



NEW INITIATIVES IN 2008 TO REDUCE DISCARDS (BY REGION)

Scottish waters

Scotland has shown a strong lead in identifying and adopting innovative conservation measures in the North Sea.

- **Conservation Credits Scheme:** Launched in Feb 2008 this landmark scheme rewards Scottish fishermen with extra days at sea when they sign up to initiatives which have an appreciable impact on the conservation of fragile fish stocks. These measures include the use of selective fishing gear and the Real Time Closure (RTC) programme.
- **Voluntary Real Time Closure scheme implemented from 1 Jan 2008 to protect spawning cod (from 1 Feb 2008 in English waters):** When a high abundance of spawning cod is identified, a limited area (7 by 7 miles) is closed for 21 days. From July 2008 the scheme was expanded to include all cod. Under this scheme there have been 17 closures so far in 2008 and compliance has been excellent.
- **Seasonal closure:** A first ever 'seasonal closure' at the Long Hole in the Fladen grounds, 100 miles north east of Fraserburgh is due to come into force at the beginning of December, to reflect the very high abundance of cod in the area at that time of year.
- **Controls on net sizes:** Making fishing nets more selective so that only fish above the minimum landing sizes are caught. Measures introduced in 2008 under the Conservation Credits Scheme include:
 - A "one-net rule" was introduced from 1 Feb 2008 so that vessels carry only one regulated gear mesh size per trip.
 - Twin-rig vessels using 70-89mm demersal gear must, from 1 Feb 2008, use either 80mm x 4mm single twine with a 110mm square mesh panel (SMP) at 15m to 18m from the codend OR use 95mm x 5mm double twine with a 90mm SMP at 15m to 18m.
 - Single trawl vessels using 70-89mm demersal gear must, from 1 July 2008, use either 80mm x 4mm single twine with a 110mm SMP at 15m to 18m from the codend OR use 95mm x 5mm double twine with a 90mm SMP at 15m to 18m.

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- **Selectivity trials:** there are six selectivity trials in Scottish waters in 2008 (four under the Scottish Industry Science Partnership (SISP) and two further trials directly funded by the Scottish Government):
 - Increasing the selectivity of North Sea nephrops gear using 100-120 SMPs.
 - Measuring the effect on selectivity of different mesh sizes/ positions of SMPs.
 - Selectivity of nephrops gear using SMPs on small vessels on North Sea inshore grounds.
 - Reducing cod by-catch through incorporation of large meshes in lower wings and belly sheet (ie “the Orkney gear” or Scottish version of the Eliminator trawl).
 - Nephrops size selectivity using grids/meshes/SMPs. Depending on the results of earlier trials, further data on appropriate gear designs will be collected later in 2008.
 - Selectivity of whitefish mixed fisheries, especially cod selectivity. Depending on the results of earlier trials, further data on appropriate gear designs will be collected later in 2008.
- **Observer programme:** Under the Scottish Conservation Credits Scheme the Scottish Government is funding a £500,000 two-year independent observer programme to deliver 500 observer days a year from July 2008 to provide further data on discards. This will cover:
 - Cod catch/discard rates on 10% of trips for specified vessels.
 - West of Scotland reference fleet to observe nephrops fishery and examine commercial viability of gears designed to reduce whitefish discards.
 - Commercial trial of ‘Orkney gear’: selective whitefish gear based on the ‘Eliminator’ trawl with large mesh in sides and belly to reduce cod by-catch but maintain commercial viability.
 - Examine viability of potential spatial measures designed to reduce cod catches in the monkfish fishery around the shelf edge in area VIA.
 - Examine viability of further spatial measures designed to reduce cod catches in the nephrops fishery in the Fladdens (area IVa).
 - Additional sampling to support the Real Time Closures scheme.
- **Discard summit (25 Sept 2008 in Edinburgh):** To address the key issues and highlight time-lag between the collation of scientific advice compared with the real-time situation on the fishing grounds. This year it is absolutely clear that the cod stock is recovering fast, but the quota does not match the abundance, meaning fishermen have no option but to dump good quality marketable fish despite their best efforts to try and avoid cod.

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English waters

- **Voluntary Real Time Closure scheme implemented from 1 Feb 2008 to protect spawning cod (from 1 Jan 2008 in English waters):** When a high abundance of spawning cod is identified, a limited area (7 by 7 miles) is closed for 21 days. From July 2008 the scheme was expanded to include all cod. Under this scheme there have been 17 closures so far in 2008 and compliance has been excellent.
- **Selectivity measures:** Fishermen using demersal towed nets (not including beam trawls) in the mesh size range 80-99mm will be required to use one of the two enhanced gear selectivity devices if they wish to qualify for the additional days at sea supplement. These devices are proven to reduce discards of cod and whiting.

- **Selectivity Options introduced in 2008:** There are various trials underway in English waters:

Reducing whiting discards

- **May 2008** - trials with industry using additional secondary SMPs.
- **Sept/Oct 08** – further trials with industry using additional secondary SMPs.
- **Sept/Oct 08** – trials with industry to evaluate a twin crown cutaway trawl.
- **Sept/Dec 08** - Further trials with industry using the Eliminator trawl.

Cod protection

- **Sept/Dec 08** - Further trials with industry using the Eliminator trawl.
- **2008** Cod avoidance programme.

Sampling of catches and discards onboard commercial vessels

- **2008** Standard DCR programme (600 observer days at sea per year).
- **2008** Evaluating onboard camera system to monitor catches and discards.

Other supporting activities

- **Oct 2008** Selectivity studies on bass.
- **Oct 2008** Selectivity studies on gill nets.
- **2008** Science and industry collaboration under the Fisheries Science Partnership.

- **North Sea Regional Advisory Council (NSRAC):** published a position statement on cod discards on 30 Oct 2008 which examines a number of options to prevent the mismatch between 2007 and 2008 quotas and the cod available which has resulted in the widespread discarding of marketable cod. The RAC has suggested the following features should govern the management of the North Sea cod fishery in 2009:
 - Recognition that the TAC for cod in 2008 has been out of line with the availability of marketable fish on the fishing grounds, resulting in

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- widespread discarding.
 - All parties should be committed to eliminating the discarding of marketable cod in 2009.
 - On the basis of ICES projections, discarding of cod will be at a higher level in 2009 than this year, if a similar TAC setting rule (15% increase) is applied because the stock is recovering at a faster rate.
 - If a TAC for North Sea cod is set for 2009 at the highest level consistent with ICES projections, the NSRAC could consider a prohibition on the discarding of marketable cod. (Denmark already applies such a measure).
 - If the TAC for North Sea cod is set towards the upper range of ICES projections for catches in 2009, it will be incumbent upon the fishing industry and member states to ensure the establishment of extensive accompanying measures to reduce or eliminate discards of marketable cod.
 - A reduction in days-at-sea would not directly address the problem of discarding to any significant degree as restricting time at sea does not constrain the level of discarding when the vessels are at sea.
 - The widespread implementation of “cod avoidance” measures to accompany an increased TAC should, all other things being equal, result in a lower fishing mortality for cod than would be the case if there is a low TAC, high discarding and minimal cod avoidance activities.
- **Cod Avoidance plans:** The NSRAC is keen to see the intensification of cod avoidance activity in 2009, to build on the start made on cod avoidance in 2008. This includes:
 - Conservation Credits/Real Time Closures to protect aggregations of juvenile and spawning cod.
 - The successful Real Time Closure programme introduced for the Scottish, English and Danish demersal fleets during 2008 which has secured demonstrable operational changes in line with the objectives of cod recovery.
 - Individual Vessel Cod Avoidance Plans: A pilot project in the English fleet testing the efficacy of cod avoidance plans in ensuring that vessels operate to restrict catches of cod to their quota allocations, through spatial, temporal and gear adaptations.
 - Technical Measures such as the eliminator trawl, which allows effective fishing for haddock and whiting whilst eliminating cod from the catch, and semi-pelagic fishing that similarly has very low discard rates.
 - Equivalent measures in fisheries in which cod is a by-catch.

NEW INITIATIVES IN 2008 TO REDUCE DISCARDS (BY REGION)

Irish waters

There are a number of ongoing industry initiatives to investigate technical discard mitigation measures in the Irish Sea nephrops fishery.

- **Anglo Northern Irish Fishermen's Producer Organisation:** recently completed and extended a study, in collaboration with scientific research laboratories, to investigate a range of technical measures to reduce discarding in the Northern Irish Nephrops fishery.
- **ANIFPO:** plans to continue trials with further modifications in 2007. Trials will focus on the suitability and effectiveness of increasing the mesh size of the current square mesh panel (from 80 to 120mm) and situate the panel closer to the cod-end which has been demonstrated to reduce the capture of sub-legal cod as well as other species of interest.
- **Selective gear trials:** Irish fishermen have been involved in a number of selective gear trials and one of these industry initiatives led to the development of the inclined separator panel, which is included in the Technical Conservation measures currently in place for the Irish Sea. Recent discussions with Irish fishermen have demonstrated a willingness to continue this research including testing the suitability of the 120mm square mesh panel on a voluntary basis.

Research conducted in the North Sea by both Scottish and Norwegian researchers have shown that this improves cod selectivity considerably; giving results that are comparable with a 120 mm diamond mesh cod-end and this device seems appropriate for Irish Sea fisheries.

- **Irish Sea enhanced data collection programme:** The collection of additional discard data will provide additional information to determine the effectiveness of such trials and it is envisaged that further selectivity trials and voluntary use of selective gears will become an integral part of the pilot project. The project was approved in Dec 2006. The aim is to:
 - Obtain estimates of total catches (removals) of key Irish Sea fish stocks which are sufficiently accurate that they can eventually be used in annual ICES stock assessments.
 - Engage the fishing industry in the collection of high resolution data collection.
 - Improve precision of current discard programme in ICES area VIIa through enhanced coverage and provision of high resolution effort and total catch data for improved discard raising procedures.
 - Provide higher resolution spatial and temporal discard data to assist in developing appropriate discard mitigation strategies for the Irish Sea.

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- Link with and enhance existing national and EU programmes e.g. Discard Atlas; EU pilot project on discard implementation issues (FISH/2006/15); English and Irish discard mapping programme.

Welsh waters

Discards are not a major issue for the Welsh fishing fleets as it is primarily a shellfish fleet. 'Soft' shellfish like crabs and lobsters are generally fished to quota and any surplus are returned to the sea alive, and survive.

Initiatives

- **Gear selectivity trials for palaemon prawns:** The main UK fishery for palaemon prawns is West Wales. Communication with prawn buyers suggests that market demand is strongest for large mature prawns, rather than landings of mixed sizes (including juveniles). Cardigan Bay Fishermen's Association, supported by the Countryside Council for Wales (CCW) and the Welsh Federation of Fishermen's Associations have conducted gear selectivity trials for palaemon prawns resulting in:
 - ✓ Regulation of mesh size of the pot ends
 - ✓ Regulation of mesh size across the whole pot
 - ✓ Requirement for catches to be riddled aboard the vessel with undersized returned immediately and carefully to the sea.
- **North Wales spurdog longline fishery:** Spurdog are a bycatch in various trawl and gillnet fisheries, and are an important component of inshore, longline fisheries in certain parts of England and Wales. A Fishery Science Partnership (FSP) project involving the fishing industry, Defra and Cefas scientists aims to (a) evaluate the role of spurdog in longline fisheries and examine the catch rates and sizes of fish taken in a longline fishery, (b) to provide biological samples so that more recent data on the length at maturity and fecundity can be calculated, and (c) to tag and release a number of individuals to inform on the potential discard survivorship from longline fisheries. (The tender closing date was October 2008.) The results will:
 - ✓ increase understanding of the discard survival of fish caught under commercial conditions.

Data collection

- 2008 Publication of all national discard data in scientific literature.
- Annual Fisheries Research Services (FRS) discards survey. FRS conducts an extensive observation and sampling programme to provide discard data across a range of fisheries and gear types.

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