway, and Russia (including discards)	664,319
Expected overcatch in 2010 based on 2009 overcatch (7.6%)	50,683
Icelandic quota	130,000
Faroese quota	85,000

Total expected catches in 2010 (including discards) 930,002

Source: ICES (2010)

In 2009 ICES advice on mackerel was that:

"The precautionary management plan for Northeast Atlantic mackerel implies catches between 527 000 t and 572 000 t in 2010. The SSB is expected to remain stable in 2011 for a catch in this range."

So ICES' estimate of mackerel catches for 2010 is 60% higher than the upper bound of what it had advised would be sustainable.

With a view to negotiating a settlement, in 2010 Iceland has now been included for the first time as a party to the coastal state negotiations. The next round of negotiations on mackerel take place in London from 12-14 October.

WEST OF SCOTLAND STOCKS

During the negotiations of autumn 2008, the European Commission's initial proposals for the West of Scotland were described by the Scottish Fishermen's Federation (2008) as amounting to an almost complete shut down of fishing in the area. The Cabinet Secretary explained to the Rural Affairs and Environment Committee on the 5 November 2008 that he hoped that the proposal was a negotiating tactic on the part of the Commission, rather than a proposal the Commission seriously expected would be implemented (Scottish Parliament Rural Affairs and Environment Committee 2008). The Scottish Government opposed the proposal and put forward alternative proposals which would allow the other important stocks of Nephrops, monkfish and megrims on the West Coast of Scotland to be harvested. The measures that are in place are described on the Scottish Government's (a) website:

"1. Gear requirements:

- The minimum mesh size in the cod-end or extension piece has increased from 70mm to 80mm.
- Vessels targeting whitefish that are 15m or below must use at least 110mm gear, whilst those that are above 15m must use at least 120mm gear.
- Vessels targeting whitefish must also have a 3m long Square Mesh Panel (SMP) fitted
 12-15m from the codline. The mesh 110mm or 120mm dependant on whether the vessel is below or above 15m respectively.
- 2. Catch-composition requirements:
 - For vessels targeting Nephrops (also known as Norway lobster, languastine and prawns), the catch must contain at least 30% Nephrops and no more than 10% combined of cod, haddock and whiting.
 - For vessels targeting whitefish, the catch must contain no more than 30% combined cod, haddock and whiting."

These measures will remain in place until at least the middle of 2011. Recognising the difficulties that these measures pose to the fleet, the Scottish Government has worked with the industry to develop alternative measures, and proposals were submitted to the European Commission in May 2010:

- A haddock quota uptake rule, to increase flexibility to whitefish fishermen and to reduce haddock discards;
- The transposition of the North Sea 110mm net into the West of Scotland, to improve the quality and value of the megrim fishery;
- A revision of the coordinates of the 'French Line' within which the measures apply;

- The removal of a prohibition on tangle nets to support a seasonal inshore crawfish fishery; and
- A derogation to allow low powered vessels to operate with a 2m Square Mesh Panel when inside the French Line.

The European Commission has asked STECF to evaluate these proposals (Scottish Government 2010a).

KILOWATT DAYS AND THE COD RECOVERY PLAN

Fishing effort for vessels fishing with gear likely to catch cod has been limited in the North Sea and the West of Scotland since 2003. From 2003 to 2007 effort was limited by calendar days.

Limits on fishing by individual vessels by calendar days have now been replaced by limits on kilowatt days – kilowatt days = engine power (KW) x calendar days. A vessels engine power affects e.g. the size of net that a vessel can tow and haul, and hence its catching capacity.

The regulation on days at sea for 2008 allowed Member States to choose to manage days at sea by a system of kilowatt days, rather than calendar days, for a particular type of fishing gear, or for a particular geographical area. The advantage is greater flexibility in allocating fishing effort. Kilowatt days are calculated by multiplying the number of days fished by the sum of the engine power in kilowatts of the vessels. The UK chose to manage fishing effort by trawlers in the North Sea and to the West of Scotland by kilowatt days in 2008. The reference period for determining the UK's kilowatt days is the average annual kilowatt days fished from 2004 to 2006.

During 2008, a long-term management plan was agreed for cod stocks, replacing the recovery plan which had been in place since 2004 (Council Regulation (EC) No. 1342/2008). The plan requires fishing mortality on cod to be reduced in stages until it is at or below a target level. It contains rules for setting cod TACs to reduce them to a level corresponding to this target fishing mortality. It also requires fishing using specific fishing gears in specific areas, including the North Sea and West of Scotland, to be managed by kilowatt days. It requires reductions in kilowatt days corresponding to the reduction in TACs. The fleet is divided into gear categories according to the type of net they use and the species they target. Effort reductions apply to gear categories according to the proportion of the total cod catch that they are responsible for. The plan requires the Council to take an annual decision on these kilowatt day limits, which are included in the TAC and quota regulation, decided at the December Fisheries Council.

For the West of Scotland, the plan required that kilowatt days be reduced by 25% per year whilst the stock size is below a biomass limit value. For the North Sea, the plan required a 25% reduction in kilowatt days in 2009, and a 10% point reduction in 2010, and a reduction of 10% points per year thereafter until a target lower fishing mortality and stock biomass are reached. Neither the West of Scotland stock nor the North Sea stock have met the targets in the plan, and so further reductions in kilowatt days are expected to be proposed by the European Commission for 2011.

The table below shows the kilowatt days allocated to the UK in 2009 and 2010. It also shows the kilowatt day allocations that would have been made in 2008, to illustrate the effect of the 25% cut applied in 2009. Proposals for 2011 will be made in the European Commission's proposal which is expected to be published on the 26 October 2010. For 2011 there will be a further cut of 10 percentage points to the kilowatt days available to North Sea whitefish fleets, reducing the minimum pot to 55% of the 2004-06 average annual effort, and a 25% reduction on the 2010 kilowatt days ceiling for West of Scotland whitefish boats. Whether there will be a

reduction for Nephrops trawlers is not yet known and will depend on the proportion of total cod catch they are estimated to have been responsible for.

Table 5 - Kilowatt days for UK vessels 2008, 2009, and 2010

	Whitefish trawlers			Nephrops	trawlers
	North Sea	West of Scotland	North Sea		West of Scotland
2008	13,726,845	3,197,975		10,887,941	5,199,485
2009	10,295,134	2,398,481		8,165,956	3,899,614
2010	8,938,164	1,836,929		7,409,969	2,972,845
2011	7,549,765	1,377,696			

Source: derived from Appendix II to Annex IIa of Council Regulation 43/2009 and Appendix I to Annex IIa of Council Regulation 23/2010. Notes – the figures for kilowatt days in the regulation for 2009 have been multiplied by 1/0.75 to derive a baseline for 2008. Figures for whitefish trawlers for 2011 – North Sea figure is 55% of 2008 figure, West of Scotland figure is 75% of 2010 figure. Whitefish trawlers are gear category TR1 defined as trawlers using mesh >=100mm; nephrops trawlers are gear category TR2 defined as trawlers using mesh >=70mm - <100mm

CONSERVATION CREDITS

The Scottish Government has sought to mitigate the impact of the reductions in fishing time required by the long-term cod management plan by introducing 'Conservation Credits'. A number of measures have been introduced which are intended to reduce cod catches. Fishermen who adopt these measures receive additional fishing time. This scheme is facilitated by Article 13 of the regulation on the long term cod plan (Council Regulation 1342/2008), which allows Member States to allocate fishing effort above the minimum set out, where vessels participate in additional cod avoidance activities.

Conservation Credits were introduced by the Scottish Government, following an agreement in the autumn 2007 fisheries negotiations. The Scottish Government agreed with the European Commission that it would institute a system of real time closures in 2008 to reduce catches of juvenile cod. Fishermen who complied with the area closures received additional days at sea.

The Conservation Credits scheme was continued in 2009 and 2010 and the measures under the scheme have been extended. The scheme provides alternatives to the reduction in kilowatt days, whilst still reducing cod mortality by the level required by the cod recovery plan. It is intended to give the majority of Scottish whitefish and Nephrops trawlers the opportunity to fish at a level close to their normal practices. Fishermen can receive additional days at sea by adopting conservation measures such as nets that allow cod to escape, and avoiding fishing in areas with high concentrations of cod. The more conservation methods used, the more days at sea can be topped up.

DISCARDS

Discards are fish that are caught and thrown back into the sea; in most cases the fish are thrown back dead or do not survive. According to a report by the Food and Agriculture Organisation of the United Nations (2005), which was based on data from 1992 to 2001, total annual discards in the North Sea were between 500,000 and 880,000 tonnes. Landings of fish species over this period were around 2 million tonnes per year (ICES 2005 table 1.2.2.2)

The European Commission has identified several reasons why discarding occurs:

- The system of quotas obliges fishermen to discard fish for which they have no quota. Relative stability and the mismatch between quotas and catches results in discards
- Minimum landing sizes require the discarding of undersized fish
- National implementation of fish quotas can contribute to the problem where it does not allocate quotas according to the catches of fleets
- Fish are discarded for economic reasons. Many species have low or no-commercial value. Fishermen also discard landable fish to save space on board for bigger higher value fish of the same species, so-called 'highgrading'.

There is general agreement that discarding is a waste of resources, and that it should be reduced. The European Commission (2007) produced a <u>consultation paper</u> in 2007 on reducing by-catches and discards. In April 2008 the Commission produced a <u>consultation</u> on how discards could be reduced in two fisheries – Nephrops fisheries in ICES Area VII (the Irish Sea, Channel and seas to the West of Ireland), and the beam trawl fishery for plaice/sole in the North Sea (neither fishery is of importance to the Scottish fleet) (European Commission 2008). It proposes a Maximum Acceptable By-catch Limit (MABL) after five to six years, with intermediate targets in the preceding years. Vessels would not be allowed to discard by-catches in excess of the MABL. The Commission stated that "this approach will be gradually extended to all other European fisheries." The Commission has also stated its intention to reduce discarding through measures adopted as part of the reform of the CFP.

The Scottish Government's <u>website</u> has some information on the measures that are being implemented by the Scottish fleet to reduce discards:

"The Scottish Government takes the issue of discard reduction very seriously and has supported EU-led initiatives to promote discard reduction as well as implementing its own measures. Scotland actively promotes a fisheries management system which allows vessels to "catch less, land more". We are keen to ensure that our precious natural resources are managed sustainably and protected for future generations.

Some of the measures currently underway to reducing discarding across the Scottish fleet are detailed below.

- Using more selective fishing nets and other gear to avoid catching the unwanted fish in the first place. Trials for further selective gear types are underway;
- Observing real-time temporary closures, or seasonal closures, of rich fishing grounds during critical times;
- CCTV scheme and observer programme to deter discarding;
- High grading (the discarding of fish which can be landed legally) is banned in the North sea and pelagic fisheries;
- Slipping (releasing the fish before the net is fully taken on board) is also banned in pelagic fisheries;
- Jigging machines in the pelagic fisheries sample the catch prior to nets being lowered so that skippers can avoid catching unwanted fish."

For some species the scientific advice already includes an assessment of the amount of fish that will be discarded. The Scottish Government has argued that it is possible to "catch less and land more" by allowing fishermen to land the fish they would have otherwise discarded by moving to a system of catch quotas. Fishermen who have agreed to take part in trials of this approach receive additional quota if they carry CCTV in the fish room of their vessel which allows monitoring to ensure no fish are discarded. These trials have continued in 2010.

Fishing News of 24 September 2010 reported on a meeting in Peterhead concerning catch quotas:

"'Backing for catch quotas is an economic imperative under the current circumstances, where skippers are running out of quota with only two-thirds of the year gone and the prospect of even more cuts next year,' said Mike Park, executive chairman of the Scottish White Fish Producers Association (SWFPA). (...)

A pilot project involving only cod catches has been underway on both sides of the border this year and an interim report on the results of the Scottish trials with 19 boats was circulated at the meeting. Boats taking part in the scheme were able to gain extra cod quota from an additional 5% awarded at last December's Fisheries Council and extra days at sea, but have to observe strict rules. Now the plan is to extend the scheme to other species.

Fisheries Ministers and officials support the scheme, and a DEFRA official at the recent NFFO AGM said catch quotas would be a "live issue" in the autumn negotiations and in the longer term.

Mike Park said (...) 'It's time now to break out from the trials stage and to experiment more fully with the concept of catch quotas, apply it to other species and move into a fully fledged system in 2011'."

GLOSSARY

Blim – biomass limit value, below which the stock is thought to be at risk of collapse

Bpa – biomass precautionary value, above which the stock is thought to be safe from collapse

Flim - fishing mortality limit value

Fpa - fishing mortality precautionary value

ICES – International Council for the Exploration of the Sea

LTMP – Long Term Management Plan

MSY - Maximum Sustainable Yield

STECF – Scientific, Technical and Economic Committee on Fisheries, a committee of experts from EU Member States which advises the European Commission

TAC – Total Allowable Catch, the total amount of fish which can be removed from a stock in a year. Due to the problem of discarding, the TAC is effectively a Total Allowable Landing. UWTV – Under water TV, a survey technique used to estimate the size of Nephrops stocks

ANNEX 1 - SUMMARY OF SCIENTIFIC ADVICE FOR STOCKS OF INTEREST TO SCOTTISH FLEET

Stock	ICES assessment of state of stock	ICES advice for 2011	TAC 2010
North Sea Cod	SSB has increased since its historical low in 2006, but remains below Blim. Fishing mortality declined after 2000, and although its most recent trajectory is considered uncertain, it is estimated to be well above the long-term objectives of maximum yield, and likely above Fpa. Recruitment since 2000 is poor, The assessment this year is considered more uncertain than the assessment conducted last year.	2011. Staged transition to MSY approach – landings of 18,100t in 2011.	33,600t
North Sea Haddock	Fishing mortality has been below Fpa and SSB is above MSY Btrigger since 2001. Recruitment is characterized by occasional large year-classes, the last of which was the strong 1999 year class. Apart from the 2005 and 2009 year classes which are about average, recent recruitment has been poor recruitment has been poor.	MSY approach – landings <36,000t in 2011. Precautionary approach – landings <74,000t in 2011. Management plan – 36,152t in 2011, which implies a TAC reduction of 5% and an effort increase of 29%.	36,000t
North Sea	The state of the stock is uncertain, and	No reference points are available to	12,900t

Stock	ICES assessment of state of stock	ICES advice for 2011	TAC 2010
Whiting	reference points for the stock are not defined. The assessment shows fishing mortality has fallen since 2000, and SSB has increased from a low in 2007.	enable MSY or precautionary advice. The advice suggests that under the current rules used by the European Commission to categorise stocks, the TAC would change by a maximum of 15%. The European Commission has asked ICES to evaluate its proposals for alternative rules. Under this proposal the TAC for North Sea whiting for 2011 would not change.	
North Sea Nephrops	ICES identify eight separate stocks within the North Sea. Three stocks are of most importance to the Scottish fleet. Fladen, Firth of Forth and Moray Firth. Fladen: The perception of the state of the stock has not changed substantially since the assessment in 2009. The UWTV abundance is still at a high level relative to the historical time series although there has been a 25 % reduction in 2009 from the 2008 value. The stable mean sizes in the length compositions of catches (of individuals >35 mm CL) and recent estimated harvest ratios (removals/TV abundance) relative to per-recruit reference points suggest that the stock is being exploited sustainably. Firth of Forth: The perception of the state of the stock has not changed substantially since the assessment in 2009. The UWTV abundance has been at a relatively high level since 2003 and the 15 % reduction observed in 2009 is within the	ICES recommend the eight stocks should be managed individually, or there is a risk stocks can be overexploited. Fladen: The stock is fished at a harvest rate of 7.2%. The harvest ratio should be increased to 10.2% resulting in landings of <13 300 t from this stock in 2011. Maintaining the current rate of 7.2% would result in landings of 9,600t in 2011. Firth of Forth: The harvest ratio in 2010 is 23.3%, which if maintained would result in landings of 2,200t. For MSY this should be reduced to 15%, corresponding to landings of 1,400t. Following ICES transition scheme for moving to MSY, the harvest rate should be reduced to 21.7% in 2011, corresponding to landings of 2.000t. Moray Firth: The harvest ratio in 2010 is 14% (which would correspond to landings of 1,300t in 2011). For MSY this should be reduced to 12.7%, corresponding to	24,688t for the North Sea as a whole.

Stock	ICES assessment of state of stock	ICES advice for 2011	TAC 2010
	confidence bounds of the 2008 value. The TV survey information, taken together with information showing stable mean sizes, suggest that the stock does not show signs of overexploitation.	landings of 1,200 tonnes. Following the ICES transition scheme for moving to MSY the harvest ratio for 2011 should be 13.7%, which also corresponds to landings of 1300t.	
	Moray Firth: The perception of the state of the stock has not changed substantially since the assessment in 2009. The TV survey suggests that the population is stable, but at a lower level than that evident from 2003 2005. There is no evidence from the mean size information to suggest overexploitation of the FU although the current low discard rate suggests that recruitment may be lower than it has been previously. There has also been an apparent increase in female catchability which when observed in other FUs has been associated with the stock having been overexploited.		
North Sea Herring	Spawning stock biomass is increasing and is close to Bpa. Fishing mortality has declined and is below the target set by the management plan. The main concern with this stock is recruitment - the year classes since 2002 are estimated to be among the weakest since the late 1970s. ICES notes that "North Sea herring has recently produced eight poor year classes in a row, which has never been observed when SSB was above 800 000 t", and there is a suggestion that rising sea temperatures may be a cause.	MSY approach – fishing mortality could be raised, resulting in a catch of <370,000 tonnes. Precautionary approach – catches of <370,000 tonnes in 2011. Management plan – the +/-15% change in TAC year to year would result in a TAC of 188,900t in 2011.	164,000t
Monkfish in North sea and West of	There is no accepted analytical assessment for this stock. However, recent dedicated anglerfish surveys in the North Sea and West	MSY approach: Due to a decrease in survey estimates of stock abundance and biomass and unknown exploitation pattern catches should	11,345t

Stock	ICES assessment of state of stock	ICES advice for 2011	TAC 2010
Scotland	since 2007; and a decline in biomass in 2009 in all areas surveyed with the exception of Division VIb (Rockall)	be reduced at rate greater than the rate of stock decrease. Because the catch levels are not known (only landings) this cannot be quantified. Therefore, effort in fisheries that catch anglerfish should be reduced.	
		Precautionary approach: The catch should be reduced and effort in fisheries that catch anglerfish should decrease.	
		Under the EU policy paper the stock is in Category 7, which means the TAC should be reduced by up to 15% based on the advice of STECF.	
West of Scotland Nephrops	ICES identify three separate stocks. North Minch: The evidence from the TV survey suggests that the population is stable over the last 3 years, but at a lower level than that evident from 2003 2006. The calculated harvest ratio in 2009 (dead removals/UWTV abundance) is above the values associated with high long term yield and low risk depletion.	North Minch: The harvest ratio in 2010 is 22%, which would equate to landings of 3,400t in 2011. The harvest rate should be reduced to 12.5% under an MSY approach, corresponding to landings of 1,900t. Following the ICES transition scheme for moving to MSY the harvest ratio for 2011 should be 20.1%, which corresponds to landings of 3,100t.	16,057t
	South Minch: The stable mean sizes in the length compositions of catches and recent fall in estimated harvest ratios to the equivalent of the FMSY proxy suggests that the stock is now being exploited sustainably.	South Minch: the current harvest rate of 13% would result in landings from the stock of 4,000t in 2011. The MSY approach would result in a slight reduction in harvest rate and landings to 12.3% and 3,800t respectively.	
	Clyde: Harvest rates for <i>Nephrops</i> in the Firth of Clyde have been at or above the proposed FMSY proxy in recent years. UWTV abundance remains well above the preliminary Btrigger.	Clyde: Fishing at the current harvest rate of 26% would imply landings of 4,500t in 2011. The MSY approach would require the harvest rate to be reduced to 16.4 %, resulting in landings of 2800 t in 2011. Following the transition scheme towards	

Stock	ICES assessment of state of stock	ICES advice for 2011	TAC 2010
West of Scotland Cod	Total mortality is high, but cannot be accurately partitioned into fishing mortality and natural mortality. The spawningstock biomass has increased from an all time low in	MSY implies the harvest ratio for the Firth of Clyde should be reduced to 24.1%, resulting in landings of 4100 t in 2011. MSY Approach: Catches (mainly discards) should be reduced to the lowest possible level.	
	2006, but remains well below Blim. Recruitment has been estimated to be low over the last decade. The 2005 and 2008 year classes are estimated to be the largest since 1997 and comparable with the long term geometric mean.	Precautionary approach: No targeted fishing should take place on cod in Division VIa. Bycatches including discards of cod should be reduced to the lowest possible level. Management plan: implies 25% reduction in effort and in TAC which equates to landings of <180t in 2011.	
West of Scotland Haddock	The very strong 1999 year class caused SSB to increase from a level near the historic low in 2000 to a peak in 2003, although SSB has declined since that time. F has been above Fpa in most years since 1987 and has been below Fpa since 2007. The 2006 to 2009 year classes are estimated to be below the long term average.	A management plan is under development. This plan results in a TAC of 940 t in 2011. ICES considers this to be in accordance with the precautionary approach.	
Rockall Haddock	Spawning biomass has increased in recent years as a result of the 2001 and 2005 year classes. SSB has been above Bpa since 2003. Fishing mortality has declined over time and is now close to FMSY. Recruitments since 2007 are estimated to be extremely weak.	Under the EU policy paper the stock is in Category 1, and ICES advises a TAC of 2,700t for 2011.	
West of Scotland	The state of the stock is unknown, but long-term information on the historical yield and	MSY / Precautionary approach: catches (half of which are discarded) should be	

Stock	ICES assessment of state of stock	ICES advice for 2011	TAC 2010
Whiting	catch composition and the survey-based assessment covering the more recent period all indicate that the present stock size is at a historical low.	reduced to the lowest possible level in 2011. ICES also comments that "There are strong indications that TAC management control is not effective in limiting the catch." Under the EU policy paper the stock is in Category 10 (catches should be reduced to the lowest level). This implies a reduction of 25% and a TAC for 2011 of 323t	
West of Scotland Herring	ICES considers that the stock over recent years has been fluctuating at a low level and is being exploited below FMSY.	Following the agreed management plan implies a TAC of 22,481 t in 2011 which is expected to lead to a TAC reduction of 13%.	
North East Atlantic Mackerel	Published 1 October		

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