

Ministry of Food, Agriculture and Fisheries



Report on a new European fisheries policy

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**Report on
a new European fisheries policy**

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1. Introduction and terms of reference

The EU's fisheries policy currently sets targets for the size of individual fish stocks, as well as very detailed rules for the fishery in order for these targets to be reached. These rules include how big the fishing fleet can be, how many days it can fish, where and when it can fish, the size of the individual fish, the size of the fish stocks and the composition of the fish in individual catches. In order to ensure that these rules are observed, a series of detailed rules has been introduced through the control policy on, for example, catch registration, satellite tracking and requirements to land fish in specific ports. Despite these very comprehensive and detailed regulations, the way in which the fisheries resources are currently exploited is not satisfactory. There is a considerable amount of discarding in the European fisheries, and at the same time many stocks are exposed to a fishing pressure which means that they are far from being exploited in an optimal way. In addition, unreported landings are still a problem. At the same time, increasing demands are being made on the fishing industry to supply products which are caught on a sustainable basis. So there is a need for a new direction for the Common Fisheries Policy which creates space for and rewards those fishers who can fish in a sustainable way without unnecessary waste, and who can document this. A reform of the Common Fisheries Policy is expected in 2012. The process of creating a simpler and more sustainable fisheries policy should start already now by means of formulating political initiatives in relation to relevant EU processes which can be anticipated in the fisheries sector towards 2012.

With the implementation of the government's programme from February 2005, Denmark has carried out a reform of the national fisheries policy which, through considerable structural adjustments, has created the basis for an economically sound fishery. The next step is to create the framework in which the individual fisher is rewarded for carrying out a fishery which puts the least burden on the resources.

On 22nd November the government put forward a new programme which included the following target for the fisheries sector:

“The government will also reform the fisheries area in the EU. Since the Common Fisheries Policy was introduced, the rules have become more and more complicated. It is necessary to change direction. Countries which fish in a sustainable way must be rewarded more than they are now.”

Concrete initiatives:

Conservation of fish stocks and increased effort for the development of the fisheries sector.

The EU's fisheries policy has become increasingly more complicated and non-transparent for the fishers and for the population. The government will draw up a proposal for a new European fisheries policy. A new management model must ensure a more simple regulation and reward countries which fish sustainably. In addition, the government wants to support the adjustment process in the fisheries sector and aquaculture, among other things, by using funds from the European Fisheries Fund.”

It is against this background that the Ministry of Food, Agriculture and Fisheries has examined the Common Fisheries Policy.

2 Summary and recommendations

The aim of the EU's Common Fisheries Policy is to ensure that living marine resources are exploited in an economically, environmentally and socially sustainable way. The fisheries policy has in general not lived up to this objective, and in the last 30 years the yield from most commercial fisheries has been steadily falling. The regulation of the fisheries by means of quotas and technical rules has in the main not ensured a balance between fishing effort and fishing possibilities.

With the reform of the fisheries policy in 2002, greater focus was placed on sustainability, and in those areas where Danish vessels fish the vicious circle of increasing fishing pressure and the negative development of the fishing stocks was generally broken, and fishing pressure on several of the most important commercial stocks has fallen. The regulation of fishing effort, which is a central element in the annual management of the fishery, has to a considerable degree contributed to a change in the development.

There is thus a continued need for a revision of the fisheries policy. The EU's Common Fisheries Policy has become more and more complex. Increasingly detailed rules have not supported a management where fisheries resources are exploited optimally. That there continues to be a considerable amount of discarding in the European fishery reflects the fact that the current management does not to a sufficient degree promote a sustainable fishery. At the same time, the fisheries policy is faced with increasing challenges with respect to meeting general requirements of sustainability in the fishery as well as traceability and catch documentation.

This report tries to identify in which actual areas there is a need for changes to the existing policy. It starts with a description of the relevant EU processes and goes on to the expected reform of the Common Fisheries Policy in 2012.

In order for a future reform to be adopted and to be a success, the current instruments in the Common Fisheries Policy must be adjusted so that they can contribute to ensuring a solid platform for the proposed changes.

The recommendations in the report are in two parts: in the first part concrete proposals are made for an adjustment of the existing policy so as to ensure a more appropriate exploitation of the resources. Then in the last part of the report a proposal is presented for a radical reform of the Common Fisheries Policy. The proposed initiatives presuppose that the current management systems in most member states are adjusted and that the technological preconditions are present. So it is a forward-looking proposal which must be implemented over several years and which has the potential to ensure an optimal exploitation of the resources.

Suggestions for adjusting the EU's current fisheries policy

In order for a more radical reform of the EU's fisheries policy to be carried out in the long term, there is a need for adjustments to the current measures concerning, among other things, effort regulation, discard and control.

Effort regulation

The increasingly detailed rules have led to an extremely complex regulation of the fishery in the North Sea, Skagerrak and Kattegat. The system of days at sea (rules on the number of days that can be spent at sea) was originally introduced as an additional measure for the cod fishery, but now covers several other demersal stocks. As a result of a long series of exemptions, the current system of days at sea has become gradually more complicated and difficult to control, whilst at the same time making it more difficult at national level to give fishers enough incentives to develop a sustainable fishery. So there is a need for a new model which can ensure a management which is simpler, more flexible and more sustainable.

It is recommended that Denmark works to ensure that the rules for effort regulation in the North Sea, Skagerrak and Kattegat are based on a kilowatt day system (days at sea multiplied by engine power). It is important that the kilowatt day system is built up so that:

- the cod stocks in the North Sea, Skagerrak and Kattegat are managed on a more sustainable basis,
- the allocation of kilowatt days to member states is done in a fair and balanced way in the form of a representative reference period, and that there is a balance between resources and capacity for each individual country (kilowatt days available in relation to catch rights),
- there is room for incentives at EU level within and between the various fishing gear categories, so that there are benefits for vessels which fish more selectively with fewer discards (and thereby in a more sustainable way),
- the system is flexible enough so that member states can, in co-operation with the fishing industry, ensure an interaction with national regulation systems and fishing patterns. This will make it easier to administer the management and to ensure that it is observed,
- the system is dynamic/adaptable and can be adjusted in relation to changing external circumstances (a current example is the increasing fuel prices which affect different fleet segments differently),
- that there is as much simplification as possible.

As for the Baltic Sea and the Belts, it is recommended that the current effort management based on closed periods and days at sea is continued.

Discards and unwanted bycatch

Discards continue to be a serious problem in the European fishery. Despite the fact that discards are synonymous with a considerable waste of resources, the current fisheries policy contains certain inherent mechanisms which lead to discards. This is mainly due to the fact that the regulation is built on landings and not catches, which is why in many situations the fishers can be forced to discard fish and thereby put unnecessary pressure on the stock. A series of factors can lead to discards, for example minimum landing sizes, insufficient selectivity of gears, lack of quotas in connection with mixed fisheries and economic factors (high grading).

In order to reduce the extent of discards in the European fisheries it is recommended:

- The catches of unwanted fish and shellfish be reduced by:
 - a) giving priority to the development of selective gears and catch methods,
 - b) making selective gears obligatory in the EU for selected fisheries so as to prevent young fish from being caught,
 - c) create a legal EU basis so that the national authorities in member states can implement temporary closures (“real-time closures”) of fisheries where there is an unacceptable level of discards.

- That there are EU rules which can lead to an adjustment of discards by:
 - a) getting rid of minimum sizes as a management instrument. This can be done i.a. by means of a revision of the technical conservation measures for the North Sea, Skagerrak and Kattegat,
 - b) introducing year-to-year flexibility for several stocks where there is a biological basis for this, including stocks which are managed together with a third country,
 - c) creating an EU framework for a gradual transition to a regulation of the fisheries based on catches instead of landings, possibly combined with a ban on discards.

- To improve the monitoring of discards by:
 - a) making it obligatory in the EU to register fish which is discarded in the vessel logbook. This will ensure better data on discards in the European fisheries and promote an appropriate behaviour,
 - b) creating a better framework for setting up trials with electronic documentation and alternatives which can ensure a full documentation of the fishery such as for example the use of standard catch compositions drawn up on the basis of a reference fleet, combined with satellite monitoring and electronic logbooks,
 - c) making greater use of reference fleets in the European fisheries in order to acquire better knowledge/documentation about catch composition and discards.

It is also recommended that focus be given to those fisheries which have the greatest discards and that the individual fisheries serve as the starting point for this work. Denmark should thus actively support the Commission’s proposal for selected fisheries to define actual targets for reducing discards, where it is up to the fishing industry to decide which methods to use in order to reach that goal.

Control and traceability

It is also in the control sector that the EU's rules are characterised by complexity, and this leads to unnecessary burdens for the fishers and the fisheries inspectors. Moreover, the Court of Auditors¹ has pointed out serious shortcomings in the existing control policy which, in particular, due to the poor registration of catches, is considered ineffective and expensive. This makes it difficult to ensure that illegally caught fish does not make its way to the processing industry and the retail trade. This is a big problem for both fishers and consumers because the law-abiding fishers are exposed to unfair competition from cheaper illegal fish, and it is impossible for the individual consumer to see whether fish has been caught legally or not. In addition, shortcomings in the control system undermine the central element in the fisheries policy: regulation by means of TACs and quotas. So there is a need for a new control policy which can target those fisheries where the risk of infringements and the consequences of those infringements for the fish stocks are greatest, and which ensures documentation and traceability of the fish along the entire chain from catch to the market.

It is therefore recommended that:

- Denmark works to achieve clear and precise control rules,
- Denmark, together with the Control Agency and the Commission, takes the initiative to hold a conference to bring into focus a risk-based control system as the bearing principle for the future fisheries policy,
- Denmark works to achieve that in the long run a risk-based control system can be introduced as a control principle in EU law, including the introduction of an economic documentation control as a supplement to carrying out the practical control.
- Denmark works to achieve the integration of the principle of a continuous traceability chain in the future control policy in order to achieve traceability and documentation,
- that thought is given to how the Commission can act more quickly, possibly by making it possible to reduce aid from the European Fisheries Fund in cases where control rules are not observed (clearance of accounts).

Suggestion for a reform of the Common Fisheries Policy

In connection with the expected review of the Common Fisheries Policy in 2012 there is a need for a new strategy for the fisheries policy if something is to be done about the increasingly detailed rules and the problems with discard.

A bearing element in fisheries management is the TAC/quota system where the yearly maximum catch which can be taken from a stock is determined and allocated among member states. In its current form the TAC/quota system has not succeeded in ensuring a sustainable exploitation of the stocks. This is particularly due to the fact that the TAC/quota system is applied as a limitation on what fishers can land and not what they can catch. The same quota can thus lead to different degrees of pressure on the resource (discard), depending on how selective the fishery is. In addition there have been and still are problems with applying the quotas.

It is therefore recommended that Denmark's overall objective is to work to change the TAC/quota system so the quotas are set as "catch quotas" instead of "landing quotas". The catch quotas can be fixed at a higher level than landing quotas because they contain the quantities which with the current landing quotas are not registered, including in particular discards. This will lead to a series of advantages:

- compared to now, the total amount taken out of the stock will be registered,
- the overall fisheries pattern can be managed in a better way,
- the data for the biological advice will be considerably improved and the advice can be expected to be more in line with how the fishers perceive the state of the stocks,
- all fish caught is included in the quota; the fisher can no longer optimise the fishery by throwing fish overboard, but instead by using selective fishing methods,
- the need for complex rules is reduced and, at the same time as the fishers begin to use a fully documented catch quota system, there will be no need for effort regulation.

The outlook for the individual fisher is that:

- there will be the possibility that those fishers who document their fishery will be allocated extra fishing possibilities,
- electronic documentation will replace the large amount of EU control rules,
- the future of the EU's fishery is ensured on the "markets for sustainability."

The use of catch quotas presupposes that the individual fisher is able to document a correct account of and registration of the catches. This can be done by having an observer onboard the vessel or by using electronic documentation in the form of a camera fitted on board the vessel. The idea is that by means of this the fisher can obtain a (higher) catch quota if he fully documents his fishery. This creates an incentive to develop a selective fishery without discards, and at the same time ensures full documentation of the individual fishery.

The latter will help to underpin a better control and meet the market demands for fisheries products which are caught on a sustainable basis and certified accordingly. The strategy of catch quotas and full documentation puts great demands on the reliability of the documentation that the fishery takes responsibility for. It should be implemented gradually so the new management principles are offered to the fishers as a possibility at the same time as improved possibilities for using electronic documentation.

The transition should take place gradually over a longer time, and the concept should be gradually developed as experience from it is obtained. In the autumn 2008 a pilot project was introduced in Denmark using full catch documentation on 6 vessels in the Kattegat.

3. The basic principles of the Common Fisheries Policy

The Common Fisheries Policy became a reality in 1983 in order to achieve an effective regulation and to avoid overfishing, and with the aim of managing a common resource. It has since been reviewed in 1992 and 2002. The fisheries policy can be divided into a resource and conservation policy, which deals with the management of the fisheries resources, a markets policy, which regulates the trade in fish and fishery products, and a structural policy, which includes the adjustment of the fleet capacity in line with the resources.

The following section will focus solely on the resource and conservation policy.

The Basic Regulation

The framework for the EU's resource and conservation policy is laid down in Council Regulation 2371/2002 (the Basic Regulation). The Basic Regulation determines objectives and the instruments in the Common Fisheries Policy where it follows that "the common fisheries policy shall ensure that living aquatic resources are exploited in an economically, environmentally and socially sustainable way." According to this, when laying down the fisheries policy, a sustainable exploitation of the fishing stocks must be ensured, whilst taking into account the precautionary principle, and efforts must be made to ensure that the fishery is managed according to ecosystem-based principles. Efforts should be made to ensure the fishers an acceptable living standard, whilst at the same time taking into account consumer interests. There is at the same time a wider objective whereby a series of equally important factors must be taken into account. It is expected that the Basic Regulation will be reviewed before the end of 2012. The most important instrument is the resource and conservation policy which is dealt with below.

Regulation by TACs and quotas

The most central element in the resource management is the quantitative regulation in the form of total allowable catches (TAC = Total Allowable Catch) and quotas to ensure that the stocks are not over-exploited. Each year the Council adopts decisions on TACs/quotas for the individual stocks on the basis of scientific advice from ICES⁴ and from the Commission's own advisory body STECF⁵. Many of the fisheries are managed on the basis of multi-annual management and recovery plans, as is the case for cod, herring, plaice, and sole in the North Sea and for cod in the Baltic. The allocation of catch volumes between the member states follows a fixed allocation key which is determined on the basis of historical fisheries and which ensures that member states get a fixed share of the fishing possibilities – the so-called relative stability. It is up to the member states themselves to lay down more detailed rules on how the quotas are managed nationally.

At the Johannesburg Summit on sustainable development in 2002 EU member states committed themselves to managing the fish stocks according to the principle of maximal sustainable yield (MSY). In Johannesburg the goal was set that all fish stocks by 2015 must be fished and, if necessary, rebuilt in such a way that they can produce the maximum sustainable yield.

Since most of the stocks which are managed in the EU are overfished in relation to MSY levels, a process has begun of adjusting the current TAC/quota management, and the MSY concept is now included in the scientific advice.

Effort regulation

The Basic Regulation makes it possible to regulate the fishery by means of effort regulation. For many years, this form of regulation has been used in waters to the west of Scotland. Of most importance for Denmark is the days-at-sea system which was introduced in connection with the recovery plan for the cod stocks in the North Sea, Skagerrak and Kattegat. As a measure to protect the cod stocks it was decided in December 2002 to introduce a ceiling on the number of days at sea for vessels of 10 metres and over depending on the type of gear used. This type of effort regulation in the form of days at sea is now a part of the annual quota regulation.

Technical conservation measures

The quantitative regulation of the fishery is supplemented by a qualitative regulation in the form of a series of technical conservation measures aimed primarily at protecting young fish. The rules include minimum mesh sizes, minimum sizes for the fish, a ban on certain fisheries or the use of certain gear types in specific areas or periods. The aim is to ensure selectivity in the fisheries and to avoid catches of young fish and unwanted bycatch.

Control rules

The control rules are an integral part of the Common Fisheries Policy. The Control Regulation requires the individual member states to carry out control of their own vessels, as well as vessels of other member states and third country vessels in those waters, which are under their jurisdiction. The tasks include control, inspection and surveillance of all fisheries activities, including fishing, transshipment, landing, marketing, transportation, storage of fishery products, as well as registration of landings and sales. The Commission also has a team of inspectors, who check on how the national authorities carry out the control obligations that they have been given.

In June 2008 political agreement was reached in the EU on combating illegal, unreported and unregulated fishing (IUU Fishing). The regulation establishes a control system to verify the legality of fisheries products from third countries. The control system is based on fisheries products being accompanied by a catch certificate, which is validated by an approved third country. The catch certificates contain details on the origin of the fisheries products, the legality of the catches and the current conservation measures of the third countries. The establishment of a control system will reduce imports of illegal fisheries products to the EU.

The current control rules are difficult to enforce, because they are complex, spread over several regulations and cover a large and very varied geographical area. There has been a tendency to introduce new control rules in order to a certain lack of transparency.

Integrating the environment into the fisheries policy

The role of the fisheries policy has changed over time, from simply focusing on improving the resource base to taking into account the effects that the fishery has on the ecosystems and environmental factors. The fisheries policy should still take into account the environment and contribute towards meeting those targets which follow from the convention on biodiversity and the demand for ecosystem based management. A new element is that the fisheries policy, in line with other sector policies which use the resources of the sea, will have to be part of an overall framework for managing the seas in order to use possible synergy effects.

Alongside an increasing environmental awareness among those who consume fisheries products in Europe is the increased demand that the fisheries policy must to a greater degree include environmental effects and a broad consideration for the environment. The primary challenge is thus to ensure an appropriate co-ordination between consideration for fisheries policy and nature protection.

One of the management instruments which is being increasingly used globally to address the conflicts between nature protection and fisheries is closed/protected areas or Marine Protected Areas (MPAs). MPAs are defined as an area which is closed due to environmental factors, for example to protect a coral reef or sensitive habitats, whilst closed areas are driven by fisheries related factors, for example closing an area in order to protect young fish.

Denmark and Sweden are currently considering designating a closed area in the Kattegat in order to protect one of the most important spawning areas for Kattegat cod.

Does the Common Fisheries Policy work?

During the last 15 years the Common Fisheries Policy has undergone several changes. The negative development for several stocks has been reversed. However there is still a lot that can be done better. There are still increasing requirements for the fisheries policy to take sustainability and traceability more into account.

Over the years the political efforts to ensure stock development has led to the increasing complexity of the Common Fisheries Policy. In order to protect stocks a series of initiatives has been introduced and this has had the unfortunate side effect that several fisheries have been subject to even more detailed rules. In 2002 effort regulation was introduced in the North Sea as an acknowledgment that regulation solely by means of quotas was insufficient to prevent the stocks from being overfished. The aim of this extra layer of regulations was to limit the time spent by the fishers at sea and thereby better adjust effort to the quotas. However, effort regulation in the form of days at sea has not been able to ensure the desired reduction in fishing pressure for all stocks. The days at sea system has been constantly changed in the form of a considerable number of exemptions in order to take into account specific national factors. The result is a very complex (layer upon layer) regulation which is difficult to control. The fisheries are today managed by a combination of volume limits (TAC/quotas), a limitation of fishing effort (days at sea) and detailed technical rules in the form of minimum sizes, bycatch percentages and mesh sizes.

In recent years, after a series of downward adjustments in the number of days at sea, a reduction in the overall fishing effort in the waters concerned has been noted for the first time, and

there are signs that fishing mortality for a series of stocks, including cod, has fallen. It is not clear whether the reduction in effort and thereby fishing mortality can solely be related to effort management, or whether it is also due to other factors such as higher fuel prices or changes to national management systems.

The technical rules are also complex. The rules vary from area to area and there is a need for very precise guidelines for the construction of the gear (mesh size, shape of the mesh, materials, knots etc). The selectivity requirements in the fishery mean that thoroughly detailed rules can also be expected in the future.

In addition to the complex rules, also built into the regulation system is a series of mechanisms which do not promote an appropriate behaviour. The increasingly detailed rules create the basis for a behaviour which instead aims at avoiding the regulation in force rather than developing a more sustainable fishery. A technical rule that is introduced to reduce catches of small fish will mean that the catch value is reduced, and this in turn creates an incentive to adjust or develop new gears which can offset the negative economic effect. As a result, the management effect on the stock is partly neutralised. Another problem is that in several cases the fishery can be optimised by fishing a given target species with a smaller mesh size with a bigger discard of undersized fish as a result, instead of fishing with a larger mesh size where discards and the burden on the resource are reduced. Thus the regulation of the fishery does not promote a behaviour which is in accordance with the targets for the exploitation of the resources.

Put in another way, there is no incentive for the individual fisher to behave in a sustainable way. This, together with a tight economy, has meant that the task of ensuring a sustainable exploitation of the resources has rested more on the authorities than the fishers. A situation which has made it more difficult to reach the conservation targets which are laid down in the fisheries policy.

A long series of external factors is also of significance for the development of the Common Fisheries Policy. The consumer is putting ever increasing demands on the products to be bought, for example with respect to a sustainable fishery etc. The consumer is influenced from various sides, and there is a great need for objective and reliable information. So there is pressure on both the fishermen and the retail trade to demonstrate that the fish that the consumer will buy has been caught from a sustainable fishery. By way of example can be mentioned the increasing use of the Marine Stewardship council's ecolabelling (MSC labelling)⁶. These factors put demands on the fisheries policy to provide sufficiently good opportunities for documentation as well as a sustainable fisheries management.

4. Outline of relevant EU processes and policy areas

Good progress has been made, but the Common Fisheries Policy does not function in an optimal way. Its complexity and unintentional effects do not sufficiently support a behaviour which ensures an optimal exploitation of the fisheries resources. So there is a need for fundamental changes to the current policy, in order to ensure a more effective and simple management.

Effort regulation - a move to the kilowatt day system

In April 2008 the Commission put forward a proposal⁷ to introduce a system with kilowatt days to replace the current days at sea system in the cod recovery plan for the North Sea, Skagerrak and Kattegat⁸. Kilowatt days means the number of days that a vessel has spent at sea multiplied by the effort measured in kilowatts which the vessel engine has.

The idea behind the kilowatt day system is that member states are given effort ceilings for the most important gear categories in the individual waters, after which the kilowatt days are managed nationally. The new proposal means that the gear categories are reduced from 16 to 10 in each fishing zone and that there are no selective exceptions, not even if exceptions have been introduced with respect to selectivity or special local conditions. The idea is that the new system should be more flexible and effective than the current system. The effort ceilings must be managed nationally by the member states on the basis of a series of criteria.

Discussions on the proposal began in April 2008 and should according to plan be implemented in February 2009.

A revision of the technical conservation measures for the North Sea and Skagerrak/Kattegat

The current regulation on technical rules for the North Sea and Skagerrak/Kattegat is from 1998⁹ and has been amended 10 times. The rules are very detailed and difficult to understand. In addition, the annual TAC/quota regulation contains temporary technical conservation measures.

In June 2008 the Commission put forward a proposal to review the current technical rules. The proposal will apply to fisheries in all EU waters - excluding the Mediterranean, the Baltic Sea, the Black Sea and for highly migratory species in all waters. The main priority is to define a new set of simpler and clearer rules. There will be one overall Council Regulation containing general principles and provisions, and four implementing provisions in the form of Commission regulations covering the areas where the RACs operate: the North Sea, the south west Atlantic, the north west Atlantic and the pelagic fishery, so that regional differences are taken into account. The proposal aims to reduce discards through improved selectivity, temporary closures, a reduction in the number of minimum sizes and a rule that only one gear type can be kept on board at one time.

Discussions on this proposal have begun.

A revision of the control regulation

The current control regulation is from 1993¹⁰ and must ensure that fisheries management meets its objective to conserve and manage the fisheries resources.

However, in its report from 2007 on the systems of control, inspection and sanctions, the Court of Auditors concluded that member states' catch data was neither complete nor reliable, and that the inspection system did not ensure the prevention or effective recording of infringements, that there lacked documentation to show that each infringement is followed up and sanctioned, and that overcapacity has a negative effect on the profitability of the fishing industry. According to the Court of Auditors, if this situation continues, there will be difficult consequences, not only for the resources, but also for the future of the fishing industry.

In the light of the report from the Court of Auditors, the control regulation must be reviewed, and the Commission is expected to put forward a proposal in October 2010 for adoption by the Council in 2009 and entry into force in 2010.

The Commission's communication on discards

In March 2007 the Commission put forward a communication¹¹ with the aim of drawing up a policy to reduce unwanted bycatches and to gradually eliminate discards in the European fisheries. The rationale is that discard is a waste of society's resources and has a negative effect on the ecosystem and the stocks in question. The basic thinking is to promote a more appropriate behaviour and technology, which can prevent discards and unwanted discards, instead of more detailed rules in the form of technical rules. The communication is very general and does not contain concrete initiatives. In April 2008 the Commission issued a non-paper in which concrete targets are put forward in order to reduce discards in the bottom trawl fishery for nephrops west of the British Isles and the beam trawler fishery in the North Sea, and the English Channel over a five year period.

According to the communication, the Commission will put forward a time scale and an implementation plan for these fisheries, after which at the end of this year and next year actual proposals will be put forward.

A revision of the Basic Regulation

In December 2002 the Council adopted a new Basic Regulation¹², which forms the framework for the Common Fisheries Policy. By the end of 2012 at the latest the Commission must report to the Parliament and the Council on the implementation of the Common Fisheries Policy. A discussion paper is expected from the Commission in the first half of 2009.

Long-term management plans

Fisheries management has gradually gone from being based on an ad hoc approach to a multi-annual strategy where fisheries are managed on the basis of long-term management and recovery plans. These plans typically contain a long-term target for the spawning biomass

and/or fisheries mortality in relation to which TAC is set every year. The aim of the multi-annual recovery plans is to rebuild stocks which are outside safe biological limits. The plans are continuously reviewed and adjusted where relevant, according to whether they meet the given targets.

The Commission's communication on eco-labelling of fisheries products

In June 2005 the Commission put forward a discussion paper on an eco-labelling system for fisheries products¹³. Products covered by the eco-labelling system can be given a special logo or declaration which guarantees the consumer that the product has been produced according to a set of environmental standards, for example the sustainability of the source of the raw materials, the production method, or the re-usability of the product. The Commission describes three models for applying the system: 1) to let the market decide, 2) to introduce an EU system which is managed by the authorities and covers all stages of development, operation and control, 3) the EU lays down minimum requirements for voluntary eco-labelling systems. The Commission prefers the third model.

It is expected that a proposal for a regulation will be put forward at the beginning of 2009.

5. The identification of policy areas and proposals for reform

5.1 Proposals to adapt the current policy

In an ideal world, catch quotas will be a more accurate management method than the current landing quotas. However, this presupposes a solid basis in the form of a comprehensive fisheries policy and healthy stocks. Tightening up the current fisheries policy is thus a precondition for implementing a reform. A series of initiatives is presented to improve the current fisheries policy so the gradual transition to catch quotas is made possible.

Effort regulation

Problems relating to the current management system

The recovery plan for certain cod stocks¹⁴ (including the North Sea, Skagerrak and Kattegat) was the EU's first long-term management plan. The aim was to ensure that over five to ten years the cod stocks could reach a stock size advised by scientists according to the precautionary principle. In acknowledgement that the traditional regulation system of TACs and quotas has not contributed to an improvement in the stock situation for a series of cod stocks, it was decided to supplement the quantitative restrictions by a restriction in the length of time that vessels can be at sea with the gear categories used to catch cod. The days-at-sea system was originally (in 2004) a rather comprehensible system with six gear categories, but over time it has developed into a very complex and administratively demanding system which builds partly on an outdated fishing pattern.

The main aim of the recovery plan was to limit fishing effort directed at cod. But the selection of six original gear types already meant that a lot of fisheries which did not include cod as the main catch were affected. As other recovery plans and multi-annual management plans were adopted, for example for northern hake¹⁵, and plaice and sole in the North Sea¹⁶, the targets became wider, and attempts to integrate these targets in the annual implementation of the cod recovery plan have contributed to the complexity.

From the outset the days-at-sea system applied in a uniform way to all vessels, irrespective of nationality, using a particular gear type. But it also meant that local conditions and national rules were not taken into account. As a result of this a series of exemptions has been introduced. This has made the days-at-sea system more complex and correspondingly difficult to administer. However, at the same time it has been noted that in recent years there has been a fall in fish mortality for cod, although the stocks are still at a low level. The recovery is happening very slowly.

There are other problems associated with the days at sea system, for example that it does not always provide sufficient incentives to use more selective gears, and that on some points it is not logical. For example, fewer days are given to vessels which use gears with a large mesh size (trawlers, Danish seine and partly netters), normally considered being more selective than those fishing with small mesh sizes. The background to this is that the use of large mesh sizes makes it possible to carry out a legal targeted/direct cod fishery, which is not possible for vessels using smaller mesh sizes, where cod can only be a (small) bycatch. So there is a risk

that unfortunately, much of the fishery is being carried out with smaller mesh sizes. This type of detailed rules, the aims of which are difficult to explain, does not help to create a culture of compliance, which is necessary. Another more general problem is that the days at sea system regulates all vessels in all member states with the same mesh size in the same way, irrespective of how much they affect the fishing mortality of cod. The result can be that “a specific problem” which affects specific vessels is solved by means of a general reduction in the fishing effort allocated to all the vessels, and this can create problems for the profitability of many fisheries.

To a certain extent, incentives to carry out a more selective fishery have been built into the current days-at-sea system, for example the use of certain sorting panels, which increase selectivity, can lead to more days at sea.

There is another problem with the days-at-sea system and which is talked about a great deal in Denmark. This is that it has led to about 100 Danish vessels being so-called ghost vessels. That means that vessel owners have sold the vessel quotas, the days at sea and the capacity, and the vessels remain inactive in the ports. The reason that the owners keep them, instead of scrapping them or removing them permanently by another means, is because the actual vessel with a relevant history has been allocated a number of days at sea which, under to the current system, can only be activated on the basis of the relationship 1:1 if the vessel is physically present.

In the Baltic Sea and the Belts, where the cod fishery is considered to be a more targeted fishery than in those areas covered by the cod recovery plan in the North Sea, Skagerrak and Kattegat, an effort regulation scheme has been in force since 2007¹⁷. Limits on fishing effort in the Baltic are targeted directly at the fishery with gears which are used in the cod fishery. The management/recovery plan means that fishing effort is gradually reduced until it reaches a sustainable level which is more closely defined in the regulation and which is different in the western and eastern Baltic. The actual effort regulation consists of a fixed closed period (which is also different in the western and eastern Baltic) combined with a maximum amount of days at sea in each of the areas. The management plan also contains a fixed period closure in 3 traditional spawning areas in the eastern Baltic.

Initial indications show that the effort regulation model for the Baltic is more successful; first and foremost because the fishery in the Baltic Sea is more targeted towards cod and thereby easier to regulate.

Possible alternative effort regulation models

Effort regulation in the form of kilowatt days

Regulation by means of days at sea regulates fishing effort on the basis of a maximum number of days allocated to all vessels which use specific gear categories in specific waters, whereas in a kilowatt day system fishing effort is determined as the number of days spent at sea in a given reference period, multiplied by the corresponding kilowatts used by the vessels (as an expression of vessel engine power). A kilowatt day system can be divided up according to ICES areas (fishing zones), gear categories or primary fisheries.

The aim of a kilowatt day system is on the one hand to make it more possible to differentiate allocation to the individual vessel, whilst at the same time taking as the point of departure the actual fishing effort exerted over a reference period.

At first hand a kilowatt day system has a series of regulatory advantages compared to the current days at sea.

Firstly, the passive effort - i.e. the effort not used over a given period – but which can be activated under certain preconditions, will not apply because the amount of kilowatt days is determined as the actual effort used in a given reference period. In other words, a new point of departure for the level of effort will be determined on a more sustainable basis.

Secondly, a kilowatt day system will in principle give member states more flexibility to develop an effective management which can target the special needs which apply to a national/local fleet and which can take into greater account the varying fishing patterns and stock situations. In the Commission's proposal there is a number of limitations in the gear categories, and this limits member state flexibility.

Thirdly, a flexible kilowatt day model will give member states the possibility to involve the fishermen more in shaping actual management initiatives. Such a partnership approach can mean that the industry's own conservation proposals can be more easily integrated into an overall solution. This will lead to a feeling of greater responsibility. Since there is a fundamental need to turn fishing patterns in a more sustainable direction with greater focus on reducing fishing mortality for some species and to reduce discards, increased involvement by the industry is a completely decisive factor.

A potential problem in going over to kilowatt days, however, is that by getting rid of the current possibilities of giving vessels which choose to fish with selective gears extra days at sea or just giving each member state an amount of kilowatt days, there is the risk is that fishers will choose to fish with a smaller mesh size than hitherto, or without additional selective gear. So it is fundamental that the overall level of protection is not reduced and that the kilowatt days system includes incentives, so gains can be made by shifting to a bigger mesh size and/or using a panel or grid which gives a more selective fishery.

Another disadvantage with the system is that there is a certain uncertainty attached to measuring the engine power of a vessel. On newer engines the manufacturer can adjust the effect upwards or downwards by means of chip tuning, which means changing the electronic steering of the engine with a portable computer. This means that it is difficult to control whether the vessels of a member state keep within the allocated number of kilowatt days. In addition, the advantages mentioned will to a great extent depend on how the actual system is built up. In the Commission's proposal on a revision of the cod recovery plan a model is suggested where it is only possible under certain circumstances to transfer effort from one gear category to another. Similarly, the proposal excludes relative changes to the fleet structure in relation to a given reference year. There is thus less flexibility to develop management solutions adapted to specific conditions in member countries, which is one of the basic advantages of the system.

Effort regulation without quotas

An alternative is the “pure” effort model, where regulation is done solely by means of days at sea and area closures, possibly combined with technical measures, but where quotas are not used as a regulatory measure. This model has the advantage that problems with discards are assumed to be fewer, since there is no limitation by quotas. But demands are placed on an effective management of the fleet capacity in order to avoid that too much fish is taken up from the stocks. The model has been used for several years on the Faeroe Islands for several demersal stocks and has not given particularly convincing results – see for example the current critical situation for cod in the Faeroese waters. So effort regulation without quotas is hardly a realistic alternative to the EU’s current days-at-sea system.

Recommendations

As has been shown, the current days-at-sea system in the North Sea has had a positive effect, but is characterised as being complex, difficult to administer and based partly on outdated fishing patterns. The numerous exemptions in it make it impossible to manage the use of effort in a forward looking way. At the same time, it has not yet been possible to ensure an adequate recovery of the cod stocks in the affected areas, although for some stocks a fall in fishing mortality has been registered.

So there is a need for a new effort regime which is simpler and more flexible, and which at the same time creates the framework for a sustainable management of the cod stocks.

Against this background it is recommended that Denmark works for an effort regime in the North Sea, Skagerrak and Kattegat based on a kilowatt day system. It is important that the kilowatt day system is built up so that:

- The cod stocks in the North Sea, Skagerrak and the Kattegat are managed on a more sustainable basis.
- The allocation of kilowatt days to the individual member states is done in a fair and balanced way in the form of a representative reference period, and so that there is a balance between resources and capacity for each country (kilowatt days available in relation to the catching rights).
- Space is created for an incentive structure at EU level within and between the various gear categories, so that vessels which fish more selectively and with less discard (and thereby more sustainably) gain advantages.
- The system is sufficiently flexible, so member states, together with the industry, can ensure an interplay with the national regulation systems and fishing patterns. This will make it easier to administer the management and to comply with it.
- The system is dynamic/adaptable so it can allow necessary adjustments in relation to external circumstances (a current example is the increase in fuel prices which affects the different fleet types differently).
- There is as much simplification as possible.

It is also recommended that in the long term thought is given to the possibility of reviewing the management model, including the need for effort regulation, when the cod stocks have been rebuilt to a level where fishing quotas cannot be fished up.

As for the Baltic Sea and the Belts, it is recommended that the current effort regime based on a closed period and days at sea continues.

Relevant EU processes

The proposal to amend the recovery plan for cod in the North Sea and Skagerrak/Kattegat, which was put forward in April 2008, is expected to be adopted before the end of 2008, as well as the implementation of the annual TAC/quota regulations.

Discards/unwanted bycatches

Problems relating to the current management

Studies indicate that there is a considerable amount of discards in the European fisheries. It is not possible to determine exact figures for the scale of the discards, which often vary according to the type of fishery and the fishing area, but according to the STECF about 20% – 60% of the catch weight in a typical demersal fishery is discarded i.e. in a fishery directed at cod, plaice, haddock, Norway lobster and saithe. STECF has calculated that discards in the North Sea for EU beam trawlers is between 40% and 60% of the catch and about 40% for demersal trawlers. By far the majority of species cannot survive being caught and thrown overboard again. From both a biological and management consideration discard is thus a considerable and criticised problem.

The fact that discards create an extra mortality means that potential catch possibilities are made worse. Discards are also a considerable waste of resources when the fish which are discarded could have been landed and sold. If discards of young fish can be avoided, the fish that survive could help to increase the stock as well as future catch possibilities. So there is a considerable interest in avoiding or reducing discards.

There are several reasons for discards, but overall they are connected to the fishing rules and/or economic reasons.

a) The catch does not meet the current minimum sizes in force

According to the EU's technical conservation measures fish, which does not meet the EU's minimum size, must be discarded. The fish may not be kept on board, landed or sold.

b) The catch is of low market value

Discarding also happens when the price which the fisher can get by landing the fish does not match the costs involved in handling or keeping the fish. Although they meet the minimum sizes, some fish and shellfish cannot be sold for consumption because of poor demand, which

is why it cannot pay to land the catch. In other cases it is an advantage to discard smaller sizes of a given species and only keep the larger fish because the market prices are higher (so-called high grading). However in Denmark since 2002 there has been a ban on the high grading of species for consumption which can be legally landed.

c) The quota for the individual stock has been used up

Another reason for discarding relates to the mixed fisheries. According to the TAC/quota regulation, fish that is caught when a member state has used up its quota, cannot be landed. So the fish has to be discarded. When a vessel has used up its quota of a stock, but can continue to fish from stocks where there is still quota (or effort) left, all catches from the stock from which the quota is used up will have to be discarded. For example, a vessel with a given vessel quota share volume of cod will be forced to discard that share of the catch, for example cod, but also plaice, haddock and saithe which do not meet the minimum size in force. When a vessel only has a small amount of its cod quota left, there will be an incentive to keep the most valuable cod onboard (“high grading”) and discard the small, less valuable cod. If the cod quota is used up, the vessel may not fish, land or sell the cod which is caught during the rest of the year – but the vessel can continue to fish, because the vessel can fish those species where the quota is not used up or which are not subject to quotas. The cod, which is part of the unwanted catch, cannot be legally landed and must be discarded.

Discarding will also occur in cases where a given catch does not meet current rules on by-catch or conservation.

Discarding is thus often a direct result of the current rules in force and is in most cases legally done to optimise the value of the individual catch journey. Despite the fact that discards increase the burden on resources, there are several mechanisms built into the current management system which lead to discards.

Thus in the current regulation there are several “system errors” which stand in the way of incentives to develop fisheries with less discards and thereby a reduced burden on the resources. So there is a need to carry out some structural changes to the current management system if the scale of discards is to be significantly reduced.

Relevant EU processes

Revision of the technical conservation measures in 2008 and proposal from the Commission in connection with its Communication on discards/recovery plan for cod.

Initiatives to reduce discards/unwanted bycatch

Adjustment /getting rid of minimum sizes.

A significant proportion of the fish that is discarded is below the minimum size¹⁸. This argues for a reduction or removal of the minimum size as a conservation measure as one solution to reducing the scale of discards. In Denmark the national compulsory minimum sizes have been reduced so they are in line with the EU measurements in order to reduce the scale of discards

and fish mortality for e.g. cod in Kattegat. However, it is too early to assess the possible effect of this.

By getting rid of minimum sizes the legal discarding of undersized fish will stop and all catches will have to be written off against a quota. This entails that the fish quotas will be used up more quickly and will lead to a risk of high grading. One solution could be a ban on high grading: this has already been introduced in Denmark. The extent to which the removal of minimum sizes will have an effect in relation to reduced discards will also depend on whether an increase in the scale of high grading can be avoided.

Gear selectivity

The fact that there are large amounts of discards of undersized fish shows that an improvement in the selectivity of fishing gear could have a real effect in terms of reducing the scale of discards. The market is asking for more information on sustainable catch methods, and this means that there is an interest in developing and improving selectivity in the fishery.

It is technically possible to improve size selectivity in pretty much all gear types. Improvements in selectivity can typically be achieved by means of large mesh sizes or the use of sorting panels or grids which allow small fish and unwanted species to get through. The mesh size is generally determined so as to correspond to the minimum size in force, in as much as catches of undersized fish are to be avoided. This is not the case today. There are, however, some practical problems associated with this, for example in the mixed fisheries, there is not just one mesh size, which is optimal for all species at the same time. In the short term, shifting to more selective gear can cause financial losses for a fisher. But this cannot justify an inappropriate management and will in the long term be counterbalanced by an improved yield. An important element here is the creation of incentives to develop and use selective gears, for example by allocating more fishing possibilities.

Another possibility is to introduce a reduction factor in the quota, depending on the gear being used. In fisheries where it can be shown that there is a considerable amount of discards, a positive effect can be obtained by “rewarding” fishers who for example fish with bigger mesh sizes with a smaller or no reduction in the quota, whereas fishers who fish with a lower mesh size are imposed a bigger reduction in their quota. A similar principle is used in the decision to count one day at sea as 2½ days in the cod fishery in the Kattegat from February to April in order to limit the fishing pressure when the cod gather together or are easier to catch.

Closed areas/real time closures

A fishing ban in areas or periods where there is a high likelihood of catching fish which will be discarded is a commonly used instrument in fisheries management. These areas, the aim of which is to protect young fish or spawning stocks, can be closed permanently or periodically, or closed for certain types of fisheries. An example of a permanently closed area is the so-called “plaice box” in the North Sea, where in a clearly defined area it is forbidden to fish with trawls because there is a large amount of small plaice.

Real time closures are implemented at short notice if, for example, the bycatches are too large or if there are too many undersized fish in the catch composition, as a result of which the

fishers are forced to move area or fishing area. The area is typically closed for a short period, for example three weeks, after which the fishery can resume. Real time closures thus depend on the active cooperation of the fishers because the system is built up on reports from the vessels on the catch composition. If the closures are to have an effect there must also be a close cooperation with fishers from all member states who have access to fish in the areas. The advantage of the system is that they are relatively easy to control by means of satellite monitoring. Real time closures are used on the Faeroe Islands, and in Norway. Scotland has set up a so-called Conservation Credits Scheme with temporary closures, and Danish fishers have been included.

It can be difficult to show in practice that such closures have a positive effect on the stock. But the closure of areas will have a positive effect on discards if it means that fishers move to areas where there are fewer small fish. One problem can arise where the fishery is pushed to another area or where the fishery takes place right up to the closed area.

Concrete targets to reduce discards

Another possibility is to determine concrete goals for reducing discards for those fisheries where discards are a serious problem. In a non-paper from April 2008 the Commission suggests that discards in the Norway lobster fishery west of the British Isles (ICES area VII) should be gradually reduced from 50% by weight and 60% in number to 10% and 15 % respectively over a five-year period. It was also suggested that discards in the beam trawl fishery for flatfish in the North Sea and the English Channel should be reduced from 70% in weight, of which plaice comprises 50%, and 80% in number, to 15% and 20% respectively over a five-year period. It is thus up to the member states and the industry to decide on which methods to use to reach the target. The gradual reduction should give the industry time to carry out the necessary adjustments and to try new measures to reduce discards. The advantage of this is that the industry is actively involved in developing new catch methods.

In order for the proposal to be adopted, a series of conditions must be met. Relatively accurate data on discards must be available on the fishery, so it is possible to measure the effect of the different measures from year to year. It is also necessary to have an effective control of the vessels involved; otherwise it will not be possible to show whether the targets are met. The Commission proposes that this is solved by means of a special monitoring programme¹⁹, which includes observer coverage. Member states will also be obliged to introduce special control programmes in order to ensure that the targets are met. If the targets cannot be met, the vessels in question will have to land the unwanted catches, and it will be decided how to deal with these catches markets- wise.

Ban on discards

The next step is an actual ban on discards, as is done in Norway and Island. The arguments for a ban on discards have previously been mentioned, since a ban can be expected to give fishers a greater incentive to use and develop gears which are more selective and give the most optimal catches. Moreover, an obligation to land all catches will give a better catch regulation and a better basis for biological advice.

Icelandic fisheries legislation includes a ban on discards so all catches must in principle be landed, even if a vessel has exceeded its quota. However, there are some mechanisms included in the regulation to ensure a certain flexibility to deal with a possible over-fishery. For all demersal species except cod this means that a certain over-fishery of the vessel quota is allowed, but the other quotas that the vessel has must be reduced accordingly. The law also includes rules on year-to-year flexibility so that in one year there can be an over-fishery of up to 5% for demersal species, herring, and deep-water prawns, but this is subtracted from the vessel the following year. If he has observed that over-fishery has taken place, the vessel owner can also buy extra quotas through the individual transferable quota system. It is also possible for the individual vessel to decide that a certain part of the catch onboard (up to 0.5% of pelagic species and up to 5% of other species) are not deducted from the quota, but are sold separately, and the income goes to a special fund to assist marine research. The legislation also makes it possible for the fisheries ministry to lay down rules according to which under-sized fish are only partly included in the catch declaration.

In Norway a ban on discards has been in force since the 1980s for a series of economically important species such as cod, haddock, saithe, red fish, mackerel, herring, argentine and capelin. The list of species covered by the discard ban is regularly reviewed and includes pretty much all the economically important species. Experience from Norway does not indicate that a discard ban alone solves the discard problem. In Norway the discard ban is supplemented by other measures such as temporary closure of sensitive areas, the obligation to change fishing area when the number of young fish exceeds a given level and the requirement to use improved gear selectivity. It is worth mentioning that Norway, with few exceptions, has not introduced year-to-year flexibility in the fisheries management and does not use transferable quotas.

It is difficult to assess whether the Icelandic model is better at ensuring that the discard ban is observed than, for example, is the case in Norway. According to the Icelandic authorities studies show that the scale of discards in Icelandic waters is rather limited. There is much uncertainty attached to such studies, but experience from both Norway and Iceland indicates that a discard ban cannot stand alone, but must be supplemented by other initiatives which ensure a certain flexibility in relation to selectivity, area closures and/or the possibility to buy additional fishing possibilities and flexibility between quota years.

This all indicates that the introduction of a discard ban has had a positive effect and that the scale of discards in both Norwegian and Icelandic waters is smaller than in the EU waters. This is possibly also due to more direct fisheries based on fewer species.

Reduction in fishing pressure

It is still the case that a lot of the stocks of commercial interest in, for example the North Sea, are overfished to a greater or lesser extent. This means that the stocks are dominated by young fish. Large fish are typically more interesting than small fish, so it can be expected that the risk of discards of young fish under the minimum size is greater where the stocks are dominated by small fish. Rebuilding the stocks by means of a reduction in fishing mortality to the MSY level must also be considered to have a positive effect in terms of reducing discards.

Control and enforcement

The effect of most initiatives on reducing discards depends on the ability to ensure an effective control and enforcement. In principle there are several possibilities to ensure an effective control. One possibility is an observer system where one or several observers are brought on board the vessel and monitor that the current rules on minimum sizes, catch composition, discard ban etc are observed. The observer system may be considered an effective method to ensure that the rules are observed. But it is a very expensive solution. In some fisheries having to pay the costs to have observers means that fishery is no longer profitable. There are also some practical problems linked for example to small vessels where the lack of space makes it difficult to use observers. However it is clear that simply for economic reasons, an observer system cannot be used as a general instrument to ensure an effective enforcement. However, thought could be given to a system whereby a vessel, in return for taking an observer onboard and paying the costs associated, is given extra fishing possibilities. The Pelagic RAC in the mackerel fishery has for example considered this.

Another possibility is electronic documentation where a number of cameras are installed on each vessel to film the catch process. These films are subsequently viewed to check whether the relevant rules have been observed. Electronic documentation has not yet generally been used in European fisheries, but is used, for example, in British Columbia in Canada. A series of technical factors linked to the robustness of the equipment to weather conditions, vessel types, types of fishery etc will have to be clarified. In addition, the electronic documentation requires close cooperation with and acceptance by the fishing industry. Ownership of and access to the data will have to be considered. The introduction of electronic documentation will also mean considerable costs, although less than traditional observer coverage²⁰. The introduction of electronic documentation cannot be excluded as a tool to ensure an effective documentation - possibly in the form of a selection measure where the fisher who takes part is given extra fishing possibilities. From September 2008 to September 2009 Denmark is carrying out a trial using an electronic observer.

Another alternative is to use a reference fleet to document the individual types of fisheries in relation to, for example, catch composition, discards etc. In Norway a formal cooperation has been set up between the authorities and the fishing industry where a number of vessels by contract gather relevant data so as to obtain better data and information on the individual fisheries. Similarly, as a means of ensuring the enforcement of the Norwegian discard ban, as system of quota deductions has been introduced in the mackerel fishery, if the size composition on landing is different from a normal size composition based on a reference haul. Reference fleets and hauls may possibly be relevant in the European fisheries. Denmark has started a major project to develop reference fleets in the Baltic and Kattegat through a cooperation between researchers and fishers with the aim getting detailed knowledge, including discards in the actual fisheries.

A discard ban could be enforced by starting with particular waters or fishing areas, where on the basis of scientific data, detailed knowledge is built up on the typical species and size composition (reference composition). The regulation could start with a requirement that the catch composition should correspond to the reference composition, but within a certain margin. On the basis of that the control could lay down requirements on:

- Use of gear in the relevant waters
- Full VSM for the entire fishing trip

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- Electronic logbook and documentation of each haul.

As long as the catch composition is within the reference composition, the fishery is considered to be without discards. If it falls outside the reference composition it will be considered to be a fishing trip with discards, unless the use of gear, VSM coverage and the electronic logbook can demonstrate that it has been a fishery without discards.

One problem is that there can be a great variation in the catch composition from trawl to trawl, and on longer fishing trips more than one type of gear can be used. As a variation, those vessels which have one (selective) gear, have complete VSM coverage and documentation in the form of an electronic logbook could be rewarded with an extra quota, whilst conventional fisheries are not rewarded, and catch compositions which deviate from the norm result in sanctions.

A related idea goes in the direction of controlling “the gear instead of the fish”, so that access to a specific fishery requires that a particular gear with documented selective properties is used. The catch is thus considered to be legal if fishing is carried out with approved gears. This is no guarantee that fish is not discarded, but in order to ensure a more selective fishery, it can be considered a relevant measure.

Recommendations

Given the above it is recommended that Denmark, in its aim to reduce discards, as a minimum works to:

- 1) reduce catches of unwanted fish and shellfish by:
 - a) giving priority to the development of selective gears and catch methods
 - b) making selective gears obligatory in the EU for selected fisheries so as to avoid catches of young fish,
 - c) an EU legal basis is created to allow the national authorities in the member states together with the industry to carry out temporary closures (real-time closures) of the fisheries where discards occur to an unacceptable level.
- 2) Adapt the EU rules which can lead to discards by:
 - a) getting rid of minimum sizes as a management instrument. This could be done in connection with a revision of the technical conservation measures in the North Sea, Skagerrak and Kattegat,
 - b) introduce year-to-year flexibility for more stocks where there is a biological basis for it,
 - c) create the EU framework for the gradual introduction of fisheries regulation based on catches instead of landings.
- 3) Improve the monitoring of discards by:
 - a) introducing into the EU the obligation to register all catches which are discarded in the vessel logbook in order to obtain better data on the scale of discards in the European fisheries and in order to promote a better behaviour,

- b) introducing trial systems with electronic documentation and alternatives which can ensure full documentation of the fisheries as, for example, the use of standard catch compositions combined with VMS and electronic logbooks,
- c) using reference fleets in the European fisheries in order to obtain improved knowledge/documentation on the catch composition and discards.

It is also recommended that focus be directed at those fisheries where discard today is greatest and that the individual fisher provides the starting point.

Control, traceability and documentation

Problems with the present management

The EU's control rules are very complex. In the control policy there are special rules in several independent regulations. At the same time in the individual TAC/quota regulations there are also separate rules on control, logbooks and use of gears. This creates lack of transparency, which makes it difficult to develop a "culture of compliance" in the fishing industry.

In order to meet the target of a sustainable European fishery, it is necessary to ensure that the catch figures are in accordance with the volumes that are caught. If the registered catch figures are not in accordance with the actual landings, then the TAC/quota regulation, which is the cornerstone of the Common fisheries Policy, is compromised.

According to the Court of Auditors the catch figures are neither reliable nor trustworthy, so the true catch figures are not known. The Court of Auditors names the following elements which can be the reason for the discrepancy between the catch figures that are sent in and the actual fishery: 1) the logbook sheet does not have to be sent in until 48 hours after the landing is completed, which can tempt some fishers to report something else than that which is landed, if there is no landing control, 2) in general it is not obligatory to weigh the landings, 3) the rules on logbook tolerance and 4) the sales note does not always contain the correct catch figures.

By way of example there is the rule on 20% logbook tolerance. According to this, when there is no landing control, there can be an under-declaration of up to 33.3% in relation to the actual fishery. If the estimate which is recorded in the logbook is declared to be 1,000 kilos, then this declaration is within the 20% tolerance rule with an actual landing of up to 1,200 kilos. If there is no landing control, it is possible to note 20% less in the landing declaration than in the logbook estimate, which is 800 kilos. These 800 kilos, which is the amount written off the quota, amount to an under-declaration of 33.3% in relation to the actual landing of 1,200 kilos.

The rules on logbook tolerance are further complicated by the fact that in relation to the management areas and fish species there is a difference according to which tolerance levels apply to incorrect estimates when the caught volumes are entered into the logbook. The rules thus vary according to which species are caught, where they are caught and how big the volumes are. For example, there can be a 20% deviation from the actual landing figures when plaice is landed from Skagerrak, whereas from a fishing trip in the North Sea it can only be 8%. On top

of this are the problems associated with enforcing these rules when landings are from a fishing trip where fishing has taken place in both regulation areas.

It is also a problem that the benchmarks and minimum requirements to the number of inspections carried out of the recovery plans allocate resources to where most of the fishery and landings take place, despite the fact that the trawlers and the biggest ports are not necessarily the most relevant in terms of inspection.

Illegal fish in the marketing chain

The present control system does not prevent illegally caught fish from finding its way onto the market. This is a problem for the stocks and for those fishers who fish legally, because they are exposed to unfair competition from cheaper illegal fish, but also in relation to the consumer who basically cannot detect whether the fish has been caught legally. It is also a problem in relation to the control authorities if fish is marketed outside the system and quotas. Unreported landings are also a problem for the biological advice. There is a need for a method which can document that the fish which is marketed has been caught legally. A method which can both underpin and supplement the control system. One approach could be to apply traceability to the fish so that the fish can be traced from the consumer back to the vessel, place and time of catch.

Initiatives to ensure an improved control policy

Risk based control

Quantitative targets for the number of inspections - either in absolute figures or as relative shares of the landings or volumes (benchmarking) do not necessarily give the most accurate picture or the most effective control. They should thus to a certain extent be replaced by qualitative targets which can document that the control effort is relevant and effective.

The risk based fisheries control means applying the control where it has the biggest effect for the benefit of a sustainable exploitation of the stocks.

A precondition for a real risk based control is a clear setting of priorities and an assessment of threats. The first priority should be to direct the control towards the biggest threats against the sustainability of the fishery. The fisheries control also has a role to play in ensuring fair competition, and a modern fisheries control should be based on giving advice and a service to the industry. But the most important is that the risk assessment and the final setting of priorities of the control effort aim at obtaining the greatest effect per control hour in relation to a responsible management of the natural resources. That means that the control must be targeted at the stocks, geographical areas, vessels and companies where the scale and consequences of illegal fishing for the stocks are considered to be greatest. It is the most economical resource-wise, gives the most preventative effect and strengthens the credibility of the authorities and the legitimacy of the rules.

The big challenge is to develop relevant control methods and standards for computer based data analysis which can underpin the risk assessment and document how effective the control

is. This challenge applies irrespective of whether a qualitative or quantitative yardstick is chosen for the control.

In recent years, Denmark has worked on developing a risk based approach to the fisheries control. The experience that Denmark and other pioneering countries have acquired should be gathered together, disseminated and developed further in the EU. One possibility is for Denmark, together with the Control Agency and the Commission start up a process to bring into focus risk-based control towards 2012.

As an alternative to more quantitative “benchmarks” in the EU’s control rules, strategic and relevant control indicators should be developed instead, such as special focus on vessels with frequent faulty transmitter reception, vessels which regularly forget to report in advance, or which frequently exceed the rules on logbook tolerance. In that way the Control Agency and the Commission’s fisheries inspectors can monitor member states to ensure that they carry out a targeted control based on a systematic data analysis directed at the most serious problem areas in their respective fishing waters.

The indicators should cover the entire chain so that relevant data is obtained on vessels, fleets, companies, waters and stocks.

The aim is to obtain knowledge and documentation which enables the control authorities to assess which vessels should be kept a close eye on, which vessels are in need of advice and which vessels and companies can just be inspected on a random basis, the purpose of which is to have a preventative effect and to test whether the control system gives the expected results.

As a product of a risk-based control method and the many joint community operative control campaigns (JDP’s), a “control handbook” can be developed with a description of control forms, standards and methods. The “control handbook” must support the individual inspector’s ability to take academically well-founded decisions whilst carrying out the control.

The vision is that “*a level playing field*” is ensured by giving the national fisheries inspectors a shared reference framework and a control philosophy to work from. In the long term the fishers in the individual countries will experience a uniform inspection method and strategy, no matter what water they are in.

If not all members states are ready to for such a change to the control system, a flexible framework can be envisaged where member states can choose between the risk-based control and the quantitative “benchmarks” so that a member state can have one or the other inspection programme approved. That means that if a convincing risk-based control system can be created, there is no need for so many inspections. If that cannot be achieved, then a relatively large and representative number of inspections must be provided.

Financial paper control as a supplement to the physical control

As a supplement to the actual physical control, i.e. control at sea and at landing, and the inspection of documents that is already carried out, by means of comparing logbooks with satellite data and sales notes, a third control instrument can be imagined consisting of a control/comparison of data when working together with other authorities, for example the tax authorities. This cooperation should create new knowledge on the basis of which discrepancies can be pursued. Such a co-operation has started in Denmark with good results.

“Clearance of accounts”

The problem today is that avoidance by a country of the EU’s control rules can only be tried by the European Court, which is normally a very long-drawn out process. The Commission thus does not have real sanctions when a member state does not meet the control rules. One possible solution to this problem could be the introduction of the requirement of a reduced re-funding of the aid. In the agriculture sector there is the requirement to repay aid if a member state does not apply adequate control procedures or if the EU rules are not observed. Even though there is no direct link between the resource management and the payments from the fisheries Fund, this practice could be applied to the fisheries sector so that it can be required that aid from the European Fisheries Fund is repaid if the rules are not observed.

Traceability and documentation

Traceability means that the fish can be traced from the consumer back to the vessel, catching place and time. A traceability chain can contain many or a few links. The following is an example of a chain with numerous links:

Traceability chain

Catch >>>> Landing >>>> Transportation >>>> Sorting centre >>>> Auction >>>>
Buyer >>>> Retail >>>> Consumer

In order for a traceability system to work, it is necessary to have a reliable and continuous documentation of the fisheries. A new control principle should thus be to incorporate a chain principle. That means that the start point for a control strategy is that the individual fishery is considered one part of a continuous traceability chain from catch to consumer, where the most reliable documentation and verification can be obtained along the entire chain. By means of improved documentation and traceability of the fish, the control authorities can achieve a method to better ensure correct catch data and to ensure that the fish which is sold to the consumer is caught as part of a quota because in the system it should be possible to provide information on receipt and despatch of all lots of fish.

The traceability system can be incorporated into the risk-based control so that the fisheries which are in the traceability system have a different risk profile for the authorities than those which are not.

The traceability chain has two parts: the first part is the chain from catch to first hand buyer. The second part is the chain from the first hand buyer to the consumer. The two chains contain two different problems. The first concerns the problem with reliable documentation in relation to the ability of the authorities to check whether landings exceed the quota. The second concerns the problem of mixed fish, so that the consumer can be sure that the fish that is bought has been fished on a sustainable and legal basis.

In order that the catch figures reported from the fisher and the first hand buyer to the control authorities in the member state are reliable, there must not be uncertainty concerning 1) what water the fish comes from, 2) what species it is and 3) how big the volumes that are landed.

In order for the control rules to prevent the different species of fish from being mixed together and illegally caught fish from making its way onto the market, it is necessary to obtain improved identification of the fish from the first hand buyer to the consumer, and this presupposes transparency in the sorting centres and the transport chain where there is a big risk of the fish being mixed and thereby loss of traceability.

Traceability gives more advantages for the fisher, the consumer, the buyers and the control authorities.

In relation to the consumer the market demand for sustainability and certification has really taken off in the last two years. The requirements will continue to increase, and a management that builds on full documentation may be expected to work effectively with the market.

Developments in recent years point towards a faster development in demands from the major marketing chains for sustainability and certification of fisheries. The Marine Stewardship Council (MSC) is today the only globally recognised certification institute for sustainable fisheries products. The OECD has started an analysis of certification methods. The demands for certification are considerable and to a wide extent have the same considerations as those attempted in the Common Fisheries Policy. The essence of the scheme is that it is voluntary for the fisheries to be certified. In the meantime, market developments show that for many fisheries it will boil down to whether they want to be on the market or not.

If a traceability system is linked to a certification scheme, so that the fisheries product is labelled as legal and sustainable, the fish can obtain better /other marketing possibilities, since more and more buyers are only interested in certified fisheries products. A fisher will thus not only cheat the control authorities, if he supplies the wrong data on fishing water, species and volume, but also the consumer. If it emerges that he has evaded the rules, it will thus have other consequences than a fine from the authorities, because it will mean reduced marketing possibilities. In that way the individual fisher will have a greater interest and responsibility in being able to document that his fishery is legal.

The certifying organs which are known in the fisheries sector are private. So there will be a cooperation between the private certification organs and the member state's control authorities.

A development of the fisheries policy towards rewarding the documented fisheries with catch incentives will in the same way as certification promote the changeover to documented and sustainable fisheries. The use of the principle of incentives and documentation in the fisheries policy will also entail advantages.

Recommendations

The purpose of control and sanctions is partly preventative and partly advisory to change the behaviour of those who consciously or because of lack of knowledge act in contravention of the rules. In order to meet its objectives, the control must use effective and proportional means.

Due to the variation in the fishing waters and the fisheries, the rules should also be sufficiently flexible so that the control resources are mobile. If the control is to succeed in changing the behaviour of the fishers, the effort must be moveable and must not be locked to a “benchmark.”

Given the above, it is recommended that the following initiatives be considered:

- that Denmark works for clear and precise control rules
- that Denmark, together with the Control Agency and the Commission, takes the initiative to holding a conference in order to put focus on risk-based control as the bearing principle for a future control policy
- that Denmark works for the introduction of a risk-based control system as a control principle in EU law, including the introduction of documentation control as a supplement to the actual physical control
- that Denmark works for the principle of a continuous traceability chain from catch to consumer to be integrated in the future control policy in order to ensure traceability and documentation
- that thought be given to how the Commission can react more quickly, possibly by reducing aid from the European Fisheries Fund if the control rules are not observed (clearance of accounts).

Relevant EU processes

The review of the control regulation/commissions communication on eco-labelling (June 2005)

5.2 The shift to catch quotas and documentation

There are several problems with the existing fisheries in relation to ensuring a simple management and a fishery with an optimal utilization of the resources. A series of factors in the EU's fisheries policy should be improved along the lines of the recommendations which have been outlined here.

A basic problem is the use of landing quotas according to which the resource management is not based of actual catches. This is the purpose behind redirecting the strategy to develop the Common Fisheries Policy to reach a situation where catch quotas are used instead of landing quotas. The fisheries policy should be legitimised – the fishers must work with and not against the conservation of resources. Discard as a conservation requirement is unacceptable with respect to the resources. The rules must not require the fishers to throw the fish overboard; the fishers must have an incentive to keep the fish onboard.

As a result of this, the EU management should focus on target management and make the detailed rules less stringent as the fisheries documents the sustainability of its activities.

The starting point is that the individual fisher is given the responsibility for conservation of the resources and for documenting that he meets this responsibility. The aim is that by observing the targets, he can both optimise the exploitation of the resources and his own economy.

Allocation of the fisheries resources and principles for their exploitation

Most of the EU's management and control rules must ensure that the fishery carried out under this quota management happens in a way that the species and size composition, as well as the fishing pressure, do not lead to discards and illegal acts which go significantly beyond the permitted "landing quotas."

The bottom line still be that the EU's resource policy must ensure that the fishery of the individual stocks is of a size that gives an optimal, long-term sustainable yield (MSY), and that the catch rights are shared between the member countries in accordance with the principles of the basic regulation (relative stability).

However, the many different fisheries and the complex conditions of the stocks means that the fishing mortality which a given landing volume can lead to for a stock can be extremely different from fishery to fishery. An example is the plaice fishery which can be carried out with both 80 mm or 120 mm mesh size and which can lead to a very considerable difference in the discard of undersized fish.

The aim should be that the quotas are determined as "catch quotas" instead of "landing quotas". The catch quotas are set at a higher level than the landing quotas so that they fully or partly take into account the volumes which under with the current landing quotas are not registered.

The use of catch quotas presupposes that the individual fisher is able to document a correct declaration and registration of the catches. This is done by taking an observer onboard or by using electronic documentation in the form of a camera fixed on the vessel. The idea is thus that the fisher can only obtain the (higher) catch quota if he can fully document his fishery. In this way an incentive is created to develop a selective fishery without discards, whilst at the same time ensuring full documentation of the individual fishery.

Catch quotas entail a series of advantages which are of decisive significance for the success of the fisheries policy:

- Unlike today they will ensure a registration of everything that is taken up from the stock.
- The overall fishing patterns can be planned in a more appropriate way.
- The data for the biological advice will be decisively improved and the advice should therefore be expected to match the fishers' perception of the stocks.
- All fish caught is included in the quotas, the fisher can no longer optimise his fishery by throwing fish out; instead he must do it by using selective fishing methods.
- The need for complex rules is reduced, and, as the fishers go over to a fully documented catch quota system, there is no need for effort regulation.

The prospects for the individual fisher are:

- that fishers who document their fisheries get extra fishing possibilities,
- the electronic documentation replaces a large number of EU control rules,
- the future of the EU's fisheries policy is secured on the "sustainable markets".

The principle of using catch quotas removes the adjustment mechanism which is what discarding is today. That means that mixed fisheries must either stop when just one of the mixed species is fished up, or the fisher must acquire new rights (see the section on national management below).

A fisheries policy which makes it possible for some fishers to take part in an incentive scheme has consequences for the national fisheries management. The main elements of the national management in the EU are:

- Regulation by means of rights based management (e.g. individual transferable quotas or vessel quotas),
- Regulation by means of rations, or
- Regulation given to associations of the fishermen (producer organisations)

In a rights based management where the individual fisher has a given share of the national quota, it is simple for the fisher to go from a landing quota to a catch quota. If his rights can be transferred, it will also be possible for him to adjust his rights to the actual development in his catch composition, for example mixed fisheries. Here it is presupposed that the fisher who has fished his catch right of a species in a mixed fishery should either completely stop the fishery, or buy a catch right which means that he can continue to fish. Because of the closer relationship and the feeling of ownership the vessel quotas can be expected to give the owner a more long-term interest in the development of the stocks, and this ensures a better exploitation of the stocks.

Fisheries in associations will similarly be able to go over to a catch based quota management because all in the association take part.

This method characterises a change in the paradigm where the individual fisher bears the responsibility and consequence of his fishery. It is this placing of responsibility that a change in the fisheries policy must ensure.

The incentive to acquire more fishing possibilities is then an incentive which must gradually lead to a management based on catch quotas. The vision is for EU management to go from the centralised detailed management to a goal management when the fishery can document the sustainability of its activities.

Several fisheries in Europe will not have the technical or regulatory preconditions in the form of individual transferable quotas ITQ so will have problems taking advantage of the proposed system. In the same way, there will be a problem in Denmark with a fishery regulated by rations, as for example the less active vessel fishery, where the individual fisher cannot adapt his catch rights to the developments in his fishery.

In conclusion, there will be an offer in the form of going over to a new system. It should happen gradually and over a longer timescale, and the concept will gradually develop as experience is acquired.

The probability for this vision being carried out must be seen in relation to the factors below:

- In the Commission is the acknowledgement that the current fisheries policy faces major problems.
- The technological development is now at such a level with relation to camera technology, computer processing and data storage that electronic documentation can be set up with relatively cheap standard products. The task is to create a reliable system and to ensure that it is not evaded. Canadian trials give a strong indication that electronic observation in the EU is realistic.
- The possibility for the fisher to establish a selective fishery is being constantly improved over the years (sonar technology, GPS, gear types, catch monitoring in the gear etc).

The decisive precondition for changes to improve the exploitation of the stocks is that it is only carried out at that speed and in those areas where the scale of the fishery can be fully documented. The change should therefore happen by gradually opening up for fisheries which want to fish in a more sustainable way, and it will be easier to adopt a gradual switch over to a new management than an obligatory and complete reform.

The Danish strategy should next year be able to clarify the actual technical possibilities for guiding the fishery by means of “incentives and documentation” and to communicate the basic ideas.

Trials with electronic documentation will be reported on at an international seminar at the Danfish fisheries exhibition in Aalborg on 7th –9th October 2009. If the results are positive, there should be a basis for the Commission putting forward a proposal for a community trial for 2010.

A change in the management strategy entails new possibilities for the fishers, but also big requirements in relation to the reliability of the documentation that the fishery takes on a responsibility for. It is therefore necessary and appropriate to implement the strategy gradually. This is best done by offering the new management possibilities to the fishers as a possibility that they can choose. If they do not choose the new possibility, they will continue to be covered by the EU’s ordinary management.

The development of a fisheries management where fishers take on the responsibility for documenting their fishery means partly that some guidelines must be laid down for this “own control,” and partly that a development and validation process should be started to ensure that the own control follows principles and methods which are simple, reliable and so set up as to meet market demands and control requirements. This development work is a private responsibility, where however the authorities acquire an important role as co-player in ensuring that the requirements are met. Examples of cooperation on this development task are the trials with electronic documentation and the development of traceability chains for the fisheries.

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17. [Council Regulation \(EC\) No 1098/2007 of 18 September 2007 establishing a multiannual plan for the cod stocks in the Baltic Sea and the fisheries exploiting those stocks, amending Regulation \(EEC\) No 2847/93 and repealing Regulation \(EC\) No 779/97](#)
18. See the working document of the ministry of Food: Discard in the Danish fishery, March 2006 www.fiskeriudvikling.dk
19. It is suggested that this is combined with a special monitoring programme in accordance with the rules in the Regulation on data collection, see [Council Regulation \(EC\) No 199/2008 of 25 February 2008 concerning the establishment of a Community framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the Common Fisheries Policy](#). Member states must ensure that at least 15% of all fishing journeys take place with an observer onboard or with another form of monitoring equipment in order to supervise the catches and registration of discards.
20. In Canada it is estimated that the costs of electronic documentation are on average 25% of the costs of a traditional observer system.



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