Mackerel

There has been a resolution to the long-standing dispute regarding the fishing of mackerel in the North East Atlantic (NEA) amongst the Coastal States.

A five-year arrangement was reached between the EU, the Faeroese and Norway on mackerel in the North East Atlantic on 12 March 2014. The arrangement, which makes room for another Coastal State to join at a later stage, establishes a number of important principles, including a commitment to sustainable fisheries, a sharing between the Parties, and a commitment to establish a new long-term management plan in 2014 following ICES advice. Iceland, has Coastal Status but is not part of this agreement, neither are Russia or Greenland who are non-Coastal States. However, as part of the new arrangement 15.6% of the quota allocation has been set aside for Coastal States and NEAFC catches.

The crisis erupted in 2009 after the Faeroe Islands withdrew from the mackerel management agreement in response to Iceland's increasing mackerel catch. The level of autonomous quotas set by both Iceland and the Faeroese between 2009 and 2013 were strongly challenged by both the EU and Norway.

Mackerel is the most valuable stock to the Scottish fishing industry, representing about one third of the value of total landings by the Scottish fleet. There had been strong protests by Scottish fishermen at the situation.

Mackerel in the NEA

The NEA mackerel stock includes three spawning components; the western, southern and North Sea, but is assessed by International Council for the Exploration of the Seas (ICES) as one stock. The stock has an extensive migration pattern with widely spread spawning areas. Catch and survey data from recent years indicate that the stock has expanded north and west during spawning and summer feeding migration.

Traditionally, the fishing areas with higher catches of mackerel have been in the northern North Sea (along the border of Divisions IVa and IIa), around the Shetland Isles, and off the west coast of Scotland and Ireland. The southern fishery off Spain’s northern coast has also accounted for significant catches. In recent years significant catches have also been taken in Icelandic and Faeroese waters, areas where almost no catches were reported prior to 2008.

Changes to the distribution and timing of migration and spawning outside the traditional patterns in recent years, and the increase in stock size changed the perception of mackerel distribution and resulted in the development of new fisheries. This is reflected in the fact Iceland was awarded Coastal State status in 2009.

This briefing note gives the background and explains the current position.
Management of the NEA mackerel fishery

According to the 1995 United Nations Fish Stocks Agreement (UNFSA) straddling fish stocks, and highly migratory fish stocks (such as mackerel) have to be managed by a Regional Fisheries Management Organisation (RFMO), which consists of Coastal States and relevant Distant Water Fishing Nations (other nations with a real interest in the fishery).

North East Atlantic Fisheries Commission

In the North East Atlantic there are several straddling stocks, including mackerel, and the relevant RFMO is the North East Atlantic Fisheries Commission (NEAFC). NEAFC comprises contracting parties which have all signed up to the Convention on Multilateral Cooperation in North East Atlantic Fisheries, which entered into force in November 1982. There are currently five contracting parties: the European Union (EU), Denmark (on behalf of the Faeroese and Greenland), Iceland, Norway, and the Russian Federation.

Coastal States (CS)

According to the United Nations Convention on the Law of the Sea (UNCLOS), a Coastal State is a state where a migrating fish stock enters and is found in its waters (defined as a 200 mile Exclusive Economic Zone). Coastal States have both the right to harvest (utilize) the fish stock and the responsibility to cooperate with other Coastal States on the sustainable management of the stock. They have the responsibility to come to an agreement with each other on total allowable catches from the stock to ensure sustainability and avoid overfishing.

Coastal States agreement up to 2008/9

Historically mackerel has been fished by several EU Member States, by Norway and the Faeroese, and to a lesser extent Russia. This means that the three relevant Coastal States for mackerel have been the EU, Norway and the Faeroese and they have been the signatories to the mackerel Coastal States agreement (in place for over 20 years), all under the NEAFC framework. The agreement includes allocating shares of quota based on a historical track record and in accordance with the latest scientific advice for the stock. The most recent management plan was put in place in 2008 whereby the parties agreed a total allowable catch and its appropriate division. A quota was set for 2009.

Changes to the Coastal States Agreement

There were almost no reported catches from Icelandic waters prior to 2008. Iceland was noted to be conducting a very small mackerel fishery in its own waters in 2005, catches of which totalled 363 tonnes. Since then Iceland has greatly increased its mackerel catches, it is currently an EU candidate state and became a Coastal State for mackerel in 2009. At this point it became the joint responsibility of the four Coastal States to reach an agreement on the comprehensive management of the mackerel fisheries in order to ensure their sustainable exploitation.
Breakdown of Coastal States agreement

During the period 2009 to 2013 the Coastal States failed to reach agreement on quota shares. Iceland and the Faeroes set their own autonomous quotas, and the EU and Norway agreed on a 10 year mackerel management arrangement in 2010. They continued to set a joint TAC based on the previously agreed sharing arrangements from the Coastal States agreement. ICES continued to provide scientific advice on catches. But there has been no international agreement on mackerel since the TAC and quota were set in 2008 for 2009 until 2014.

It is worth noting that disagreement on the management of straddling and highly migratory stocks is not new and has occurred before with both North East blue whiting and Norwegian spring-spawning herring. The protracted disagreement on blue whiting (six years) led to a very grave depletion of this stock, which has subsequently recovered. Agreeing and maintaining international fishing agreements is paramount but this requires the willingness of all parties concerned to cooperate. It is not uncommon that one or more of the third parties lack such a goodwill and chose to fish at a unilaterally established high intensity for a number of years before consultations are concluded successfully. Such behaviour may lead to considerable depletion of the fish stock in question, even if other parties moderate their fishing rates.

TAC negotiations on NEA mackerel

Since the beginning of the dispute, many rounds of international negotiations took place to try to resolve this issue before an agreement was finally reached on 12 March 2014.

(For historical ICES advice and TACs set for 2010-2013 see Annex 1 page 8.

For 2014

The advice from ICES in October 2013 was that landings should be no more than 889,886 t in 2014. ICES updated its advice in May 2014 that catches should be between 927,000 tonnes and 1,011,000 t.

- Under the 12 March 2014 agreement the TAC for NEA mackerel has been set at 1.24 million tonnes, above the revised ICES recommendation.
- For all years of the arrangement, the Parties agreed to set aside 15.6% of the TAC as a Coastal State and Fishing Party reserve.
- Under the five-year agreement the delegations agreed an ad hoc arrangement for 2014. The Faeroese will receive 156,240 tonnes, the EU 611,205 tonnes, and Norway 279,115 tonnes. 42,537 tonnes has also been set aside for international waters regulated by NEAFC.
- Greenland (who is outside the agreement) has set an autonomous quota of 100,000 tonnes.
- Iceland set a unilateral quota of 147,547 tonnes (12%) for 2014.
- For 2015 – 2018 the TACs should be based on the level advised through the ICES long term management plan. The Parties would maintain the same relative shares agreed for 2014: for the EU 58.4%, the Faeroese 14.93% and Norway 26.67%.
- Parties have asked ICES to provide advice on a revised management plan on which to base appropriate fishing levels during the years 2015 to 2018.
ICES interim advice October 2013

Scientific advice is provided by ICES. Until 2013 an age based analytical assessment was carried out on the whole stock using catch data and a triennial egg survey to obtain a Spawning Stock Biomass (SSB) estimate.

ICES published interim advice in October 2013 but was not able to present an analytical assessment due to a change in the perception of the accuracy of the catch data prior to 2005. The egg survey results, taken together with estimates of mortality based on catch, gave strong indications that there had been an increase in stock size and that current levels of catch and landings did not pose a threat to the stock. Catches of mackerel have been increasing since 2005 and have been around 900 kt since 2010.

This advice was a change from previous years. Previous assessments were based on analytical assessments, and management advice given on the basis of this. This year, because of the uncertainty about historic catch data, it was agreed that the previous stock assessment method was no longer an appropriate basis for providing catch advice for this stock.

ICES advice May 2014

The assessment conducted in 2013 was not accepted for use in management due to the effect of highly uncertain catch information prior to 2000. The assessment was benchmarked in February 2014. This process involves reviewing all available data, assessing the suitability of any new data and deciding on reference points and assessment methods. New assessment models were evaluated to account for uncertainty in historical catches. The period of uncertain catches is now accounted for in the new assessment and this means that the estimates of stock development are more uncertain in the past than they are recently. The new assessment model is considered to give reliable information on the state of the stock and provides estimates of uncertainty in all stock parameters.

Comparison with previous assessment and advice

The last analytical assessment for NEA mackerel stock was carried out in 2012. Compared to results of that assessment, the perception of the stock has changed.

The SSB from the 2014 benchmark is now estimated to have varied between 2 million tonnes in the late 1990s and early 2000s and 5 million tonnes in the recent years, compared to 1.6 million tonnes and 3 million tonnes in the 2012 assessment. The October 2013 assessment (based on trends in the egg survey) suggested that SSB was increasing, but that exploitation was unknown. The 2014 benchmark assessment also indicates that SSB is increasing and that fishing mortality is decreasing and is now below FMSY.

Further research

In addition a joint Nordic ecosystem survey (IESSNS) was carried out between Norway, Iceland and the Faroe Islands in July and August 2013. This has estimated NEA mackerel abundance in summer 2013 at 8.8 million tonnes. These abundance estimates strongly suggest that the NEA mackerel have increased significantly both in geographical distribution and abundance.
ICES (and the Marine Research Institute in Iceland) have both highlighted changes in mackerel distribution. ICES reports that the stock has expanded north-westwards during spawning and the summer feeding migration. This distributional change is likely a reflection of increased stock size coupled with changes in the physical environment and in the zooplankton concentration and distribution. A new research project by the Icelandic Marine Research Institute (until December 2014) will look at stock structure and give information on changes in the migration pattern.

The changes in mackerel distribution and migration have been investigated in an Ad hoc Group on the Distribution and Migration of NEA mackerel. The accepted consensus of the AGDMM was that there has been an expansion of the distribution of spawning over time in the western component.

This expansion has been geographically large, but is thought to contain a marginal proportion of total spawning. There has also been an expansion in the temporal distribution of spawning in the western and southern components to earlier in the year. The distribution of juvenile mackerel is very patchy, and abundance is highly variable between years. A northern expansion of the western component is indicated by the recent summer surveys in the Nordic Seas but it is unclear whether or not this expansion in distribution of mackerel is permanent or cyclical. While the marginal distribution has changed notably, the spawning area has remained remarkably inert at its core. The record-high surface temperatures seen in the Nordic seas during summer in recent years, compared to long-term average, have largely increased the potential feeding habitat for mackerel, including a documented large spatial expansion of mackerel to the north and west. This expansion has resulted in increased overlap with Norwegian spring-spawning (NSS) herring in the outer edges of their distribution area, as well as other fish stocks utilizing these feeding grounds.

Other influences

Review of MSC certification suspension

The certifiers for seven MSC certified mackerel fisheries in the North East Atlantic had their fisheries’ certificates suspended in April 2012. Due to the inability of all states targeting NEA mackerel to agree on quota allocations within the TAC, therefore compromising the management system, such that the MSC standard has not been fully met. The suspension is not the same as a certificate withdrawal as suspended certificates can be re-instated on completion of a condition with no need for a new full reassessment. Mackerel caught after 30 March 2012 could not be labelled ‘MSC certified’. The fisheries affected are:

- Danish Pelagic Producers Organisation North East Atlantic mackerel (DK);
- Irish Pelagic Sustainability Association western mackerel (IE);
- Irish Pelagic Sustainability Group western mackerel pelagic trawl fishery (IE);
- North East Atlantic mackerel pelagic trawl, purse seine and handline fishery (NO);
- Pelagic Freezer Trawler Association North East Atlantic mackerel (NL);
- Scottish Pelagic Sustainability Group North East Atlantic mackerel (UK);
- Swedish Pelagic Producers Organisation North East Atlantic mackerel (SW).
MINSA - Group action

During the dispute (June 2012), the MSC welcomed an action plan aimed at solving the ongoing mackerel dispute in the North East Atlantic. The plan was submitted by the Mackerel Industry Northern Sustainability Alliance (MINSA) – the seven MSC certified mackerel fisheries above. The successful development of the action plan meant fisheries' certificates were suspended until 30 April 2014. In May 2014 MSC announced all affected fisheries, whose certificates expired in 2014, should start their re-assessment processes as soon as practically possible, with announcements submitted to MSC no later than 10 July 2014, with the aim that each fishery should be recertified by July 2015. All MINSA mackerel fisheries whose certificates expire in 2014 are extended until 31 July 2015.

Unsustainable fishing trade sanctions

New rules empowering the European Commission to ban EU imports of fish from stocks which are being unsustainably fished were ratified by the EU Parliament and the Council of the European Union in October 2012. It is hoped the ban will discourage massive overfishing of mackerel by Iceland and the Faeroese. The regulation opens the way for trade sanctions against third countries allowing unsustainable fishing of fish and fishery products from stocks of common interest (fish stocks available to EU and third countries fleets whose management requires co-operation). Trade sanctions were imposed by the EU against the Faeroese in August 2013 to ensure the conservation of the Atlanto-Scandian herring stock. As the Faeroese catch mackerel with Atlanto-Scandian herring sanction measures also include Faeroese mackerel imports to the European Union.

Marine Conservation Society (MCS)

In January 2013 the MCS changed its advice on mackerel and advised only eating it occasionally. This was revised in May 2013 to - Best Choice: Cornish hand-line caught mackerel (rated 2); Best Alternative: UK/EU/Norwegian pelagic caught mackerel (rated 3); Least Sustainable Choice: Icelandic and Faeroese pelagic caught mackerel (rated 4).

Vessel data collection

The pelagic industry has initiated a ground breaking project to research and implement a vessel data collection programme to enhance the quality of the scientific assessment. The group includes respected pelagic scientists and industry representatives from EU, Norway, Iceland and the Faeroese. Stakeholders are actively seeking mechanisms that would allow inclusion of fishing industry information into the assessment process, and are involved in a number of pilot projects in this regard. Industry has scaled up its participation in the mackerel RFID tagging project; processing plants in Denmark, Iceland, Ireland and Scotland are now equipped to read mackerel tags, in addition to the existing tag reading facilities in Norway.

Seafish position

Seafish believes that fisheries management must be based on sound scientific advice, underpinned by compliance with that advice. Everyone involved has a part to play and responsible practice by fishermen is fundamental. Fish do not respect geographical boundaries so it is also imperative that fishing nations co-operate to
jointly implement effective management regimes. Only in this way can we preserve both fisheries and the marine environment for the long-term. The unilateral increase in quotas by Iceland and the Faeroes was clearly at odds both with the goals of long-term sustainable practice and co-operative management. Seafish endorsed the efforts of the EU, Norway, Iceland and the Faeroes to re-establish and ratify the Coastal States’ agreement. Whilst mackerel management has been successful the long term interests of the stock do demand flexibility.

**Key Points:**

- There was no internationally agreed catch in line with the management plan between 2009 and 2013. The lack of international agreement led to catches in excess of the advised TAC for the stock.
- Recent recruitment, notably in 2005 and 2006 were the largest recorded in the time series of assessments.
- There are strong indications that there has been an increase in stock size and that current levels of catch and landings do not pose a threat to the stock.
- Scottish and other European MSC client groups agreed an action plan to press for resolution of the issue. The current certification remains suspended while these efforts continue.
- This is not the first time there have been issues regarding Coastal States agreements on highly migratory fish stocks. It took six years of negotiations to reach an agreement on blue whiting (finally reached in December 2005).
- Changes to the distribution and timing of migrations, and mackerel spawning patterns, have raised both scientific and biological considerations, over the political rationale behind each decision.

**Glossary of terms used**

Management decisions for sustainable fisheries should restrict the risk that spawning stock biomass falls below a minimum limit, or that fishing mortality rates become too high.

- **MSY** (Maximum Sustainable Yield). Referred to as $F_{\text{MSY}}$ – fishing at levels that catch the maximum proportion of a fish stock, that can safely be removed on a continuous basis; and $B_{\text{MSY}}$ – spawning stock biomass that results from fishing at $F_{\text{MSY}}$ for a long time.
- **PA** (Precautionary Approach). Referred to as $F_{\text{pa}}$ – precautionary reference point for fishing mortality; and $B_{\text{pa}}$ – precautionary reference point for spawning stock biomass.
- **Management Plan.** Agreed by all parties to maintain/rebuild stocks.
- **$B_{\text{trigger}}$**. Value of spawning stock biomass that triggers a specific management action.
- **$B_{\text{lim}}$**. Minimum level of spawning stock biomass, or limit biomass is defined. Below $B_{\text{lim}}$ = a higher risk that the stock reaches a level where it suffers from severely reduced productivity.
- **$F_{\text{lim}}$**. The limit to fishing mortality.
- **SSB**. Spawning stock biomass or stocks reproductive capacity. Management should prevent spawning stock decreasing below $B_{\text{lim}}$ and avoid fishing mortality above $F_{\text{lim}}$. Advice is generally aimed at avoiding the risk that spawning stock falls below the $B_{\text{pa}}$ (precautionary biomass) and fishing mortality increases above $F_{\text{pa}}$. 

Changes to the distribution and timing of migrations, and mackerel spawning patterns, have raised both scientific and biological considerations, over the political rationale behind each decision.
Annex 1 - Historical ICES advice

For 2010

The advice from ICES\textsuperscript{15} was to allocate a total TAC of 527,000 to 572,000 tonnes (fishing mortality range - mgment plan).

- Both Iceland and the Faeroese set their own autonomous quotas for the fishing year\textsuperscript{9}. Iceland allocated a TAC of 130,000 tonnes and the Faeroese 85,000 tonnes. This was estimated to be 21\% of the total reported landings.
- Based on the historical sharing arrangements used in Coastal States agreements, the EU and Norway set a joint quota of 548,014 tonnes (ICES estimate\textsuperscript{9}).
- The 2009 spawning stock biomass (SSB) was estimated to be 3 mt\textsuperscript{9}.
- Official landings in 2010 were 862,000 tonnes\textsuperscript{2}.

For 2011

The advice from ICES\textsuperscript{16} was to allocate a total TAC of 592,000 to 646,000 tonnes (fishing mortality range - mgment plan).

- Both Iceland and the Faeroese set their own autonomous quotas for the fishing year\textsuperscript{10} of 146,818 tonnes for Iceland and 150,000 tonnes for the Faeroese. This was estimated to be 32\% of the total reported landings\textsuperscript{11}.
- Based on Coastal States historical sharing arrangements, the EU and Norway set a joint quota of 586,663 tonnes (ICES estimate\textsuperscript{10}).
- The 2010 SSB was estimated to be 2.93 million tonnes\textsuperscript{10}.
- Official landings in 2011 were 862,000 tonnes\textsuperscript{2}.

For 2012

The advice from ICES\textsuperscript{17} was to allocate a total TAC of 586,000 to 639,000 tonnes (fishing mortality range - mgment plan).

- The EU and Norway have continued to set their fishing allocation according to the conditions of the Coastal States agreement and set a joint quota of 576,670 (ICES estimate\textsuperscript{1}).
- Iceland and the Faeroese made no change to their approach in setting their own autonomous quotas. Iceland allocated a TAC of 145,000 tonnes and the Faeroese a TAC of 148,375 tonnes respectively\textsuperscript{1}.
- The 2012 SSB is estimated to be 2.68 million tonnes\textsuperscript{1}.
- Official landings in 2012 were 877,000 tonnes\textsuperscript{1} (compared to a TAC of 586,000 - 639,000 tonnes\textsuperscript{2}).

For 2013

The advice from ICES\textsuperscript{8} was to allocate a total TAC of 497,000 to 542,000 tonnes (fishing mortality range - mgment plan).

- This corresponds to a catch reduction of between 47\% and 42\% compared to the estimated catches in 2012. This would lead to an estimated SSB of between 2.61 and 2.56 million tonnes.
- In January 2013 the EU and Norway set a joint mackerel quota of 489,882 tonnes (a 15\% reduction on 2012 and based on Coastal States historical sharing arrangements).
- Iceland and the Faeroese both set an autonomous quota of 123,182 tonnes (a 15\% reduction on 2012), and 159,000 tonnes respectively.
References

2. http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2013/2013/mac-nea.pdf
8. http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2012/2012/mac-nea.pdf

See also:
The Seafish Responsible Sourcing Guide on mackerel: http://www.tinyurl.com/seafishrsg