

EN

Multi-annual plan West of Scotland herring

EN

EN



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels,
SEC

COMMISSION STAFF WORKING DOCUMENT

**Impact Assessment regarding the Commission's proposal for a
COUNCIL REGULATION
establishing a long-term plan for the stock of herring distributed to the West of Scotland
and the fisheries exploiting that stock**

DG FISH

Agenda planning: FISH/2007/033

TABLE OF CONTENTS

EXECUTIVE SUMMARY

The Impact Assessment concerns a draft proposal that would set long-term management objectives and implementing methods concerning a fishery for herring to the West of Scotland. The scope of the proposal is relatively small, covering about €8 M / year in terms of catch value. Approximately 90 vessels, 1400 at-sea jobs and some 25 000t of fish catch for human consumption would be affected by the proposal, which is intended to deliver stability and sustainability. However, the likely impact is modest because the value of the catches from this stock comprises only a small part (less than 1.7% on average) of similar catching opportunities available to the same fishing fleet.

Scientific and Stakeholder Committees have been consulted.

Despite its modest impact, the proposal is supported by DG FISH as an additional element in bringing decisions setting the Common Fisheries Policy (CFP) under a long-term framework that is compatible with international obligations and with the CFP objectives.

The operational elements and options are:

- A rule for setting total allowable catches (TACs) annually, based on scientific advice, and which allows for stability in TACs when the stock is at a high level, but affords greater protection if the stock should fall to smaller sizes. This will be better in delivering sustainability than the current *ad hoc* decision process in Council, which has been shown to set TACs on average around 40% too high.
- A provision to provide more protection to the stock if it falls under the minimum level advised by scientists. DG FISH's preferred option is a closure of the fishery. A progressive reduction or an *ad hoc* "special circumstances" article are options that have also been considered.
- A provision to limit TAC variations when possible. DG FISH considers it feasible to limit TAC variations to less than 15% between years when the stock is at a high level, but the risks attendant on applying this provision at stock sizes under 75 000t would be unacceptable.
- A provision to improve control of catch reports by fishing vessels. The option to rely on control improvements by Member States has been considered, but DG FISH prefers the implementation of area-specific special fishing licences concerning fishing for herring.

Details of consultation processes, options and impacts are provided.

1. PROCEDURAL ISSUES AND CONSULTATION OF INTERESTED PARTIES

1.1. Organisation and Timing

This impact assessment concerns a proposal for a Council Regulation establishing a long-term plan for the stock of herring distributed to the West of Scotland¹ and the fisheries exploiting that stock. Its development is foreseen in Agenda Planning (FISH/2007/033) and in the 2007 Annual Management Plan of the Directorate-General of Fisheries and Maritime Affairs under the specific objective "Conservation and Management of Fish Resources" (to propose and negotiate measures, including multi-annual management plans, for the conservation and management of Community fish stocks, joint stocks and stocks partly occurring in

¹ Reference is made to the stock of herring distributed in EC and international waters of ICES Divisions Vb, VIb and that part of Division VIa north of 56°N, excluding the Clyde.

international waters, with a view to ensuring the exploitation of fish stocks at maximum sustainable yield levels, taking into account broader environmental, economic and social concerns and making the best use of harvested fish resources, especially by avoiding wasteful discard practices).

The reform of the Common Fisheries Policy set the basis in 2002 for changing to long-term plans and away from annual decision-making. The stocks that were most problematic were addressed first. Long-term plans to provide for stock recovery have been adopted since 2003 for North Sea plaice and sole, four stocks of cod, two stocks of hake and two stocks of sole. The Commission is now starting to propose long-term plans for the less problematic species, with the objective of avoiding these stocks from falling into critical situations.

The adoption of a proposal concerning a management plan for West of Scotland herring is one of the main outputs for 2007 that was planned in respect of the foregoing objective. The adoption of the proposal is foreseen in the fourth quarter of 2007.

This is a proportionate impact assessment and no inter-service steering group has been convened. The scope of the proposal is limited and the impact, in social, economic and environmental terms, is modest (see section 2.3.3).

1.2. Consultation and expertise

Advice has been sought from relevant scientific organisations since 2004. The impact assessment is prepared by DG FISH on the basis of scientific advice concerning long-term management and is complemented with economic analysis using available information. Consultation with stakeholders has taken place with the relevant representative body.

External expertise has been sought from the International Council for the Exploration of the Sea (ICES) concerning long-term management of fisheries resources of interest to the European Community since 2003. This organisation collates the expertise of fisheries scientists mostly working in the national fisheries laboratories of Member States and provides a systematic and standardised advice to the European Community and to Member States.

In 2005 ICES advised for the first time on appropriate elements of a long-term plan for this stock². The Scientific, Technical and Economic Committee for Fisheries endorsed ICES' advice and did not provide a different advice concerning long-term management³.

A research project concerning herring stock identity was also funded by the European Community⁴. Based on the results of this project, further questions were raised to ICES who, after considering the new information, advised in June 2007 that no changes would be made concerning the long-term management advice presented in 2005⁵.

Stakeholders were consulted by means of verbal and written presentations to the Pelagic Regional Advisory Council (PelRAC). This body has been established as the main body for consultations with interested parties having an interest in the Common Fisheries Policy in

² ICES, 2005. Report of the ICES Advisory Committee on Fishery Management, Advisory Committee on the Marine Environment and Advisory Committee on Ecosystems, 2005. ICES Advice, Volume 5, p.21 Celtic Sea and West of Scotland. 242pp. (www.ices.dk/committe/acfm/comwork/report/2005/may/her-vian.pdf)

³ Report of the Scientific, Technical And Economic Committee For Fisheries. Review of scientific advice for 2006. Commission Staff Working Paper SEC(2005).

⁴ WESTHER "A multidisciplinary approach to the identification of herring (*Clupea harengus* L.) stock components west of the British Isles using biological tags and genetic markers"

⁵ www.ices.dk/committe/acfm/comwork/report/2007/may/her-vian.pdf

respect of pelagic fish stocks⁶. The Advisory Committee on Fisheries and Aquaculture (ACFA) was not consulted as that body advises on cross-cutting issues whereas this plan concerns a specific regional issue.

A non-paper from the Commission services was presented to the PelRAC on 20th June 2006 setting out the main elements of the intended Commission proposal. The PelRAC⁷ replied by letter on 17 November 2006 and indicating:

- (a) general acceptance of the approach advised by ICES, including a 15% limit on inter-annual changes in TAC;
- (b) a need to specify more accurately the harvest rule in terms of timing;
- (c) a disinclination to accept automatic reductions in TAC in the absence of scientific advice;
- (d) support for the Commission's approach concerning control and enforcement.

Two further issues were raised by the PelRAC which cannot be addressed in the context of the long-term plan but will be addressed in other legislation that is currently being prepared:

- (e) a need to include up to 10% inter-annual flexibility in quotas.
- (f) a need to remove a seasonal closure for herring fishing.

1.3. Dissemination of scientific advice and the results of consultations with stakeholders

The scientific advice from ICES and from STECF and the advice from the PelRAC are available on the websites of the respective committees^{5, 7, 8}.

2. PROBLEM DEFINITION

2.1. Issue requiring action

Currently, no long-term guidance for setting annual fishing opportunities exists and decisions are made annually on an *ad-hoc* basis. There are no legislative provisions concerning sustainable exploitation of this stock although sustainability is an objective of the Common Fisheries Policy.

2.2. Underlying driving forces

The main long-term drivers of the fisheries system are the biological limitations on the productivity of the stock. Reducing the stock size to a low level can (while maintaining high catches for a short period) lower the productive potential of the stock in the longer term. In contrast, in short-term perspectives it can often be economic and social pressures which predominate in the dynamics of the system and lead to decisions on fishing opportunities that, cumulatively, can become unsustainable.

⁶ 2005/606/EC: Commission Decision of 5 August 2005 declaring operational the Regional Advisory Council for Pelagic stocks under the Common Fisheries Policy. OJ L 206, 09.08.2005, p. 21.

⁷ www.pelagic-rac.org

⁸ <http://old-stecf.jrc.it/meetings/sgrstgeaoct2005/final .doc> and www.cc.cec/home/dgserv/sg/sgvista/i/sgv2/repo

This means that economic and social pressure exist which have led to TACs being set higher than those recommended according to sustainability criteria, and many fish stocks being fished outside safe biological limits⁹.

2.3. Effect on the sector

2.3.1. Identification of the sectors affected

The principal sectors affected are the owners, operators and crews of pelagic fishing vessels operating West of Scotland. These include vessels flying the flags of UK, IRL, NL, FR and DE.

Fishing vessels in this sector are typically very mobile and have access to a number of fisheries resources, including North Sea herring, mackerel, blue whiting in the North-East Atlantic and also to some fisheries resources outside Community waters (e.g. sardinella off West Africa). The characteristics of the sector concerned are have been determined by the Commission services on the basis of data submitted by Member States, as below:

| Pelagic trawlers - 2005 | UK | NL^(a) | IRL^(a) | DE | FR |
|--|-----------|-------------------------|--------------------------|-----------|-----------|
| Relative dependence on VIa herring | | | | | |
| Proportion of national herring catch taken by pelagic trawlers | 100% | 95% | 80% | 82% | 54% |
| Proportion of herring revenue from VIa herring | 10.0% | 22.0% | 7.2% | 44.0% | 1.2% |
| Proportion of overall revenue from VIa herring | 1.3% | 0.7% | 4.7% | 1.7% | 0.3% |
| Pelagic trawlers catching VIa herring | | | | | |
| Number of vessels | 35 | 16 | 29 | 7 | na |
| Employment | 489 | 587 | 344 | na | na |
| Herring VIa catches | | | | | |
| Volume (t) | 18.5 | 4.2 | 2.9 | 2.5 | 600 |
| Revenues (thousand Euro) | 5,397 | 980 | 591 | 999 | 170 |

^(a) Including some catches in VIa(S)

2.3.2. Effect of the regulation

The proposed Regulation would govern the setting of total allowable catches according to a "harvest rule" that would allow high and stable catches over the long term. The rule includes a limit on changing TACs such that no variation greater than 15% from one year to the next is permitted unless unforeseen circumstances occur.

Following the advice of ICES and STECF, the TACs would be altered each year in the light of the latest evaluations of the state of the stock:

1. Under normal conditions, i.e. when the size of the spawning stock is larger than 75 000t, the TAC would be set to that quantity of catch corresponding to a fishing mortality rate of 0.25, but the TAC would not be changed by more than 15%.

⁹ A detailed analysis is given in Commission Communication "Fishing Opportunities for 2008: Policy Statement from the European Commission. COM/2007/297 final.

2. Should the size of the spawning stock fall below 75 000t, the TAC would be set to that quantity of catch corresponding to a slightly more conservative fishing mortality rate of 0.2. In this case, the 15% limit on TAC variation would not apply.

3. Should the size of the spawning stock fall still further and pass lower than 50 000t ($=B_{lim}^{10}$), the TAC would be set to zero.

2.3.3. *Magnitude of the effect on the sectors*

Recent catches from this stock have been around 25 000t according to scientific estimates, with an average first-sale value of some €8 Million from 2004 to 2006 (Section 2.3.1).

The stock represents a small part of the fishing opportunities for herring and mackerel available to Member States. Furthermore, the stock is not at an immediate risk of collapse and the adjustments in catches corresponding to the application of the plan should be moderate. The plan should maintain yields and fishing mortality rates at approximately the same level as has been taken from the stock in the recent past.

On both accounts therefore the effect of the plan on the relevant fisheries sectors should be to help ensure stability of a small part of the sector's catches, and not to create important changes. Both topics are explained further below.

For those Member States holding quotas on this stock, the proportion of the fishing opportunities for (a) herring in all areas, and (b) herring and mackerel in all areas available to them from this stock is as follows¹¹:

| Member State | % of herring quota in Zone VIa(N) | % of herring quota in VIa(N) as proportion of all herring and mackerel quotas. |
|--------------|-----------------------------------|--|
| DE | 10 | 7 |
| FR | 2 | 2 |
| IRL | 19 | 6 |
| NL | 5 | 4 |
| UK | 26 | 9 |

The dependency of any Member State on this stock is therefore limited, with the possible exception of herring fishing in the UK where the quota accounts for 26% of the herring fishing possibilities. However, this still only represents 9% of the total tonnage of herring and mackerel quotas. Even these low figures are overestimates because real catches have been substantially lower than reported catches. In 2005, an estimated 6 900t less fish was caught in this area than was reported officially. In practice, the dependency of the sector on herring catches is even smaller because the herring prices are normally very much lower than the price of mackerel, which comprises the bulk of catches by this sector.

¹⁰ B_{lim} is the minimum biomass, the stock size is below the size at which recruitment is expected to be impaired (or where the stock dynamics are unknown).

¹¹ Calculated from Council Regulation (EC) No 41/2006 of 21 December 2006 fixing for 2007 the fishing opportunities and associated conditions for certain fish stocks, applicable in Community waters and, for Community vessels, in waters where catch limitations are required. OJ L 15 of 20 January 2007, p.1.

The adjustments in catches required by the plan should, in principle, be moderate. According to the ICES and STECF reports quoted in Section 1.2, the stock is only slightly overexploited with respect to maximum sustainable yield.

2.3.4. Legal basis for Community action

Council Regulation (EC) No 2371/2002 of 20 December 2002 on the Conservation and Sustainable Exploitation of Fisheries Resources under the Common Fisheries Policy¹² provides for the establishment of recovery plans for stocks outside safe biological limits (Article 5) and for management plans for fisheries exploiting stocks within safe biological limits (Article 6). In practice, long-term plans need to be able to cater for situations where a stock may either be outside safe biological limits and then recover, and where a stock may be inside safe biological limits and then later fall outside safe biological limits and require recovery measures. Because of this practical difficulty, these articles are currently under review.

While Regulation (EC) No2371/2002 is being reviewed, it is appropriate to use Article 37 of the Treaty establishing the European Community as a legal basis.

2.3.5. Necessity and subsidiarity

This proposal concerns the annual setting of a TAC for a fish stock that is shared between several Member States: Germany, France, Ireland, the Netherlands and the United Kingdom according to a fixed allocation. Management in this area therefore must affect these Member States in exactly equal proportion. It is not possible for Member States to do this by independent or devolved action. Therefore, it is necessary that this management action be implemented in Community legislation.

3. OBJECTIVES

The objective of the long-term plan is to ensure the exploitation of the stock consistently with high and sustainable yield.

Policy coherence concerning sustainability objectives should be maintained. The plan should conform to the objectives of the Common Fisheries Policy, as set out in Article 2 of Regulation (EC) No 2371/2002. In addition, such plans should contribute to the aims of the Implementation Plan agreed by the World Summit on Sustainable Development at Johannesburg in 2002, especially in respect of exploiting stocks compatibly with maximum sustainable yield¹³. This political objective has been the subject of a separate Commission Communication (Implementing sustainability in EU fisheries through maximum sustainable yield (COM (2006) final) and accompanying working document (SEC(2006) 868)¹⁴.

3.1. Subsidiary objectives

In order to reach the foregoing objectives, specific implementing targets are foreseen as subsidiary objectives. These are:

- (a) the spawning biomass should be kept above 75 000t;
- (b) the fishing mortality should be kept close to 0.25 (unless the spawning biomass falls below 75 000t);

¹² OJ L 358, 21.12.2002, pp. 59-80.

¹³ <http://eur-lex.europa.eu/LexUriServ/site/en/consleg/2002/R/02002R2371-20030101-en.pdf>

¹³ www.un.org/esa/sustdev/documents/WSSD_POI_PD

¹⁴ eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2006:0360:FIN:EN:PDF

- (c) should the spawning biomass fall below 75 000t, the fishing mortality should be kept close to 0.2 while the stock size remains above 50 000t;
- (d) should the spawning biomass fall below 50 000t the fishery should be closed;
- (e) the TACs should effectively control the levels of real catches.

Attaining these subsidiary objectives should ensure that the principal objective is met. Furthermore, in order to improve the stability of the catches and markets:

- (f) the TAC should where possible not be altered by more than 15% from one year to the next;

Attainment of sub-objectives (a) to (d) will be measured according to the annual evaluations of the state of the stock as assessed by ICES and STECF. Attainment of sub-objective (e) will be monitored in the course of the evaluation of national inspection and control systems by the inspection team of DG FISH. Attainment of sub-objective (f) will be proposed by the Commission for inclusion in annual regulations concerning the setting of fishing opportunities.

All sub-objectives have been discussed with stakeholders in the PelRAC and are considered realistic. As the sub-objectives are close to current conditions, timely implementation within two years of entry into force of the Regulation is appropriate and feasible.

4. POLICY OPTIONS

4.1. *Status quo* option

Under present conditions, there is no quantitative legal basis establishing guidelines or restrictions on the annual setting of fishing opportunities concerning this stock. Retaining this process would mean that TAC decisions would be taken on the basis of short-term criteria such as annual fish stock assessments and associated advice, and *ad-hoc* considerations of economic and social factors at a political level. Experience with this approach has shown it to prioritise short-term economic benefits over long-term sustainability (see section 2.2).

4.2. Long-term management option

Scientific agencies have provided a recommendation for a policy option only after extensive internal consideration of other options. A discussion with stakeholders has also been held. The outcome of this external examination of policy options is provided in the advice from scientific agencies.

A similar policy has been in place concerning the stock of herring in the North Sea since 1996, and the policy option is supported by the interested parties. A long-term plan can help stabilise catches in response to annual variations in the stock and in the assessments. It is not a protection against long-term changes in the ecosystem. In the case of North Sea herring a decrease in the survival of larvae (for reasons unknown but ecological) has resulted in lower annual recruitment of young fish to the stock and unavoidably also in lower yields.

By managing fishing mortality to a lower level, the impact of the ecological change has been mitigated to some extent, but it cannot altogether be avoided. This is why the long-term plan is supported, but nevertheless has not prevented a decline in catches.

The plan contains provisions for periodic reviews such that policy amendments can be introduced if further developments warrant this. Periodic reviews are a standard feature of Community long-term plans.

4.3. Implementation alternatives

4.3.1. What provision should be made if the stock should fall below the minimum level ?

Scientific advice indicates a risk to reproduction of the stock if the spawning stock size should fall to 50 000t (B_{lim}). More stringent conservation action would then be needed. Three alternatives exist in recent practice:

Option (i): non-prescriptive: a "special circumstances" article could be included whereby, should the stock size fall below B_{lim} , Council would be constrained only to set a TAC that is "lower" than that which otherwise be set by following the rule.

Option (ii): closure: a strict reading of scientific advice indicates that if a stock falls to the level that its reproduction is at risk the fishery should be closed. This advice has been followed for some stocks which, like herring, are fished in single-species fisheries (e.g. anchovy, sandeel, Norway pout) though implementation is more difficult in mixed fisheries.

Option (iii): prescriptive: an article prescribing the application of a "linear rule" could be used, whereby the fishing mortality rate to be allowed becomes progressively lower if the stock size becomes lower. This means that an automatic rule provides more protection to the stock when it is smaller.

4.3.2. Additional provisions concerning control measures

Substantial area-misreporting of catches caught in the North Sea but reported as caught West of Scotland has occurred in recent years, though the practice is reported to have ceased in 2006. However, misreporting in relation to other areas has continued, and this would prejudice the attainment of the objectives of the plan.

Two options have been considered.

Option (i): no action, reliance on recent improvements in control by relevant Member States. In 2005 UK and IRL undertook high-profile actions concerning enforcement of pelagic quotas, including important prosecutions against vessels and processing plants. The enforcement of quotas is said to have improved substantially. This has been confirmed by visits of the DG FISH inspection team in the context of cod recovery measures in March, June and November 2006. It could be argued that these improvements alone will provide sufficient improvements in quota management to permit the management plan to operate successfully. However, although overall recording of quantities landing may have improved, it is not clear that the origin of the catches is better recorded. Area-misreporting is likely still to persist. Although the misreporting was nearly eliminated in 2005, by 2006 a resurgence of area-misreporting to some 6,900t had occurred.

Option (ii): special licences. In order to reduce the possibility of area-misreporting, one approach is to restrict fishing vessels to be operating either in the West of Scotland area or in the North Sea in each fishing trip. Prohibiting trips where some fishing is done in both areas greatly reduces the scope for misreporting. This can be done by requiring vessels that fish herring in the West Scotland area to fish only in that area on the same fishing trip. Such restrictions can be introduced by means of a special fishing permit. This system was put in place by the UK for a short period, during which it seemed to be effective. However, use of real-time reporting by electronic logbooks could be an alternative and effective means to reduce area-misreporting.

4.3.3. Possible limits on TAC variations

Scientific advice indicates that a limit on the change in TAC could be introduced without prejudice to the conservation of the resource when the stock is above 75 000t. Such measures - and specifically a limit of +/-15% on changes in TAC from one year to the next - are strongly supported by the catching sector in order better to achieve stability in catches and in markets.

5. ANALYSIS OF IMPACTS

5.1. Environmental impacts

Under normal conditions and in the shorter term (i.e. when the spawning stock is assessed as being above 75 000t) the annual variation in TACs should be limited to +/- 15%. As noted previously, sector dependence on this stock is between 2% and 9% of landings of herring and mackerel. The inter-annual impacts of the long-term plan should therefore be to restrict the impact of changes in this TAC to figures of the order of 1.4% or less of the herring and mackerel catches. This, however, is an average by Member State – some individual vessels may be subject to a higher impact if their dependence on this stock is greater.

It is not normally possible to predict long-term trends in fisheries productivity. Changes in oceanic climate including global warming, and currently unexplained medium-term changes in recruitment can lead to significant trends in productivity. However, it is known that keeping fisheries impacts at levels no higher than those needed to take high yields improves the stability of the stock and improves the robustness of the fishery to adverse environmental effects. Implementing a plan which will lead to moderate fishing mortalities will therefore lead to improved stability in the industry.

5.2. Economic impacts

It is not possible to forecast economic impacts in absolute terms. Market prices for herring can fluctuate widely in response to variations in supply from the larger stocks – Norwegian Spring-Spawning Herring and North Sea herring, and these trends cannot be predicted over the longer term. Short-term forecasts indicate a decrease in the supply of North Sea herring in the near future by at least 100 000t, while the stock of Norwegian Spring-Spawning Herring is in good condition with prospects for further increases in landings. However, the plan should, by contributing to the stability of herring supplies, also contribute to the stability of the herring fishing industry and its markets.

Most of the catches of West Scotland herring are taken by vessels engaging in a variety of fishing activities on various stocks and whose dependence on this relatively small stock is very limited. Therefore the direct impact of improved long-term management of this stock will cover only a small part of the economic activity of these vessels.

5.3. Social impacts

Compliance with fishing opportunity regulations has been a problem in recent years. Up to half of the reported catch from this area has actually been caught in the North Sea (particularly for UK vessels) because the better availability, size, and proximity to principal ports of the fishing grounds around Shetland in the summer makes it more profitable to catch these herring than in the West Scotland area. However, since 2005 a more stringent enforcement, monitoring and sanctioning regime has been in place and the misreporting problem appears to be mitigated. Further follow-up of the matter will accompany the implementation of the long-term plan.

Adoption of a long-term plan with clear sustainability criteria may allow the fishery to qualify for certification under independent "eco-label" criteria. This could be helpful in product marketing terms, and in improving the perception of the sector as a responsible industry.

5.4. Impacts on international relations

The stock is distributed almost wholly within EC waters and is not subject to unregulated exploitation by third-country vessels. Catches and fish stock management will not be affected by such third-country activities. In the recent past, some transfers of quota have been made from the EC-managed TAC to the Faroe Islands as part of the annual bilateral exchange of fishing possibilities. Setting the TAC in a multiannual framework will allow more predictability in the fishing opportunities available for exchange with third countries.

5.5. Impact summary

| | 1 st Option : continue with short-term management | 2 nd Option: Implement long-term management |
|------------------|--|--|
| Positive impacts | Greater flexibility in decision-making. | Decision-making constrained to result in attainment of sustainability objectives. |
| Negative impacts | Long-term sustainability not assured as an objective. | No annual flexibility in decision-making |
| Direct impacts | Unknown, but likely to result in higher-risk management approaches. | Likely to result in a sustainable and stable fishery in the long term. |
| Indirect impacts | Ineffective enforcement measures allow the fleets more operational flexibility to choose fishing areas, but can create a higher biological risk for other stocks nearby, e.g. North Sea or NW Ireland herring. | More effective control measures helps avoid fish stock collapses and depletions in nearby areas, e.g. North Sea or NW Ireland. |

6. COMPARING THE OPTIONS

6.1. Should a long-term plan be implemented?

Various options have been considered internally by scientific agencies. The resulting scientific advice, previous experience with North Sea herring, and stakeholder contributions agree that a rule to fish West Scotland herring at a fishing mortality in the range 0.2 to 0.25 is appropriate and beneficial. DG FISH services agree, and further consider that this is consistent with the objectives of the Common Fisheries Policy and the Johannesburg World Summit on Sustainable Development. The proposal includes provision to revise fishing mortality rates if scientific advice indicates that this is needed, and at intervals of no less than four years.

The choice to implement such a plan can be compared with continuing under present conditions.

| Option (i): <i>Annual ad-hoc</i> decision-making | | |
|--|--|---|
| | Qualitative description | Quantitative description |
| Economic impact | | |
| Short-term costs to relevant enterprises | Unknown, not predictable. Likely pressure to set fishing opportunities above sustainable levels. | <i>Ad hoc</i> decisions affecting entire catches from the stock. |
| Long-term costs to relevant enterprises | Unknown, not predictable. Likely that pressure to set fishing opportunities above sustainable levels can result in stock depletion below maximum sustainable yield levels. | <i>Ad hoc</i> decisions affecting long-term productivity of the whole stock, i.e. up to ca. 8M€/yr. |
| Social impact | | |
| | Unknown, not predictable. Flexibility is retained at a decision-making level. | |
| Environmental impact | | |
| | Unknown, not predictable. Pressures to increase catches in the short term tend to lead to stock depletions. | TAC decisions under the CFP have been taken on average at about 40% above sustainable levels. |

| Option (ii): Implementation of long-term plan | | |
|---|--|---|
| | Qualitative description | Quantitative description |
| Economic impact | | |
| Short-term costs to relevant enterprises | Short-term impacts can be mitigated by a limit on changes to TACs so long as stock levels remain good. | Not quantified, but should be low. |
| Long-term costs to relevant enterprises | Long-term costs should be kept at a low level by maintaining stocks and catches at high and stable levels. | By exploiting the stock at maximum sustainable yield, costs should be low and the economic resource rent kept at a high level, close to current values. |
| Social impact | | |
| | The long-term plan should minimise short-term disruptions | Maintenance of employment and incomes at close to current levels |

| | | |
|----------------------|--|---|
| | and ensure high and stable incomes and employment for the long-term. | (in proportion to West Scotland stock). |
| Environmental impact | | |
| | The plan should lead to safe and near-optimal exploitation of the stock, with a small risk of stock collapse and including precautionary elements. | Exploitation of the stock in conformity with the precautionary approach and MSY objectives in the Johannesburg Implementation Plan. |

DG FISH considers that retaining an annual decision-making system unconstrained by considerations of sustainability would be a high-risk approach for the sector in the longer term. While the stock has not yet been depleted in the absence of a long-term plan, conditions may change rapidly (in this fish stock, or in others nearby) and it is consistent with the precautionary approach to implement a sound management practice in advance. Therefore DG FISH considers the implementation of a long-term plan to be desirable.

6.2. What provision should be made if the stock should fall below the minimum level?

DG FISH sees the risks and benefits of three options detailed in Section 4.3.1 as below:

| Option (i): Non-prescriptive action if stock size falls below minimum level | | |
|---|---|--|
| | Qualitative description | Quantitative description |
| Economic impact | | |
| Short-term costs to relevant enterprises | Unknown, not predictable. Likely pressure to set fishing opportunities above sustainable levels. | Up to 9% of turnover for relevant enterprises, averaged per Member State. |
| Long-term costs to relevant enterprises | Unknown, not predictable. When lower short-term costs are decided, long-term costs will tend to be higher | Up to long-term loss of 9% of turnover. Lower long-term losses if more short-term losses are accepted. |
| Social impact | | |
| | Unknown, not predictable. Flexibility is retained at a decision-making level. | Reduction in product supply of pelagic fish for human consumption in relevant Member States by up to 25000t / year |
| Environmental impact | | |
| | Unknown, not predictable. If large catch reductions are decided, environmental impacts will be smaller. | At worst, collapse of local herring stock. At best, significant short-term reductions in catches followed by stock recovery. |

| Option (ii): Closure of fishery if stock size falls below minimum level | | |
|---|---|---|
| | Qualitative description | Quantitative description |
| Economic impact | | |
| Short-term costs to relevant enterprises | Closure of fishing for West Scotland herring. | Short-term loss of entire catch from stock. |
| Long-term costs to relevant enterprises | This option leads to lowest long-term impact, <i>i.e.</i> highest probability of stock recovery. Timescale for recovery is environment-dependent. | Fastest possible recovery to normal conditions, but time-period cannot be forecast. |
| Social impact | | |
| | Temporary loss of fishing activity on herring in the West of Scotland area. Possible reduction in employment. Some reduction in earning, but in proportion to the catching opportunities. Social acceptance has been indicated by stakeholders. | Loss of product supply of herring from this area for pelagic fish for human consumption in relevant Member States. |
| Environmental impact | | |
| | This option provides highest likelihood of stock recovery. However the timescale cannot be predicted. | Stock is likely to recover to levels of historical productivity at the fastest possible rate given environmental constraints. |

Option (iii) would involve setting TACs at low levels according to fishing mortality rates that are progressively lower if the stock becomes smaller. It is intermediate in its consequences between Option (ii) and taking no action in the case of a stock falling below the minimum level.

DG FISH favours Option (ii) on the basis that is the option most likely to restore the stock to normal productive levels and is most effective in environmental and long-term economic terms. Short-term social effects are likely to be lower than for many other fishery closures because alternative resources would be available to the same fishing fleets, and stakeholders have indicated that the option would be acceptable.

6.3. What additional provisions should be included concerning control measures?

The consequences of the options described in Section 4.3.2 are summarised below:

| Option (i): <i>Status quo</i> | | |
|-------------------------------|-------------------------|--------------------------|
| | Qualitative description | Quantitative description |
| Economic impact | | |

| | | |
|--|---|---|
| | | |
| Administrative costs | No specific burden, included in other control operations | |
| Short-term costs to relevant enterprises | Unless Member States improve control, some enterprises can reduce their costs by taking fish from more vulnerable resources closer to their home ports. | Cannot be quantified. |
| Long-term costs to relevant enterprises | Higher long-term costs can be expected if resources are depleted due to poor management of catching opportunities. | Potentially high cost, if the matter contributes to fishing down North Sea herring and NW Ireland herring stocks. |
| Social impact | | |
| | Current conditions imply poor enforcement of Community regulations concerning fishing. Allowing this to continue negatively affects the credibility of the CFP as well as affecting the sustainable exploitation of the stocks concerned. | Cannot be quantified. |
| Environmental impact | | |
| | There is a high, but unquantifiable, risk that poor control measures can prejudice the proper management of other herring stocks, e.g. in the North Sea and off North-West Ireland. | Loss of yield from other herring stocks. Cannot be quantified. |

| | | |
|---|---|---|
| Option (ii) : Special fishing licences | | |
| | Qualitative description | Quantitative description |
| Economic impact | | |
| Administrative costs | Licences should be issued and followed-up for about 90 fishing vessels operating in the area. | The administrative burden is small. |
| Short-term costs to relevant enterprises | Loss of fishing opportunities that are taken in non-permitted fishing areas. Some additional costs will be incurred by obliging vessels to catch fish in the permitted zones. | Compared to 2006, about 6 900t of fish would have to be caught in other areas as required by the different state of the fish resources. |
| Long-term costs to relevant | In the long-term costs are reduced by correctly matching fishing | The extent of the cost reduction depends on future stock |

| | | |
|----------------------|--|--|
| enterprises | opportunities to the state of the stocks. | development and climatic changes and cannot be forecast. |
| Social impact | | |
| | Better enforcement will lead to creating a climate of confidence in the CFP and in fisheries management systems. Stakeholders have already indicated acceptance of the control measure. | Not quantified. |
| Environmental impact | | |
| | Improving control measures reduces the risk of mismanagement of stocks. | Eliminating area-misreporting could reduce the impact of fishing on nearby vulnerable stocks by up to one-third. |

DG FISH prefers to propose that a special fishing permit be required for fishing herring West of Scotland, and that a condition of this permit should be that no herring are fished in other areas during the same trip. A derogation for vessels using electronic logbooks could be permitted. Interested parties in the PeIRAC have supported this approach.

6.4. Should a limit be imposed on variations in TACs between years?

Scientific advice allows for the possibility of limiting TAC variations between years when the stock is above the 75 000t B_{pa} level. This limitation has been applied in an *ad-hoc* way in the last two years, but its application could be formalised.

| Option (i): <i>Status quo</i> :Unlimited TAC variations | | |
|---|--|--|
| | Qualitative description | Quantitative description |
| Economic impact | | |
| | Unforeseen variations in survey efficiency can lead to large variations in scientific assessments and so to large variations in TAC. This leads to market instability. | In the absence of constraints, unnecessary variations in TAC of up to 40% could be expected. |
| Social impact | | |
| | Large variations in TACs can cause large variations in earnings and hence in social instability and disruption. Stakeholders have strongly requested a constraint on TAC changes. | Not quantified. |

| | | |
|----------------------|---|--|
| Environmental impact | | |
| | Large changes in TACs can be necessary if stocks are depleted to minimum levels or are at risk of approaching them. However, if stocks are in good state such changes are not necessary for effective stock management. | Scientific assessment indicates that large TAC changes are not needed when spawning stock size is above 75 000t. |

| | | |
|---|---|--|
| Option (ii): <i>Status quo</i> : +/- 15% limit on TAC variations at high stock levels | | |
| | Qualitative description | Quantitative description |
| Economic impact | | |
| | <p>Constraining TAC changes to small values can help stabilise markets and assist in the forward planning of enterprises catching and marketing fish. This leads to lower costs.</p> <p>The extent of cost reduction cannot be quantified.</p> | Scientific simulation studies have indicated that TAC changes can be limited to +/-15% so long as stocks are at a healthy level. |
| Social impact | | |
| | <p>Reduced variations in TACs can stabilise earnings and employment and hence avoid social instability and disruption.</p> <p>Stakeholders have strongly requested a constraint on TAC changes.</p> | Not quantified. |
| Environmental impact | | |
| | Reduced changes in TACs can be consistent with good fish stock management so long as the possibility to make large changes if the stock falls below a warning level is retained. In such cases the stocks can still be exploited with high and stable yields. | Scientific assessment indicates that large TAC changes are not needed when spawning stock size is above 75 000t. |

DG FISH's preferred policy option is to implement the 15% limit on TAC changes only when the stock is above 75 000t. This provides more stability for the industry sector, as they have requested. If the state of the stock should deteriorate below 75 000t then scientific advice

should be implemented directly so as to provide an improved protection for the stock. However, the 15% limits should not apply at lower stock levels.

7. MONITORING AND EVALUATION

The indicators of successful operation of this plan are that:

- fishing mortality, as measured by ICES and STECF, should remain close to the target values established in the plan;
- the size of the spawning stock should remain above 75 000t;
- TACs and quotas established according to the plan are respected and area-misreporting is eliminated.

These indicators will be monitored annually in order to detect any deficiencies in the operation of the plan. At four-yearly intervals, a comprehensive review of the plan will be implemented.

The monitoring arrangements concerning the state of the stock are common to those for other stocks in the North-East Atlantic area. Collection of scientific data concerning landings and survey data from research vessels are co-funded by the European Community. Data are collected, analysed and evaluated by the ICES and formal advice is provided by STECF.

Should advice from STECF and ICES indicate that the plan is not reaching its objectives, a review process will be started by DG FISH.

Concerning control issues, cross-national coordination of inspection activities is to be established by the new CFC agency which is now being established. Additionally, inspectors from unit D2 ("Fisheries Inspection") of DG FISH will follow-up and review the implementation of fisheries control measures by the relevant Member States.