

# Reform of the Common Fisheries Policy:

Turning the tide for low impact fisheries



**SEAS AT RISK**

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# Reform of the Common Fisheries Policy

Turning the tide for low impact fisheries

# Reform of the Common Fisheries Policy: Turning the Tide for Low Impact Fisheries

Seas At Risk is a European association of non-governmental environmental organisations working to protect and restore to health the marine environment of the European seas and the wider North East Atlantic. Its work in fisheries focuses on addressing issues of over-fishing and the collateral damage to habitat and the wider marine environment that fishing practices can incur.

Together with more than 160 organisations in the coalition group OCEAN2012<sup>1</sup> - of which Seas At Risk is a founding and steering group member - Seas At Risk is striving for a reformed Common Fisheries Policy that:

- enshrines environmental sustainability as the over-arching principle without which economic and social sustainability is unobtainable;
- ensures decisions are taken at the most appropriate levels and in a transparent way, ensuring effective participation of stakeholders;
- delivers sustainable fishing capacity at EU and regional levels;
- makes access to fisheries resources conditional on environmental and social criteria; and
- ensures public funds are only used in a way that serves the public good and alleviates social impacts in the transition to sustainable fisheries.

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<sup>1</sup> "A coalition dedicated to ensuring that the 2012 reform of the EU Common Fisheries Policy stops overfishing, ends destructive fishing practices and delivers fair and equitable use of healthy fish stocks." [www.ocean2012.eu](http://www.ocean2012.eu)

# Executive summary

## Low impact fishing

Fishing has impacts on the marine environment by selectively removing fish and other organisms – i.e. impacting on ecosystem structure and composition – and through physical interaction – e.g. a trawl or dredge impacting on the seabed, and thus altering the seabed habitat. In addition, fishing also has indirect impacts on the environment due to the greenhouse gas emissions stemming from its fuel use. The extent of such impacts can be changed by using different gears and practices, and it is possible to reduce the impact of almost all interactions, though this is easier to achieve in some fisheries than in others.

There is broad support for reducing the impact of fishing on the marine environment, but only limited progress has been made in putting this ambition into practice. The current debate on the reform of the Common Fisheries Policy (CFP) provides a great opportunity to adopt low impact fishing as a policy objective, backed up by a programme of tailored incentives to change.

The 2009 report “*Moving towards low impact fisheries in Europe: policy hurdles & actions*”, a study commissioned by Seas At Risk, made a number of recommendations, including:

- recognise different environmental impacts of different fleet segments when developing policy for capacity reduction or establishing “rights based” management systems, ensuring the most environmentally-friendly components of the fishing fleet are not disadvantaged;
- ban or severely limit discarding, at the same time as encouraging greater gear selectivity;
- use zonal management to make more apparent the benefits of less damaging gears;
- provide positive incentives to low impact fisheries – as long as this does not amount to a subsidy to increased capacity;
- ensure coherence of the CFP with EU commitments on sustainability and environmental impacts of fisheries.

The current study examines these measures in greater detail in the context of CFP reform.

## Reform proposals and low impact fisheries

The European Union makes prominent commitments to sustainable fisheries, application of an ecosystem-based approach to fisheries management, and improvement in marine environmental quality (in particular through the Marine Strategy Framework Directive (MSFD)). However, whilst there are several aspects of the European Commission’s proposals for the CFP reform that do deal with environmental aspects, there is no clear statement of environmental policy.

A number of simple modifications of the proposals to support low impact fishing would also contribute to the achievement of other policy objectives, and do so mainly through industry rather than government led investment.

The main points to be addressed in order to promote low impact fishing within the CFP reform process are threefold:

- how can quota management systems be employed in support of low impact fishing;
- how can the proposed partial discards ban be converted into a much more powerful policy instrument for improved environmental practice; and



- how can a greater focus on inter-linkages between zonal management, licensing and socio-economic objectives both amplify the scale of benefits deriving from any low impact fishing programme and counter some of the more negative impacts of quota management systems and fleet capacity reduction measures?

## Conclusions and recommendations

The main conclusion is that the CFP reform proposal contains elements that deal with environmental aspects, but that there is a lack of coherence in the approach and no clear policies aimed at reducing the environmental impacts of EU fisheries as a whole. This can be largely fixed by adoption of a low impact fishing dimension within the CFP. This would not only bring focus and form to the environmental policy strand, but it would also provide additional financial leverage for change<sup>2</sup>:

- giving a further push to fleet capacity reduction measures (and at no additional cost),
- bringing the partial discards ban proposals into mainstream fisheries management by refocusing the issue onto gear selectivity, thus putting the emphasis on catching what you want to land, rather than landing all you catch,
- providing incentives to zonal management and contributing to the socio-economic objectives of the CFP.

Indeed it would appear that it is the lack of coherence in the current CFP reform proposal that is its weakness. Strong policy statements are made in respect of management of fishing capacity, rebuilding of stocks to sustainable levels, decentralisation and regional management, and even in stopping the wasteful practice of discarding. Each of these policy strands could be greatly enhanced, however, if the CFP Regulation included guidance on how these policy strands inter-link, and how each of these links strengthens policy delivery (a graphical representation of these inter-linkages is presented as Annex A).

Currently there is little to no penalty for vessel owners who use gear and fishing practices that are damaging to the environment, and no relative advantage is given to vessel owners that employ low impacting gears and practices. The industry is currently able to externalise almost all its environmental costs with impunity. By introducing a clear low impact fishing policy strand, mechanisms are put in place that work in support of sustainable practices.

The recommendations arising from this analysis are:

## Objectives

**Recommendation 1:** The reformed CFP should include as one of its objectives the minimisation, and where possible elimination, of negative environmental impacts of fishing. Therefore, it should promote a transition to low impact fisheries.

## Access to resources

### • Access criteria

**Recommendation 2:** Access to fishing opportunities should be allocated on the basis of environmental and social criteria to promote sustainable fishing. Operators performing well on these criteria should be given preferential access to resources (both in terms of quota and days at sea). Criteria should include selectivity, impact on habitats, energy consumption per tonne of fish caught, quality of employment, associated benefits to coastal communities, and compliance with the rules of the CFP. Such an allocation

<sup>2</sup> It aligns good environmental practice with commercial interest, and fleet rationalisation is funded by enterprises rather than from the public purse.

system will serve as a strong incentive for low impact fisheries, and will promote movement away from micro management to results based management.

**Recommendation 3:** The Commission proposal to allow Member States to reserve up to 5 per cent of their fishing opportunities for allocation according to specific eligibility criteria provides a first step towards an allocation system based on environmental and social criteria and should become mandatory. Eligibility should not be restricted to holders of transferable fishing concessions (TFCs), and the Member State's reserve should be significantly increased (to at least 25 per cent) for it to have any impact as an incentive. Specific guidance on criteria should be agreed at EU level to ensure this tool serves to promote low impact fisheries.

- **Transferable Fishing Concessions (TFCs)**

**Recommendation 4:** The introduction of transferable fishing concessions (TFCs) should be voluntary rather than mandatory. Member States should have the flexibility to choose from a range of options on how to allocate access to fishing resources. TFCs are a specific market-based form of allocation scheme that can lead to a decrease of the number of active fishing vessels, but will not, on its own, ensure the remaining fleet operates in an environmentally and socially sustainable manner.

**Recommendation 5:** Provisions must be introduced in the legal text to ensure that where TFCs or other trade-based systems are implemented, sufficient safeguards are in place to prevent excessive concentration of rights and to protect low impact fishing vessels. Such safeguards include limiting tradability, and reserving certain zones or giving preferential access when allocating concessions to those vessels adopting low impact gear and practices.

- **Spatial management**

**Recommendation 6:** An additional tool to regulate access to resources is zonal management, which should be given greater prominence and used to reserve clearly defined areas for operators adopting low impact gear and fishing practices. In this way, zonal management can provide a strong incentive for low impact fisheries. Control and enforcement of zonal management should be facilitated through increased use of electronic vessel monitoring in the inshore and small-scale fleets, and in particular the use of relatively cheap "black-box" data loggers should be encouraged.

- **Discard ban**

**Recommendation 7:** There needs to be an explicit link between the discard ban and selectivity to ensure that the discard ban is not just an encouragement to land everything, but rather contributes to increased selectivity.

**Recommendation 8:** Higher selectivity should be encouraged by giving preferential access to those who fish in the most selective way when allocating fishing opportunities.

**Recommendation 9:** Any commercialisation of unwanted catches may create financial incentives to target fish that fishers had previously tried to avoid. Deducting all catches of quota species from a vessel's quota is a primary incentive to improved selectivity. In addition, the majority of the revenues from selling undersized bycatch should also revert



to fisheries control and/or research, in order to rule out that operators yield a profit from poor practice. The landing obligation should rather incentivise fishers to minimise unwanted catches, and in that way help movement away from micro management to results-based management.

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# 1 Introduction

## 1.1 Low impact fishing

Fishing has impacts on the marine environment other than those that arise from the removal of a proportion of the population of the target species. These may be **direct**, such as impacts on marine populations from unselective gear, destruction of the seabed, or interactions with rare or endangered species. Fishing impacts may also be **indirect**, for example contributing to climate change via the carbon emissions of fishing vessels.

The 2009 report “*Moving Towards Low Impact Fisheries In Europe: Policy Hurdles & Actions*”<sup>3</sup>, a study commissioned by Seas At Risk, documented why a move towards the use of more selective and less damaging fishing gear and practices made for better and more sustainable fisheries and marine policy and practice, particularly in light of the state of crisis of European fisheries. It showed how shifting to low impact gears and fishing methods would decrease the damage to marine ecosystems, lower fuel costs, and reduce greenhouse gas emissions, with benefits to both fishermen (improved economic security) and the environment (improved ecosystem capacity and resilience).

This current report looks at how this ambition might be taken forward within a reformed Common Fisheries Policy (CFP), particularly in light of the European Commission’s legislative proposals issued on 13<sup>th</sup> July 2011<sup>4</sup>.

## 1.2 The environmental impacts of different gears

Analysis undertaken as part of this earlier study ranked fishing gears on the basis of their impact on the environment. This is illustrated in Table 1 where impacts are ranked by gear type and by species group being targeted – pelagic fish, demersal fish, epifaunal invertebrates (e.g. crab & lobster), and infaunal invertebrates (e.g. scallops & cockles). Deployment of gear appearing towards the top of a column is assessed as having a higher impact on the environment than one towards the bottom end of the column. On this basis, a switch from deployment of a high impacting gear to a low impacting gear can yield substantial environmental benefits. Under the current fishery management regime, however, there is little incentive to make such a move.

**Table 1 – Quality of gear / environmental interactions**

| impacts | pelagic fish     | demersal fish     | epifaunal** invertebrates | infaunal* invertebrates |
|---------|------------------|-------------------|---------------------------|-------------------------|
| high    | drifting gillnet | beam trawl        | beam trawl                | mechanised dredge       |
|         | midwater trawl   | otter trawl       | otter trawl               | boat dredge             |
|         | purse seine =    | trammel net       | trammel net               | hand dredge             |
|         | pelagic longline | set gillnet       | trap                      |                         |
|         | trolling line    | demersal seine    | dive                      |                         |
| low     | handline         | demersal longline |                           |                         |
|         |                  | trap = handline   |                           |                         |

\* infaunal – invertebrates that live in the sediment

\*\* epifaunal – invertebrates that live on the seabed

x = y indicates equivalence of impact



<sup>3</sup> Seas At Risk (2009) *Moving Towards Low Impact Fisheries in Europe: Policy Hurdles & Actions* – by J. Gascoigne & E. Willsteed, MacAlister Elliott and Partners Ltd

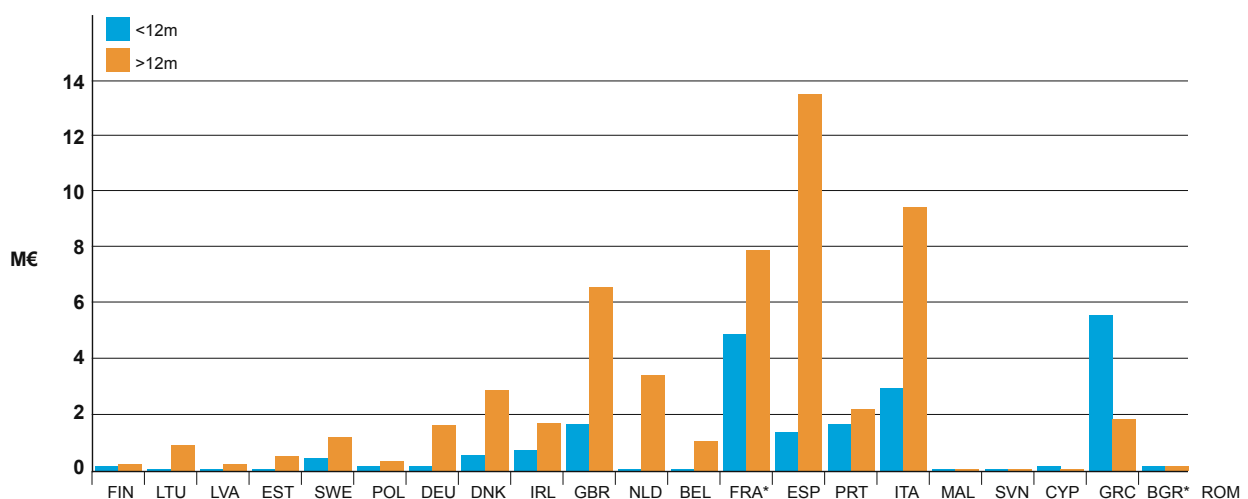
<sup>4</sup> COM (2011) 425 - Proposal for a Regulation of the European Parliament and of the Council on the Common Fisheries Policy; 13.7.2011.

Why this matters is illustrated in Figs 1, 2 & 3. Within the European Union more fish is caught by the over 12m fleet than by the under 12m fleet, as illustrated in Fig 1. The gear of choice of the larger vessels, and those responsible for the greater proportion of landings, is the trawl (see Fig 2). The average scale of over 12m vessels (as measured by gross tonnage (GRT), an indication of the volume of a vessel) is significantly greater than for the under 12m fleet (see Fig 3), and trawl gear is typically deployed by larger and higher powered vessels. Trawling in most cases involves the capture of a high proportion of non-target fish and invertebrates, alongside the fish species that form the target of the fishing operation. In addition, bottom trawling has relatively high environmental impacts – for example through physical contact with the seabed.

In terms of vessel numbers, most vessels are small in size and employ less environmentally impacting passive gears (gears preferred by smaller and lower powered vessels).

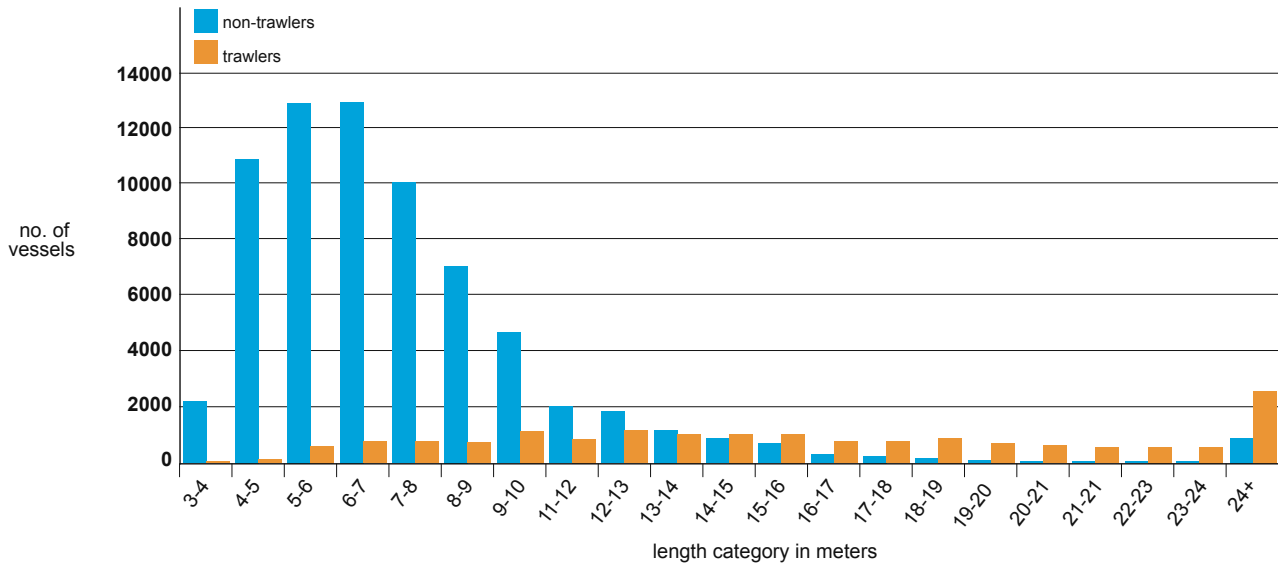
A general shift from larger, higher powered vessels using active gears to a fleet of smaller vessels using more environment-friendly gear would have significant positive impact on the sustainable management of Europe’s marine environment and fisheries.

**Fig 1 - Comparison of small scale (<=12m) and large scale (>12m) fleets per MS, average value of landing, 2006-8**



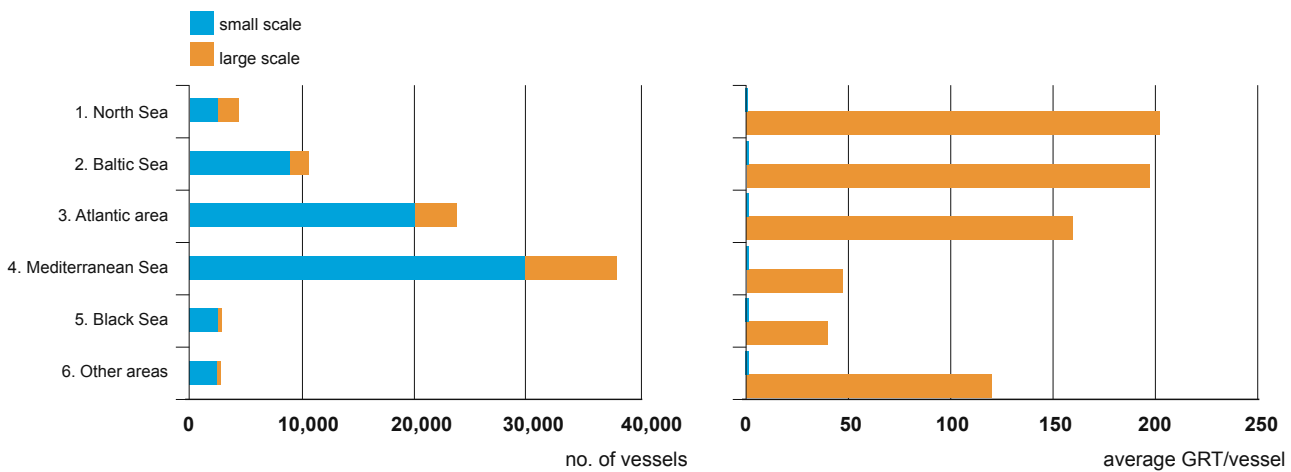
**Source:** from the European Parliament study (2011) *Characteristics of small-scale coastal fisheries in Europe*, based on EC statistics for 2006 to 2008  
[http://www.europarl.europa.eu/RegData/etudes/etudes/pech/2011/460059/IPOL-PECH\\_ET%282011%29460059%28PAR00%29\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/etudes/pech/2011/460059/IPOL-PECH_ET%282011%29460059%28PAR00%29_EN.pdf)

**Fig 2 – Number of EU fishing vessels by size group and trawl / non-trawl, 2008**



*Source: adapted from presentation by DG Mare on Small Scale Coastal Fisheries under the CFP reform, 25 February 2010 Brussels: [www.ec.europa.eu/fisheries/news\\_and\\_events/.../session01\\_en.pdf](http://www.ec.europa.eu/fisheries/news_and_events/.../session01_en.pdf)*

**Fig 3 – Structure and scale of EU fleet components; vessels <12m (small scale) & vessels >12m (large scale)**



*Source: from the Community Fleet Register – courtesy processed by Framian NV  
 Note: small scale is vessels under 12m in length; GRT is a measure of a vessel's volume*



### 1.3 Reducing environmental impact

The 2009 report drew some simple conclusions on the issue of low impact fishing. To reduce the environmental impacts of fishing, desirable changes would include:

- a move from active / mobile to passive gear – and more specifically a move away from heavy trawls and dredges;
- a move away from larger offshore vessels towards, where feasible, smaller inshore vessels:
  - with particular benefits to reductions in carbon emissions;
  - with, in many cases, benefits in terms of reduced direct gear impacts – e.g. for otter trawlers the doors used on small vessels will be lighter than those used on large vessels.

To encourage such changes, the following suggestions were made:

- recognise different environmental impacts of different fleet segments when developing policy for capacity reduction or establishing “rights-based” management systems, ensuring the most environmentally-friendly components of the fishing fleet are not disadvantaged;
- ban or severely limit discarding, at the same time as encouraging greater gear selectivity;
- use zonal management to make more apparent the benefits of less damaging gears;
- provide positive incentives to low impact fisheries – as long as this does not amount to a subsidy to increased capacity;
- ensure coherence of the CFP with EU commitments on sustainability and environmental impacts of fisheries.

### 1.4 CFP reform

The Common Fisheries Policy (CFP) of the European Union has been in place for thirty years, and is currently the subject of a third point of reflection<sup>5</sup>. A revised policy is expected to enter into force in 2013.

The European Commission issued its Green Paper on the current reform of the CFP in 2009 in which it admitted broad under-achievement of the policy goals of the CFP, including:

- failure to address the deep-rooted problem of fleet overcapacity;
- failure to achieve effective matching of exploitation levels with responsible management of fish stocks;
- management systems that encourage short-term focus;
- management systems that do not penalise waste;
- management systems that pit managers against fishermen, and which thus require higher levels of control than might otherwise be required.

On the basis of wide consultation and study, the European Commission issued its proposals for a reformed CFP on 13th July 2011, and it is these proposals that will form the basis of debate and negotiation in the period between now and the finalisation of the reformed policy.

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<sup>5</sup> Appraisal / re-appraisal is undertaken every ten years

## 2 Reform proposals and low impact fisheries

Clearly there are a number of potential areas for productive cross-linkage between CFP reform and stated ambitions to reduce the environmental impacts of fishing and improve the overall quality of the marine environment. Some have been captured in prominent EU commitments to sustainability, application of an ecosystem-based approach to fisheries management, and improvement in marine environmental quality (in particular through the Marine Strategy Framework Directive (MSFD)). Whilst there are several aspects of the proposals that do deal with environmental aspects, the proposals lack coherence in the approach and contain no clear policies aimed at reducing the environmental impacts of EU fisheries as a whole. It is in this context that the current European Commission's CFP reform proposals could be significantly strengthened if they were modified to give greater emphasis to reducing the environmental impacts of fishing.

The key areas of on-going debate in respect of CFP reform and low impact fishing relate to the following:

- The CFP reform proposal makes very limited practical commitment to some elements of reducing the environmental impact of fishing. On the positive side there is the requirement that all EU managed stocks should be managed on the basis of fishing mortality below Maximum Sustainable Yield (MSY) –  $F_{msy}$  – so that stock biomass ( $B_{msy}$ ) should be at or above MSY by 31<sup>st</sup> December 2015. Further, a discard ban covering these managed stocks should be introduced in stages between 1<sup>st</sup> January 2014 and 1<sup>st</sup> January 2016. But for the rest, other environmentally linked elements are inferred rather than explicit, and thus no objectives, targets, and timing are stated.
- To facilitate prompt and significant alignment of fleet capacity with fishing opportunities, the mandatory introduction of transferable fishing concession systems (effectively tradable catch and/or effort quota systems) is proposed. This is probably the most contentious of all the reform proposals, particularly so in that such a mechanism does not necessarily result in a decrease in environmental impact<sup>6</sup>, and tends to work against the interests of small-scale and traditional fisheries. No safeguarding measures are included in the reform proposal to counter-balance such effects, and this is one of the reasons why this policy proposal is resisted by many.
- The CFP reform proposal gives very limited direction to management within the 12 nautical miles zones of Member States<sup>7</sup> where spatial management in combination with licensing measures has particular relevance in terms of low impact fishing and management of non-quota stocks. Improved guidelines on the application of zonal management and specific encouragement in the use of low cost inshore vessel monitoring systems ("black boxes" – that record data every few minutes, compared to every hour or two with "blue boxes") could strengthen policy delivery.
- Allowance is made in the reform proposal for the possible retention by government of a proportion of up to 5 per cent of catch or effort quota – to be made available to industry in support of policy implementation. However, no specific use is indicated. Although discussions centre on its use as a mechanism to assist new entrants to the fishery, and its possible use as incentive to win support for different management initiatives, no



<sup>6</sup> The environmental footprint of five small (say 10 GRT each) light weight trawlers can be substantially less than that of one large (say 50 GRT) heavy duty trawler; so restructuring of a fleet of x GRT to a smaller number of vessels but with the same or even a reduced combined GRT may not result in reduced environmental impact

<sup>7</sup> As stated in the explanatory memorandum accompanying the EC reform proposal, "limited support was shown [by Member States] for the idea of a differentiated [inshore] regime beyond current legal provisions."

reference is made as to how this may be achieved<sup>8</sup>. In addition, the arbitrary 5 per cent ceiling placed on such holdings is probably insufficient to achieve any specific policy objective.

- A discard ban covering all 36 EU managed fish stocks<sup>9</sup> is to be gradually introduced over a period of three years (pelagic stocks first, then cod, hake and sole, and then the rest – including Mediterranean fisheries). The proposed landing obligation does not cover the many stocks that are not subject to EU management. This appears to be a response to growing public concern about waste of marine resources, but particularly that induced by the current quota system. The partial discards ban effectively changes the management regime from one recording what is landed, to recording what is caught – an important difference. Because this does not cover non-quota stocks, and no policy statement is made to encourage use of more selective gears and reduction of bycatch, the partial discards ban is largely divorced from issues of fisheries management.

A simple policy analysis matrix, shown as Fig 4, identifies the key points of impact and interaction between policy threads and implementation mechanisms. In addition, indication is given of how different leverage mechanisms may be used to strengthen policy delivery.

These various dimensions of policy reform are discussed in the following chapter. Whilst it is the overall objective of the Seas At Risk “Low Impact Fishing” initiative to encourage fishery managers and policy makers to recognise and incorporate incentives to low impact fishing within policy, this cannot be approached as a single issue but needs to be integrated into an overall and inter-connected policy matrix.

Encouraging adoption of low impact fishing has to be achieved within an overall fishery management framework, identifying and using leverage wherever possible. Key parameters of such a framework are:

- differentiation of the fishing fleet – by size, gear, practice
- a zonal / spatial basis to activity and fishery management
- rules-based fishery resource allocation systems utilising elements of fleet differentiation and zonal management.

For example, it is possible to apply different access rules to different parts of the fleet; and it is possible to restrict access to particular fishing areas according to fleet segmentation and to those vessels adopting particular fishing practices.

Resource access rules are at the heart of the commercial dimensions of fishing, and the proposed TFC system(s) is a particular dimension of resource access focused primarily on achieving a reduction in fleet capacity in the short term, but in the medium and longer terms achieving a better balance between fleet capacity and fishing opportunities. Resource access is an important potential incentive tool to encourage adoption of low impact fishing, but tradability and fleet concentration impacts have the potential to work against reduction in the environmental impact of fishing.

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<sup>8</sup>It is a fine line as to how much detail can and should be included in the core legal framework of the CFP Regulation, but it is argued that key “link” phrases and descriptions need to be included in this legislation, even though the detail may be expanded upon in supporting documentation

<sup>9</sup>There are 36 fish species for which stocks or stock components are monitored and managed by the EU on the basis of Total Allowable Catch and national quotas. These species make up the greater majority of EU catches; the fisheries for many other fish species are managed at national level or using other, non-quota based, management systems (such as effort regimes).



It is for these reasons that promotion of low impact fishing cannot be divorced from policies that deal with resource access and allocation systems, zonal management systems, tools that allow preferential access to zones, and systems that allow allocation of specific incentives to those that adopt low impact fishing. Each of these elements is discussed, with case study examples where appropriate, in the following chapter. The order of discussion is:

- fishery allocation systems – **rights-based management**
- the particular issues associated with **transferable fishing concession** systems
- **counter-balancing measures** – to counter some of the impacts of unfettered market forces – socio-economic instruments (small-scale fishing, inshore management and coastal communities), zonal management, fleet segmentation
- fishery allocation as **incentive tools**
- **discards and gear selectivity.**

**Figure 4 - Policy matrix**

|                        | stock management                           | fishery management                           | fleet management                                     | environmental management               | public pressure                         |
|------------------------|--|--|--|--|---|
| intended outcome       | regrow stocks to allow exploitation at MSY | profitable, ecosystem-based management       | fleet capacity in balance with fishing opportunities | low impact ecosystem-based management  | reduced waste and other adverse impacts |
| key policy instrument  | TAC & MSY                                  | MSY & RBM                                    | capacity ceilings & TRBM                             | currently none proposed                | no-discards                             |
| incentive to change    | could lead to increased quota              | reduces uncertainty                          | leads to increased profitability                     | none                                   | increased revenue (fish sales)          |
| disincentive to change | short-term economic penalty                | difficulties in achieving even playing field | favours capital and reduces employment               | usually leads to reduced profitability | possible economic cost (shorter trips)  |
| missing policy         | established harvest control rules (HCR)    | need stronger incentive to change            | need stronger incentive to change                    | need Low Impact Fishing policy         | potential to greatly expand benefits    |

**leverage mechanisms**

Government retained quota is part of incentive system to leverage selective gear, Low Impact Fishing, rapid restructuring of fleet, and to strengthening management systems

Low Impact Fishing policy is part of measures to counter concentration, strengthen incentives to fleet restructuring, and forms the basis for broadening & deepening impact of no discards policy

zonal management provides further leverage to fleet restructuring, use of selective gear, and adoption of Low Impact Fishing

TAC – Total Allowable Catch; MSY – Maximum Sustainable Yield;  
 RBM – rights based management; TRBM – tradable rights based management



# 3 Main issues

## 3.1 Rights-based management

Rights-based management (RBM) is considered central to effective fisheries management, as it moves management away from the “tragedy of the commons” that occurs with an open access fishery, by allocating specific access rights to groups or individual vessel owners and fishermen. Rights-based management systems are central to the management of the main commercial stocks accessed by the EU fleet, and at the core of key transformations proposed for the reformed CFP. Accordingly it is appropriate here to establish quite clearly what RBM refers to, and how effective different types of RBM are.

The main proposed change is the mandatory introduction of transferable fishing concession systems (TFCs). There is also reference to the possible use of user rights to encourage adoption of preferred practices – for example encouraging the use of more selective gears.

All Member States currently implement some forms of RBM since all fishing vessels are required to hold a valid fishing licence for the type of fishing they are engaged in. The type of license issued limits the gear that can be used, the areas that can be fished, and the species that can be targeted. Furthermore, all European fishing fleets are now capped (i.e. these are no longer open access fisheries). The number, power and tonnage of vessels in any particular fleet segment are fixed at any given time; Member States cannot simply issue additional fishing licenses without withdrawing equivalent capacity from the fleet.

The main types of RBM are listed in **Table 2**.

| <b>Table 2 – The main types of RBM applied in European fisheries</b>   |  |
|--|--|
| <b>non-transferable</b>  | <b>transferable</b>  |
| <ul style="list-style-type: none"><li>• territorial use rights in fisheries (TURF).</li><li>• limited non-transferable licensing (LL);</li><li>• community catch quotas (CQ);</li><li>• vessel catch limits (VC);</li><li>• individual non-transferable effort quotas (IE);</li><li>• individual non-transferable catch quotas (IQ);</li></ul> | <ul style="list-style-type: none"><li>• limited transferable licensing (LTL);</li><li>• individual transferable effort quotas (ITE);</li><li>• individual transferable quotas (ITQ).</li></ul> |

For the 36 stocks<sup>10</sup> subject to international management and fished by EU fleets, a Total Allowable Catch (TAC) is set for each year, and a part of this TAC is allocated to each relevant Member State in the form of national quota. Each Member State then generally allocates catch quota to fleet segments, regions or groups of vessels – what can be loosely termed community catch quota. Thus this too is another RBM system widely applied across the EU. In large part because of the multi-species nature of coastal fisheries in the Mediterranean, the favoured management system here is effort control – days-at-sea – also a form of RBM.

In some Member States user rights are allocated to individual vessels – as effort quota (number of days per year that can be fished), or as landings quota (tonnes of a particular species that can be landed per year). In a few Member States vessel owners are allowed to change the mix and volume of quota they hold at any given time by buying or leasing quota from other vessel owners. In some fisheries, activity is controlled by both catch and effort quota.

For non-quota stocks, management is more typically applied on the basis of vessel catch limits, community catch limits, and/or territorial use rights (the latter most commonly applied

<sup>10</sup> to be accurate, two of these 36 managed stocks refer to more than one stock – deep sea stocks and rays

to long-standing fisheries for more sessile organisms such as bivalves – cockles, mussels, etc.) combined with technical measures (minimum mesh size, type and size of gear, etc.).

Vessel owners make investment and operational decisions on the basis of the fishing opportunities open to them, and the costs and revenues associated with exploiting those opportunities. A key element in this equation is the confidence they can place in accessing and then exploiting fishing opportunities.

RBM systems move the arena from open access to closed licensing systems, and in some cases allocate rights on a per vessel basis. But this has been insufficient on its own to bring fleet capacity into alignment with fishing opportunities – a key ambition of the CFP. Where an element of transferability of access entitlement has been introduced the process of capacity adjustment has progressed further. Transferability of access entitlement provides the flexibility that allows vessel owners to better match vessel attributes with fishing opportunities. Thus when owners assess future investment in vessel and equipment they take into consideration their likely level of access to fish.

Vessel owners make rational decisions based on the information available to them – and the more secure their access to fishing opportunities, the greater the role this plays in their decision-making. Where their access to fishing opportunities is less secure, or more dependent on them being the first to catch the fish, many owners tend to invest in larger and more powerful vessels in order to give them the competitive edge, contributing to over-capacity, even though it is inevitable that for some such owners this raised level of investment will not pay off.

Most EU-quota fisheries have to date been managed on the basis of some form of community quota – but the security of access that this offers varies from very weak to very strong – usually related to the particular structure, skills and practices of the authority managing the community quota. Recognising the variability evident in such systems, managers and industry have increasingly turned to individual vessel based effort and landings quota systems – whether or not managed collectively (along the lines of community quota). In some fisheries the quality and flexibility of the user right has been further enhanced through tradability – as in individual tradable effort, and individual tradable quota.

A study commissioned by DG MARE to inform CFP reform describes 66 RBM systems in use across EU Member States<sup>11</sup>. An examination of the quality of the different types of user rights identified yielded the information described in the above paragraph. The core elements of this analysis are described in Box 1.



<sup>11</sup> DGMare (2009) *An analysis of existing Rights Based Management (RBM) instruments in Member States and on setting up best practices in the EU. Final Report. 117 pages. - and Part II - Catalogue of Rights Based Management instruments in coastal EU Member States. 247 pages. Prepared by a Consortium of MRAG, IFM, CEFAS, AZTI Tecnalia & PoEM.*

## Box 1 – Rights-based management and the issue of transferability

A major piece of work commissioned by DG Mare in 2008/9<sup>1</sup> identified nine main types of rights-based management system in operation within the EU (see **Table 2**). Six such systems involve temporary, non-transferable concessions, and three involve a degree of transferability – though it was also recognised that wherever a right was deemed to have value, industry players usually found some way of introducing a dimension of transferability to the movement of rights between actors.

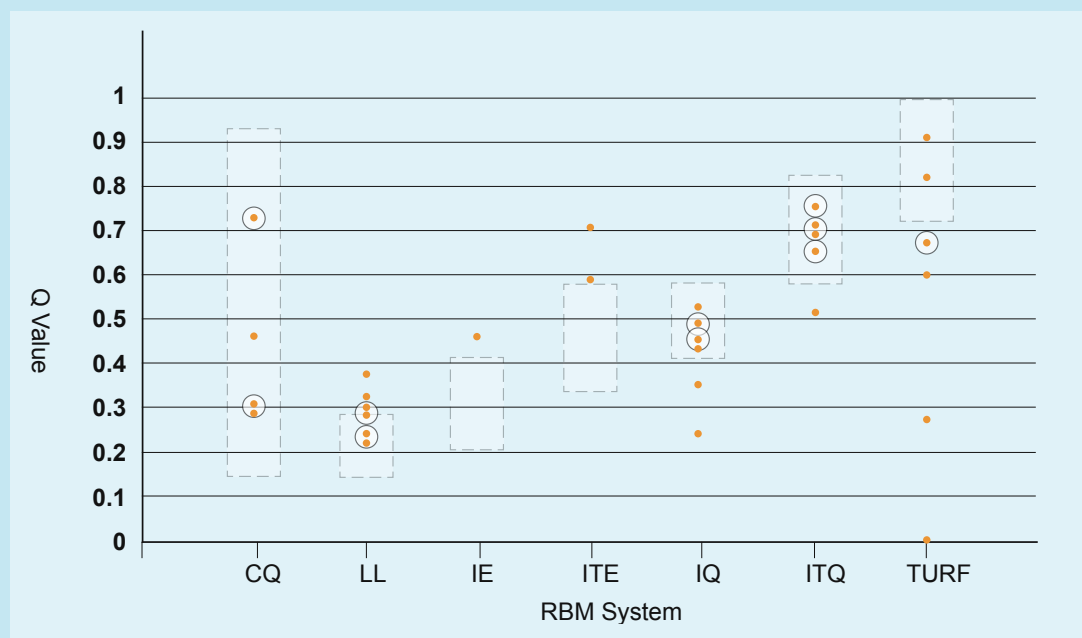
According to the report, the strength of these systems can be measured in terms of Exclusivity, Validity, Security and Transferability. These measurements can be converted into scores – a system originally developed by Scott<sup>2</sup>, and extended by Arnason<sup>3</sup> to better differentiate the qualities of these characteristics. The work by Arnason resulted in development of the “Q-measure of the quality of rights”. In the DG Mare study this transposition was undertaken for a range of RBM systems, and the plot of these Q-values is shown in Fig 4.

This assessment yielded clear and consistent differentiation between RBM systems. As indicated in the graph, a simple fishing license system registers as the weakest of rights (LL), whereas TURFs (Territorial User Rights Fisheries), most commonly found in traditional systems for husbanding of sessile mollusc fisheries, offer the strongest of rights. Tradability of effort or quota rights (ITE & ITQ) strengthens a right over the non-tradable alternate, but individual effort quotas (IE) confer limited exclusivity, and thus score lower than individual catch quotas (IQ). As can be seen, tradable catch quotas (ITQ) yield particularly high Q-values.

The wide range of Q-values registered for Community Quota systems (CQ) simply indicates that the strength of the use right is very dependent on the design of a particular scheme, but that such a system can confer very strong user rights.

A significant benefit of this form of analysis is that it provides policy makers with a better understanding of the strengths and weaknesses of different types of rights-based management system.

**Fig 4 - Q values of RBM systems in the EU as assessed during this study.**



**Note** - The dotted lines indicate the expected range of Q-values for each RBM system. The circled data points are those that were selected as case studies in the Commission study.

<sup>1</sup> DGMare (2009) *An analysis of existing Rights Based Management (RBM) instruments in Member States and on setting up best practices in the EU. Final Report.* 117 pages. - and Part II - *Catalogue of Rights Based Management instruments in coastal EU Member States.* 247 pages. Prepared by a Consortium of MRAG, IFM, CEFAS, AZTI Tecnalia & PolEM.

<sup>2</sup> Scott, A. (1955). *The fishery: the objectives of sole ownership.* *Journal of Political Economy* 63(2):116-124.

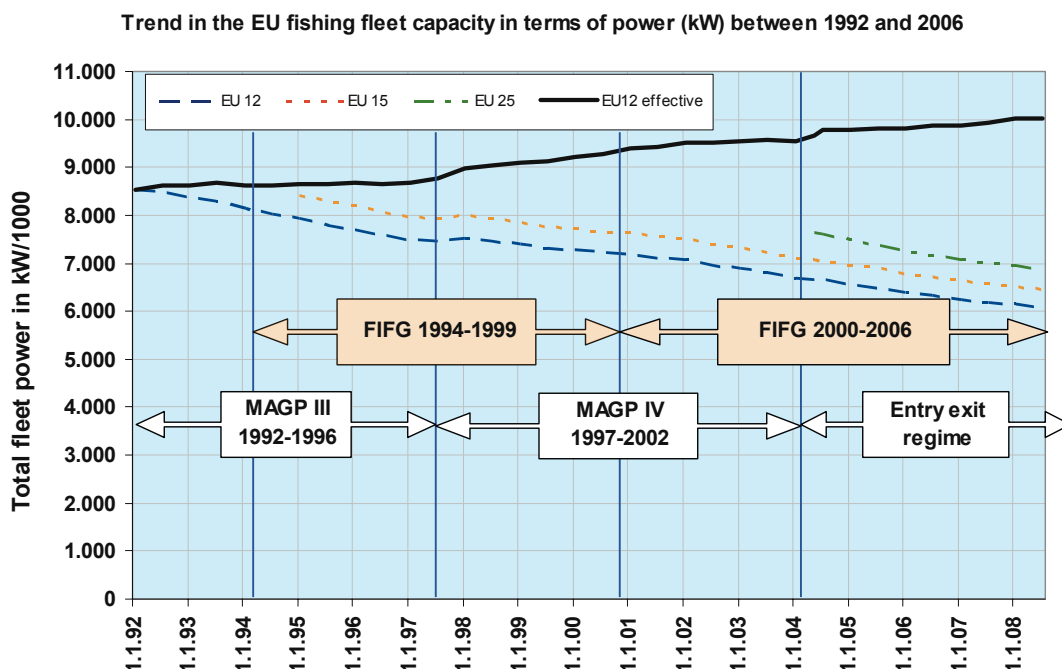
<sup>3</sup> Arnason, R. (2007). *Property rights quality and economic efficiency of fisheries management regimes: Some basic results.* In T. Bjørndal, D. Gordon, R. Arnason & R. Sumaila (Eds), *Advances in fisheries economics.* Oxford: Blackwell.

### 3.2 ITOs and fleet capacity reduction

The Commission's CFP reform proposal includes a requirement that Member States introduce, by 31 December 2013, systems of transferable fishing concessions for all vessels of 12 meters length or more, and to all vessels using towed gear. The intention is that "The introduction of a system of transferable fishing concessions will constitute a major driver for fleet capacity adjustment."<sup>12</sup>

The primary thrust of this proposal is to bring about the accelerated alignment of fleet capacity and fishing opportunities. Previous policies to curb over-capitalisation of fleets, and to bring capacity into better alignment with fishing opportunities, have mainly relied on the setting of capacity ceilings through agreed multi-annual guidance programmes (MAGPs)<sup>13</sup>, backed up by schemes to retire older capacity, to decommission capacity, and to reduce or withdraw publicly funded financial incentives to modernisation. These schemes – which have been in place for at least the last twenty years – have resulted in some numerical decline in capacity, but such declines have been largely negated by the effects of technological improvements in efficiency and effectiveness – technological creep (see Fig 5). The capacity of most fleet segments is still considered to exceed, by some margin, the available fishing opportunities. Of additional concern, capacity reductions have come at considerable cost to the public purse, and have tended to involve withdrawal of the least efficient and smaller vessels in a fleet segment (often those vessels that have least impact on the environment).

**Fig 5 - The development of the nominal capacity (kW installed engine power) of European fishing fleets since 1992.**



Source: DG MARE (2008), Commission Working Document: reflections on further reform of the Common Fisheries Policy.

Note: the EU12 effective capacity line assumes an increase in technological efficiency of 3 per cent per year



<sup>12</sup> from the "Explanatory Memorandum" to the EC's CFP reform proposals

<sup>13</sup> since replaced by an exit/entry system

This CFP reform proposal seeks to add transferability to the rights-based management systems that are currently in use across the EU. It builds on the fact that the larger proportion of EU landings from Atlantic and Baltic fisheries<sup>14</sup> are of species already managed by systems of Total Allowable Catch and quota, that all fishing activity is controlled by licensing, and that in many but not all fisheries fishing opportunities are already allocated to vessels or fleet components on the basis of a user right of one form or another.

Under these recent and currently prevailing systems, effective capacity reduction has not occurred. Adding the dimension of transferability has, however, been shown to be effective – with examples cited from New Zealand, Iceland and Norway, and most recently from Denmark – with the main driver for change being the pursuit of improved profitability. Such changes, however, come with unwanted side effects which can be devastating to low impact fleet segments. Access rights tend to become concentrated on a few large and efficient vessels, as the system rules tend to favour those with capital, and this tends to lead to discrimination against smaller-scale operators and those engaged in more traditional or low impact fisheries. These changes also tend to result in lower employment in the catching sector.

In practice, the policy initiative to achieve realignment of fleet capacity acts in opposition to other policy objectives to support small-scale, coastal and traditional fisheries, and to maintain fishery employment. In terms of environmental impact these changes tend to result in the deployment of a smaller number of on average larger vessels deploying larger and more impacting gear – i.e. if fleet capacity, in terms of kW and GRT, remained the same, the smaller fleet of larger vessels is likely to have significantly greater impact on the environment than the larger fleet of smaller vessels.

Having said that, because owners have historically compensated for poor user rights by investing in fishing capacity in excess of resource opportunities, access to more secure user rights might enable them, over time, to remove a proportion of such over-capacity (usually by buying out less efficient smaller vessels), and to reduce the environmental footprint of the fleet. Unless there are incentives to use less impacting gears and techniques, however, the reduced environmental footprint is a consequence of numbers rather than any underlying change in fishing behaviour or use of more sustainable techniques.

The CFP reform proposals covering this issue give no recognition to these side-effects, and present no policy elements or guidance on how these might be counter-balanced or mitigated. This is a major failing in the current proposals.

The most effective recent deployment of transferable fishing concession systems in bringing down fleet capacity is that of Denmark. Details of this process are presented in Box 2. The introduction of transferable vessel quota systems in Denmark has resulted in the rapid, substantial and significant reduction in fleet capacity, and has greatly improved the operating economics of the fleet. Nevertheless, the introduction of this system has not brought about any evident reduction in the environmental impact of fishing, or lead to the adoption of more selective and more energy efficient gears. Indeed it can be reasonably argued that these changes have resulted in the concentration of the fleet in fewer, more technologically efficient, and on average larger and more highly powered, vessels – registering substantial improvement in economic and financial efficiency, but no substantive reduction in the environmental impact of this fleet. This radical policy initiative on the part of the Danish government and industry has achieved its specific policy objective – capacity reduction – but it has not been accompanied by sufficient additional policy tools to mitigate negative impacts and meet other policy objectives.

<sup>14</sup> few Mediterranean and Black Sea stocks are currently managed by TAC

<sup>15</sup> STECF (2011) *The 2010 Annual Economic Report on the European Fishing Fleet - Report EUR 24554 EN - edited by John Anderson & Jordi Guillen*. Available at [http://stecf.jrc.ec.europa.eu/documents/43805/44854/10-12\\_SG-ECA+10-02+-+2010+AER+on+EU+fishing+fleet\\_JRC59885.pdf](http://stecf.jrc.ec.europa.eu/documents/43805/44854/10-12_SG-ECA+10-02+-+2010+AER+on+EU+fishing+fleet_JRC59885.pdf)

<sup>16</sup> Indeed in some cases quota associated with less impacting fishing techniques can be bought out by those using more impacting techniques.

## Box 2 – Danish ITQ system

The Danish ITQ system is held up by some EC policy makers as a model that should be adopted by other Member States. Over the period 1995 to 2008, the fleet has been reduced from 5,182 to 2,892 vessels. Over the same period the total number of “key” vessels (vessels fishing 98 per cent of Danish quota) has been reduced from 1,800 to 750 – with commensurate improvements in profitability.

The current system has emerged from long and involved analysis, debate and negotiation – over a period of 15 years and more. It has involved the development of a differentiated system of user rights covering most of the Danish fisheries, and the dimension of tradability of right has been gradually introduced over the last ten years across these fisheries.

In the early 1990s the Danish government achieved a substantial reduction in fleet capacity through decommissioning – more so than had been achieved by any other EU Member State (to date about €200 million of public funding has been spent on decommissioning in Denmark). This greatly improved the operating economics of the remaining fleet, but capacity was still considered to exceed fishing opportunities. There was reluctance by the Danish government, however, to commit further public funding to capacity reduction, and pressure, notably from the pelagic sector, to maintain and improve international competitiveness. In 2002 an ITQ system was introduced for the herring and mackerel fleet. In 2005 a similar but distinct system was established for the demersal fleet by attaching quota shares to individual vessels (vessel quota shares – VQS) based on historical fishing patterns.

A key feature of the system – established with the specific purpose of encouraging industry funded reduction in the capacity of the fleet – was the inextricable linkage of quota to license. Thus quota could only be transferred if the fishing vessel to which the quota had been attached was scrapped or otherwise moved out of the fishing sector. This feature resulted in a contraction in the pelagic fleet from 120 vessels in 2002 to 45 by 2009. From 2005 to 2009 about a third of vessels in the demersal segment had been taken out of the fishery – all achieved using private rather than public funding.

Another key feature of this system has been the promotion of the facility to operate “quota pools”, where a group of vessels can be operated collectively (for all intents as if they were a single vessel), allowing the group organisation to share quota within the group – i.e. building in considerable flexibility in operation, and reducing the need to discard.

While successful in reducing the number of vessels in the Danish fleet, the system has also been subject to severe criticism for its impact on smaller scale vessels and coastal communities. The quota transferability inherent to the system has led to a situation whereby larger scale vessel owners or companies, with greater access to capital, have been able to buy out several of the smaller scale operators. The Danish government’s attempt to safeguard the smaller vessels in the fleet by introducing a barrier to transferability of quotas from vessels under 17m to larger vessels seems to have been unsuccessful in preventing these negative impacts.

In addition to the impacts on overall employment of this quota concentration, this has also meant that quota has shifted to different ports, in different geographic areas in Denmark. Previously vibrant coastal communities such as the one on the Baltic island of Bornholm have therefore been severely hit, with shipyards and processing plants closing down or relocating to other areas or countries. The process is also leading to a decrease in the interest of young people in the fishing business – as the combined cost of acquiring a vessel and the associated quota is now so high as to be prohibitive for new entrants to the fishery.

Moreover, the concentration of fishing rights on larger and more high-powered vessels appears to have also induced a shift away from low impact fisheries. Small scale fishers often argue that vessels using more environment-friendly gear are being replaced by large trawlers.

**Sources:** various profiles, but particularly a presentation by Niels Wichman, MD of Danish Fishermen’s Association & the Danish Fishermen’s Producer Organisation – “Creating the incentive structure for sustainable fisheries – Danish experiences with Rights Based Management” – presentation to the World Summit on Fisheries Sustainability, Vigo, 2009. ([http://www.nffo.org.uk/pdf/Annex%20%20\\_2\\_.pdf](http://www.nffo.org.uk/pdf/Annex%20%20_2_.pdf)), as well as an article published on *Corriere della Sera* on the 19th of January 2012 (“La pesca rischia di affondare”).



The Danes have not been oblivious to the downsides of this policy initiative, and have introduced a number of counter-balancing measures – a trading boundary at 17m, quota uplift for certain elements of the under-17m fleet, and operation of quota pools. But it is still felt by many, most notably the affected smaller coastal communities and the owners of the smallest vessels, that these counter-balancing measures have been misaligned, and important socio-economic qualities of the coastal communities have not been protected. It is also as yet unclear the extent to which these policies have led to improvements in or worsening of the marine environment.

In this context it remains of key concern that no measures to mitigate the negative impacts of tradability are identified or addressed as part of the CFP reform proposal, despite the fact that the proposed capacity reduction measure lies at clear odds with other CFP objectives. The CFP regulation is all the weaker for this – a significant omission.

### **3.3 Counter-balancing negative impacts of concentration of ownership**

There are three principle elements to the issue of counter-balancing the negative impacts of ITQ and ITE systems:

- the first is the possibility of avoiding these issues altogether by not going down this route at all;
- the second is to counter-balance the negative environmental consequences of fleet concentration; and
- the third is to address the adverse socio-economic impacts.

Principles two and three combine the establishment of some sort of boundary that demarks the extent of some form of preference or discrimination. In these cases the combination of these tools serves a particular purpose – the counter-balancing of specific concentration impacts.

Other combinations of these types of tool are used for other purposes as well – explored in section 3.4. The explicit use of quota incentives as an encouragement to the adoption of improved environmental practice (for example in adoption of low impact fishing) can be applied at a broad-scale policy level. Linkages between boundaries and incentives can also be used in the pursuit of other management policies:

- such as stock conservation (see Box 6 relating to the Scottish Conservation Credits Scheme); and
- to make explicit the benefits of good environmental practice – where the environmental benefits deriving from the good environmental practices of one fleet segment are undermined by the poor environmental practices of another fleet segment operating in the same area.

Good environmental practice cannot be captured as a single policy intervention, or resolved using a single management tool; it is a cross-cutting issue, requiring incorporation into a wide range of not necessarily environmental policies, management tools and practices. Zonal management, and fleet differentiation (by license and practice), provide the basis for discrimination, and thus provide an essential framework for the application of incentives to



low impact fishing – for example restricting zonal access to particular fleet segments. Low impact fishing incentives have limited merit on their own; their impact results from leveraging benefits through other elements of policy and the ruling management framework. Hence to advance the cause of low impact fishing it is also necessary to address the CFP reform proposals dealing with zonal management, fleet segmentation and socio-economic policies.

### **The link between low impact fishing and socio-economic measures**

Licensing, spatial management, and transferability barriers appear to simply focus on providing protection against the adverse socio-economic impacts of transferable rights-based management systems, but they form an essential part of the framework within which low impact fishing can be incentivised – not least because many, but by no means all, inshore and smaller-scale fishing activities already employ low impact practices. These tools do not in themselves positively encourage the adoption of low impact fishing. Instead they facilitate the segregation of, and offer some protection to, fleet segments primarily deploying low impact gear and fishing techniques.

The link between quota / transferable fishing concession systems and low impact fishing is complex. Quota allocation provides an effective means of managing fishing activities, but it could also provide a particularly effective means of encouraging a move to less impacting gears and practices. ITQ and ITE systems are a further development of quota systems that are particularly effective at encouraging a reduction in the excessive capacities of fleets, but they also encourage commercial behaviour that is often at odds with the socio-economic and environmental dimensions of fisheries policy. Informed use of spatial management, licensing and fleet capacity barriers is a particularly effective means of countering such adverse impacts – and forms a key lever point in promoting the use of low impact fishing. These same tools are also particularly effective at amplifying the effects of any moves to encourage low impact fishing – whether or not they form part of a quota management regime or a transferable fishing concession regime. Therefore, any move to encourage low impact fishing should also seek to achieve close alignment between socio-economic and environmental policies. It is for this reason that in the following paragraphs we explore counter-balancing measures that have a particularly socio-economic focus.

### **Making environmental and socio-economic policies and measures explicit**

Avoiding ITQ and ITE systems altogether is hardly a realistic policy option, given that some Member States have already introduced such systems, and it is likely that others will follow suit over time. There is, however, a real issue with regard to the mandatory nature of the reform proposal – given that where such systems have been introduced in the past the process has been preceded by many years of debate, negotiation and planning. As currently proposed, each Member State is required to introduce transferable fishing concession systems by 31<sup>st</sup> December 2013. If taken forward, this is likely to result in the hasty design and introduction of systems – with not only the likely consequence that systems will be poorly structured and introduced with inadequate counter-balancing measures, but that there will be unintended consequences to such hasty action, consequences that will take time and resources to correct.

It is essential that any policy thread to introduce transferable fishing concession systems requires the introduction of explicit policies to reduce the environmental impact of fishing and to give support to small-scale and traditional fisheries and associated dependent



communities<sup>17</sup>. Logically, the same proviso should be applied whether or not transferable fishing concession systems are introduced. The introduction of clear and explicit policies to reduce the environmental impact of fishing and to address the adverse socio-economic impacts of any fleet reduction policies should form an important and independent part of the reformed CFP. As currently drafted, whilst some reference is made to these issues being objectives of the CFP, there is no accompanying policy to give substance to such intent.

Therefore, if the policy proposal to make introduction of transferable fishing concession systems mandatory is approved, much more explicit guidance on how this is to be done needs to be incorporated within the CFP regulation to avoid mistakes in implementation. We would suggest that such guidelines require that systems are based on per-vessel effort or catch quota, that they have to incorporate restrictions on tradability that offer some protection to smaller scale or low impact fleet segments, and that a sufficient proportion of quota has to be retained by government for use as incentive to adoption of low impact fishing. It may also be necessary to strategically reallocate quota to some fleet segments where economic performance has been disproportionately under-mined through attenuation of quota availability under current allocation systems. This was attempted at the instigation of the industry, and with reluctance on the part of policy-makers, with the Danish system, but there is concern that inter-tradability within the Danish under-17m fleet still resulted in fleet concentration at the expense of the smaller vessels.

### Counter-balancing measures

Many of the above measures have their main application at the boundary between small-scale and industrial scale fleet activity. This is appropriate given that this is the main area where policy measures collide, and it remains the case that many larger vessels are allowed to fish alongside much smaller vessels inside 12 nautical mile limits, where the relative scale of environmental impacts from the different fleet segments can be considerable. This can mean that, for example, the benefits from use of low impacting gears are undermined by the use of heavy high impacting gear by a few large vessels operating in the same area. Low impact fishing needs to be adopted by large and small-scale vessels alike.

Under management systems where user rights are attached to individual vessels, a range of licensing and spatial management tools are available to give a degree of protection to sections of the fleet vulnerable to encroachment by larger scale and more capital intensive operators. Such protection can extend to those vessels using passive gears, and those using low impacting active gears and practices. These tools do not in themselves positively encourage the adoption of low impact fishing – this requires the introduction of specific incentive systems (see later sections: quota as an incentive tool, and discards and gear selectivity) – but such counter-balancing measures provide the essential points of leverage for application of incentives.

Box 3 gives details of some of the counter-balancing tools that can be applied, singly and in combination, to allow differentiation between fleet segments and practices within ITQ systems and other resource allocation systems. In practice most are applied as combinations of zonal management and selective licensing. Some of these are in common use across Member States, but it is the specific variations in design and application of these tools that are most important in providing the counter-weight to other policy initiatives.

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<sup>17</sup> These are policies of the EU and the CFP that are regularly given low priority. Though the marine environment policy is given some weight through the Marine Strategy Framework Directive, the social dimensions of fisheries typically come off second best to arguments in favour of economic efficiency (primarily because of difficulties in valuing the full extent of the contribution of small-scale and traditional fisheries to the coastal economy, culture and environment), despite committed political and public support.

### Box 3 – Tools for countering fleet concentration of ITQ systems

The combination of licensing and spatial management is a key element in implementing both socio-economic and low impact fishing policies. A range of policy tools are available to provide protection to special interests, examples of which are:

- **Zonal management:** Fisheries management in territorial waters is a matter for Member States, and the international recognition of 6 and 12 mile territorial limits means that there is considerable scope for differential management of fishing activity between those operating inside and outside these boundaries. Nonetheless, it is not often or always the case that small-scale operators are protected in these regimes, since it is normal for considerably larger boats flying the flag of the particular Member State to be able to fish alongside much smaller vessels – but smaller vessels do not have the equivalent option available to them, to fish safely further to sea. Wider use of zonal management could assist in this area, with differentiated areas being reserved for low impact fishing techniques.
- **Specific recognition of small-scale fisheries:** Most fisheries treat inshore and small-scale operators as a separate fleet segment, and most Member States also utilise an artificial vessel size partition to distinguish inshore / offshore, small scale / large scale that may demarcate or complement such distinctions. The EU recognises a division at the 12m mark; in the Danish ITQ example a 17m breakpoint is used; in the UK a 10m breakpoint is used<sup>1</sup>. Such differentiation between fleet components within ITQ systems (as in the following two examples) can assist in countering the concentration impacts of quota transferability, and thus offers greater potential for measures directed at encouraging low impact fishing to take effect.
- **Specific quota allocations to small-scale segments:** In the Danish example, extra cod and sole quota was allocated to the under-17m “special license” coastal fleet, but only on condition that they voluntarily joined the ITQ system. In the UK there is the widely held view that the under-10m fleet has been disadvantaged in quota allocations and negotiations are on-going to seek to resolve this situation, with moves to bring the under-10m fleet more fully into the predominant tradable quota regime.
- **Blocking tradability across the vessel size / segment partition:** In the Danish ITQ system, owners of vessels in the “special license” under-17m segment can buy up license and quota from anywhere in the fleet, but other vessel owners cannot buy-out licenses and quota from the special license fleet. Similar controls are applied for the consolidation of licenses in the UK and Ireland – across the 10m and 12m divides respectively. A further development of such a system could be to restrict tradability to within fleet segments, or to allow one-directional trade among specific fleet segments – for example, by allowing low impact vessels to buy quota from higher impact vessels, but not the other way around.
- **Differential mobility between fleet segments:** One area of weakness in fleet policy application can be discrimination against small-scale and low impacting operators, because it can be relatively easy for operators from effort or catch limited segments to transfer to their less constrained segments, but the reverse is not so – i.e. there is not an even playing field; when others buy into the less bounded sector they effectively worsen the operating economics of those already in the sector. In the UK the management systems are such that both the potting sector (where no catch limits apply) and nephrops trawl fisheries (where in practice dedicated nephrops fishermen cannot access whitefish, but whitefish vessels can access nephrops) are relatively easy targets for those seeking to switch from “tight” segments. Clearly policy has to balance the need for flexibility with the need to protect certain interests from the full force of the market. Allocation of quota by fleet segment, wider use of zonal controls, and use of quota as an incentive tool to low impact fishing can all have a role under these circumstances.
- **Specially limited quota pools:** In the Danish system, use of a specific form of port or coastal community related quota pool has been encouraged – where all vessel owners in a pool commit to give other pool members the first option to buy-out any license and associated quota, so retaining capacity within that pool / that port / that community.
- **Community quota:** In the UK, local industry and government interests have sought to enhance quota opportunities for certain elements of the fleet by setting up community quota companies. These companies have a specific mandate to hold and lease quota to vessel operators that meet specific criteria and tend to secure and enhance quota entitlements for use by a local fleet. Successful public and private schemes have been established separately in the Shetland Isles, the Orkney Isles, and in Cornwall focusing on whitefish quota, and in the Western Isles focusing on nephrops quota.



<sup>1</sup> But more detailed or complex definitions may be needed in order to prevent the emergence of “rule-beaters” – vessel designs intended to specifically get around such rules.

These already play an important part in achieving gear separation in the management of marine protected areas – as are used in the management of Natura 2000 sites such as the Wadden Sea off the coast of the Netherlands, Germany and Denmark. Another example of the deployment of this tool is illustrated in Box 4, giving details of the UK Start Point Inshore Potting Agreement. These types of controls are likely to become more widely used over time.

Particularly with regard to zonal management systems, whilst self-reporting through log-book declarations and sales records provides good base information, these need to be accompanied by high levels of independently verified information on where fishing takes place. For the over-12m fleet this has been accomplished by the requirement that all vessels carry a satellite mediated position monitoring system or “blue box”, but reporting at hourly intervals does not meet requirements in inshore waters or for the smaller elements of the fleet. Here a lower cost system that records position and activity every few minutes is more appropriate. Such a “black box” system has been in use in the marine aggregate industry, and in the Dutch and Irish bottom mussel industry (see Box 5), for some time. Its use has recently been trialled in the UK as an adjunct to the “blue box” vessel monitoring system (VMS)<sup>18</sup>.

The examples described in Boxes 4 and 6 show current applications where zonal management is used to amplify the benefits deriving from use of low impacting gear and practices. The CFP reform proposals are relatively unspecific in this regard, deferring in the case of inshore fisheries to maintenance of the current system. Whilst much of the detail of how this inshore regime is managed can be left to Member States, at least some overall guidance on principles needs to be incorporated into the CFP regulation. In particular it needs to cover important areas of counter-balancing the adverse effects of other policies and the interaction between small-scale and industrial scale fleet components.

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<sup>18</sup> [http://www.seafish.org/media/Publications/SR617\\_VMSFinal.pdf](http://www.seafish.org/media/Publications/SR617_VMSFinal.pdf)

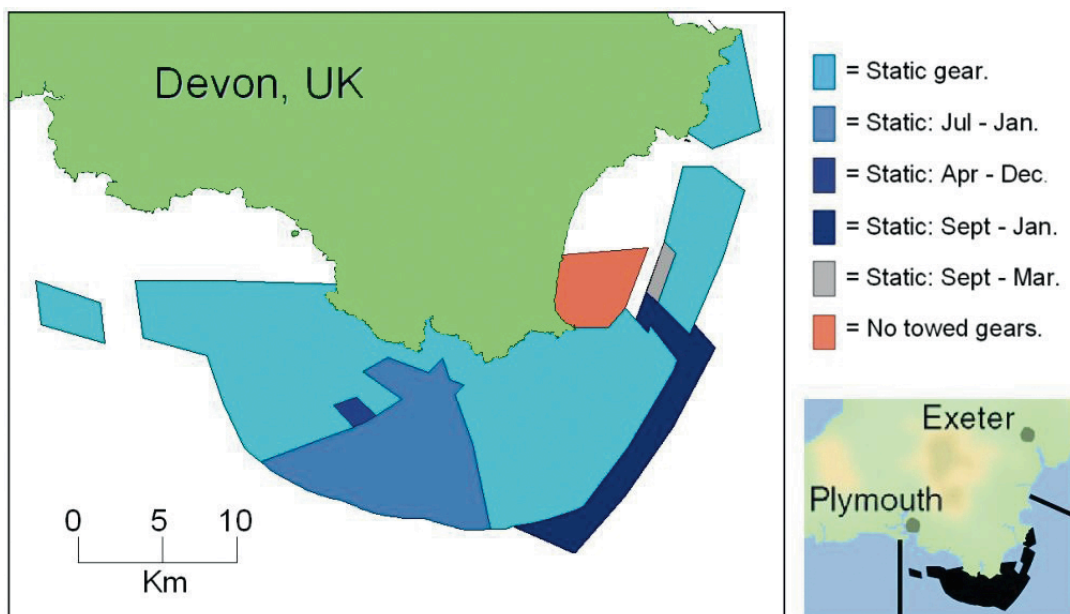
## Box 4 – Start Point potting management agreement

The Start Point Inshore Potting Agreement (IPA) off the coast of Devon in the UK is essentially a means of achieving operational separation between active and passive gear segments – in both space and time. Established as a voluntary agreement in 1978, it was formally incorporated into the local inshore fishery management regime in 2002. The particular structure of the agreement has changed over the years in response to altered circumstances and drivers – indicative of the flexibility of this tool. Its most recent format is illustrated in Fig 6.

This management agreement started life as a mechanism for reducing gear conflicts, but it has evolved to incorporate elements of marine conservation. It has managed to achieve a high degree of gear separation by area over the years. In addition, research has indicated that there is notably greater habitat complexity where only static gear is deployed, there is less complexity where there is seasonal access for active gear, and lowest habitat complexity is found where fishing is open access<sup>1</sup>. This means that the agreement has also delivered environmental benefits, even though this was not part of its initial objectives.

Most potting and trawling vessels operating within the IPA are below 15m in length. Whilst fishing activities in the region are under the management and control of the local management authority, there is historically a large element of self-policing in the management of this Agreement, and it is fishermen that initiate and debate proposals for modification of the Agreement. Nonetheless, despite this agreement's resilience, increasing levels of non-adherence have caused problems. Some form of vessel position and activity monitoring – for example the use of a low cost inshore vessel monitoring system recording data every few minutes, widely used in the Dutch and Irish bottom mussel industry and currently under field trial in the UK – could provide a useful evidence base to the agreement.

Fig 6 – Schematic showing the Start Point Inshore Potting Agreement



**Source:** adapted from the presentation of findings of Blyth R et al (2007) *The Inshore Potting Agreement: a model for inshore management*



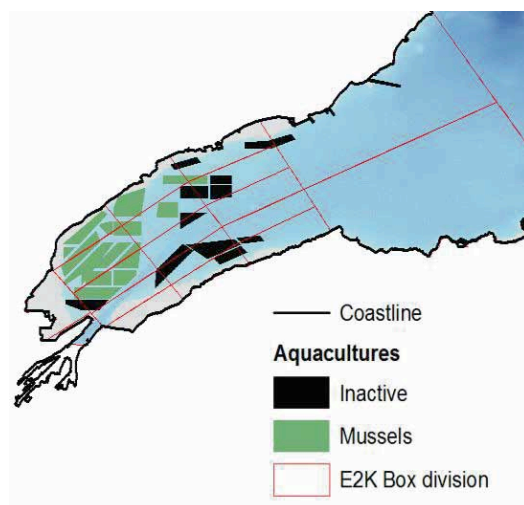
<sup>1</sup> Blyth R, M Kaiser, P Hart, G Edward-Jones - 2007 – *The Inshore Potting Agreement: a model for inshore management*

## Box 5 – “Black box” inshore vessel monitoring

Three agencies in Northern Ireland and the Republic of Ireland have set up a local system for monitoring the activities of mussel dredgers. Vessels are fitted with tamper-proof data-loggers that record position and heading at two-minute intervals – units used widely in the Dutch mussel industry. This information is periodically downloaded from the vessels by one or more base stations using mobile phone technology (GPRS). The information is analysed to confirm compliance with license conditions relating to where the vessels can dredge for seed mussel, and where they can lay that seed.

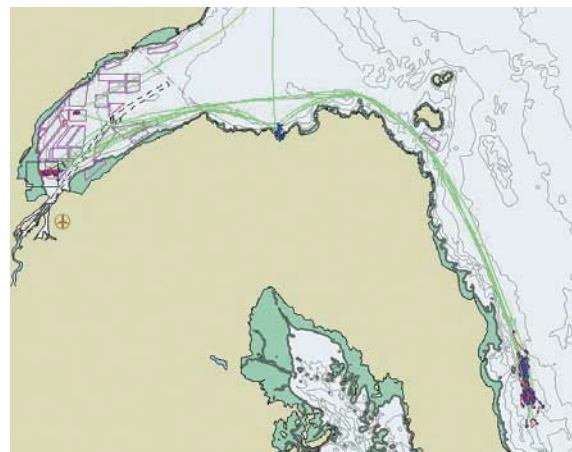
Aside from identifying where vessels are operating, data can be resolved to identify the speed at which vessels are moving, which can indicate when a vessel is steaming, when the dredges have been deployed and when the dredges have been hauled. If needed, the data-loggers could also be rigged to receive direct information on the deployment of dredges, though this capacity has not been required in this particular fishery. The system has proved helpful to both managers and vessel operators, reducing the incidence of license contraventions and resolving disputes between license holders through the provision of independent evidence of activity. It is also evident that this relatively simple system could be applied to a wider range of inshore / coastal fisheries.

**Fig 7 – Schematic showing licensed mussel grow-out areas in Belfast Lough**



**Source:** SMILE project website – [www.ecowin.org/smile](http://www.ecowin.org/smile)

**Fig 8 – Screen shot from the DARDNI tracking system** - showing the track of a vessel (track shown in green when steaming, and red / blue when working on beds) picking up seed mussel and relocating it to grow-out beds (licensed areas outlined in pink) in Belfast Lough



**Source:** DARDNI

## Eco-certification

The use of quota-type incentive systems to encourage adoption of more selective gear and lower impacting gear is discussed in the next section, but it is appropriate here to refer to one other form of environmentally oriented incentive system – that of eco-certification. As a further dimension to the Danish management system, high standards of environmental management in fisheries have been encouraged through certification to the Marine Stewardship Council (MSC)<sup>19</sup> standard for sustainable and well managed fisheries. It is a commitment of the Danish industry, with the support of the Danish government, that all its major commercial fisheries achieve certification to the MSC standard. Compliance with this standard requires adherence to detailed environmental impact criteria, covering gear selectivity, discards, bycatch, endangered, threatened and protected species, ecosystem and habitat.

Specifically it requires that the managers of the fishery under assessment:

- are able to assess the risks that the fishery poses in each of these areas (i.e. they have information on the nature and extent of the interaction, and understand the likely consequences of that interaction),
- have in place specific strategies and systems to manage those interactions, and particularly to address and mitigate interactions that are considered high risk, and
- have evidence that the management and mitigation strategies applied are likely to be effective, and have systems in place to regularly review performance, and refine strategies and systems in the light of such performance.

Crucially, a fishery has to have in place, and regularly update, strategies and management plans for managing and mitigating identified impacts. Meeting these requirements has brought about significant changes in how fishers and managers address the environmental impacts of fishing in those fisheries seeking such certification.

53 European fisheries have already been certified to the MSC standard, and 47 fisheries are in the process of assessment. It is also noteworthy that not only is the Danish industry committed to this standard, but so are the Dutch and Scottish industries and governments. The requirements for certification, however, are particularly costly for the small scale, low impact segments of the fleet, often preventing them from applying for (re-)certification.

None of these entirely reasonable operating requirements are currently included in the CFP regulation. Elements of this approach are addressed within the Marine Strategy Framework Directive (MSFD), but no specific linkage is made between the CFP regulation and the MSFD. This omission needs to be remedied.

### 3.4 Using fishing opportunities as an incentive tool

Within the CFP reform proposal there are a number of policy initiatives that could support low impact fishing, but any inter-connection with other policies and measures is implicit rather than explicit. It is notable that at no point do the reform proposals cite low impact / low carbon fishing as a policy goal, despite many references to an objective of the CFP reform proposals being to better integrate environmental concerns into the policy, and to support ecosystem-based management. The one reference to a possible mechanism for encouraging adoption of low impact fishing – government retention of quota – is again implicit. There may also be some intention that the establishment of a partial discards ban encourage use of more selective gears, but this is obtuse at best.

This is all the more concerning if the policy proposal to introduce transferable fishing



concession systems in all Member States is taken forward. Coupled with the introduction of no discards on key species this fleet reduction initiative is, in the short term, likely to encourage owners and skippers to reduce the costs of catching and landing fish that yield little return. They are likely to do so by investing in more selective, lighter and more fuel efficient gear. But such changes offer little in the way of financial benefits to owners, and so this move is likely in the medium term to be undermined by the more significant improvement in profitability resulting from the redistribution of fishing opportunities amongst a greatly reduced fleet. Under these circumstances, owners may no longer feel the economic pressure to invest in more selective fishing techniques. Therefore, unless there are more focused and long-lasting incentives to counter movement towards concentration of fishing concessions on fewer and larger vessels, and to encourage continued moves to reduce bycatch and discarding, these policies will have little positive environmental benefit in terms of reducing the environmental impacts of fishing.

The potential impact of using effort or catch quota as a tool to incentivise movement to less environmentally damaging fishing practices is considerable, and particularly powerful. An example of this, the Scottish Conservation Credits Scheme, is illustrated in Box 6. Introduction of such incentive schemes obviates the need to rely on other, often weak and incidental, economic drivers to adopt low impact fishing. The use of such a tool is not dependent on the introduction of transferable fishing concessions, but simply draws on the current regime of management of core stocks on the basis of catch and effort quota – and where quota is allocated to groups of vessels or to individual vessels. But it does require that the CFP regulation incorporates a specific and explicit policy to encourage low impact fishing.

In addition, however, it requires an explicit link to be established between the adoption of low impact fishing and the facility for governments to retain up to 5 per cent of national quota for currently undefined use in support of meeting management objectives. Once again, the CFP reform proposal has little to say on this issue. Implicit linkage to an implicit policy of support for adoption of low impact fishing is a woefully inadequate treatment of the environmental dimension of the CFP.

Outside of this issue, the establishment of a 5 per cent ceiling to the government retention of quota appears unnecessarily low and without rationale. 5 per cent of quota may not provide sufficient leverage in support of policy measures, particularly where this facility is not only being used to support the adoption of low impact fishing. Consideration should be given to raising this limit whilst also more clearly defining the policy intention that retained quota should be used as incentive to adoption of low impact fishing.

### **3.5 Discards and gear selectivity**

There has been long-term pressure by environmental NGOs to cut discards, and broad public disquiet about the extent of discarding. This has come to a head around the public “Fish Fight Campaign” which calls for the introduction of a ban on discarding. This campaign has been particularly effective, but has necessarily focused on an over-simplistic presentation of discard issues and discard solutions – though the foundation of the argument presented remains potent and widely supported, viz. that catching and then throwing back into the sea dead fish is an unnecessary and unethical waste.

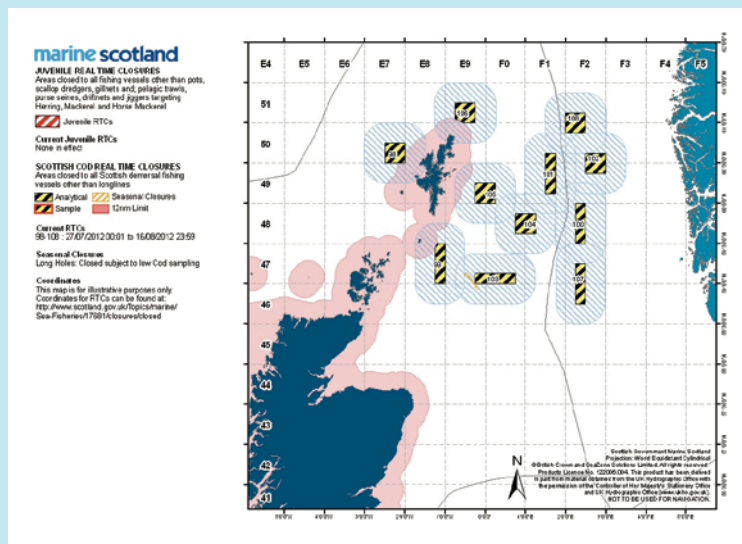


## Box 6 – The Scottish Conservation Credits Scheme

Against a backdrop of growing concern about the declining population of North Sea cod, not only did affected NE Atlantic fishing nations agree to establish large cod recovery areas where gear restrictions applied, and a network of smaller closed areas covering key cod spawning areas, but the Scottish industry and government also established a species specific adaptation of what might otherwise be called a “move-on” rule – “real time closures” and “amber boxes”. This scheme has been in place since 2008 and is considered to work well as a positive incentive to the use of more selective fishing methods, and in reducing cod catches, despite recently coming into some conflict with elements of the Cod Recovery Plan itself over the issue of “days-at-sea”.

The problem was that this fishing area supports a large and valuable mixed whitefish fishery, but given the poor state of the cod stock the available quota for cod is small. This meant that, despite the best efforts of skippers to avoid catching cod, there were many instances where catches included significant amounts of cod for which skippers held little or no quota allocation, and much cod had to be discarded – rather defeating any other efforts to re-build cod stocks. The policy initiative was thus to try and dissuade skippers from fishing in areas where high proportions of cod were most likely to be found.

In the Scottish system, a four-pronged approach was taken. At the base of the scheme is the EU Cod Recovery Plan to reduce cod mortality by 25 per cent within a large area of the North Sea and North West waters. Demersal and whitefish trawlers working within the Cod Recovery Area are required to use more selective gear. Further, under the EU Cod Recovery Plan a number of cod spawning or aggregating areas are permanently or seasonally closed. In addition to these, the Scots have introduced 21-day “real time closures” and rolling 3-month “amber” area closures.



<http://www.scotland.gov.uk/Topics/marine/Sea-Fisheries/17681/closures/ciz>

In return for avoiding fishing within these two types of areas, participating vessel owners are eligible for an increase in the number of “days-at-sea” (an effort control) allocated to their vessel. Additionally, an incentive is offered to skippers on the basis of the type and selectivity of the gear used. Different gears are ranked according to their selectivity, and operators using the most selective gear get extra days-at-sea. Moreover, once a certain proportion of the quota has been exhausted, skippers have to change to the most selective gear.

The “real time closure” is established much along the lines of the Norwegian system (where the trigger is under-sized fish) but based on reports of high cod bycatch by skippers and by Scottish and Norwegian inspection vessels. By contrast the “amber” areas are designated on the basis of analysis of recent vessel logbooks and satellite tracks (VMS) for the fleet, where the data analysis is used to predict areas of cod concentration. The location and extent of “amber” areas is re-assessed on a quarterly basis.

So that the system does not get out of hand, upper and lower limits are set for the extent of sea area covered by “real time” and “amber” area closures at any given time.



Box 7 gives some indication of the scale of the problem, where a recent assessment of European discarding practices<sup>20</sup> indicated that rates as high as 50 per cent are typical in some fisheries.

The introduction of a partial discards ban impacts on a number of areas of conservation policy and sustainability – it may lead to improvements in the management of fish stocks at or above MSY (through improved data quality on fishing related mortality), in ecosystem health, and in the financial viability of fisheries. However, analysis undertaken in the run-up to the reform process seems to suggest that the main basis for the policy is not for these reasons, or based on the extensive scientific, economic and policy research that has been undertaken on this subject, but rather because of public opinion and the negative image that discarding brings on the industry. The treatment of this subject appears to have become over-simplified, and this does not make for good policy; as currently formulated is likely to have limited effectiveness, most particularly because it does not make any connection between a discard ban and the use of more selective fishing gear and techniques.

In combination with the use of catch and effort quota systems and the retention by government of a proportion of fishing quota, a no discards policy provides the basis for the most effective mechanism for providing incentives to fishermen to design and deploy more selective fishing gear, and to engage in practices that limit the environmental impacts of fishing. The key mechanism is that if all catches of a particular species are logged against quota, there is the incentive for skippers to quickly work to limit the small and under-sized portion of their catches and to increase that catch portion containing larger and more valuable fish. This mechanism, however, is not evident from the regulation as currently drafted.

The whole impetus behind the low impact fishing concept is to not only reduce the amount of fish that is thrown back in the water – usually dead – but to limit the capture of fish and organisms that are not being targeted (bycatch) in the first place. This also has the potential to severely limit the capture or other interaction with Endangered, Threatened and Protected (ETP) species, and limit the collateral damage to seabed habitats and marine ecosystems. At the core of this are the issues of gear type, gear selectivity and fishing practice.

### **Box 7 – Variation in levels of discarding**

It is widely accepted that discarding has to be reduced and that this should be done on a fishery-by-fishery basis. There is considerable information available on discarding patterns in European fisheries. A recent report (2011) by the European Commission<sup>1</sup> provides a detailed summary of discards in the EU regions, categorising the discard problem into fishing regions, gears used and stocks targeted. Thus, high discard fisheries (>40 per cent) include beam and some types of bottom trawls, longlines, and hydraulic dredges. Medium discard fisheries (15-39 per cent) include other types of bottom trawls, trammel and seine nets and some pelagic trawls. Low discard fisheries (<15 per cent) include pelagic trawls, trammel nets, gill nets, and lampara nets, as well as most forms of small-scale and artisanal<sup>2</sup> fishing.

Discarding in EU fisheries can be at particularly high levels, such as:

- 30-60 per cent for the finfish fishery off the Iberian Peninsula (MRAG, 2007);
- 50 per cent of the catch in North Sea beam trawl fleets (MRAG, 2007);
- between 20-98 per cent in the North Sea nephrops trawl fleet (Enever et al, 2009); and
- 40 per cent for most bottom-trawling in North East Atlantic fisheries (STECF, 2006).

Overall, the majority of species in ICES regions are either discarded due to minimum landing size (MLS) restrictions (such as highly valuable species like cod, hake and plaice) or, to a lesser extent, due to market forces at play, resulting in discards of fish with low commercial value in general (whiting) or because the fish are of small size (megrim and horse mackerel) (STECF, 2006). In the North Sea in particular, discarding of all species is generally related to MLS restrictions.

<sup>20</sup> DGMare (2011) *Impact Assessment of Discard Reducing Policies - plus EU Discard Annex, in Impact Assessment Studies related to the CFP; Studies in the Field of the Common Fisheries Policy and Maritime Affairs, Lot 4.*

<sup>1</sup> DGMare, see footnote 20.

<sup>2</sup> use of relatively simple technologies

The issue then becomes much less one of “land and use everything you catch”, but rather “only catch what you want, and do so whilst minimising harm to other organisms, and minimising disturbance to habitats and ecosystem”. The policy of “no-discards” is not in the way of an encouragement to “land everything”, but rather an economic penalty to get fishermen “not to catch what they do not want or need” – issues that are not currently identified as linked to the partial discard ban within the CFP reform proposal.

The proposal to introduce a partial discards ban does go some way to address issues of waste, incorporating some of the lessons learnt in other parts of the world (see Box 8), but the proposals remain unlinked to a coherent environmental policy (no such policy is stated), or to issues of selectivity and seabed impact. The policy means very little if it does not provide a sufficient disincentive to the indiscriminate “catching and landing of everything” – i.e. it needs to act as an incentive to fishermen to design and operate more selective gear, and to abide by fishing practices that keep environmental impacts to a minimum. As the proposal stands, it is not clear that this is in fact the case. And the partial nature of the discards ban is such that there is no sanction against the continued indiscriminate capture and discarding of species that are not subject to formal international stock management, whether or not they have commercial value.



## **Box 8 – Discard bans: international experience**

### **Iceland**

The discard ban initially started as a catch quota scheme for cod and haddock. Over time the list of species to which the discard ban was applicable grew. For example, in 1997 it was estimated that discard levels of haddock were greater than 20 per cent of total haddock landings. In 2006, this figure was less than 5 per cent. Previous legislation had placed some emphasis on reducing discards, but it was not until the 1996 legislation that the greatest advances in restricting discards were made.

The management system uses multiple measures to reduce juvenile catches. Real time closures are implemented in areas identified as supporting high proportions of juvenile fish. Length-based comparisons of observed catch and non-observed catch are used to identify incidents of discarding. Limits on the amount of juvenile catch which can be landed before penalties are applied are also used.

In theory, each vessel must hold sufficient quota for all fish likely to be caught during each fishing trip – which will depend on the area and length of the proposed trip. To manage this, each vessel is able to access quota portfolio information in real time via a web database, and to participate in quota swapping to increase the necessary levels of quota for the relevant species (in 1991 an ITQ system was introduced).

Socially, there is now greater awareness of discarding and its impacts to the fishery. Operators report each other if an operator is seen to be discarding and is not identified by patrolling authorities.

### **Norway**

This ban initially began as a catch quota system for cod and haddock, increasing to incorporate other species over time. Since 2008 it has become a ban on discarding of all species of commercial value. Analysis of Norwegian discard policies shows that the discard ban is not the central feature of these policies that it is often presumed to be. Instruments like the flexible closed area policy, ongoing effort to increase selectivity of gear, and the obligation to change fishing grounds if the proportion of undersized fish found crosses a threshold value, are the more essential elements of the Norwegian anti-discard policies. The discard ban can only be applied because discard levels had been first reduced by these other measures.

The illegal by-catch and catches of juveniles have to be landed, and the amount of such landings is deducted from the TAC of the given species, and only a small proportion of the sale value is returned to the vessel. The discard ban formally applies to all catches that are dead or dying, with a few exceptions, such as jellyfish and like, listed in the regulation. The chances of survival of discards of most species, particularly from trawlers and seine netters, are assumed to be very low – and they therefore have to be landed. It is of note that discards of invertebrate organisms – starfish, sea urchins, shellfish – generally show higher survival rates than fish when returned to the sea.

At-sea patrol presence, through the coastguard, is considerable (up to 2,200 inspections per year). Industry interviews observed that the incidence of inspection was a key deterrent to discarding, and although small amounts of discarding still occur, there is a very high chance of increased discarding being detected. The joint action between Norwegian and Russian authorities is also a key factor in the reduction of IUU catches.

# 4 Conclusions and recommendations

## Conclusions

A number of important conclusions arising from analysis of the European Commission's legislative proposals for the CFP reform may be drawn from the foregoing. Key amongst these are that:

- the environmental policy strand of the CFP regulation is poorly framed and developed;
- there is no operational dimension to encourage the use of more selective gear or reduce the environmental impact of fishing presented in the proposals;
- a number of tools to assist in implementation of policy are referred to, but how they are to be used, and guidance as to what elements of policy they should support, is not provided (e.g. transferable fishing concession systems, government retention of up to 5 per cent of quota, partial discards ban, zonal management); and
- whilst passing reference is made to these, no guidance is given with respect to use of more selective gear and practices, and presentation and application of a socio-economic thread to the CFP.

The main conclusion is that the CFP reform proposal as currently presented is imbalanced – and that imbalance is primarily the limited nature of the environmental dimension of the policy. This can be largely fixed by adoption of a low impact fishing dimension within the CFP. This would not only bring focus and form to the environmental policy strand, but it would also provide additional leverage for change:

- giving a further push to fleet capacity reduction measures (and at no additional cost),
- bringing the partial discards ban proposals into mainstream fisheries management by refocusing the issue onto gear selectivity and maintaining ecosystem resilience, and
- providing incentives to zonal management and contributing to the socio-economic objectives of the CFP.

Indeed it would appear that it is the lack of coherence in the current CFP reform proposal that is its weakness. Strong policy statements are made in respect of management of fishing capacity, rebuilding of stocks to sustainable levels, decentralisation and regional management, and even in stopping the wasteful practice of discarding. But each of these policy strands could be greatly enhanced if the CFP Regulation included greater guidance on how these policy strands are inter-linked, and how each inter-linkage itself strengthens policy delivery (a graphical representation of these inter-linkages is presented as Annex A).

Further development of the environmental policy strand and a focus on low impact fishing would provide the means to achieve this. Moreover, the adoption of such elements does not undermine or weaken any other policy element, and comes at no additional cost. Indeed at present there is little to no penalty for vessel owners who use gear and fishing practices that are damaging to the environment, and no relative advantage is given to vessel owners that employ low impacting gears and practices. As a means of further promoting low impact fishing any proposed management structures would be strengthened if combined with fleet / gear related effort and catch quota incentive systems. But the industry is currently able to externalise almost all its environmental costs with impunity. By introducing a clear low impact fishing policy strand, mechanisms are put in place that work in support of sustainable practices, and which do so as a largely industry funded mechanism. This can be achieved through the following recommendations.



## Recommendations

### Objectives

- **Recommendation 1:** The reformed CFP should include as one of its objectives the minimisation, and where possible elimination, of negative environmental impacts of fishing. Therefore, it should promote a transition to low impact fisheries.

### Access to resources

#### Access criteria

- **Recommendation 2:** Access to fishing opportunities should be allocated on the basis of environmental and social criteria to promote sustainable fishing. Operators performing well on these criteria should be given preferential access to resources (both in terms of quota and days at sea). Criteria should include selectivity, impact on habitats, energy consumption per tonne of fish caught, quality of employment, associated benefits to coastal communities, and compliance with the rules of the CFP. Such an allocation system will serve as a strong incentive for low impact fisheries, and will promote movement away from micro management to results based management.
- **Recommendation 3:** The Commission proposal to allow Member States to reserve up to 5 per cent of their fishing opportunities for allocation according to specific eligibility criteria provides a first step towards an allocation system based on environmental and social criteria and should become mandatory. Eligibility should not be restricted to holders of transferable fishing concessions (TFCs), and the Member State's reserve should be significantly increased (to at least 25 per cent) for it to have any impact as an incentive. Specific guidance on criteria should be agreed at EU level to ensure this tool serves to promote low impact fisheries.

#### Transferable Fishing Concessions

- **Recommendation 4:** The introduction of transferable fishing concessions (TFCs) should be voluntary rather than mandatory. Member States should have the flexibility to choose from a range of options on how to allocate access to fishing resources. TFCs are a specific market-based form of allocation scheme that can lead to a decrease of the number of active fishing vessels, but will not, on its own, ensure the remaining fleet operates in an environmentally and socially sustainable manner.
- **Recommendation 5:** Provisions must be introduced in the legal text to ensure that where TFCs or other trade-based systems are implemented, sufficient safeguards are in place to prevent excessive concentration of rights and to protect low impact fishing vessels. Such safeguards include limiting tradability, and reserving certain zones or giving preferential access when allocating concessions to those vessels adopting low impact gear and practices.

#### Spatial management

- **Recommendation 6:** An additional tool to regulate access to resources is zonal management, which should be given greater prominence and used to reserve clearly defined areas for operators adopting low impact gear and fishing practices. In this way, zonal management can provide a strong incentive for low impact fisheries. Control and enforcement of zonal management should be facilitated through increased use of

electronic vessel monitoring in the inshore and small-scale fleets, and in particular the use of relatively cheap “black-box” data loggers should be encouraged.

#### **Discard ban**

- **Recommendation 7:** There needs to be an explicit link between the discards ban and selectivity to ensure that the discard ban is not just an encouragement to land everything, but rather contributes to increased selectivity.
- **Recommendation 8:** Higher selectivity should be encouraged by giving preferential access to those who fish in the most selective way when allocating fishing opportunities.
- **Recommendation 9:** Any commercialisation of unwanted catches may create financial incentives to target fish that fishers had previously tried to avoid. Deducting all catches of quota species from a vessel’s quota is a primary incentive to improved selectivity. In addition, the majority of the revenues from selling undersized bycatch should also revert to fisheries control and/or research, in order to rule out that operators yield a profit from poor practice. The landing obligation should rather incentivise fishers to minimise unwanted catches, and in that way help movement away from micro management to results-based management.







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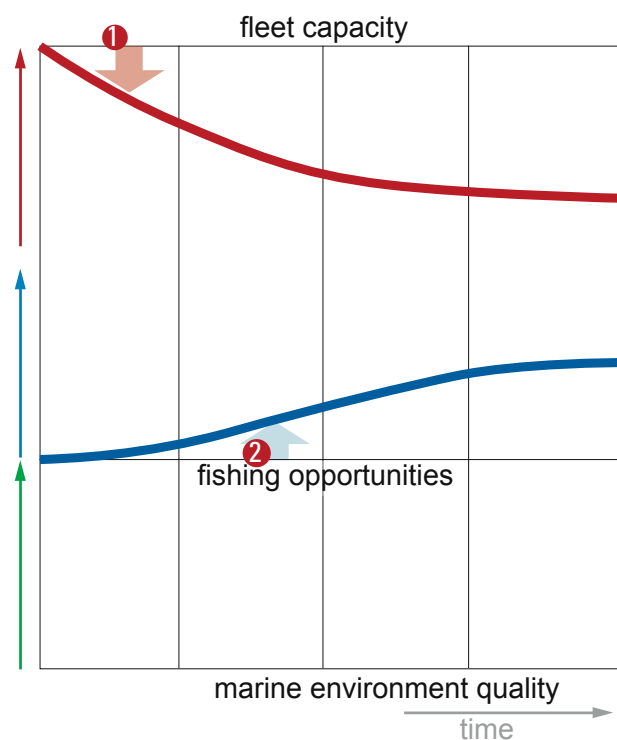
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## Annex A – Graphical representation of how incentives to low impact fishing inter-link with fleet capacity, stock management and environmental quality elements of the CFP



- 1 Introduction of system to encourage fleet restructuring (reduction programme or TFCs), but without link to use of Low Impact Fishing

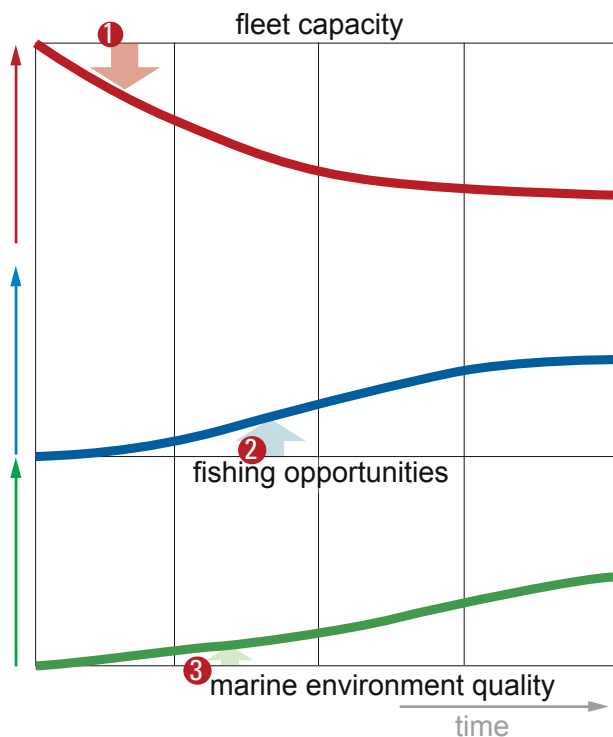
This increases the pressure on the industry to reduce capacity, but on the basis of past experience most Member States do not put in place the type of system that is fully committed to capacity reduction, and capacity reduction will not proceed to full alignment, and so will continue to remain well above what is required to exploit available fishing opportunities.



- 2 Management of core stocks to MSY, but with fleet capacity substantially exceeding fishing opportunities

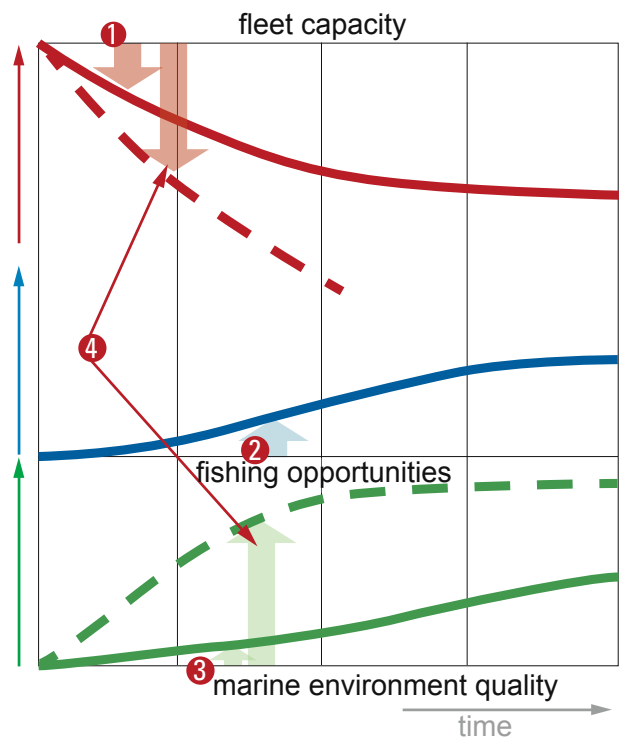
Implementation of the policy to manage stocks to MSY will undoubtedly lead to increases in stock biomass, and thus also to available TACs, but crucially, if not also linked to reduction in bycatch, discards and seabed impacts, the speed of stock recovery will be below expectations, exacerbated by fleet capacity remaining well in excess of fishing opportunities (putting pressure on the setting of TACs above scientific advice, but also increasing pressure on vessel owners to work around the system).



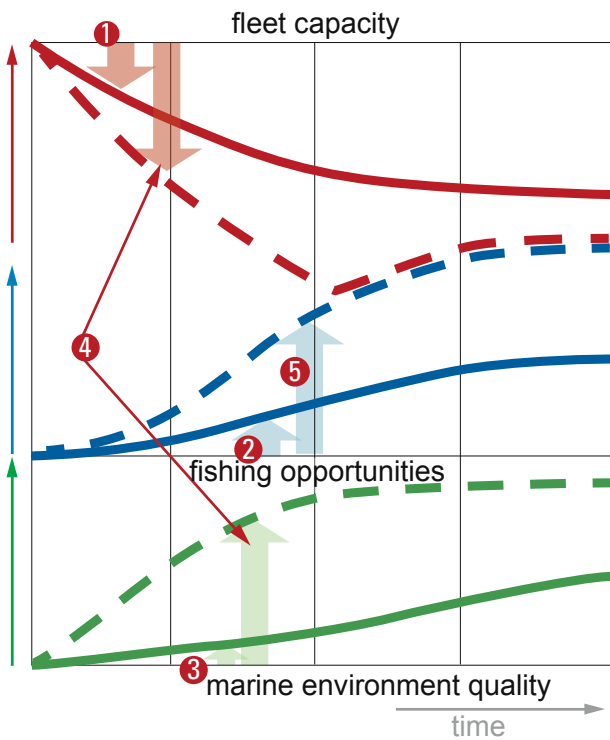


③ Improved management of marine environment (under MSFD), but without specific incentives to Low Impact Fishing

The Marine Strategy Framework Directive requires implementation of a systematic and results-based approach to reducing the environmental impacts of various activities, including fishing (along similar lines to those attaching to the Water Framework Directive), and thus there is reasonable expectation that, irrespective of how environmental quality is measured, there will be steady improvement in quality. But in the absence of specific complementary elements within the CFP regulation encouraging, if not requiring, fisherman to use more selective fishing gear and techniques, and reduce the environmental impacts of fishing, the extent and rate of improvement of the marine environment will be muted.

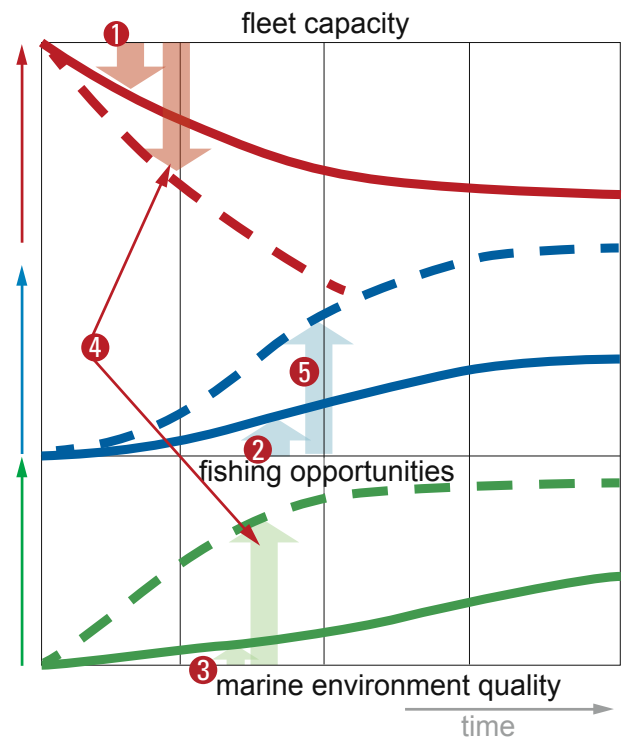


④ Use of quota as an incentive to use of more selective gear and adoption of Low Impact Fishing boosts fleet restructuring and reduces environmental impacts



5 Increase in fishing opportunities through alignment of fleet capacity with opportunities, plus reduced bycatch and seabed impacts

The combination of accelerated and deeper capacity reduction, management to MSY (and hopefully setting of TACs on the basis of robust Harvest Control Rules per stock / fishery), plus strong linkage of quota allocations to achievement of substantial reductions in bycatch and seabed and other environmental impacts, will result in faster recovery of over and fully exploited stocks, and thus to further increases in fishing opportunities, resulting in further improvements in the profitability of the fleet.



1 Introduction of system to encourage fleet restructuring (reduction programme or TFCs), but without link to use of Low Impact Fishing

2 Management of core stocks to MSY, but with fleet capacity substantially exceeding fishing opportunities

3 Improved management of marine environment (under MSFD), but without specific incentives to Low Impact Fishing

4 Use of quota as an incentive to use of more selective gear and adoption of Low Impact Fishing boosts fleet restructuring and reduces environmental impacts

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