



Implementation of the EU Landings Obligation

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BACKGROUND & ANTECEDENTS

A central objective of the reform of the Common Fisheries Policy (CFP) is the progressive elimination of discards in all EU fisheries through the introduction of an obligation to land all catches. North Sea demersal fishing fleets will soon be operating within a CFP transformed by the discard ban and other reforms. The landings obligation will be applied to the industrial fisheries in the North Sea on the 1st January 2015, and to the demersal fisheries in the North Sea on the 1st January 2016 for some species. Discard Plans will need to be developed and proposed by cooperating member states by that target date. Such plans will require changes to current management and control regimes, and will affect other aspects of the CFP.

This document sets out the basic views of the North Sea Advisory Council on meeting the landings obligation. Subsequent documents will develop more directed and specific advice on the preparation of discard plans and the basis for any exemptions.

A VISION FOR THE NORTH SEA DEMERSAL FISHERIES

First, we present a future vision of the North Sea demersal fisheries, both as a destination to strive for and as a guide to the practical implementation of the landings obligation. Implementation of the actions to achieve this vision by 2025 would be realistic given all the challenges. That would prepare the Advisory Council for the next series of reforms to the Common Fisheries Policy. A 2020 deadline would also be relevant in terms of implementing the provisions of the Marine Strategy Framework Directive. But there are other, much closer targets that will need to be met on a shorter timescale.

The new Common Fisheries Policy aims to ensure that fishing is environmentally, economically and socially sustainable and that fisheries continue to provide a source of healthy food for EU citizens. The CFP is also intended to contribute to the Europe 2020 Strategy for smart, sustainable and inclusive growth (“Blue Growth”). Within that strategy it is recognised that the seas and oceans are strong drivers for the European economy, with great potential for innovation and development. Although fisheries are not the main focus, it must be accepted that our shared fisheries are both a key source of healthy food for the world and an important source of employment within coastal communities.

Our long-term vision places emphasis on the economic and social benefits to be derived from sustainable fishing practices. In our vision of the future, the North Sea Demersal Fisheries will be based on:

Higher Yields

Progress will continue to be made towards high yield fisheries, with low fishing mortality rates

Greater Stability and Profitability

Fishing businesses will be more stable and based on long term management plans. Reforms to fisheries policy will provide the basis for a profitable sector in which fleet renewal is possible without subsidy.

Better Food Security

Maintenance of food supplies will be a priority. Global demand for food is continuing to increase while production growth is slowing, against a background of future climate change. The North Sea will continue to provide a source of high quality food with full assurances on food quality, safety and traceability.

Better Governance

Fisheries management in the North Sea will have the support of fishers and other stakeholders. Management will be more professional, with fishers confident that they will be able to participate fully and their input taken seriously. Management will operate at minimal cost to taxpayers.

Sustainable Harvesting and Healthy Ecosystems

International commitments aimed at ensuring the sustainable exploitation of fisheries resources will be fully implemented. Impacts of fisheries on species, habitats and ecosystems will be minimised, and where possible eliminated, through full and consistent implementation of the Habitats and Species Directive, the Birds Directive and the Marine Strategy Framework Directive.

Relevant Co-decision Taking

Co-decision at the European level will be reserved for overarching, strategic, policy issues; and for auditing the European fisheries management system as a whole. Co-decision will not obstruct practical management of the fisheries. Detailed policy will be determined largely at regional level, by cooperating member states working closely with the North Sea Advisory Council. Environmental NGO representatives consider there remains a strong need for some overarching objectives and minimum common standards to apply across the EU. Some measures, primarily conservation measures relating to non-commercial by-catch species and habitat protection, should remain regulated at a high level (e.g. agreed through co-decision) to ensure that these are interpreted, implemented, monitored and enforced consistently across all member states.

Cooperation with Norway

There will be close cooperation and a high degree of mutual understanding between Norway and the EU on the development of management plans and the implementation of the landings obligation in the North Sea.

Results-based Management, with Full Documentation of Catches

A system of management will be implemented that is focused on outputs and results. There will be a high degree of transparency throughout the system, underpinned by detailed and accurate documentation of catches. There will be greater delegation of responsibilities to the regional and vessel level. As stocks improve, and as full catch documentation is implemented, there will be less reliance on input controls.

Mixed Fishery Management Plans

Most TACs will be set within the context of long term management plans applicable to mixed fisheries rather than individual fish stocks, incorporating full consideration of interactions between species. Those plans will be based on scientific assessments, and in addition they will take account of the characteristics and interests of the different fishing fleets. Plans will be developed on a regional basis by cooperating member states, working with the Advisory Councils and scientific advisers.

Economic Incentives

Economic Incentives will be aligned with management objectives. Perverse incentives that act against conservation interests will be identified swiftly, and removed promptly.

Improved Selectivity

Technical conservation rules will be replaced by selectivity measures, determined at vessel level by each skipper, aimed at achieving the optimum catches/landings consistent with the vessel's quotas and with the requirements of the landings obligation.

Fewer TACs

After a range of flexibilities including quota uplifts and exemptions have been considered and implemented, it may be necessary to consider reducing the number of TACs or to combine TACs as a last resort, in a similar way to the "Norway Others" quota, to avoid the serious problem of choke stocks. In that eventuality will be essential to then safeguard minor, non-commercial and by-catch stocks by means of technical, spatial or other measures so as to ensure the sustainable harvest of all stocks.

Less Emphasis on Micro-management

There will have been a decisive move away from prescriptive micro-management, accompanied by a greater delegation of responsibilities. Fishers will find their own ways of meeting fishery objectives under a system of system of transparent and verifiable results-based management.

High Survival Rates

Post-capture survival rates of both target and non-target species will have improved as a result of increased gear selectivity, improved technology and handling practices. Within the landings obligation, some quota species will continue to be returned to the sea, when there is scientific evidence that post capture survival is high.

Control and Enforcement

There will be a high degree of understanding of the rules in force; and those rules will be internally consistent, coherent and cost efficient. If fisheries controls are more intelligent and pragmatic then it will follow that there will be a higher degree of compliance, co-operation and co-responsibility from the fishing industry.

On-board Sampling

Various forms of delegated responsibility will operate, within a wider framework of external monitoring, incentives and sanctions. Cost-efficient, effective, on-board sampling of catches will be common aboard fishing vessels. There is likely to be a trade-off between the degree of on-board monitoring of catches and the burden of prescriptive requirements. The greater the confidence in the reporting of catches, the less need there will be for prescriptive measures and intrusive external monitoring.

Fishing Vessels as Research Platforms

Fishing vessels will participate in various types of monitoring and research with some fleets serving as reference fleets, where appropriate. Partnership agreements between scientists and fishermen will be the basis for a highly effective information system that will help inform management decisions. Fishers will be trained to deliver accurate information through a process of on-board sampling.

IMPLEMENTING THE LANDINGS OBLIGATION IN THE NORTH SEA

The timetable for implementing the landings obligation is demanding: 1st January 2015 for the industrial fisheries in the North Sea and 1st January 2016 for the first demersal species. The NSRAC outlines below how it considers that the new requirements should be implemented, within the specific conditions of the North Sea fisheries. There is a need to avoid any major pitfalls arising from a mishandled implementation regime. First, a summary is presented. Then the various issues are discussed at greater length.

Summary

- 1) Changes to current management and control regimes will be necessary to implement the landings obligation; affecting other aspects of the CFP. As a priority, discard plans must be developed well before the industrial and demersal fisheries become subject to the landings obligation, by the 1st January 2015 and the 1st January 2016 respectively. This document sets out the basic views of the North Sea Advisory Council on these issues. Subsequent documents will develop more directed and specific advice on the preparation of discard plans.
- 2) The Advisory Council has outlined above its own vision of the future for the North Sea Fisheries once implementation of the landings obligation has been effected. It would like to see high yield fisheries that are environmentally, economically and socially sustainable, operated by stable and profitable fishing businesses. Those fisheries will provide a source of healthy food, subject to full quality assurance. Management of the fisheries will depend upon multi-annual management plans developed specifically for the North Sea fisheries by cooperating member states working closely with the Advisory Council. Results-based management will pass greater responsibility on to fishers themselves. Fishers will manage their operations to achieve optimum catches, with landings consistent with their vessels' quotas and the requirements of the landings obligation. Control rules will be more consistent, coherent and cost efficient, and supported by a higher degree of compliance, co-operation and co-responsibility from the fishing industry.
- 3) It is envisaged that demersal fisheries will ultimately be managed through multi-annual management plans, based on an ecosystem approach, and developed at a regional level, with close involvement of the Advisory Council. A framework for the preparation of those plans has still to be put in place and their development faces a number of hurdles, including the slowly evolving science on mixed fishery, multi-species management plans. Effective and inclusive regional cooperation by North Sea member states, with full involvement of the Advisory Council, must be seen as a high priority.
- 4) Meeting the landings obligation will require changes to the current Control Regulation. Any new controls must avoid making the industry less efficient, and recognise the adverse conditions that fishing vessels have to endure at sea. There must be complete

removal or replacement of all regulatory requirements that are inconsistent with the landings obligation.

- 5) The landings obligation provides an opportunity for a decisive shift away from technical measures based on prescriptive rules to a radically more flexible and adaptable approach to achieving greater selectivity, focused at the individual vessel level. Fishers must also be allowed to find their own solutions to reducing unwanted catches. Residual and redundant technical conservation controls should be removed as the landings obligation is successfully implemented. What should be left is a minimum in fishing gear specifications to prevent the use of highly destructive methods. Only in exceptional circumstances, relating to the conservation of non-commercial by-catch species and habitat protection, should technical measures be determined through co-decision.
- 6) Fish for which scientific evidence demonstrates high post-capture survival rates should be returned to the sea rather than brought to shore, as this will reduce fishing mortality. Determining what constitutes a 'high' survival rate poses a challenge to scientists and policy makers. Post-capture survival rates are highly variable depending on species, gear characteristics, handling practices and environmental conditions. There is a general lack of scientific research that can be applied to these different scenarios and because of complexities in arranging appropriate investigations at sea, the NSAC is concerned that there is not sufficient time for the various scientific assessments to be completed in time to inform discard plans. One key determinant should be whether landing the fish leads to a greater fishing mortality. It is also noted that fishers themselves can enhance the conditions that contribute to survival through changes in their catch patterns and fishing behaviour. The second key determinant for deeming a species capable of surviving is therefore the potential of that fishing method to avoid catching unwanted fish. The Advisory Council intends to supply more detailed advice on this key issue of survival exemptions.
- 7) The application of the *de minimis* provision allows a small proportion of the total annual catch of all species to be exempt from the landings obligation. There is a need to define carefully those situations where these exemptions are to be applied. Priority must be assigned to those fisheries that would bear disproportionate costs for landing fish, those where selectivity improvements would be difficult to achieve, and those where health and safety issues would be generated. The Advisory Council will develop work streams to provide further advice on this issue.
- 8) Choke species may have a strong negative effect upon fishing businesses. Potentially large quantities of quota could remain uncaught. Article 2 of the basic regulation is aimed at ensuring that fishing activities are "environmentally sustainable in the long-term and managed in a way that is consistent with the objectives of achieving economic, social and employment benefits, and of contributing to the availability of food supplies". The closure of key fisheries through the creation of choke species must be avoided. A *métier-by-métier* approach at regional level may help in avoiding generating choke species. Commercial fishing representatives of the Advisory Council propose that the setting of TACs for non-target species should be avoided, where there is adequate monitoring of the state of the stocks concerned. Environmental NGO representatives

agree that choke species pose a threat to the economic viability of fishing businesses under a landings obligation and emphasise that a range of conservation, protection, handling and avoidance measures should also be considered to enable all species – both targeted and non-targeted – to be maintained at healthy levels.

- 9) Fishing opportunities will need to be adjusted to reflect the transition from landings quotas to catch quotas. The latest advice from ICES does include total catch estimates. Some quota flexibility may be required to “balance the books”. If a range of measures, including quota flexibilities, fail to eliminate choke species, then reducing the number of TACs or confining TACs to the main economic driver species may be necessary as a last resort in order to facilitate implementation of the landings obligation. In those circumstances it would be essential to then provide safeguards for minor, non-commercial and by-catch species through the adoption of technical, spatial or other measures to ensure the sustainable harvesting of all stocks.
- 10) The elimination, as far as possible, of unwanted mortality is a key objective of the landings obligation. Implementation of the landings obligation has itself the potential to generate unwanted mortality, with adverse implications for achieving and maintaining Maximum Sustainable Yield. Maintaining progress towards MSY in the North Sea demersal fisheries, whilst also implementing the landings obligation, requires both flexibility and caution. The Advisory Council advocates a step-by-step, adaptive approach. Multi-species considerations within an ecosystem-based approach must be built progressively into management decisions. MSY is most usefully understood as a range of fishing mortalities on the effort/yield curve rather than an individual fixed point; this view has been expressed in previous advice from the North Sea Advisory Council. The development of management plans on a regional basis is seen by the Advisory Council as a key step towards achieving higher yield fisheries, whilst maintaining the economic viability of fishing fleets. Member states and the Advisory Council will also have to consider the requirements of the Marine Strategy Framework Directive alongside those of the landing obligation in preparing those important multi-annual management plans.
- 11) The landing obligation will affect the economics of catching fish. It may also have severe economic effects upon downstream industries. STECF has already emphasised that choke species could have a serious negative effect on fishing businesses, some of which may be unable to continue trading. Large quantities of quota may also remain uncaught. However, the possibility of landing more commercially marketable fish can also act as a driver for fishers to put in place appropriate measures to maximise fishing opportunities. To ensure that all fish landed are of commercially marketable size requires the introduction of the best possible selective fishing gears, married with improved temporal and spatial measures. Fishers must be given greater flexibility in developing their own solutions to meeting the landings obligation. They will be assisted with this by the removal of obstructive technical conservation regulations.
- 12) There will be an additional cost to fishers associated with the landing of low value, regulated species. There will also be cases where vessels will be forced to return to port prematurely due to the pressures of stowage. It is not yet clear how this will affect vessel

profitability. However, in almost all cases it will lead to reduced income and may even lead to business failure.

- 13) A major threat to fishing businesses is the premature halting of fishing activity, generated by choke species. Vessels will have to have sufficient quota to cover expected catches before they put to sea. Many vessel operators will be faced with the choice of either paying the high cost of leasing quota (where the option of leasing exists), or laying up the vessel in port. Both courses of action will have a detrimental effect on their businesses.
- 14) Past experience has shown us that governance structures are absolutely central to the success of fisheries management measures in the North Sea. Policy formulation by member states cooperating at the regional seas level, with the involvement of the Advisory Councils, is now an integral part of the reformed CFP. Within the new CFP basic regulation there is an obligation on member states to consult with the relevant Advisory Council in the development of their discard plans. An appropriate framework for achieving this cooperation between member states and the Advisory Councils must be put in place as a matter of urgency.
- 15) In the North Sea, TAC levels and TAC uplifts for shared stock will have to be agreed with Norway. This is potentially a very significant factor in the implementation of the landings obligation. Closer cooperation between the EU and Norway is necessary if we are to implement a practical, working, discard ban.
- 16) The imminent arrival of the landings obligation in the demersal fisheries in the North Sea will add a significant pressure to the EU Norway agreement to develop solutions through practical and workable flexibilities. The Advisory Council advocates the early introduction of pilot projects to trial the application of the landings obligation. The pilot studies that have been undertaken so far have raised serious concerns about the ability of vessels to fish their quota allocations because of choke stocks. Implementing the landings obligation also creates enormous scope for unintended consequences. The best way to guard against perverse outcomes is to move forward through an adaptive approach, supported by an extensive programme of well-planned pilot projects and trials.
- 17) Adequate and effective control and monitoring is essential to implementation of the landings obligation. More effective compliance will be achieved by ensuring a level playing field at a regional level and by relaxing technical restrictions where there is high confidence in the verified catch data. It will be also be important for member states and the Advisory Council to work closely with the European Fisheries Control Agency to ensure effective control and monitoring, and to improve the gathering of information feeding the assessment and management process. A key risk in the implementation of the landings obligation lies in the loss of data quality, leading to weaker advice on the fish stocks.
- 18) The transition from the current arrangements to a fully-fledged landings obligation will be complex, difficult and painful for the fishing industry. It will be important to ensure that the new arrangements do not bring fishers into conflict with the control and enforcement agencies. However, the landings obligation might also serve as a catalyst to bring about

profound and positive changes to the North Sea demersal fisheries. It is important that the Commission and member states continue to engage fully with the North Sea Advisory Council in implementing these reforms to the Common Fisheries Policy.

1. Discard Plans for the North Sea Demersal Fisheries

Discard Plans will need to be developed by cooperating member states, with the participation of the Advisory Council, by the January 2016 target date for the main demersal species. Any discard plans should be consistent with articles 2, 15, 21 and 22 of the new CFP basic regulation.

STECF has been charged with developing guidelines to assist member states in formulating joint recommendations that will form the basis of regional discard plans. These will include:

- Definition of fisheries; management units and timelines for implementation
- Exemptions on the basis of high survivability;
- Provisions for *de minimis* exemptions
- Provisions on documentation of catches;
- Fixing of minimum conservation reference sizes
- Identification of potential indicators for future impact assessments

It will be important for member states and the Advisory Council to work closely with STECF in the development of those guidelines, and in the preparation of any proposals for exemptions within the discard plans.

2. Mixed Fishery Management Plans

With the implementation of a landings obligation in the North Sea it is envisaged by the Commission that demersal fisheries will ultimately take place within the context of multi-annual management plans, developed at a regional level, with close involvement of the Advisory Council. A framework for the preparation of those plans has still to be developed. There are no examples of existing mixed fishery plans that can serve as models, and in their absence there is a risk that interactions between species will not be adequately considered in management decisions, which will have significant consequences under the landings obligation. The preparation of mixed fishery management plans faces a number of hurdles, not least:

- Issues relating to institutional competence within European institutions and also in relation to the EU Norway reciprocal agreement

- The slowly evolving science on mixed fishery, multi-species and ecosystem dimensions to managing the fisheries in the North Sea. There is currently some scepticism whether mixed fishery plans can be developed successfully
- The need to consider differences between fishing fleets. Some fleets may be targeting species that form part of the by-catch for other fleets
- The requirement for effective and inclusive regional cooperation by North Sea member states, and for full involvement of the Advisory Council.

New mixed fishery plans are required, developed at a regional level, which properly integrate the current single-TAC approach, take full account of the whole fishery system, and are precautionary. It may be some time, however, before comprehensive, multi-annual, mixed-fishery plans are agreed and implemented for the North Sea demersal fisheries.

3. Monitoring, Control and Compliance

Meeting the landings obligation will require modernisation and major adjustments to the current Control Regulation. The discard ban will not be absolute as it only covers TAC species and the regulation allows for exemptions. Management of these exemptions will present major challenges for control, compliance and enforcement. A pragmatic and incremental approach to provisions on control will be needed to ensure that fishing and the processing of fish products continue to be viable activities. The implications of “detailed and accurate documentation of all fishing trips” required under the basic regulation may introduce proposals for new forms of control. It will be essential that those control measures be adjusted not just for reasons of alignment but to ensure acceptance and secure high compliance. Better, more effective, control rules will be needed to achieve co-responsibility from the fishing industry.

The overarching policy objectives with regard to control, monitoring and enforcement of the landings obligation must be to:

- **Achieve full documentation of catches**
- **Achieve a high degree of compliance, underpinned by a risk-based enforcement approach. Achieving a “level playing field” at a regional level will be important. Inter-regional coherence will also be important where fish move across regions.**
- **Ensure that the additional costs associated with monitoring and compliance with the landings obligation are proportionate relative to the scale of the fishery or business operation.**

- **Adopt pilot innovative approaches, such as electronic monitoring, reference fleets, catch composition checks, and self-audit, where possible, to achieve a balance between assurance and cost.**
- **Ensure complete removal of all regulatory requirements that are inconsistent with the landings obligation.**
- **Apply initial discretion in applying penalties, and adopt a phased and adaptive approach, in order to avoid conflict with fishers.**
- **Apply a common and strong legal framework, with appropriate sanctions, in order to achieve adequate compliance across regions.**
- **Ensure a proportionate approach, recognising fully the reality of conditions under which fishing vessels, and especially the smaller vessels, operate.**

In commenting on the proposed Omnibus Regulation, the Advisory Council has pointed out that new control measures being proposed would result in significant economic costs and regulatory overload for the industry, as well as an extra workload for crew on board fishing vessels. There is a risk of endangering the safe operations of fishing vessels. Any new controls must not make the industry less efficient and they must not simply move costs from the control authorities to the industry.

There will also be a continued requirement for the collection of scientific data from commercial fishing trips.

A continued, independent, scientific data collection programme is required as a key component of the implementation of the landings obligation. This would provide a mechanism for validating catch profiles and discard levels, providing confidence in catch estimates and enabling relaxation of technical measures.

Reference fleets may also play an important future role: with a sub-set of vessels operating in a fishery to represent the entire fleet. Other vessels might have their catch compositions checked. However, there may not be sufficient consistency of operations for this to work, for all fleets.

There must be close cooperation and an exchange of views between the European Fisheries Control Agency, member states, and the Advisory Council to ensure effective control and monitoring and achieve a cost effective and pragmatic control regime adapted to the specifics of each fishery.

4. Technical measures: achieving greater selectivity

The requirement to land all quota species (which will then count against quota) will provide a strong economic incentive to reduce unwanted catch. Disposal costs associated with landing unwanted catch will provide an additional economic incentive. The landings obligation provides an opportunity, as well as a strong imperative, for a decisive shift away from technical measures based on prescriptive legislation (which has not been a notable success over the last 20 years) to a radically more flexible and adaptable approach to achieving greater selectivity, focused at the individual vessel level. The introduction of a landings obligation renders many of the present regulations redundant. This new approach should be embraced and supported by removing all residual and redundant technical conservation controls simultaneously with the application of the landings obligation, as suggested by the Advisory Council in its advice on technical conservation measures.

With the implementation of a discard ban and adoption of results-based management, regulation based on mesh sizes and catch composition can be removed. As a consequence of this, and the greater accountability of fishers for their catches, fishers have suggested that the one-net-rule can now also be removed. Further discussion of this issue will now take place within the NSAC.

The landings obligation will itself drive increased selectivity and adaptation of fishing strategies to avoid and minimise unwanted catches. The landings obligation will move the CFP beyond its current prescriptive approach towards the elimination, reduction and avoidance of unwanted catches by fishers themselves. Selectivity and technical measures should be:

- Determined at individual vessel level as a rational response to the incentives and imperatives created by the landing obligation
- Supplemented, if necessary, by measures determined at regional level

It is likely that introduction of the landings obligation will have unintended consequences. It is of the utmost importance that in the interim period, before the demersal discard ban comes into force for demersal fisheries in January 2016, a major programme of trials and pilot studies should be undertaken. We note that a number of projects are already underway, and we would like to see these listed for the North Sea. These projects should highlight both potential problems and possible solutions likely to be encountered both by individual fishing vessels and member states in implementing the landings obligation. Time is needed for fishers to develop new fishing gears and new ways of fishing. Funding and additional quota to undertake these vital research and pilot projects must be granted by fast track, and given a very high priority.

5. Exemptions from the landings obligation

In terms of exemptions, there is a need to define:

- Those species for which fishing should be prohibited.
- Those species that show high survival rates, taking into account the characteristics of the gear, fishing practices, and the state of the ecosystem.
- How the *de minimis* provisions are to be handled.
- How species with zero TACs should be treated

High Survival

As STECF has pointed out, the landing of discards that would otherwise survive can have a negative impact upon stocks. Clearly, fish that are dead or dying on the deck, or species with low survival rates, must be landed. Norwegian experience suggests that some species, properly handled, can be returned to the sea and may survive in the short term. Fish that are scientifically demonstrated to have high long-term survival rates should be returned to the sea rather than brought to shore, as this will reduce fishing mortality. Where the scientific evidence on survival is incomplete, the most rational decision should be taken on whether to return fish to the sea, using the best available evidence until scientific proof is available. An interim risk-based approach, should be used to decide which species show good survival and can safely be returned to the sea, with positive benefits to fish stocks and to the ecosystem. Such initial and provisional decisions to release fish, however, should be conditional on further scientific investigations being put into place to acquire further supporting evidence. STECF affirms that there is a need for new experimental work to take place to consider ways of estimating survival and ICES scientists are preparing a guidance manual on survival experiments. One key determinant should be whether landing the fish leads to a greater fishing mortality. There is also a need not just to measure survival, but also to optimise survival through fishing practices, gear modifications, different treatments on deck, sorting methods etc. Improvements to fishing gear selectivity and the adoption of other measures to reduce unwanted capture should accompany work to optimise survival.

A pragmatic solution to the problems of survival would be to provide an exemption for those species where there is scientific evidence of high survival in the long-term, and to work at a fishery level to enhance the conditions that contribute to survival. However, the Advisory Council intends to look more closely at the issue of survival and to provide the Commission and North Sea member states with more detailed advice on this issue. Evidence will be provided on which species are most likely to survive, based on the best available scientific advice and the extensive knowledge of fishers.

***De minimis* provisions**

In the new regulation up to 5% of the total annual catches of all species subject to landings obligation can be exempt from the landings obligation. *De minimis* exemptions apply

- Where scientific evidence indicates that increases in selectivity are very difficult to achieve
- To avoid disproportionate costs of handling unwanted catches, for those fishing years where unwanted catches per fishing gear do not represent more than a certain percentage, to be established in a plan, of total annual catch of that gear

One interpretation of the regulation is that *de minimis* should be a simple solution for difficult problems with small quantities of fish caught in some fisheries where improved selectivity is not possible and the costs of landing the fish would be exceptionally high. The provision is not intended to provide a general exemption. However, the interpretation of the regulation requires clarification. It is also not certain whether the *de minimis* provision is an addition to the agreed TAC or a proportion of it. STECF has suggested that it might be the latter in order to meet MSY objectives.

Although the application of *de minimis* provisions must be justified, they may be important in keeping some fishing businesses viable. STECF guidance is being provided to member states for *de minimis* provisions in multi-annual plans or discard plans. The following questions are already being asked:

- What catch records are required to justify a *de minimis* exemption (by species)?
- When is unwanted catch “below a certain percentage of the total catch of that gear”?
- What additional costs will be involved (additional labour for sorting catch)? How is this to be measured?
- What percentage of total income is considered to be “disproportionate”?

Overall, there is a need to define carefully those situations where *de minimis* exemptions may be required, métier-by-métier, and to forward additional information on these conditions to the Commission, STECF and member states.

Zero TAC species

Zero TACs apply to ‘prohibited species’ (e.g. common skate). In addition, the TACs for some other species of conservation interest are currently set to zero, as in the case of porbeagle and spurdog. Some other species like west coast cod also have their actual

TACs set to zero as a temporary measure. Fishing vessels cannot currently retain species with zero TACs. The landings obligation does not apply to prohibited species, but the position with respect to other zero TAC species is obscure and requires clarification. There is the possibility that some of them may have to be landed. One possibility for dealing with such species is to treat them temporarily in the same way as prohibited species. Another is to set a by-catch limit, to allow fish caught incidentally to be landed, but without providing encouragement for a directed fishery. The Advisory Council will be considering the different options.

6. Dealing with Choke Species

Some care must be taken regarding the issue of "choke species" in implementing a discard ban. The term "choke species" describes the situation when the exhaustion of quota for one minor species in a mixed fishery prevents the full uptake of the remaining quota species that are the main targets. STECF has pointed out that choke species can have a strong negative economic effect - businesses may be unable to continue trading and large quantities of quota might remain uncaught. Different species may choke different individual vessels and/or groups of vessels operating in the same sea areas, depending on how access to quota is allocated, and which fishing gears are being used.

The effects of choke species on fishing businesses can be severe. Article 2 of the basic regulation states the CFP shall "ensure that fishing activities are environmentally sustainable in the long-term" and are managed "in a way that is consistent with the objectives of achieving economic, social and employment benefits, and of contributing to the availability of food supplies". We cannot risk the closure of key fisheries through inappropriate management measures, yet we should not jeopardise the state of vulnerable species.

Two different scenarios may avoid problems with choke species:

- **Ensuring that all TACs are set in good agreement with the abundance of each species. The quality of the stock assessments is dependent, amongst other things, upon the collection of sufficient data to perform analytical assessments for all stocks. Currently, however, there is a long time lag between the collection of those data and their application to stock assessment and quota setting. A more efficient stock assessment process will reduce the risk of setting quotas that do not account for sudden changes in the stocks. The use of real-time data from fishing vessels would assist in improving stock assessments.**
- **TACs should be set to ensure the sustainable exploitation of all species – both target and non-target. Improved monitoring and data collection through the landings obligation will assist in the provision of quality and up-to-date data for**

use in these scientific assessments. Given the complexities of mixed fishery management, species management through TACs may not achieve the required recovery or sustainable exploitation for some species, notably non-target species. In such instances, setting of TACs for non-target species may no longer be appropriate and it may be necessary to reduce the number of TACs or combine TACs. In that eventuality it will be essential to provide safeguards for minor, non-commercial and by-catch species to ensure the sustainable harvesting of all stocks. This may be achieved through the application of alternative conservation and protection measures such as, *inter alia*, spatial and/or temporal closures to protect spawning fish, juveniles or those habitats with which non-target species have a close association.

It is difficult to forecast in advance which species will become choke species. Some may be by-catch species while others may be targeted species with limited quotas. Flexible and adaptable management arrangements will be required at all levels, including the national level, to prevent the exhaustion of quota for minor species reducing the uptake of the major economic species.

Past estimates of discards have at best been highly uncertain and for many species they have often lacked accuracy. There is a need to establish “true” catch figures before the new regulation is enforced. There is a need for trials in a range of fisheries aimed at documenting all catches.

7. Quota Management

One solution to the development of choke species is through more flexible allocation of quotas to individual vessels. Management of national quota allocations by member states lies exclusively within their own competence. Nevertheless, the landings obligation will set up a *hierarchy* of responsibilities and shared competencies that will ultimately determine the quota rules under which fishing vessels in the North Sea must operate.

These quota rules will include:

1. The CFP Basic Regulation agreed by co-decision, with oversight by the European Commission/ STECF
2. The Discard Plan or Multi-annual Management Plan agreed by regionally cooperating member states and approved by the Commission.

3. National quota management rules applied by individual member state authorities to both Producer Organisations and individual vessels
4. Producer Organisations, where member states have devolved quota management arrangements
5. Fishing vessels operating under quota

The extent to which the quota management arrangements within a member state can be adapted to deal with the landings obligation is an open question. Different member states with fleets operating in the North Sea have different arrangements:

- Devolved responsibilities to Producer Organisations managing through pool allocations, ITQs or a mixture of the two
- Transferable fish concessions
- Periodic catch limits set centrally

The level to which responsibility is devolved and the bodies through which management is effected are important in terms of the tools available to reinforce quota management. The devolution of management to organisations such as Producer Organisations is attractive to some member states. But these organisations often lack the practical powers to react in a timely manner to overfishing by a vessel or group of vessels. Management through Fisheries Administrations, while enabling action against such threats, is often unwieldy, uses blunt tools and cannot respond effectively to the nuances of many fisheries and to ensure the optimum uptake of quota.

Member states can provide incentives for improvement by providing priority access to fishing opportunities to operators employing the best available selective practices and fishing gears.

In the context of both discard plans and management plans, it will be important to have clear definitions of *areas*, *fisheries* and *stocks*, regardless of whether the landings obligation is implemented through a single species or mixed fishery management plan. In the North Sea the presumption should be that the units selected should be as large as possible, unless there are compelling reasons to the contrary. This will ensure maximum flexibility for quota management purposes, which will in turn help vessels to adapt to the requirements of the landing obligation. A co-ordinated and coherent approach to the delineation of the individual management areas will be required, both within and between regional management groups, and in areas where stocks are shared between such groups.

TAC Uplift

Article 16 (2) requires overall fishing opportunities to be fixed to reflect the transition from landings quotas to catch quotas. Any TAC uplift to accommodate the landings obligation will require the transfer of fish previously in the discard column of ICES advice into the catch column; on the presumption that the requirements of the landing obligation will oblige all TAC species caught to be landed, unless a specific exemption applies (*de minimis* or high survival rates). No allowance is made within the regulation for any lesser result in the fixing of overall fishing opportunities.

Article 16 (1) clearly states that in the allocation of fishing opportunities, the relative stability of fishing activities should be maintained. While this is not the same as requiring the maintenance of fishing opportunities, it could be assumed that activities are commensurate with opportunities, resulting in a requirement for the overall relative stability ‘share’ of each species for each member state to be maintained at the current level. The principle of Relative Stability will, we suppose, apply to the uplift of TACs but given that some fleets will have discarded at a higher rate than other fleets, the allocated uplift may not be directed to where it is needed to cover existing discards. Regardless of the allocation mechanism they use, each member state must take the likely catch composition of fleets into account (Article 16 (7)), although catch compositions themselves are likely to change under the impact of the landings obligation. Difficult choices will be faced at a regional level by member states and advisory councils in deciding whether to reward a high discard fleet and thereby remove the incentive to adapt; or to recognise real difficulties faced by some fleets in reducing discards.

Even in the North Sea where data deficiencies are not as significant as elsewhere, discard data tends to be uneven depending on which fishery; species; and member state is concerned. The impact of this unevenness in the discard data could be significant for the magnitude of quota uplifts and for the implementation of the landings obligation in its early years. Making quick use of accurate real-time data offers the best mitigation.

Quota Flexibilities

Some quota flexibility may be required to “balance the books” within the context of the landings obligation. Ways permitted by the basic regulation through which the adverse consequences of the landing obligation (in terms of disruption to coherent quota management) could be managed and mitigated would be through:

- Inter-annual quota flexibility (banking and borrowing)
- Inter-species flexibility

In the North Sea, for shared stocks, the TAC levels and therefore the TAC uplifts will be determined through the process of the annual fisheries agreement with Norway. Although it is possible for North Sea member states to signal their preferences, there is no guarantee that Norway will agree; or what price it will try to extract for this change from the status quo.

This is potentially a very significant factor in the implementation of the landings obligation in the North Sea.

Article 15 (8) enables inter-species flexibility. The Article does not specify that the quota flexibility is associated with the share of the relevant member state, with the exception of the reference to a total lack of quota. However, it may be assumed that, in line with the overall principle of the allocation of fishing opportunities, any quota flexibilities will be applied on a member state basis. This is also consistent with the application of the expanded banking and borrowing system, and leaves the overall allocation of the relevant entitlement for both allowances to the competency of the member state. The use of flexibility is dependent on the non-target stock being within safe biological limits.

With inter-species flexibility, there is potential for impacts upon stocks if quota is exchanged between a high volume/low value species and a low volume/high value species. It will not always make sense to count the catches of one species against the quotas of other species, irrespective of the state of conservation of the different species or irrespective of the level of mortality induced by a particular fishery. Nevertheless, inter-species flexibility can play an important role in some but not all fisheries.

8. Reducing the Number of TACs

If the above measures, including quota flexibilities, fail to eliminate choke species, then reducing the number of TACs set or confining TACs to the main economic driver species may, as a last resort, make application of the landings obligation easier. In that eventuality safeguards will be essential, involving technical, spatial and other measures, to ensure that all stocks are harvested sustainably. By-catch species or “associated stocks” do not generally influence fishing behaviour or patterns. They are caught (and within a landings obligation, landed) in proportion to which they appear in the catch. With fewer TACs some targeting of what are generally considered by-catch species might take place, but one would have to examine the respective costs and benefits of, on the one hand substantially removing the potential for choke stocks and on the other lifting quota constraints on a minor species. We note that fewer quotas are imposed upon Norwegian vessels than upon EU vessels.

The setting of inclusive TACs for groups of target species could be considered for some fisheries, where there are adequate safeguards to protect minor, non-commercial, and by-catch stocks.

Transfer of TAC between species, as well as between years might also be allowed – as long as the range of acceptable Fmsy values for the species is not compromised.

Sufficient other conservation or avoidance measures must be implemented to ensure maintenance of all stocks - target and non-target - at healthy levels, along with adequate control and monitoring measures.

Primary TACs might be set for the gadoid round fish (excluding ling, blue ling and tusk), monkfish, *Nephrops*, and flatfish such as plaice, sole and megrim. MSY targets for these primary species should be set as ranges in order to enable maximal yields for fisheries, rather than for single species. Studies might be put in place to assess the risks versus the benefits of this approach.

9. MSY and the Landings Obligation

Fishing at Maximum Sustainable Yield (MSY) has now taken the form of a legal obligation within the CFP Basic Regulation. The practical challenge facing fisheries managers and fisheries stakeholders is how to maintain the progress that has been made over the last decade towards stable high yield fisheries in the North Sea, whilst:

- Simultaneously maintaining the economic viability of the fleets
- Implementing the landings obligation.
- Taking account of the multi-gear character of our demersal fisheries
- Taking account of multi-species interactions

For the reformed CFP European institutions have chosen to use the concept of fishing mortality at maximum sustainable yield (F_{msy}) as the legally required upper limit for achieving low mortality, generally regarded as a precondition for high yields.

The elimination of unwanted fish mortality is a key objective of the landings obligation. Nevertheless, implementation of the landings obligation has itself the potential to generate additional mortality, which has implications for achieving and maintaining MSY. Those risks must be managed in the best way possible.

It is clear that future management measures must negotiate both the legal realities enshrined in the CFP basic regulation and also the biological realities in the North Sea marine ecosystem, and in particular species interactions through various predation patterns. Inadequate data and questionable assumptions on actual, current predation patterns create significant challenges for the implementation of management decisions based on multi-species advice. It is clear, however, that ignoring multi species interactions would be the greater error. Clearly, this is a complex arena in which the evolution of practical scientific and management advice is most definitely “work in progress”.

Against this background, maintaining progress towards biomass levels that are able to produce MSY in the North Sea demersal fisheries, whilst also implementing the landings obligation, requires flexibility, inventive solutions and caution.

To avoid losing gains made in recent years the NSAC advocates:

- **An adaptive step-wise approach, making TAC decisions on the basis of scientific advice whilst also considering economic evidence, and phasing progress towards MSY to take account of the latter.**
- **Progressively building multi-species considerations into management decisions as the quality of scientific advice on species interactions strengthens.**
- **Understanding MSY as a range of fishing mortalities on the effort/yield curve rather than an individual fixed point.**
- **Ensuring that the high levels of compliance experienced in recent years and which are an intrinsic aspect of progress to MSY, are maintained by:**
 - **Securing and maintaining the support of resource users through their close involvement in management decisions**
 - **Ensuring high levels of clarity about requirements**
 - **Aligning economic incentives with management objectives as far as possible**
 - **Ensuring that fleet profitability is not dramatically undermined by management decisions**
 - **Ensuring an effective network of monitoring and control**
- **The use of management plans to secure progress towards high yield fisheries without destabilising the economic viability of the fleets**

10. Wider Ecosystem Considerations; the MSFD

In 2008 the European Parliament and Council adopted the Marine Strategy Framework Directive (MSFD) with the aim of reaching Good Environmental Status (GES) for European marine waters by 2020. Each member state is required to take the necessary measures to achieve GES, by maintaining or restoring marine waters to a healthy status, while maintaining an efficient and economically viable fishing industry. Most member states have acknowledged that the use of existing management measures, including the reformed Common Fishery Policy (CFP) and the Habitats and Species Directive are the main drivers to achieve GES.

The MSFD requires the achievement of GES for 11 descriptors, of which 4 are most relevant from a fisheries perspective. Of major influence for the industry will be the aim of the MSFD to achieve GES for descriptors 1 (biodiversity), 4 (food webs) and 6 (seafloor integrity), which cover impacts on the wider ecosystem, and descriptor 3 which addresses the status of exploited fish and shellfish stocks according to three criteria: fishing mortality, stock biomass and size and age structure. The necessity of reaching GES for these 4 descriptors in combination with implementation of a landing obligation requires evaluation of possible implications for the fishing industry in the North Sea.

A key element in achieving Good Environmental Status for biodiversity, the status of fish stocks, food webs and seafloor integrity is the development of more selective and benign fishing gears. The fishing industry has substantially invested resources to promote selectivity. This process must be maintained and aided by incentives to further reduce discards.

The implementation of the landings obligation and underpinning management framework should consider interactions with other species and possible implications for achieving GES. Selectivity and avoidance measures, together with some exemptions, will have benefits for a range of species (commercial and non-commercial) and will possibly fulfil a range of requirements for GES under the MSFD.

Through regionalisation, member states and the Advisory Council will have to consider the requirements of the MSFD alongside those of the landings obligation and in the context of multi-annual management plans.

11. Implications for Fishing Businesses

Fishers will view success of the landings obligation not just in term of its sustainability, or whether it delivers wider societal confidence, but in terms of how fishing businesses cope during the transition phase and beyond. Fishers will be exposed to new pressures as fishing is transformed. It will be extremely important, therefore, to understand the speed and depth at which change should be delivered if we are to protect fishers from any unnecessary financial pressures or business failure.

The landings obligation will not simply affect fish catching, it will also potentially have severe economic effects upon those downstream industries that depend upon a supply of fish, and which support the operation of the fishing industry itself.

STECF has already emphasised that choke species could have a serious negative effect on businesses, which may be unable to continue trading. Large quantities of quota may remain uncaught. There may need to be substantial changes in practice for businesses to remain trading. Article 2 of the new basic regulation requires that the CFP “shall ensure that fishing and aquaculture activities are environmentally sustainable in the long-term and are managed

in a way that is consistent with the objectives of achieving economic, social and employment benefits, and of contributing to the availability of food supplies". But those economic and social benefits may be jeopardised and fishers forced out of business by the landings obligation.

The possibility of landing more commercially marketable fish can act as a driver for fishers to put in place appropriate measures to maximise fishing opportunities. It is natural for businesses to move to the point of maximum efficiency, which in the case of the landing obligation means ensuring as far as possible that all fish landed is of commercially marketable size. This will mean the introduction of the best possible selectivity married with improved temporal and spatial awareness.

The cost to fishers of providing improved selectivity will not be insignificant, given that most solutions will be at the individual vessel level: although some solutions will undoubtedly be available at the *métier* level, with groups of similar vessels finding common solutions. The costs entailed in creating, building and trialling new ideas and concepts will be high. Downtime and periods of low revenue during any trial phase will add significant costs to business and, whereas some trials will be funded or part funded, there will be a vast number that receive zero or very little funding.

There will be an additional cost to fishers associated with the landing of low value, regulated species, below the MCRS. It has yet to be tested whether the level of value returned from such landings will come close to the cost of returning them to shore. There will also be cases where vessels will be forced to return to port prematurely due to the pressures of stowage. Similarly, it is unclear how this will affect vessel profitability. However, in almost all cases it will lead to reduced income and may even lead gradually to business failure.

A major threat to fishing businesses is the premature cessation of fishing activity which will occur in situations where a mismatch exists between the abundance of a particular stock and the available opportunity to catch it (the choke species situation). The legislative requirement is for a vessel to have in place fish quota to cover expected catches before it puts to sea. This dictates that many vessel operators will be faced with the choice of either paying the high cost of leasing quota (where the option of leasing exists) to gain continued access to the fishery for other species, or laying up the vessel in port. Both courses of action will have a detrimental effect on business although the latter has a higher probability of being terminal.

There is also a risk to fishing businesses from a reduction in the data able to be collected on fish stocks as a result of the landings obligation. If operators continue to discard then reductions in data quality foreseen by STECF will affect the quality of the assessments with detrimental effects upon the management of the fisheries.

The landing obligation will affect the economics of catching fish. There will be an additional cost to fishers associated with the landing of low value, regulated species. Vessels may also be forced to return to port prematurely due to the pressures of stowage. The biggest threat to the fishing business is the premature halting of fishing activity, generated by choke species. Vessels will have to ensure they have sufficient

quota to cover expected catches before they put to sea. In almost all cases these problems will lead to reduced income and may even lead to business failure.

12. Governance

Future Governance

Experience over the last 20 years tells us that governance structures are absolutely central to the success of fisheries management measures in the North Sea. Past failures in governance, and specifically micro-management by over use of overly prescriptive legislation, was identified in the CFP Reform Green Paper as one of the main reasons fisheries policy in the EU had frequently failed to meet its objectives. CFP reform has now moved some way towards a decentralised approach. Policy formulation by member states cooperating at the regional seas level, in ways that are consistent with EU treaty obligations, is now an integral part of the reformed CFP, and by extension to the implementation of the landings obligation.

The North Sea Advisory Council

The direction of travel reflected in the current governance changes is very much in line with advice provided by the North Sea Advisory Council since its establishment in 2004. We recognise however, that notwithstanding the central importance of having the right governance structures in place, decentralised policy formulation provides the preconditions for success, not success itself. The focus must now shift to the content of fisheries policy and specifically the implementation of the landings obligation.

Engagement with the Scheveningen Group

Within the new CFP basic regulation there is an obligation on member states to consult with the relevant advisory council(s) in the development of their discard plans (article 14a.). The advisory councils' privileged status, reflecting their expertise and composition as stakeholders, and their enhanced role within the reformed CFP, would lead us to expect an obligation for them to be consulted. However, it is the NSAC's ambition, and we believe the North Sea member states' preference, also to move beyond formal consultation towards a more embedded and pervasive partnership approach - without however compromising respective competencies. Engagement of this sort has already begun through the involvement of the NSRAC in the development of a discard "atlas" for the North Sea demersal fisheries, under the framework of the Scheveningen Group of cooperating member states.

A partnership approach relies less on formal governance structures and more on developing ways of cooperating that build mutual trust and confidence. Much has already been done to integrate stakeholders into the production of fisheries science at a formative stage, where it matters (STECF expert working groups, ICES benchmark and data compilation meetings). Now, we must extend this evolution to the policy sphere. The integration of stakeholders into key scientific deliberations is widely regarded as a wholly successful and positive development. Although there are logistical, practical and resource implications, we see no reason why the integration of AC stakeholders into policy formulation should not follow a similar trajectory. A comparable model of engagement is required to that which has evolved between scientists and stakeholders. An annual meeting between ICES and the RACs (MIRAC) is held to discuss high-level strategic issues. The main engagement comes through a series of different benchmark meetings, workshops, briefings and fisheries science projects throughout the year, attended by a range of stakeholders, depending on their experience, interests and availability.

The Advisory Council considers that the highest priority should be given to moving towards an embedded and pervasive partnership with the Scheveningen Group. At a practical level, this will mean:

- **Using all available opportunities to develop a continuous constructive dialogue between member states and the North Sea Advisory Council**
- **Developing collaborative initiatives to trial untested aspects of the landings obligation**
- **Finding new ways of sharing information**
- **Defining ways in which the Scheveningen group and the Advisory Council can jointly develop a shared strategic vision for the implementation of the landings obligation and the development of multi-annual management plans**
- **Avoiding duplication in favour of transparency and cooperation**

Working jointly with the European Fisheries Control Agency

It will be especially important for member states and the Advisory Council to work with EFCA to:

- **Strike the right balance between a level playing field and regional distinctiveness**
- **Deal with trans-boundary issues**
- **Develop a low-cost, risk-based approach to monitoring and enforcement**
- **Avoid the landings obligation acting as a driver for more detailed control conditions at the expense of fishing businesses**

Norway

Geography and shared fish resources make it inevitable that the EU and Norway are compelled to find ways of working together to jointly manage shared fish stocks. The annual reciprocal fisheries agreement between EU and Norway is the principal instrument through which this cooperation is achieved. It is however a complex, multi-faceted agreement, in which negotiating leverage in one part of the agreement can create obstacles to a straightforward management approach in another.

Despite the negotiating complexities of the relationship between EU/ Norway, in the joint conference on long term management plans held in Svalbard in May 2012, both parties spoke strongly in favour of management plans which:

- Are developed with a high degree of transparency and participation by stakeholders
- Focused on long term objectives
- Provide for high and stable yields
- Provide a firm framework for TAC decisions and other harvest control rules, whilst retaining sufficient flexibility to adapt to changing conditions and scientific advice

Agreed EU/Norway management plans do not mean identical management measures in EU and Norway waters but do suggest a commitment to achieve as much harmonisation and coordination as possible.

The EU landings obligation poses many challenges to the EU Norway agreement. However, the EU Norway agreement will inevitably be an essential element in implementing the discard ban in EU waters.

Discussion at EU/Norway level must focus on:

- **TAC uplift to accommodate the landing of fish that would otherwise have been discarded**
- **Inter-annual quota flexibility**
- **Inter-species flexibility**
- **Reducing the number of TACs or grouping TACs for jointly managed stocks where considered necessary as a last resort, whilst also providing adequate alternative safeguards for non-target species to ensure that they too are managed sustainably.**

Some of these issues may be regarded as potential showstoppers because, along with the *de minimis* provision, they are the means by which flexibility is introduced by the EU into an otherwise absolute prohibition on discarding of quota species. Norway has its own way of applying its discard ban in a flexible and pragmatic fashion. The imminent arrival of the landings obligation in the demersal fisheries in the North Sea will add a significant pressure to the EU Norway agreement to develop solutions through practical and workable flexibilities. What is certain is that it will not be possible to retain an economically viable fleet without those flexibilities.

Against this background, the North Sea RAC advocates:

- 1) The early introduction of *pilot projects* to trial the application of the landings obligation *with* and *without*:
 - Quota uplift
 - Inter-species flexibility
 - Where appropriate, and after due consideration, grouped quotas for non-target stocks, set to allow for all species within the group to be fished at sustainable levels.

The pilot studies that have been undertaken so far have raised serious concerns about the ability of vessels subject to a landing obligation, with quota uplift, to average estimated discard levels in the previous year, to fish their quota allocations because of choke stocks. Close cooperation between EU and Norway is necessary if we are to implement a practical, working, discard ban. The Advisory Council is meeting with the Norwegian Fishermen's Association to foster the kind of cooperative relationships and mutual understanding that will be essential in the context of the development of multi-annual management plans at a regional-seas level.

- 2) The avoidance of paper solutions (such as the 2011 high grading ban, which may have worked at the level of public relations but had absolutely no effect at vessel level and in fact was legally unenforceable in the EU).

- 3) Minimising the scope for perverse outcomes. In applying an instrument as broad in potential effect as the landings obligation there is enormous scope for unintended consequences. The best way to guard against perverse outcomes is to move forward through trial and error (what in some circles is referred to as an adaptive approach). An extensive programme of pilots and trials will be required. The application of a big bang approach with minimum preparation is not one that can be contemplated.
- 4) Dialogue is going to be essential if the practical implications of the landings obligation are to be understood fully. The difficulties encountered in the EU/Norway discussions over the application of the landings obligation in the Skagerrak has provided some insight into the issues that are likely to be encountered in the North Sea.

Improving fisheries science

There is a serious problem, recognised by scientists, with the long time lag in collecting scientific data and applying them to fish stock assessments. Particular difficulties may arise when the stock assessments do not accurately reflect the current state of the stocks in a given area - discarding then becomes inevitable. There is strong danger of particular species becoming choke species if their TACs are not set at levels that reflect their true abundance. Adequate financial support is required to ensure that scientific advice is based on up-to-date assessments of the stocks, and that long delays in the compilation and analysis of catch data are reduced.

Fishing fleets are able to assist with the collection of relevant data to allow real-time fish stock assessments. These data from the fishing fleet should be used systematically in the future to improve the assessments, and to ensure that scientific advice reflects the actual conditions on the fishing grounds.

On board sampling of length distributions, together with electronic logbook data will enable fast track updates of assessments. Real time monitoring and rapid data compilation and analysis are essential if we are to align the fishing regulations and fishery measures with the actual abundance of fish on the fishing grounds.

There is a particular need to rectify the deficiencies in current data on fish that are discarded by species and by métier. Quota uplift will be based on scientific evidence and catch information, including estimated levels of discarding, averaged across member states. But there is a lack of actual data; although the North Sea is in a better position than some other sea areas. With the obligation to land all catches improvement in the collection of data on discards is needed.

Cooperation with scientists will also be necessary to assist in determining those species and fishing methods showing high survival, and in defining *de minimis* conditions.

A Learning Process

It is important to recognise that for all involved, the transition from a top-down, command and control approach to managing the North Sea demersal fisheries and implementing the landings obligation will be a learning process. The experience of the regional advisory councils in providing the foundations for trans-national dialogue within the fishing industry and also with other stakeholders, including the e-NGOs, has been quite remarkable. Member states have always communicated with each other to some degree or other but the kind of close collaborative work which is now expected of them was not required, or not even considered appropriate within the previous more hierarchical CFP regime, in which member states were as often as not supplicants rather than equals.

The truncated timetable for implementing the discard ban is a less than helpful context in which to develop these new and hopefully positive relationships. Nevertheless that is the reality and it is the Advisory Council's aspiration that a working relationship will quickly be established. It is certainly the Advisory Council's intention to accept any invitation to participate in this process at every level.

13. The way forward

There is little doubt that the transition from the current arrangements to a fully-fledged landings obligation will be complex, difficult and even painful. It will result in changes to the ecosystem that are only dimly perceived and difficult to predict. It will require behavioural and institutional change, not only from the fishing sector but from fisheries managers, control authorities and fisheries scientists.

However as our vision statement makes clear, if handled well, the landing obligation also has the capacity to be the catalyst that brings profound and positive change to the North Sea demersal fisheries.

It is important that the Commission and member states continue to engage fully with the North Sea Advisory Council in implementing reforms to the Common Fisheries Policy.