REFLECTIONS ON THE

COMMON FISHERIES POLICY

REPORT TO

THE GENERAL DIRECTORATE FOR FISHERIES AND MARITIME AFFAIRS

OF THE

EUROPEAN COMMISSION

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The Reform of the Common Fisheries Policy was launched in 2002 with the adoption by Council of a new Basic Regulation. In early 2007, the Commission decided to undertake an informal stocktaking process, to assess progress with the implementation of new principles and new legislation, and to determine what should be its priorities for action during the period 2007-2012. (The Basic Regulation will be due for formal review in 2012).

The report enclosed was commissioned by DG Fisheries and Maritime Affairs as part of this internal process of reflection. In order to allow for focused and effective debate within the DG, and to encourage 'thinking outside the box', it was decided to begin by asking two eminent international fisheries scientists to provide their own, independent assessment of the Reform of the CFP so far. These two experts, Michael Sissenwine and David Symes, come from a natural sciences and social sciences background respectively. Together, their experience spans both EU and non-EU fisheries. They were asked to identify for themselves the main issues which they considered important and wished to analyse.

Sissenwine and Symes then studied documents relating to the CFP, conducted interviews with a range of stakeholders, organisations and officials in European institutions, and sat in as observers on meetings. The result is their study, 'Reflections on the Common Fisheries Policy'.

This report is an interesting independent contribution to the debate on the future of European fisheries management, on which the Commission welcomes opinions and arguments on a continuous basis. However, the Commission wants to emphasise that while it agrees with the authors with regard to many of the achievements and inadequacies of the CFP which they identify, their analysis, and the remedies they propose, are theirs and theirs alone. The report represents one set of expert opinions among many which could have been, or will in future, be sought. Therefore, while the Commission takes the arguments made by Sissenwine and Symes seriously, the report itself has no particular authority vis-à-vis the ongoing reflections on the future CFP, and cannot be seen as representing a blueprint for any future changes.

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PREFACE

Fisheries policy in Europe is under scrutiny as concerns about the status of stocks mount and fisheries issues receive increasing attention as part of a broader environmental agenda. At the same time, traditional interests in fisheries are suffering from the negative impacts of stock declines and excess fishing capacity. Evolving attitudes about government institutions are also changing (1) the way fisheries are managed, (2) funding for fisheries programs, and (3) public participation in governance.

Against this backdrop, it is understandable, and indeed prudent, that the European Commission's Fisheries and Maritime Affairs directorate would want to reflect on the situation, particularly progress with respect to the 2002 reform of the Common Fisheries Policy (CFP). Therefore, Michael Sissenwine and David Symes were asked to reflect on the CFP and fisheries management in Europe. Dr. Sissenwine, a natural scientist, is the former Director of Scientific Programs and Chief Science Advisor for the US National Marine Fisheries Service, and past President of the International Council for Exploration of the Sea. David Symes is a social scientist from the University of Hull, UK with an interest in fisheries governance.

The "reflections project" provides high level impressions based on a brief review of written documents and discussions with Commission staff, Member State officials, and fishing industry and environmental stakeholders. The project was conducted from April to June on a part time basis. The idea was to stimulate and provoke further dialog within the Commission, rather than to prescribe solutions to narrowly defined problems. The target audience is solely the Fisheries and Maritime Affairs Directorate. Limiting the audience is conducive to an informal report that can be candid and even provocative. Undoubtedly some of conclusions and recommendations are off target and the Commission should disregard them. Hopefully, there will also be good ideas that the Commission will want to pursue.

The report is organized into two parts which build on the different perspectives of the authors. While they were written independently, they were designed to minimize overlap. Where redundancies and inconsistencies occur, they reflect legitimate alternative perspectives which are worth considering. A consolidated summary of conclusions and recommendations from parts 1 and 2 of the report follows this preface.

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

The Common Fisheries Policy (CFP) is a product of the 1970s and it has retained its character as a top down command and control fisheries management instrument in spite of recent reforms. Its objectives are broad, and they do not provide much guidance on how to manage fisheries. The performance of the CFP has been mixed at best. The survival of the CFP in spite of the changes in fisheries, governments, and public opinion that have occurred in the last 25 years is evidence of a degree of political success. The modern and dynamic nature of the fishing industry and the capability and commitment of the EC staff also reflect positively on the CFP. The scientific enterprise that supports the CFP is high quality and generally it providing sound scientific advice. However, the CFP has not performed well with respect to:

- Status of stocks- The fisheries subject to the CFP suffer a much higher rate of overfishing than occurs on average worldwide and in a comparable developed country.
- Excess capacity- While some progress has been made reducing excess capacity, the rate has been slow, and reductions may barely keep up with increases in fishing power resulting from technology improvements.
- Profitability- Although the available data is limited, estimated profits appear low.
- Rebuilding plans and management plans- The CFP calls for these plans as mechanisms for fulfilling objectives. Several rebuilding plans have been adopted, but they have not always been followed. Additional rebuilding plans are needed. Preparation of management plans lags behind.
- Implementation- Implementation of some fishery management regulations has been poor and ineffective. Illegal, unreported and under reported catches are degrading some fisheries management advice, as well as the credibility of fisheries management.
- Ecosystem Approach- the CFP calls for progressive implementation of an ecosystem approach. Recent steps to reduce discards and protect habitat are elements of an ecosystem approach. However, the EC has not formalized a strategy for implementing an ecosystem approach and documenting that it is doing so.
- Stakeholder and Public Opinion - The CFP has an image problem with the fishing industry, environmentalists, and the general public. Commission staff, scientists, Member State officials, and participants in political processes of the CFP, are frustrated by the problems noted above, the complexity of regulations, lack of transparency, and the overall workload associated with the Policy.

In addition to these performance problems, the CFP faces significant challenges, such as:

- Relationship to other ocean governance regimes- Fishing has enjoyed a privileged status in its use of the sea, but this is now changing. Increased competition for marine space and a heightened interest in environmental protection has focused interest on integrated marine management. Two new initiatives - the Marine Strategy Directive and the Maritime Policy Green Paper - pose a challenge to the ‘independence’ of fisheries policy.

- Scientific support- The demand for scientific support for the CFP has increased in magnitude (e.g., more species) and scope (e.g., economic assessments and social impact analyses in addition to resource assessments). Scientific resources are strained and linkages between scientific activities occur in an ad hoc fashion, rather than by design.
- Relative stability, lack of transparency and the "blocking minority"- These are features of the fishery management landscape for the CFP that limit options. The blocking minority discourages ambitious proposals to improve the performance of the CFP. Relative stability inhibits market based approaches to address the problem of excess capacity. Lack of transparency obscures accountability. It frustrates stakeholders and increases the risk of political decisions that are contrary to the broader public interest.
- Demands on the Fisheries and Maritime Affairs Directorate- A top down command and control approach to fisheries management places large demands on the Directorate. The demands are growing in response to the problems noted above and growing expectations of stakeholders and the public. Is it feasible for the Directorate to successfully perform all of the functions required for command and control management? Even if the Directorate was to increase in size significantly (which seems unlikely), it will be very difficult to overcome the isolation that a centralized organization in Brussels suffers when it has stakeholders throughout coastal communities of Europe.

In spite of these problems and challenges, there is no realistic alternative to having a common fisheries policy or something like it.

To address the performance problems and challenges highlighted in the previous section, the European Commission should consider the following short to medium term approaches:

- Operationalise the CFP- Guidelines and protocols should be developed to help interpret the CFP (e.g., priority between objectives) and to make its application more consistent in terms of both processes and outcomes.
- Make fishery management processes more transparent- Fishery management processes should be well documented and accessible to stakeholders and the public. Options should be analyzed in advance of decisions using state of the art decision support tools that take account of scientific uncertainty and implementation uncertainty. Decisions should be explained relative to these analyses.
- Implement an ecosystem approach to fisheries management- Elements of the approach are already being implemented, but mostly piecemeal. The approach needs to be carried out systematically and processes need to be documented. The ecosystem approach includes implementation of the maximum sustainable yield (MSY) approach, a strategy to reduce bycatch and discards, and movement toward rights based management, all of which the Commission is already pursuing. However, in the case of the MSY approach and reducing bycatch and discards, realistic analyses and strategies are needed to tackle these challenges. In general, implementing an ecosystem approach adds to the need to operationalise the CFP through guidelines and protocols. Transparency is a requirement of the ecosystem approach.

- Strategically consider scientific needs for fisheries management- The Commission is a major stakeholder in the scientific enterprise that contributes to fisheries management. The Commission should encourage a dialog on a strategy to nurture the scientific enterprise as a whole, form the appropriate linkages, and to clarify roles and responsibilities.
- Reduce dependency on the Council for annual fishery management decision making- At present, the agenda of the Council is dominated by short term annual decision making, such as setting TACs. This distracts from more strategic issues, and it invites political decisions that are more responsive to local constituency pressure than to broader public interests. Reducing the dependency on the Council will require sharing responsibility by empowering other entities to be co-decision makers. Options include some form of regionalization of fisheries management such as empowering Regional Advisory Councils to develop management plans, more use of framework plans that can be implemented by the Commission without annual decisions by the Council, or making more use of Commission working groups to more fully negotiate proposals before they reach the Council for approval.

In addition to remedial actions to treat some of the deficiencies of current fisheries policy, there is an equally urgent need for a thorough examination of the CFP as a whole in preparation for the reform of the Policy in 2012. The review should focus *inter alia* on the following:

- the underlying principles that structure the policy approach, including SD, non-discrimination, relative stability and subsidiarity, to ensure that their interpretation is appropriate to the needs of the 21st century;
- the policy objectives that need to be restated, made more explicit and prioritised and the extent to which there may be trade offs between the biological, ecological, economic and social objectives made clear; target led, operational objectives should be set for each long term management plan to provide industry and the public with a clear indication of where the policy is heading and what progress is being made;
- the policy approach which will require redefining so as to indicate how the different elements (precautionary approach, MSY, ecosystem based approach, fleet management, rights based management etc) fit together and how the CFP complements and contributes to the processes of integrated marine management and marine spatial planning;
- and, last but certainly not least, the institutional framework that is in need of fundamental restructuring to capture the benefits of subsidiarity and stakeholder participation and improve the implementation of policy decisions; particular attention should be paid to (i) rebalancing the roles and responsibilities of the European institutions (principles, objectives and strategic thinking) and member states (formulation and implementation of management plans) and (ii) regionalising the CFP in such ways that it can deliver more closely targeted and comprehensive management plans and also assist directly in the development of integrated marine management.

REFLECTIONS ON THE COMMON FISHERIES POLICY

PART 1 - CHALLENGES, PERFORMANCE AND THE FUTURE

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1. INTRODUCTION

A common policy for fisheries was envisioned in the 1957 Treaty of Rome (see Part 3, Common Policies, Article 32-38), although it did not become a reality until 1983. The Common Fisheries Policy (CFP) has the same legal basis as the common agricultural policy (CAP) and it shares the same objectives: to increase productivity, stabilise markets and ensure security of supply and reasonable prices to the consumer. The 2002 reform of the Common Fisheries Policy reaffirms the importance of fisheries in Europe, at least politically, culturally and as an environmental issue, although fisheries are a very small economic factor. This "disproportionate visibility" of fisheries is the norm in developed countries.

The visibility of fisheries is a curse when special interests groups are able to use it to pressure their local representatives into giving their interests priority over the broader public interest that the CFP is intended to serve. It is a blessing if the attention that fisheries receive is channelled into finding long term solutions for fisheries problems. The goal of this report is to help stimulate the latter.

This is part 1 of a 2 part report. It reviews goals and objectives of the CFP and compares them to other fishery management frameworks. Are the goals and objectives logical, consistent and well specified? Are they typical? Next the report considers the bottom line: how well is the CFP performing? Of course, fisheries management is a difficult task such that performance will always be imperfect. Therefore it is useful to compare performance in Europe to fishery management peers (i.e., other developed countries). Following an assessment performance, the report comments on causes of performance problems, and it highlights some specific aspects of fisheries management in Europe which are potentially barriers to good performance. The Report also considers processes for organizing scientific activity in support of the CFP and the challenge of implementing an ecosystem approach to fisheries management. Finally, the report attempts to identify some steps that might be taken to improve fisheries management.

The report draws heavily on my experience in other countries, particularly the USA. I cite examples from the US that are worth considering in Europe. However, I do not want to give the impression that the US is blessed with wonderful fisheries management. It has

more than its share of problems, mistakes are made, and controversies roar. Nevertheless there are some useful lessons to be learned.

2. CRITIQUE OF THE OBJECTIVES OF THE COMMON FISHERIES POLICY

The overarching objective of the 2002 reform of the Common Fisheries Policy is to ensure exploitation of living marine resources that provides sustainable economic, environmental and social conditions. To achieve the objective, the Policy calls for application of the precautionary approach to protect and conserve living aquatic resources, provide sustainable exploitation and minimize impacts of fishing on marine ecosystems. It also calls for progressive implementation of an ecosystem based approach to fisheries management. The Policy seeks an economically viable fishing industry that is efficient and competitive, providing a fair standard of living for participants in the fishing industry. It also calls for consumer interests to be taken into account.

The objective of the CFP is laudable in its attempt to satisfy the needs and desires of the fishing industry, including fish workers, consumers, social interests and environmental interests. However, it fails to give operational guidance for fisheries management. Guidance is lacking on scaling, the meaning of vague concepts, and tradeoffs. With respect to scaling, sustainability occurs over a wide range of stock sizes, yields, fleet sizes, employment levels and consumer prices. For example, fish stocks may be sustained at depleted levels as a result of overfishing (doing so is risky, but it can be done), at very high levels with small fisheries, or at intermediate levels which produce about the maximum sustainable yield (MSY).

In terms of vague concepts, sustainable social conditions is the most problematic because there are so many dimensions to social conditions. We normally think of sustainability of a fish stock or the fishing industry along the dimensions of stock size and profits, respectively. Sustainability means preventing a prolonged negative trend toward extinction. However, “social conditions” involves profiles of people’s spatial distribution, age, health, education, culture, standard of living, preferences and values, and countless other things. Social conditions are constantly changing across multiple dimensions. So what is the social condition the CFP seeks to sustain? Is it the same number and size of coastal communities dependent on fishing? Is this feasible? Is it desirable? Do the communities want to remain dependent on fishing?

Lack of guidance on tradeoffs has a temporal dimension. A common tradeoff in fisheries management is between long term sustainability of fish stocks and short term economic and social costs which may jeopardize economic and social sustainability (depending on how the latter is interpreted). The CFP’s call for the precautionary approach might be interpreted as giving priority to conservation of fish stocks when it comes to such trade-offs, but the CFP’s definition of the precautionary approach is narrow. It says that lack of information is not an excuse for inaction. However, it does not say to give priority to the needs of future generations or long term benefits over short term costs, or to err on the side of conservation in the face of uncertainty. The CFP also fails to give guidance on other tradeoffs such as the trade off between the standard of living of fishing industry works and consumer interests.

How do the objectives of the CFP compare to other developed countries’ fishery management frameworks? The framework for New Zealand is the Fisheries Management Act of 1996. Its objective is to: “maximise the value New Zealanders obtain through the

sustainable use of fisheries resources and the protection of the aquatic environment"[2]. It addresses the scaling issue by calling for maximizing the value from fisheries. However, since "value" has both monetary and non-monetary dimensions, the concept of what's to be maximized is left vague. In practice, the overwhelming objective of New Zealand fisheries management is to maximize rent produced by fisheries through the "purest" example of an individual transferable quota system anywhere.

The framework for managing fisheries in Canada is complex and in some ways uneven (for example a new policy framework was introduced for Atlantic Canada in 2004, but a parallel framework for the Pacific is still being developed). The overall objectives are conservation of fishery resources, sustainable utilization and economic sustainability.[3] On the issue of trade-offs, the policy for Atlantic Canada is quite clear. The highest priority is conservation. Canadian fisheries management is highly market based with extensive use of enterprise allocations and individual quotas. Over the past few years, significant progress has been made in the preparation of Integrated Fisheries Management Plans (IFMP) with various forms of co-management by resource users, and a growing focus on measurable objectives and reference points -- i.e., "objective-based fisheries management". Canadian fisheries management is also evolving to take account of the country's "Species at Risk Act" (which concerns the risk of extinction) and "Oceans Act" (which is aimed at multi-sectoral ocean area management).

Fisheries in Australia are managed under the authority of several laws including Fisheries Management Act of 1991, the Fisheries Administration Act of 1991 and the Environment Protection and Biodiversity Conservation Act of 1999 (EPBC Act). The Australian Fisheries Management Authority (AFMA)[4] manages Commonwealth fisheries of Australia. It is a statutory body established under law, but operating under the control of a non-governmental Board of Directors. AFMA establishes management committees primarily made up of participants in fisheries. These committees have broad latitude to develop fishery management plans, as long as they comply with the aforementioned legal frameworks, and policies adopted by the federal government. A recent policy driving Australian fisheries management at this time is a result of a 2005 "Ministerial Direction" by the Minister for Fisheries, Forestry and Conservation. The Ministerial Direction led to the preparation of a Harvest Strategy Policy[5] with Guidelines[6]. The Strategy and the Guidelines are prescriptive and conservation oriented. The overall objective is to: "maintain stocks at ecologically sustainable levels and, within this context, maximise the economic returns to the Australian community." By stating economic returns are within the context of ecological sustainability, the policy sets conservation as the first priority. Also, the objective of economic maximization is narrow compared to the broader social objectives of the CFP. To achieve the objective, the Policy requires fisheries to be managed with a target biomass that corresponds to Maximum Economic Yield, and the Guidelines specify that 1.20 times the biomass corresponding to MSY is the "default"

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[2] See: http://www.oecd.org/dataoecd/10/10/34430857.pdf

[3] See: http://www.oecd.org/dataoecd/11/27/34427924.pdf

[4] See: http://www.afma.gov.au/default.htm

[5] See: http://www.daffa.gov.au/fisheries/domestic/harvest_strategy_policy

[6] See: http://www.daffa.gov.au/__data/assets/pdf_file/0015/160341/hsp-public-comment.pdf

value of the biomass target. The default value for the minimum biomass level is set at one half the B_{msy} (which in turn has a default value of 40% of the biomass of the unfished stock), and the strategy is required to have less than a 10% risk of violating the minimum biomass level. The target fishing mortality rate must be set below the fishing mortality rate associated with MSY.

The Strategy and Guidelines are now considered a final draft to be implemented by January 2008. To motivate the fishing industry to accept such conservation oriented guidelines, the government committed 220 million Australian dollars to an industry assistance initiatives referred to as "Securing Our Fishing Future."

Arguably, the fisheries situation in the USA is the most comparable to the EU in terms of the size and variety, cultural diversity, government complexity, scientific capability and economic importance (minor in both cases). Admittedly, language differences are only a minor issue in the USA. Fisheries in the USA are managed under the Authority of the Magnuson-Stevens Fisheries Conservation and Management Act.[7]

In 1977, the Act established eight Regional Fishery Management Councils with members from the fishing industry, a few other stakeholders, State fishery management representatives and one Federal fishery manager. These Councils are mandated to prepare Fishery Management Plans consistent with ten National Standards of the Act. If they adhere to the National Standards, the Plans are approved and implemented by the Federal Government.

Like the CFP, the objectives implicit in the National Standards for US fisheries are broad. They state that conservation and management (1) **shall** prevent overfishing while achieving optimum yield, (2) be based on best scientific information available, (3) to the extent practicable, manage individual stocks as a unit, (4) should not discriminate between States, (5) seek economic efficiency, but not have economic allocation as its sole purpose, (6) take into account variations among fisheries, (7) minimize costs of management and avoid duplication, (8) "consistent with the conservation requirements of this Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities", (9) to the extent practicable, minimize bycatch mortality, and (10) promote safety at sea.

The Act does not specify the priority of the National Standards, but there is some prioritization implied. National Standard 1 on preventing overfishing uses the unambiguous word "shall" whereas most of the other National Standards give weaker direction. National Standard 8 concerning communities, acknowledges that priority be given to preventing overfishing and rebuilding overfished stocks. Also, there is legal precedence in the US that establishes National Standard 1 to prevent overfishing as the highest priority.

While many of the terms and concepts in the Act are vague as with the CFP, there is one concept that has a reasonably prescriptive definition. The optimum yield which is to be achieved according to National Standard 1 is to be based on the maximum sustainable yield "as **reduced** by any relevant economic, social or ecological factor." In practice, this means the fishing mortality rate associated with MSY should be a limit reference point

[7] See: http://www.nmfs.noaa.gov/msa2007/2007reauth_notsigned.pdf

(similar to Australia), although there are too many cases where the limit and target are effectively the same.

In addition to the guidance provided in the Act, the US Federal Government has prepared extensive guidelines on interpretation of the National Standards, procedures for developing a Fishery Management Plan, and analyses of management options (following National Environmental Policy Act (NEPA) Environmental Impact Statement rules[8]). A high degree of transparency is maintained throughout the process as a result of the Administrative Procedures Act, Freedom of Information Act, and Federal Advisory Committees Act.

My conclusion is that the high level objectives of the CFP are somewhat to considerably broader, and thus give less guidance, than fishery management frameworks for other developed countries. More importantly, there does not seem to be the level of supporting "instruments" (guidelines, legal precedent, accepted best practice, etc) translating high level objectives into operational fisheries management as there is elsewhere. This lack of operational specificity has the advantage of allowing flexibility to deal with unanticipated circumstances. It also invites debate and it intensifies controversies that reflect different values and priorities, which have not been "taken of the table" by spelling out the rules of engagement. Lack of specificity makes it easier for there to be political "horse trading," which can be seen as an advantage or disadvantage, depending on who wins and who losses.

3. HOW WELL IS THE COMMON FISHERIES POLICY WORKING?

There are several ways to judge performance. Ideally, there should be operational objectives with performance measures and performance standards agreed in advance. The measure should be monitored and compared to the standards. This has not been done, but there is general agreement that the amount of overfishing is one measure of performance, and the desired standard is a low level (zero is probably not achievable).

The Commission used assessments from the International Council for Exploration of the Sea (ICES) to summarize the status of fisheries under the jurisdiction of the CFP.[9] Of 43 stocks assessed, 35 or 81% were overfished relative to common proxies for the fishing mortality rate associated with MSY. There are many more stocks not included in these statistics that are almost certainly overfished. For example, ICES has not formally assessed most deep-sea stocks, but it has warned that most stocks are harvested outside safe biological limits.[10] There are few assessments of Mediterranean Sea fish stocks, but it seems likely that most valuable species are overfished. This is expected for fisheries

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[8] For Operational Guidelines, see: http://www.nmfs.noaa.gov/sfa/domes_fish/OperationalGuidelines/OperationalGuide.htm For National Standard 1 Guidelines, see: http://www.nmfs.noaa.gov/sfa/Prorules_files/061697B_FR.pdf Guidelines for National Standard 1 are currently being revised.

[9] See: Commission Staff Working Document. Technical Background to the Commission's Communication "Implementing Sustainability in EU Fisheries through Maximum Sustainable Yield: a Strategy for Growth and Employment. COM(2006) 360 final.

[10] Communication from the Commission to the Council and the European Parliament. Review of the management of deep-sea fish stocks. COMM(2007) 30 final.

which are only "lightly" regulated. One of the most important fisheries of the Mediterranean Sea, bluefin tuna, is seriously overfished. The Scientific Committee of the International Commission for Conservation of Atlantic Tunas (ICCAT) estimated that recent catch levels are about 3 times the sustainable level.[11] It warned that there is a "high risk of fisheries and stock collapse."

The US National Marine Fisheries Service is required by law to report to Congress annually on the status of US fisheries, which makes it easy to compare the situation to Europe. In fact, status of stocks information is updated near real time (whenever a new assessment is completed) and quarterly updates are available on a website.[12] In the US, stocks are classified in terms of overfishing, based on the fishing mortality rate relative to the fishing mortality rate associated with MSY; and biomass relative to a biomass limit which is usually one half of the biomass associated with MSY. As of 31 March 2007, status assessments were available for 180 stocks, of which 45 or 25% were deemed suffering from overfishing. Twenty nine percent of the stocks were classified as overfished, which means their biomass was below the biomass limit. The fact that there are more overfished stocks than fisheries with overfishing is indicative of several stocks being rebuilt under rebuilding plans. The plans have ended overfishing, but the stocks remain overfished as they have not rebuilt yet. In most cases, the rebuilding plans are designed to achieve rebuilding to the biomass associated with MSY (not just to rebuild above the minimum biomass level) in 10 years with 50% probability. Thus, an improvement in the overfished status of stocks is expected to lag overfishing status. In general, there has been slow improvement in the status of fisheries over the last decade, since ending overfishing and implementing rebuilding plans was mandated.

The United Nations Food and Agriculture Organization (FAO) Fisheries Department reports on the status of fisheries biannually. There reports include stock status information from the USA and Europe, so there is some redundancy to the information presented above. The 2006 FAO report on the worldwide status of fish stocks is the most recent.[13] It reports on data as recent as 2005. Total global landings from capture fisheries have been relatively stable at about 95 million tones for the last decade. The NE Atlantic, where most EU vessels fish, is the fourth most important statistical area (behind the NW Pacific, SE Pacific, and Western Central Pacific) producing about 10 million tones.

According to FAO, 25% of the fish stocks worldwide were overexploited, depleted or recovering. This means that 75% were in an acceptable condition, although there is relatively little opportunity for expansion of fisheries. Thus, the status of stocks worldwide and in the USA is similar, but the European situation is worse. FAO reports that the Northeast Atlantic (including the Mediterranean and Black Seas) is "the areas with stocks having the greatest need for recovery." [14]

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[11] See page 59 of: http://www.iccat.int/Documents/SCRS/SCRS%202006%20ENG.pdf

[12] See: http://www.nmfs.noaa.gov/sfa/domes_fish/StatusoFisheries/2007/FirstQuarter/Q1-2007-FSSISummaryChanges.pdf

[13] See: http://www.fao.org/docrep/009/A0699e/A0699e00.htm

[14] See: http://www.fao.org/DOCREP/007/y5600e/y5600e06.htm#P212_65692

In fairness to the Europe, it is my observation that the status of fisheries today is closely correlated with their status at the time efforts to end overfishing and rebuild stocks began. For example, in the US, the fisheries off New England have over a 400 year history, and they were badly overfished when modern US fisheries management began. They remain the US fisheries with the most problems. European fisheries have an even longer history of intense fishing. Also, the EC is more than a decade behind the US in moving from fisheries management aimed at avoiding unacceptable levels of stock depletion, to fisheries management with an MSY goal. Recovery from a "bad" starting point is always difficult, particularly when one starts late.

Fishing capacity is another consideration in assessing the performance of the CFP. Excess fishing capacity is widely recognized as a problem in terms of economic performance of fisheries and it can be an indirect cause of overfishing and poor stock status. Excess fishing capacity drives up the cost of fishing without increasing yield in the long term. In fact, it usually leads to less yield. Excess capacity does not lead to overfishing if management measures, such as TACs, effort limits, and technical measures, are adequate to conserve stocks. However, fisheries with poor economic performance usually cannot absorb short term reductions in yield that may be necessary to prevent or end overfishing. Thus managers are reluctant to cutback fishing, particularly when they face political pressure from a fishing industry struggling to survive. In practice, excess capacity often contributes to the problem of overfishing by shifting priority from long term conservation and sustainable social benefits, to short term economic needs of fleets that are too large to be sustained in the long term.

The European Commission is well aware of the problem of excess fishing capacity. Article 12 of the CFP says "The Commission shall establish for each Member State reference levels expressed in GT and kW for the total fishing capacity of the Community fishing vessels flying the flag of that Member State…" Article 13 requires Member States to manage entry and exit of fishing vessel capacity to achieve a reduction. The rules for entry and exit to reduce capacity set down in the CFP depend on whether or not public funding is used, and the size of vessels. According to the CFP "Member State which chooses to enter into new public aid commitments for fleet renewal after 31 December 2002 shall achieve a reduction in the overall capacity of its fleet of 3 %" over the two years 2003-2004 compared to the reference levels established under Article 12.

Member State reference levels of capacity have been established[15] as required under Article 12, and capacity levels are monitored based on the requirements of Article 13.[16] All Member States reported a gradual reduction in fleet capacity mainly resulting from vessels being decommissioned. The overall reduction in tonnage and horsepower for the EU-15 Member States for the three years 2003-2005 was 6.27% and 7.28%, respectively. The reduction in both capacity measures for the new Member States was 18%. Most of this reduction was funded by public aid, especially for the EU-15 Member States.

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[15] See: Commission Regulation (EC) No 1438/2003 of 12 August 2003 laying down implementing rules on the Community Fleet Policy as defined in Chapter III of Council Regulation (EC) No 2371/2002; available at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32003R1438:EN:NOT

[16] For the most recent annual report on the fishing capacity of Member States, see: http://eur-lex.europa.eu/LexUriServ/site/en/com/2006/com2006_0872en01.pdf

Most Member States also reported a steady decreases in the amount of fishing effort being expended, probably reflecting a reduction in fishing opportunities (e.g., effort limits and lower TACs), not necessarily a reduction in fleet capacity. The implication is that reductions in fleet capacity are not necessarily reducing the degree to which Member State fleets are underutilized relative to their capacity. Of course the problem would be worse if fleet capacity had not been reduced. The higher cost of fuel certainly exacerbated the economic problems faced by a fishing industry with excess fishing capacity.

Presumably, the objective of Articles 12 and 13 of the CFP is to adjust fishing capacity to match the capacity necessary to efficiently generate a fishing mortality that will maximize the long term sustainable yield. In fact, estimating such a level of capacity is a difficult technical problem. In the USA, the National Marine Fisheries Service had a technical working group of several research economists working on the issue for several years. There were also international working groups under the auspice of FAO as part of the International Plan of Action for Capacity Management. Much progress was made,[17] but I am not aware of any protocol for estimating capacity targets that is entirely satisfactory or widely accepted.

The rationale for the rate of fleet reduction called for in the CFP relative to reference levels of fleet capacity is unclear. Does setting the rate of reduction the same for all Member States mean that the degree of excess capacity is uniform throughout the EU? This seems highly unlikely. While it is encouraging that the rate of reduction set out in the CFP was roughly achieved, a goal of a 3% reduction in two years does not seem very ambitious in light of the Commission's own estimate that there was more than 40% overcapacity in the EU fleet overall.[18] Also, a study by the International Council for Exploration of the Sea indicated that the introduction of new technology increases fishing power by 1-3% annually,19 which means that the target and actual reductions in fleet capacity may have little real effect in terms of economic efficiency and the ability to overfish. An FAO study[20] indicates much more substantial increases in fishing power, as shown in the following Table:

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[17] See the FAO Framework for Measuring and Assessing Capacity at: ftp://ftp.fao.org/docrep/fao/008/y5443e/y5443e00.pdf

[18] According to Commissioner Fischler, see: http://www.europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/00/325&format=HTML&aged=1&language=EN&guiLanguage=en

[19] See: Communication from the Commission "On improving fishing capacity and effort indicators under the common fisheries policy. COMM (2007) 39 final. Also see: Report of the ICES-FAO Working Group on Fishing Technology and Fish Behaviour. ICES CM 2004/B:05, Ref ACE. Available at: http://www.ices.dk/reports/FTC/2004/WGFTFB04.pdf

[20] Fitzpatrick, J., 1996. Technology and Fisheries Legislation, In Precautionary approach to fisheries, Part 2: Scientific papers, *FAO Fisheries Technical Paper* 350/2. Rome, FAO. pp. 191-199. Available at: http://www.fao.org/docrep/003/w1238e/w1238e09.htm

Estimated Technology Co-efficient By Vessel Types				
Vessel Type	**Length (m)**	**Technology Co-Efficient**		
		1965	**1980**	**1995**
Super Trawler	120	0.6	1	2.5
Tuna Seiner	65	NA	1	1.6
Tuna Long Liner	65	0.5	1	2.3
Freeze Trawler	50	0.7	1	2.0
Purse Seiner	45	0.6	1	2.0
Stern Trawler	35	0.6	1	1.9
Long Liner	35	0.4	1	2.8
Multi-Purpose	25	0.6	1	2.5
Shrimp Trawler	25	0.5	1	2.2
Gillnetter	15	0.4	1	1.5
Trawler	13	0.5	1	1.8
Fast Potter	10	0.3	1	1.4
Pirogue	10	0.6	1	1.3

The "Technology Co-efficient" refers to the relative fishing power of vessels over time as a result of advances in technology. For example, the fishing power of a 13 meter trawler increased by 260% in 30 years from 1965 to 1995.

Many other countries are attempting to reduce fishing capacity, but it appears that only the USA has submitted to FAO a National Plan of Action for Managing Fishing Capacity[21], as called for by the International Plan of Action.[22] It is estimated that 55% of US fisheries have excess capacity, and the cost of buying back the excess capacity in the five fisheries with the worse problem would be about a billion US Dollars. The goal of the plan is to essentially eliminate excess capacity by 2020 through a combination of vessel and fishing permit buyback programs with private sector/government cost sharing (so far roughly 25% has been government funded and 75% is from government guaranteed loans to the fishing industry), transferable rights based management that gives market incentives for industry to consolidate fishing capacity, and fishing fleet attrition that results from economic stresses associated with ambitious stock rebuilding plans. My sense is that the latter is having the biggest impact on capacity reductions in the US.

Another indicator of the performance of the CFP is the profitability of Member State fisheries. The Commission compiles economic data on profitability.[23] The data indicates

[21] The US National Plan of Action for the Management of Fishing Capacity is available at: http://www.nmfs.noaa.gov/sfa/reg_svcs/npoa.capacity.8.4.04.pdf

[22] The FAO International Plan of Action for the Management of Fishing Capacity is available at: ftp://ftp.fao.org/docrep/fao/006/x3170e/X3170E00.pdf

[23] See a Working Paper prepared by DG Fish E4 for the Seminar on the Economic Dimension of European Fisheries, 14 May 2007, in Brussels. Power point presentation with figures available at:

that net profits from EU fisheries totalled 6.4% of landed value. However, economic performance is very variable between Member States with 6 of the 13 for which there is data reporting a loss. Italy accounts for most of the profit for all of the EU, according to the data. One wonders if Italian fisheries are really so much more profitable than the rest of Europe or if there are problems with the available economic data.

My judgment is that net profits less than 10% of the value of landings are poor. Given the degree of excess capacity, the cost of fuel, and declining fish stocks, it is not surprising that EU fisheries are economically stressed. This is the case for many fisheries around the world that suffer the same problems as EU fisheries. However, there are also many fisheries that are very successful in economic terms, particularly those that are managed under transferable rights regimes. A study in New Zealand prior to introducing Individual Transferable Quota management indicated that well managed fisheries could generate rents (benefits in excess of normal profits) of up to 40% of landed value. This is why it is common for transferable fishing quota to sell for 2 to 3 times the annual ex-vessel value of the catch allowed under the quota. This only makes sense in terms of a reasonable return on investment if profits are of the order of 10-30% (assuming a modest return on investment in purchase price of quota 5 to10% annually).

Articles 5 and 6 of the Common Fisheries Policy call for Recovery Plans and Management Plans as instruments for achieving the goals of the Policy. As currently drafted, the Policy considers these two types of plans separately. I think that long term/multi-annual planning processes should be merged. Plans should prescribe steps to rebuild stocks when necessary and then how to maintain them in good condition, as well as contingency plans to address the risk of stocks declining below safe biological limits.

At present, there appear[24] to be recovery plans for several stocks of cod, Northern hake, Southern hake and Norway lobster, and anchovy. The Commission's Staff Working Document on Technical Background for Implementing Sustainability of EU Fisheries through Maximum Sustainable Yield [25] indicates several other stocks which are probably in need of recover (e.g., stocks of anglerfish, spurdog, and plaice). There are currently Management Plans for two sole stocks. Management plans are under preparation for several other stocks (e.g., the Pelagic RAC is pursuing plans for some of the stocks under its purview), but there is a backlog of stocks for which recovery and management plans are needed. As a comparison, the US has 42 Fishery Management Plans (including Recovery Plans) which covers virtually all US fisheries.26 These plans and supporting documentation are much more comprehensive than EC plans in terms of background on the fisheries, analyses of the management alternatives that were considered, benefit/cost analyses and social impact analyses, projections about the future of the fishery and

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http://ec.europa.eu/fisheries/meetings_events/events/archives/events_2007/140507/mastracchio_ppt_en.pdf

[24] It would be useful if the European Commission made all recovery and management plans accessible from a single link on its website.

[25] See: Commission Staff Working Document. Technical Background to the Commission's Communication "Implementing Sustainability in EU Fisheries through Maximum Sustainable Yield: a Strategy for Growth and Employment. COM(2006) 360 final.

[26] Access to all US Fishery Management Plans is available at: http://www.nmfs.noaa.gov/sfa/domes_fish/FMPS2.htm

fishery resources, etc. For example, the Impact Analysis for a recent Amendment of the Fishery Management Plan for New England Multispecies Groundfish (e.g., cod, haddock, several flounder species) is 322 pages in length (admittedly, one of the longest of any FMP).[27] EC plans are essentially codification of a TAC setting control rule. The linkage to supporting documentation and analyses of the expected impact of the Plans is unclear or non-existent.

In summary, the overall performance of the CFP has been poor. In terms of conservation of fish stocks, it is doing worse than the US and the rest of the world. While some progress has been made in reducing excess capacity, it is unclear if the reductions are even keeping up with technology creep. Progress needs to be accelerated if fisheries are to become efficient and to reduce short term economic pressures for overfishing. Indicates of profitability are uncertain and difficult to interpret, but they are about what one would expect in light of the status of stocks and the degree of overcapacity. Preparation of Recovery Plans and Management Plans is lagging, and the degree to which these Plans objectively analyze management alternatives is unclear.

It is also worth noting that dissatisfaction with the performance of the CFP is common. Individuals within the Commission express frustration, generally indicating that they believe more conservation is needed. A few people from the "political side" of the process told me that they were unhappy with the performance of the CFP. One expressed "disgust." Environmental interests are clearly dissatisfied. The fishing industry is generally defensive about the status of stocks, but they too think more could be done to simplify the rules, make clear how decisions are made, and increase flexibility. Internationally, EU fisheries have an image problem as a result of EU access agreements with developing countries which are perceived to be hurting small scale coastal fisheries, and because the EU position in international organizations, such as ICCAT, does not give enough priority to conservation. Slowness to respond to warnings about the viability of deep-sea fisheries off Europe also puts the EU in a bad light.

On a positive note, the staff of the Commission is generally held in high regard. Recent efforts to simply regulations, implement economic analyses, front end load decisions, and engage stakeholders, including the establishment of RACs, and the Economics Seminar, have all been well received.

4. WHAT'S GONE WRONG?

Fisheries management is a difficult and complex task such that whatever can go wrong often does go wrong. Even when it is reasonably successful, fisheries management is controversial, because people have different values and objectives, such that there will always be winners and losers. The challenge is for fishery management to be perceived as "fair" even if not everyone likes the outcome. This requires clear objectives, sound scientific information, rationale fishery management decisions, and good implemented.

[27] For Impact Analyses for FMP for New England Multispecies Groundfish, see: http://www.nefmc.org/nemulti/index.html

4.1. Objectives

The objectives of the CFP were discussed in Section 2. My conclusion is that they are vague compared to objectives of fishery management frameworks elsewhere, and they are not supported with guidance documents and protocols to make them useful as operational objectives. FAO Technical Guidelines[28] refer to a process for "unpacking high level policy goals" to translate them into day-to-day management activities. This has not been done to a significant degree for the CFP. As a result, the Objectives of the CFP do not limit controversial debates between stakeholders with different view points and they expose decision makers to political pressure. This is true to some degree for every fishery management situation, but more so for CFP fisheries.

4.2. Scientific Information

The scientific information that supports fisheries management is always uncertain, and it is often controversial because interest groups exploit uncertainty to argue against proposals they do not like. The problem is worse when scientific information is weak as a result inadequate background research, poor or flawed data, scientists that lack training and experience, or poor communications. Issues associated with the scientific information are discussed in a later section of this report. For now, it is sufficient to say that the scientific support for fisheries management under the CFP is not perfect, but it is certainly better than most places in the world, and the scientific expertise available in Europe is arguably the best. However, there are some problems with communications and the deterioration of fishery dependent data (landings, size composition) resulting from illegal or unreported landing is weakening some scientific advice.

4.3. Fishery Management Decisions

The Council of Ministers is the primary fishery management decision making body for the CFP. It is difficult to comment on the rationale of the Council's decisions, because objectives are ambiguous, and there is limited documentation (discussed later). However, if the poor status of stocks in Europe is a legitimate basis for judging the performance of the CFP, then the consistency of Council decisions with stock conservation needs is one way of addressing the quality of decision making.

To be blunt, it seems to be common knowledge that Council decisions involve "horse trading" between Ministers who are trying to satisfy local constituency interests. Recommendations on measures that are needed for conservation are often weakened by Council decisions. I've also heard that recommendations from the Commission to the Council are sometimes weaker than the scientific advice, in response to fishing industry pressure and/or to avoid making a recommendation to the Council that has no chance of being accepted. The result is that decisions are made that are not conservative enough to prevent overfishing or depletion of stocks.

Management of fisheries for cod is an example of the problem. The following table based on the most recent scientific advice from ICES[29] on North Sea Cod is informative:

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[28] See FAO Technical Guidelines for Responsible Fisheries 4, supplement 2, An Ecosystem Approach to Fisheries, at: ftp://ftp.fao.org/docrep/fao/005/y4470e/y4470e00.pdf

[29] See: http://www.ices.dk/committe/acfm/comwork/report/2006/oct/cod-347d.pdf

YEAR	ICES ADVICE	TAC
1987	Recover SSB, TAC of 100-125 t	*175 t*
1988	Reduce F by 30% from 1986, TAC of 148 t	*160 t*
1989	Halt SSB decline, TAC 124 t	124 t
1990	Reduce F 20% from 1988, TAC of 113 t	**105 t**
1991	Reduce F 30% from 1989%	*100 t*
1992	Reduce F 30% from 1989%	*100 t*
1993	Reduce F 30% from 1989%	*101 t*
1994	Significant reduction in F	*102 t*
1995	Significant reduction in F	*120 t*
1996	Reduce F 20% from 1994 to 0.7, TAC of 141 t	**130 t**
1997	Reduce F 20% from 1995 to 0.65, TAC of 135 t	**115 t**
1998	Maintain F, TAC of 153 t	**140 t**
1999	F=0.60 to rebuild the stock, TAC 125 t	*132 t*
2000	F less than 0.55, TAC less than 79 t	*81 t*
2001	Lowest possible catch, TAC of zero	*48.6 t*
2002	Lowest possible catch, TAC of zero	*49.3 t*
2003	Closure, TAC of zero	*27.3 t*
2004	Zero catch, TAC of zero	*27.3 t*
2005	Zero catch, TAC of zero	*27.3 t*
2006	Zero catch, TAC of zero	*23.2 t*
2007	Zero catch, TAC of zero	*20.0 t* [30]

Entries in the TAC column in black indicate that the Council followed ICES advice. Green/bold indicates it was even more conservative, and red/italic indicates it was less conservative. There is a lot more red than green, especially when the advice is to reduce the TAC. The North Sea cod situation illustrates the problem of the Council not being conservative enough relative to scientific advice.

Recognizing the severity of the situation with cod, the Council adopted a multi-year recovery plan in 2004.[31] The goal of the Recovery Plan is to rebuild cod stocks to biomass levels referred to in the Plan as "target levels" (see Chapter II of the Plan). At the risk of oversimplifying, the Recovery Plan calls for annual TACs and associated effort limits that result in a 30% annual increase in biomass, so long as adjustments in the TAC are not more than 15%. However, the Plan sets a maximum level of fishing mortality, which presumably could result in an increase in biomass greater than 30% and/or a decrease in TAC greater than 15%. To make matters more complicated, the Plan says that under "exceptional circumstances" when the biomass is below a minimum level where the stock is considered at high risk, the Council will decide what to do, except that the TAC should be set no higher than it would have been if the stock was above the minimum level.

An annual increase in biomass of 30% is an ambitious conservation objective, but other aspects of the plan are less conservative:

[30] The TAC adopted by the Council for 2007 is not given in the ICES advice on North Sea cod for 2006.

[31] See: http://eur-lex.europa.eu/LexUriServ/site/en/oj/2004/l_070/l_07020040309en00080011.pdf

- The so called biomass target is actually a precautionary limit reference point. Labelling it as a target continues a culture of fishery management to avoid disaster rather than to achieve desired outcomes (a point made in the Commission's Communication on MSY);

- The fishing mortality limits set in the Recovery Plan are several times higher than the fishing mortalities that are necessary to end overfishing;

- The so called "exceptional circumstances" of the Plan existed at the time the Plan was adopted, and have ever since. This is the circumstance when the stock is most at risk, and where presumably a rebuilding plan would want to prescribe strong corrective action.

Another issue with the Recovery Plan is that it prescribes annual decisions independent of stock conditions that will have an impact in subsequent years. For example, during a series of years of poor recruitment, the year when a single year-class of modest size recruits to the spawning stock might qualify for an increase in TAC, even though the stock remains at an extremely low level and a reductions will be needed in subsequent years.

While the Recovery Plan is based on information from ICES, it has not been evaluated by ICES.[32] However, ICES states in its 2006 advice that it "…considers the recovery plan as not consistent with the precautionary approach."[33]

So how is the plan working? As noted above the North Sea cod stock has been in the range referred to in the Recovery Plan as "exceptional" since the plan was adopted. According to the Plan, the minimum cumulative reduction in TAC from 2004 through 2007 should have been 38.6%. The actual reduction in TAC was 26.7 %, primarily because the Council failed to honour its own plan in the first year of implementation.

So far, there is little evidence that the Recovery Plan is working or that the stocks will recover to safe biological limits in the 5-10 years predicted by the plan. One argument is that an ecological regime shift (perhaps caused by climate change) makes recovery unrealistic. While cod recruitment may be suffering from a regime shift, it is clear that biomass could recover substantially by reducing fishing mortality, particularly on young fish. US cod stocks experience a rapid increase in spawning biomass when fishing mortality was reduced and protection for young fish was increased, even though recruitment remained low. However, recover does stall unless the initial increase in spawning potential resulting from production via growth translates into better recruitment.

ICES 2006 advice on North Sea cod highlights the problem of too much fishing mortality on juvenile cod, noting that they account for about 85% of the catch, and that 95% of recruits are taken before they have a chance to spawn. In this regard, technical measures to protect small fish adopted under the CFP are lax compared to North America. Mesh size rules for European fisheries are complicated, but generally they require no more than

[32] See page 4-33 of the ICES Advice Autumn 2004.

[33] See page 26 of ICES Advice 2006, Volume 6.

a 120 mm mesh to trawl for cod. Off the Northeastern US, the minimum mesh size ranges from 165 to 179 mm depending on location and species mix.

Even if the mesh size is increased, there may not be a reduction in mortality on juvenile cod if fisheries for other species, which catch cod (either landing or discarding it), are allowed. Clearly, this is the case, particularly in the Nephrops fishery which uses a mesh of 70-99 mm. In fact, days at sea limits for directed cod fishing may have stimulated a shift in effort to smaller mesh gear in mixed fisheries including the Nephrops fishery.

In contrast, small mesh gear is only allowed off the Northeastern US in certain areas and season where there is experimental data to demonstrate that there will be no significant catch of cod, or other species that are overfished. Fisheries with exemptions from large mesh regulations are often required to have a high level of observer coverage (sometimes 100%) to assure that bycatch is acceptably low.

The Commission's recent Communication on the Review of the Management of Deep-Sea Stocks[34] gives another illustrate of the problem with Council decisions when it comes to conservation. TACs were not introduced until 2002 after more than a decade of fishing stocks that are known to be particularly vulnerable to overfishing. In 2005, ICES repeated its advice that "most deepwater species are considered to be exploited unsustainably."[35] It recommended a 30% reduction in effort compared to the 1998 level for ling and tusk, and a closure of directed fishing for blue ling. It said it could not provide specific advice for other species because of data problems, but consistent with the precautionary approach, ICES recommended an "immediate reduction in … deep-sea fisheries unless they can be shown to be sustainable." NEAFC adopted a recommendation to reduce fishing effort on deep-sea stocks by 30% in 2005 and 2006. The Commission proposed to the Council to reduce fishing effort by 30% from 2003 (the relationship to 1998 is unclear), but the Council only agreed to reductions of 10% in 2005 and 2006. Furthermore, as the Commission's Communication points out, the actual reported catches were usually lower than the TACs being set such that the TACs were not effective in constraining fishing or addressing the conservation issues raised by ICES.

There were also measures to place a ceiling on fishing capacity to limit expansion of deep-sea fisheries, again in response to a warning from ICES. Unfortunately, the Commission's Communication says that the ceiling "… in practice has probably had no effect."

Fishery management decisions for Eastern Atlantic (mostly Mediterranean Sea) bluefin tuna are a blatant example of decisions that are inconsistent with scientific advice on stock conservation.[36] In this case, the International Commission for Conservation of Atlantic Tuna is the decision maker, but the position of the European Commission

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[34] See: http://eur-lex.europa.eu/LexUriServ/site/en/com/2007/com2007_0030en01.pdf

[35] See: http://www.ices.dk/committe/acfm/comwork/report/2005/sept/NEAFC%20Request%20and%20OSPAR%20request%2027%209%20without%20annex.pdf

[36] Admittedly, I may be bias having represented the US at ICCAT during recent debates over conservation of Eastern Atlantic bluefin tuna. The US position is much more conservative arguing for strict adherence to the scientific report of ICCAT's Scientific and Statistical Committee.

usually prevails with respect to this stock. It did in 2006 with the EC taking the lead in drafting the 15 year Eastern Atlantic Bluefin Tuna Rebuilding Plan[37] adopted by ICCAT. The objective of the Plan is to rebuild biomass to the level corresponding to MSY with greater than a 50% probability. The most recent estimate of fishing mortality for the stock was three times the fishing mortality corresponding to MSY.[38] The Plan sets TACs of 29,500 t in 2007 gradually decreasing to 25,500 t in 2010. This is about double the catch the Standing Committee on Research and Statistics (SCRS) of ICCAT estimated could be sustained. Catching double the sustainable yield is not a plan for rebuilding a fish stock.

My conclusion is that there is plenty of evidence of poor decision making if conservation is a priority objective of the CFP.

4.4. Implementation

Member States are primarily responsible for implementing fishery management decisions. However, the ability to implement management measures in part depends on their design (e.g., are there loopholes that make implementation and enforcement difficult or impossible?). Many of the discussions I had pointed to implementation being a problem, particularly enforcement. In some cases, the poor design of management measures rendered them ineffective, some measures are difficult to enforce, and Member States in some cases lack the will or resources to enforce some measures.

The same three examples I used in the previous section of this report illustrate implementation problems.

As noted, mesh size regulations to protect small cod are largely ineffective because smaller meshes are allowed in fisheries directed at other species, resulting in cod bycatch and discard mortality. According to STECF, the 70-99 mm mesh fleet accounted for half the cod mortality in 2005. This problem is exacerbated by the effort limit regime which limits the number of days at sea per vessel, but not the total number of days at sea of each fleet segment. This may create an incentive to switch to smaller mesh gear where days at sea limits are less restrictive. I have also heard that the baselines used for effort limits were too high such that in some cases the limits have little effect.

According to ICES's estimates of total removals of cod, illegal fishing is a serious problem. ICES estimated that for 2003-2005, official (reported) landings account for 50% of removals, discards 10% and other unaccounted for removals (presumably illegal and unreported) 40%.[39]

The Commission's Communication reviewing the management of deep-sea fish stocks notes that landings and fishing effort data are poor, and discards are largely un-reported, although they may be large. It reviews regulations aimed at improving data collections, but it indicates only minimal success with these efforts. The Communication concludes

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[37] The ICCAT Eastern Atlantic Bluefin Tuna Rebuilding Plan is available at: http://www.iccat.int/Documents/Recs/compendiopdf-e/2006-05-e.pdf

[38] See page 61 of the 2006 report of the Standing Committee on Research and Statistics of ICCAT for the recent estimate of fishing mortality relative to MSY and an estimate of sustainable yield. Available at: http://www.iccat.int/Documents/Recs/compendiopdf-e/2006-05-e.pdf

[39] See page 27 of ICES Advice 2006, Volume 6.

that "…measures currently in force have been too poorly implemented to protect deep-sea stocks.

Enforcement of Eastern Atlantic bluefin tuna regulations is a notorious problem. The 2006 report of the SCRS of ICCAT estimates that actual catch in recent years has probably exceeded the reported catch by more than 50%. SCRS states "it appears that the TAC is not respected and largely ineffective in controlling overall catch." It warns of a "high risk of fisheries and stock collapse" if adjustments are not made to impose greater control over the fisheries by improving compliance.

The use of Vessel Monitoring Systems (VMS) for most fisheries should help to cope with some of the implementation problems of the CFP. In theory, it is particularly useful for monitoring days at sea and closed areas. However, if effort regulations are complicated with exceptions and variations between vessel types, fisheries, species caught, etc, VMS may loss its value as an enforcement tool. Unfortunately, I have heard that this is the case. With respect to using VMS to enforce closed areas, it usually requires monitoring the speed of vessels to distinguish between vessels transiting and vessels fishing. At least in the case of one closure for deep sea fisheries, the Commission's Communication indicates that this is not being done.

4.5. Conclusions- What's Gone Wrong

The vagueness CFP objectives and lack of operational guidelines for implementing the Policy is a contributor to what's gone wrong. However, poor decision making relative to conservation needs is probably the biggest problem. Even without more guidance for the Policy, decision makers should understand that conservation is a priority and the social and economic objectives of the Policy are dependent on conserving fish stocks in the long term. There are also cases where poor implementation of fishery management decisions magnifies poor decisions. Sometimes poor decisions are impractical to implement and enforce.

In most cases, scientific advice and services that support fishery management are adequate, and if the advice had been followed many of the current resource problems could have been avoided. However, there are cases where assessments are late identifying stock problems or recognizing stock recoveries. There are also cases where a rapid change in advice is difficult to cope with. The change in ICES advice for North Sea cod from maintaining F which allowed for an increase in TAC in 1999, to a zero TAC in 2001, is an example. While scientific advice and services are not in themselves the cause of poor performance by the CFP, to the extent they create credibility problems and fuel controversy, they make the decision making environment much more difficult. It is not enough for science to be right. It needs to interface with fishery management decision making processes in a manner that helps managers make the "right" decisions. This does not mean that scientists should advocate any particular outcome, but they should help managers to understand implications of the policy options, and they need to guard against situations where science controversies divert attention from more fundamental problems.

4.6. Impediments to Fisheries Management under the CFP

The discussion above has sometimes compared the situation in Europe to the US and other places. Comparisons are useful to measure relative performance and to learn lessons from other's experiences. However, there are some fundamental differences in

the fishery management situation under the CFP compared to most other places. Unfortunately, these differences are impediments in my opinion. They are:

- Lack of Transparency: Compared to my experience elsewhere fishery management processes are much less transparent. Lack of transparency starts with scientific advice. Only recently have observers been granted limited access to advisory meetings. At the other end of the process, the rationale for Council decisions is not clear. There public does not have easy access to an administrative record of analyses that were conducted to evaluate options, comments received from the public, and an explanation of the rationale for decisions. Lack of transparency invites the political horse trading that leads to poor decision making.

- Blocking minority: Council decisions are made by a qualified majority, which means proposals can be blocked by a minority. This makes it difficult to get agreement on difficult decisions that are unpopular with stakeholders with political influence in only a few Member States. My understanding is it is easier for a minority to block proposals as a result of expansion of the European Union. The threat to fishery management posed by a blocking minority is worse when annual decision making on TACs is need than for a system where policy or strategic decisions are made less frequently.

- Subsidiarity: Responsibility for implementing fishery management decisions lies with Member States. The Commission has the potential to put pressure on Member States with the threat of legal actions (it successful sued France for its failure to enforce fishery management regulations) or by withholding funding. Both of these approaches take political will, legal action may take years, and there are several factors that limit the effectiveness of withholding funding. The USA has subsidiarity for some fisheries where Fishery Management Plans are adopted regionally, but implementation is up to individual States. However, there are legal processes for the Federal government to pre-empt States if they fail to implement management, and this has occurred. In Australia, the problem of subsidiarity is avoid by agreements between the Commonwealth and States that one or the other (not both) will be responsible for managing specific fisheries throughout the range of fish stocks.

- Ironically, subsidiarity impedes the command and control form of fisheries management as currently practices under the CFP because the Commission can only command management but it does not control implementation. However, if management changed to a co-management or co-decision making mode, as discussed in Part 2 of the report by David Symes, subsidiarity could motivate Member States to be responsible for decisions they help to make.

- Relative Stability: This is intended to preserve the relative importance of fisheries among Member States. However, the relative importance of fisheries was not stable before the CFP, so why should it be expected to be stable now? One important implication of relative stability is that it limits the ability to use market based allocation of fishing opportunities as a mechanism to rationalize fishing capacity and create incentives for economic efficiency and conservation.

Another impediment to performance of the Common Fisheries Policy is the relatively small size and centralized nature the General Directorate for Fisheries and Maritime Affairs (DG FISH). In several place in this report I am critical of implementation of the CFP because supporting documentation is lacking (e.g., guidelines and protocols to help

interpret objectives). Often I compare the situation to the US. However, the central office of the US National Marine Fisheries is at least double the size of DG FISH. It is also difficult to image how an organization located almost entirely in Brussels can deal with diversity of fisheries and coastal communities spread over all of Europe. Even if it could, it is notoriously difficult for centralized bureaucracies to be credible with distant stakeholders. In addition to a much larger central office in the US, there are also six regional offices. The total federal personnel in the USA responsible for management (excluding scientific programs) is at least four time the size of DG FISH. There are differences in responsibilities. For example, the Agency in the US is responsible endangered species and marine mammals in addition to fisheries management. On the other hand, it does not use demanding command and control management. It also benefits from substantial staffs of 8 regional fisheries management councils. It is hard to escape the conclusion that DG FISH simply is not big enough to effectively manage fisheries by command and control, and trying to do so almost entirely from Brussels makes matters worse.

5. SCIENTIFIC SUPPORT FOR THE COMMON FISHERIES POLICY

5.1. The continuum of scientific activities from knowledge to action

Fisheries management should be science based governance. The Commission is well aware of the need for research, data collection and scientific advice (including stock assessments which estimate the status of fish stock and predict future conditions corresponding to catch and fishing mortality rate options). The Commission has also begun considering economic assessments of the impact of fishery management measures. When it comes to scientific support for fisheries management, both the General Directorate for Fisheries and Maritime Affairs and the General Directorate for Research, through framework research programs, have responsibilities. The General Directorates work together to set priorities and decide on research funding with respect to scientific support for fisheries management. DG Fisheries and Maritime Affairs directly funds Member States to collect data on fisheries and fisheries resources.

Ultimately, science based fisheries management depends on scientific activities along a *continuum from knowledge to action.* The continuum includes:

(1) **Funding** for all of the activities along the continuum.

(2) **Basic research** on theory, concepts and processes related to ecosystems, including humans.

(3) **Applied research** aimed at specific uses.

(4) **Observing systems** that provide information on the state of marine ecosystems and related human activities, such as fishing, including database management.

(5) **Interpretive produces** based on the results of research and observations, that describe the state of systems, such as stock assessments, or the state of scientific knowledge, such as what is known about the ecosystem effects of fishing.

(6) **Decision support tools,** such as operating models, that are designed to evaluate options taking account of what is known, and measurement, process and implementation uncertainty.

(7) **Policy advice** to help shape policies, such as the precautionary approach, or a policy calling for rights based management. Policy advice should not advocate policies, but it should bring policy options to the attention of policy makers and clarify the implications of policies.

(8) **Implementation advice** to help translate policies into operational approaches, such as harvest control rules or protocols for establishing Marine Protected Areas.

(9) **Tactical advice** specifying regulations based on operational approaches, such as advice on the TAC that corresponds to a control rule.

(10) **Impact assessments** for a range of management options. Ideally, impact assessments should be a routine process based on tested decision support tools. Typically, there is some impact assessment in advice (policy, implementation and tactical), but management options almost always evolve from advice, and there is a need for decision makers to have the best assessment of the impact of the specific options they are considering before making decisions. Impact assessments should be considered in advance of management decisions, not used after the fact to justify a decision. Impact assessments should also be available to stakeholders in advance of decisions.

(11) **Planning, coordination and integration** for activities, such as resource surveys, preparation of interpretive products, and the design of research.

(12) **Communication services** to make information more accessible and understood by users and to better inform public opinion based on objective scientific information, not advocacy.

(13) **Expert Consulting services** for scientists to engage in real time interactive communications with stakeholders and managers during deliberations. In the real world, there is a need for an expert to address issues that are not explicitly included in implementation and tactical advice.

This representation is one dimensional, but in reality there are multiple dimensions representing various scientific discipline that support fisheries management, including social sciences and natural sciences. In order for the continuum to function properly there needs to be connectivity from segment to segment (e.g., policy advice should be informed by research) and discipline to discipline (e.g., biologists talking with social scientists).[40] Several of the activities occur at multiple places along the continuum. For example, communications and expert consulting services are expressed as down stream segments of the continuum, when in reality they need to occur continuously. They are particularly important parts of the formulation of policy advice. Decision support tools may be developed several places along the continuum, such as part of preparing policy,

[40] The “Science and Policy Day” workshop by the "SAFMAMS" research project in DG FISH on 21 March 2007 highlighted the importance of boundary organizations or boundary objects to enhance connectivity. The report of the workshop is forthcoming.

implementation and/or tactical advice. Coordination and integration should also occur continuously.

Typically, the continuum is maintained by five types of institutions. They are funders, universities, government laboratories, scientific staffs of fishery management organizations, and network organizations. The activities of institutions have distributions with different centres of gravity, but the tails of the distributions should overlap. Overlapping tails facilitate connectivity which is critically important. Having multiple disciplines working within institutions facilitates connectivity between disciplines.

For the CFP, the scientific enterprise that supports fisheries management is more complicated than usual as there are several "actors" fulfilling some niches.[41] For example, the International Council for Exploration of the Sea (ICES), the European Fisheries and Aquaculture Research Organization (EFARO)[42] and the Marine Board of the European Research Association (MB-ERA), are all networking organizations, although the latter's role is relatively minor when it comes to fisheries management. There are also multiple sources of funds including two General Directorates of the EC and Member States. The private sector, including the fishing industry, funds some scientific activities in support of fisheries management. The following table is one representation of the distributing the activities:

ACTIVITY	RESEARCH FUNDERS (EC, MS, Priv.Sector)	UNIVER-SITIES	MEMBER STATE FISHERIES RESEARCH INSTITUTES	EFARO	ICES	STECF	EC IN-HOUSE ADVICE
1 Funding	XXXX						
2 Basic Res.		XXXX	XX				
3 App. Res.		XX	XXXX			X	X
4 Obs.		X	XXXX		X		
5 Interpret		X	XXX		XXXX	X	
6 DS Tools		X	XX		XXXX	X	X
7 Policy Adv.		X	X		XX	XXXX	XX
8 Impl. Adv.			XX		XXX	XX	X
9 Tact. Adv.			X		XXXX	XXX	XX
10 Imp.Ass.					XX	XXXX	XXX
11 P&C&I	XXX	X	XXX	XXX	XXX	X	X
12 Comm.		XX	XX		XX	XX	XX
13 Consult.		X	X		X	XXX	XXXX

The number of Xs in the table indicates the relative amount of involvement in each activity. Some of the roles are obvious. Universities conduct basic research, whereas Member State Laboratories usually conduct more applied research. Member State laboratories and other member state institutions collect most of the data on ecosystems and fisheries, but ICES manages some of it. Funding organizations (including both DG

[41] For a report on research institutions that are relevant to the CFP, see: http://ec.europa.eu/fisheries/publications/orgres.pdf

[42] See: www.efaro.eu/default.asp?ZNT=S01O13

FISH and DG Research), ICES, and EFARO all provides planning, coordination and integration, with a lot of overlap in the people participating in these activities. How to partition responsibility for various types of advice is not obvious. In my opinion, scientific input to policy advice and consulting services are best performed by scientists that can be interactive with managers. This points toward STECF and Commission Staff. Implementation advice and tactical advice should be prepared objectively without influence of managers. It is also a large workload which STECF and Commission Staff cannot now perform. This points toward ICES. If assessment models are develop to the degree that implementation and tactical advice can be provided more easily and mechanically than today, more of the responsibility might be taken on by an expanded Commission staff.

With respect to scientific advice for fisheries management, I want to highly three important considerations with respect to the role that ICES plays.

(1) Quality assurance- This is important both in terms of the actual quality achieved and credibility. ICES is formalizing and strengthening quality assurance processes with support from the Commission. There is an inherent degree of quality assurance that comes with the large and diverse scientific community engaged in ICES work.

(2) Independence- ICES has a degree of arms length independence from the Commission even thought it is accountable to most of the same governments as the Commission. The latter makes ICES responsive to the needs of the Commission for advice, but the former insulates it from influences that might bias the advice.

(3) Transition of research to advice- This is a key challenge particularly for an ecosystem approach. Since ICES is an umbrella for scientific activities from basic research to advice, more so than any other organization I know of for marine ecosystems, it has an advantage over other organizations when it comes to the transition from research to advice.

There are many options for the arrangement of Xs in the table (in terms of opinions about how they are arranged, and how they should be arranged) and for row and column headings (e.g., a column could be added for private sector scientists). The purpose of the table is to help stimulate and structure a discussion about the entire continuum of scientific activities that are needed to support fisheries management, and roles and responsibilities. A key issue is the design of system connectivity so that research is actually applied. This is particularly important if large investments in ecosystem research that have been made in the last decade, and will be made under the next EU research framework are to actually pay off in terms of an ecosystem approach. This is not entirely the Commission's responsibility, and it does not "control" the web of institutions, individuals and processes that make up the continuum. However, the Commission's responsibility for the CFP makes it a major stakeholder, and it should pay attention to the entire continuum and how the segments connect so that knowledge flows into action.

There are several specific issues that should be considered as the Commission addresses the science needs of the CFP.

5.2. Human resource needs for advisory processes

The demands for scientific support for fisheries management, including stock assessments, economic analyses, social impact analyses, has never been greater. There simply are not enough scientists with training and experience to fill the needs.

There are several factors that are limiting the supply of scientists to support fisheries management, including:

- Lack of formal training opportunities: The skills that are needed are not taught in most Universities. They usually have to be learned in apprenticeship situations or by working with colleagues as part of working groups. This means that there must be some redundancy in staffing so that experienced people can be mentors for new comers.

- Funding: Many government institutions have budget constraints which make it difficult for them to hire, retain and replace necessary expertise.

- Burn out: Providing scientific support for fisheries management is controversial, demanding, and unforgiving when mistakes are made. This leads to burnout and loss of expertise.

- Disillusionment: The fisheries sector generally gets "bad press" such that many young scientists would rather be associated with the conservation movement than government laboratories that support fisheries management. This problem is exacerbated by some university scientists that label government fishery agency scientists as bias as a result of their agency's alleged support for the fishing industry.

- Incentives: Career advancement for most scientists depends on publications in peer reviewed journals. Most of the scientific activities that support fisheries management are not conducive to such publications.

- Unevenness in support for advisory activities: The participation in advisory activities is sometimes supported entirely by the scientist's home institution, sometimes travel support is provided, and sometimes scientists are also rewarded with an honorarium or consulting fee (which can be substantial). This means that some activities have little trouble attracting qualified scientists, while it is difficult for other activities. I have heard that participation in STECF is more attractive than ICES activity for this reason.

It is time to look comprehensively at the human resource needs for CFP scientific support, make participation more attractive, assure there are appropriate educational and training opportunities, mange human resources so there are proper incentives and rewards, and guard against burnout.

5.3. Trend toward quasi privatization of research institutions

This trend means laboratories are shifting from being the recipients of government funding so that they can do whatever the leadership of the laboratory deems to be in the public's best interest, to business like institutions that do specifically what customers are willing to pay for. There are many good reasons for this trend, and I am not arguing against it in general. However, it has important implications. Much more time is spent seeking funding and fulfilling project management requirements, which is an added

overhead and exacerbates the human resource problem. Laboratories can evolve form integrated programs where the whole is greater than the sum of the parts, to a collection of individually funded projects. Long term commitments to monitoring may be harder to maintain. Scientists that had given a high priority to advisory processes in support of fisheries management may decide to pursue funding to do something else. The incentive problem mentioned above becomes even more problematic as peer reviewed publication are often an important factor in competing for funds. Laboratory scientists may also have less interest in interacting with the fishing industry because doing so is not seen as import for funding. Some members of the fishing industry complained to me that this was a problem in their country.

5.4. Three way interactive communications

The traditional method of communication for scientists is written documents. ICES depends heavily on this method. The chairs of advisory committees communicated "face to face" with stakeholders and fisheries managers, but they usually use ICES approved advice as their "script."

There is a need for interactive three way communication (i.e., brainstorming) between managers, scientists and stakeholders. This is necessary to improve understanding of issues and to find creative solutions to problems. Regional Advisory Councils are emerging as a place where such communications can occur. However, traditional ICES advisory processes are not well suited to participate.

5.5. Openness of scientific processes

Related to the need for three way interactive communication is the need for more openness in scientific processes. There need to be ground rules for participation in scientific processes, but anyone that has something substantive to contribute should have the opportunity, and others with an interest should be able to observe. The benefit of more openness will be better informed scientific advice, greater relevance to management needs, fewer surprises, and improved mutual understanding and respect.

Improving openness of scientific processes includes more support for cooperative research between the scientists involved in advisory processes and the fishing industry. In the USA and Canada there are many success stories, particularly involving resource surveys and designing and testing fishing gear to reduce bycatch and habitat impacts. The US has committed tens of millions of dollars to build networks of scientists and fishing industry people engaged in cooperative research. In some cases, such funding has been used to mitigate short term economic losses of the industry when they are "squeezed" by strong conservation measures.

A critical need to make scientific processes more open is access to scientific data. Most of the data collected to support fisheries management advice is paid for with public funds, particular by DG Fisheries and Maritime Affairs funded data collection regulations. Historically, access to this data has been restrictive compared to other place. For example, in the USA, the fisheries related data is accessible to anyone who wants it accept for restrictions to protect business sensitive data (e.g., landings of individual vessels are only available on a "need to know" basis). Fishery independent resource survey data is available to anyone. I understand that the EC advocates more access to fisheries data in revisions of the data collection regulation currently under discussion. I strongly support a move in this direction.

5.6. Need for decision support tools and impact assessments:

One of the activities described above as part of the continuum from knowledge to action is the development of decision support tools. Such tools are badly needed to evaluate and compare the expected performance of alternative fishery management options. Modelling frameworks to evaluate harvest control rules and technical measures, including robustness to imperfect implementation, are need.

This is demanding scientific work, but there is capability for it. Model testing does occur, but it is not tied closely enough to management decision to keep decision making honest by exposing proposals that are unlikely to achieve stated objectives.

The use of closed areas in the North Sea to protect cod illustrate the need for better decision support tools tied closely to management decisions. ICES Advice for 2006 on cod[43] concluded that the 2001 emergency closure of a large area of the North Sea [44] "…had insignificant effect…"because of the redistribution of fishing effort to the edges of the closed area seasonally and spatially. This is a common limitation of closed areas, which is why the US uses a decision support tool that models effort redistribution to analyze all closed area proposals for the New England groundfish fishery. Model results are explicitly cited in the rationale for fishery management decisions.[45] It is noteworthy that the large seasonal closure of the Mediterranean Sea the EC proposed to ICCAT to protect bluefin tuna was not accompanied by such an analysis, and thus it will probably be significantly less effective than presumed in the proposal.

5.7. Enhancing the role of social science: The Commission's recent establishment of an economics unit to conduct impact analyses is an important step forward. However, some key issues need to be addressed:

- *Respect for social science*- Too many people do not understand that social sciences are objective science. During my tenure as a leader in ICES, I tried several times to highlight the need for more commitment to social sciences, including proposing a social sciences objective for the ICES Strategic Plan. There was almost universal resistance by delegates with the most telling comment being "keep politics out of ICES." At the recent Economics Seminar convened by the Commission I was told that the fishing industry wanted short term economic assessments as a basis for arguing against conservation proposals. My reaction is that decision makers should consider objective assessments of short term economic impacts, rather than responding to un-substantiated claims. They should also be considering assessments that address long term benefits. Furthermore, the issue of tradeoffs between short term economic impacts and conservation is an issue of priority setting, not economic analysis.

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[43] See page 28 of ICES Advice 2006, Volume 6

[44] The closure was implemented according to Council Regulation (EC) 259/2001.

[45] The US began using a model of effort redistribution for closed area regulations of the Northeastern US about 10 years ago, although the model has been improved over the years. Effort redistribution is modeled based to data on the spatial and temporal distribution of multispecies catch rates assuming that fishing vessels' response to a closure by redistribute effort to maximize total multispecies revenues. A description of the model is available at: http://www.nefmc.org/nemulti/index.html

- *Social science beyond economics*- Social impact assessments are needed along with economic impact assessments. While there are rarely "operational objectives" for social impacts, a social impact assessment helps managers and society judge the "fairness" of management proposals, and it reduces the ability to block proposals based on unsubstantiated claims that they are unfair.

- *Encourage interdisciplinary approaches*- At present, natural science and social science institutions in Europe are mostly separate and somewhat isolated. ICES and the European Association of Fisheries Economists (EAFE)[46] have no formal contact. Few fisheries laboratories in Europe employ social scientists, unlike the US where this is the norm. For example, the laboratory I directed in Woods Hole has 10-15 social scientists including economists and social anthropologies.[47]

5.7. Professional governance[48]

Today, there are three primary governance mechanisms for the professions that support fisheries management. They are academic degrees that attest to education and training, journal peer review which is intended to quality assure research, and ground rules of advisory processes.

Decision makers and society need to trust and respect the professions that provide scientific support for fisheries management. Trust and respect does not mean that they ignore uncertainty and other inevitable imperfections, but it does mean that they have confidence that services and advice adhere to an accepted standard.

Governance usually evolves as a scientific discipline matures from primarily curiosity driven research with results communicated within the discipline, to a socially important profession providing advice and services to lay people. Unlike communications within the discipline, lay people are not able to judge quality of professional services and advice for themselves, such that professional governance is needed to provide quality assurance. For many professions, certification and licensing programs are implemented by the professionals themselves and/or governments. These programs usually include processes for reviewing performance to assure adherence to standards. Medicine and engineering are examples.

Ground rules of advisory processes are evidence of the evolution of professional governance for fisheries management advice, but as pointed out above, this governance has limitations. For example, it is not conducive to interactive communications. Is it time for the professions that provide scientific support for fisheries management and the users that depend on it to look at the issue of professional governance?

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[46] The European Association of Fisheries Economists' web address is: http://www.eafe-fish.org

[47] For information on the social science program of the US National Marine Fisheries Service, visit the following website: http://www.st.nmfs.gov/st5/index.html

[48] See the following essay for a recent discussion of professional governance for environmental science: Sissenwine, M.P. 2007. Environmental science, environmentalism, and governance. Environmental Conservation 34(2):21-2. Available upon request since the number of the journal where it will appear had not been issued as of June 9, 2007.

6. APPLYING AN ECOSYSTEM APPROACH

6.1. Understanding an ecosystem approach

The Common Fisheries Policy calls for "…progressive implementation of an eco-system-based approach to fisheries management." The United Nations Report on the World Summit on Sustainable Development (WSSD 2002) at Johannesburg in 2002[49] calls for "… use of diverse approaches and tools, including the ecosystem approach, the elimination of destructive fishing practices, the establishment of marine protected areas consistent with international law and based on scientific information, including representative networks by 2012… ". The discussion that follows attempts to explain what and ecosystem approach is, and is not. It points toward a process that the European Commission might want to implement to formalize application of the ecosystem approach.

This discussion of an ecosystem approach that follows is from the perspective of fisheries management. That is, it addresses how fisheries management should change to implement an ecosystem approach. There is also a need for the fisheries sector to participate in processes that integrate management across sectors such as capture fisheries, aquaculture, coastal development, tourism, energy production, transportation, and non-renewable resource extraction. This is sometimes referred to ecosystem based management, place based management, ocean area management, coastal zone management and ocean area management. Integrating fisheries management with other sectors should be addressed by the Commission's Maritime Policy. David Symes addresses this issue in Part 2 of the report.

It was only in the second half of the twentieth Century that management of marine fisheries by central governments and international organizations became common, and took on many of the characteristics of today (e.g. annually setting a total allowable catch, TAC). This intensification of fishery management occurred when it was clear that Huxley's proclamation of 1883, that "…probably all the great sea fisheries, are inexhaustible…,"[50] was not true. In spite of the intensification of fishery management, many stocks have been overfished and collapsed. The social and economic hardships caused by the failure to manage sustainably have been severe. In addition, there is growing concern about the indirect impacts of fishing on marine ecosystems. Many fisheries management stakeholders, from the fishing industry and others such as environmentalists, are critical of fisheries management, in part because they do not feel that their voices are being heard. These problems have fuelled a widespread and growing belief that fisheries management needs to improve and that this can be achieved by taking an ecosystem approach.[51]

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[49] The report is available at: http://daccessdds.un.org/doc/UNDOC/GEN/N02/636/93/PDF/N0263693.pdf?OpenElement

[50] From the inaugural address of the Fisheries Exhibition of London, 1883. See the text of the address at the following web address: http://aleph0.clarku.edu/huxley/SM5/fish.html

[51] For example, see National Research Council (NRC). 1999. Sustaining marine fisheries. National Academy Press. Washington, DC. ; National Marine Fisheries Service. 1999. Ecosystem-based fisheries management. Ecosystem Advisory Panel to NMFS. NOAA Technical Memorandum NMFS-F/SPO-23. National Marine Fisheries Service, Silver Spring, MD.

The FAO Technical Guidelines for an Ecosystem Approach to Fisheries[52] state that the purpose of an Ecosystem Approach is:

> "to plan, develop and manage fisheries in a manner that addresses the multiple needs and desires of societies, without jeopardizing the options of future generations to benefit from the full range of goods and services provided by marine ecosystems."

The Guidelines define the approach as follows:

> "An Ecosystem Approach to fisheries strives to balance diverse social objectives, by taking into account knowledge and uncertainty about biotic, abiotic, and human components of ecosystems and their interactions and applying an integrated approach to fisheries within ecologically meaningful boundaries."

The Ecosystem Approach to Fisheries (EAF) recognizes that target species of fisheries interact with each other and with other components of ecosystems, including their physical and chemical environment. It also recognizes that fisheries impact non-fishery resource components of ecosystems directly (e.g. physical alteration of habitat) and indirectly (through the food web). EAF recognizes that humans are part of ecosystems, and it appreciates the diversity of human goals and objectives. Uncertainty about the current and future state of ecosystems must be faced as well. It should not be used as an excuse for inaction and taking risks that unduly jeopardize options for the future is inherently contrary to the purpose of EAF. The differences between fisheries management as it has been practiced until recently and the future with an ecosystem approach are highlighted in table[53] below:

FROM	**TO**
A few valuable species treated individually	Multispecies and ecosystems
Considered environmental variability as noise	Use environmental signals in management
Ignored ecosystems other than overfishing of target species	Minimize ecosystem impacts and does not allow impacts deemed inappropriate
Inaction or risk prone decisions in the face of uncertainty	The precautionary approach
Priority to short term economic considerations	Priority to long term sustainability
Quasi singular objectives primarily reflecting fishing interests	Balancing of diverse and often competing objectives of society
A single geographic scale	A hierarchy of nested geographic scales
The fishing industry as stakeholders	Stakeholders broadly defined
A focus on top down decision making	A focus on participatory decision making
Government paying for management and research	Users of ecosystems paying or share costs of management
A fishery sector approach	A multi-sectoral approach (fishing, aquiculture, tourism, coastal development, etc.)
Fishery management units	Integrated coastal or ocean area management

[52] See FAO. 2003. The Ecosystem Approach to Fisheries. FAO Technical Guidelines for Responsible Fisheries. No. 4, Suppl. 2. Rome, FAO. 112 pp.

[53] The table will appear in FAO Technical Guidelines for Marine Protected Area as a Fishery Management Tool being prepared by M. Sissenwine and R. Pomroy.

The transition to an ecosystem approach is an evolutionary process, not revolutionary. As indicated in the FAO EAF guidelines, at least in the short term, EAF will be an extension of the current approach to fisheries management. The evolution is occurring now such that today's fisheries management has more of the elements of an ecosystem approach than a decade ago, but less than a decade from now.[54] EAF does not replace or diminish the need to control fishing mortality to sustain fisheries. The 1999 report of the US National Research Council on Sustaining Marine Fisheries advocated the Ecosystem Approach, but not as a replacement for current approaches to fishery management. It concluded that a

> "significant overall reduction in fishing mortality is the most comprehensive and immediate ecosystem-based approach to rebuilding and sustaining fisheries and marine ecosystems"

The pace of the evolution depends on accumulation of knowledge and understanding, and societal values and beliefs. Some people will be threatened by the evolution, while others will feel it is too slow. An ecosystem approach is a process that values knowledge, copes with uncertainty, embraces diverse stakeholders, and balances sometimes conflicting objectives. It is not a prescribed outcome either in terms of fishery yields or the state of ecosystems.

The bottom line is that an ecosystem approach is being progressively implemented under the CFP, although probably not fast enough. In particular, more needs to be done to significantly reduce fishing mortality as "…the most comprehensive and immediate ecosystem-based approach…"

The Commission could formalize processes to demonstrate that it is applying an ecosystem approach. This might involve preparation of "Fishery Ecosystem Plans" as a more comprehensive ecosystem oriented alternative to the Recovery Plans and Management Plans called for by the CFP. A Congressionally mandated Task Force in the US recommended this approach in 1998[55] and the US has begun implementing it.[56]

The idea of preparing Fishery Ecosystem Plans is not to "make work" by merely assembling information about ecosystems. It is to document a process that leads to decisions that take account of (a) diverse stakeholder values and goals translated into operational measures of performance, and (b) existing knowledge about ecosystems including uncertainty, and (c) objective analyses of options. The Commission encouraged ICES to prepare "Guidance on the Application of the Ecosystem Approach to

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[54] See: Sissenwine, M. and S. Murawski 2004. Moving beyond "intelligent tinkering": advancing an ecosystem approach to fisheries. Marine Ecology Progress Series. 274: 291-295.; and Sherman, K., M. Sissenwine, V. Christensen, A. Duda, F. Hinrichsen, C. Ibe, S. Levin, D. Lluch-Belda, G. Matishov, M. O'Toole, S. Seitzinger, V. Vandeweerd, J. Thulin, J. McGlade, K. Zwanenburg, T. Qisheng, H.R. Skjoldal, and R. Serra. 2005. A Global Movement Toward an Ecosystem Approach to Management of Marine Resources. Marine Ecology Progress Series 300: 241-296.

[55] The report of the Task Force is available at: http://www.st.nmfs.noaa.gov/st7/documents/epap_report.pdf

[56] For a description of ongoing work on preparation of a Fishery Ecosystem Plan, see: http://www.nefsc.noaa.gov/ecosystems/Ecosystems.pdf Also see the following paper for a description of key elements of an Ecosystem Plan: Sissenwine. M.P. and P.M. Mace. 2003. Governance for responsible fisheries: an ecosystem approach. Responsible Fisheries in Marine Ecosystems. Food and Agricultural Organization and CABI Publishing, Cambridge, MA. p. 363-390.

Management of Human Activities in the European Marine Environment"[57] which is a useful starting point for preparing Fishery Ecosystem Plans.

Unfortunately, the fisheries sector—managers, scientists and/or fishers—often demean progress that is being made implementing an ecosystem approach when they criticize the approach for being vague or they say "I agree with an ecosystem approach, but I don't know what it means…" or "… we don't have enough data to apply it…" Enough is known and an ecosystem approach is increasingly being applied (albeit not enough in Europe) by more inclusive stakeholder involvement, efforts to reduce fishing capacity, rebuilding plans, and closures to protect habitat and reduce bycatch. The Commission should embrace the Ecosystem Approach and demonstrate it is applying it, or someone else will definite it in a way that is unworkable for fisheries.

Several current initiatives of the Commission are elements of an ecosystem approach. They included:

6.2. Implementing sustainability through maximum sustainable yield

The Commission's Communication on this subject[58] responds to the WSSD 2002 call for states to "Maintain or restore stocks to levels that can produce the maximum sustainable yield with the aim of achieving these goals for depleted stocks on an urgent basis and where possible not later than 2015." As stated by the US National Research Council, reducing fishing mortality to the levels corresponding to MSY is a substantial step in an ecosystem approach.

The Communication argues that an MSY approach should be implemented by defining target rates of fishing mortality and reaching the targets gradually, not by attempting to achieve a target biomass corresponding to MSY. I generally agree with managing to achieve a target fishing mortality, not a target biomass. Fisheries management can control fishing mortality, but it only influences biomass indirectly through fishing mortality. However, gradually reducing fishing mortality to target levels will not fulfil the EU's agreement to restore stocks to the level that produces MSY where possible by 2015. To do so will usually require reducing fishing mortality to the level corresponding to MSY or lower immediately.

Aside from the consistency of the Commission's approach with the WSSD 2002 commitment, there is little evidence that there is a strategy with political will to implement it. Reducing fishing mortality for most species by 50% or more is a huge challenge. The Commission's recovery plan for cod isn't even attempting to achieve the fishing mortality that corresponds to MSY. It is time to prepare specific fishing mortality reduction schedules, analyze the social and economic impacts, identify ways to mitigate short term losses, and determine the reality of political commitments in light of these specifics.

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[57] Available at: http://www.ices.dk/pubs/crr/crr273/crr273.pdf

[58] See: http://eur-lex.europa.eu/LexUriServ/site/en/com/2006/com2006_0360en01.pdf

6.3. Move toward effort management

Effort management can be useful within an ecosystem approach. It has several potential advantages. Effort limits may be used:

- To reduce discard problems
- To encourage capacity reduction
- Because it is more robust to stock assessment uncertainty than TAC management
- As a backup to TACs because effort limits are easier to enforcement

It seems that the Commission is using effort management for several of these reasons, but it is not clear how well specific applications have been designed for the purpose. For example, effort limit rules are so complicated, that I have heard they are no more enforceable than TACs, even with VMS. Also, effort limits need to be set lower enough to limit fishing mortality to the level TACs were intended to achieve. If effort limits are to be used to encourage capacity reduction, the rules have to allow effort units to be consolidated on fewer vessels.

Effort limits are a useful supplement to TAC management, but as they are currently being applied, I do not think they are an alternative.

6.4. Policy to reduce unwanted bycatch and eliminate discards

The Commission's communication[59] on bycatch and discards indicates it will progressively introduce a ban on discards. Eliminating discarding would be a major step toward an ecosystem approach; however a ban is virtually meaningless unless it can be enforced or there are incentives to retain bycatch. Managing bycatch and discards is a huge challenge which requires a species and area specific "actionable" plan with performance measure. Such a plan should:

- Describe (quantitatively if possible) the nature of the bycatch and discard problem in each fishery based on available information,
- Address discard reporting requirements and the sampling design of observer programs to monitor discards,
- Classify discard problems in terms of impacts on (a) conservation of fishery resource species, (b) species with high "existence value" (marine mammals, sea turtles, sea birds, coldwater corals), (c) biodiversity, (d) economic efficiency, and/or (e) ethical concerns about discards regardless of a-d;
- Prioritize responses to the problems in the previous "bullet;"
- Identify potential methods for reducing discarding such as closed areas, gear modifications, regulatory changes, market incentives, etc.;

[59] See the Commission's communication on bycatch and discards at: http://eur-lex.europa.eu/LexUriServ/site/en/com/2007/com2007_0136en01.pdf

- Evaluate options including impact assessments;
- Specify performance measures and performance standards;
- Address implementation issues, performance monitoring and adaptive change.

The US launched its bycatch management program with a similar approach resulting in a 1998 report titled Managing the Nation's Bycatch.[60] There is a national strategy for monitoring bycatch[61] The National Marine Fisheries Service's National Bycatch Strategy website[62] is a source of planning documents and it includes links to regional implementation plans. There has been sum success, but bycatch management is still a work in progress after about a decade.

6.5. Rights-based management

The Commission's Communication on rights based management [63] is aimed at opening a dialog on rights based management by sharing experiences. The Commission correctly recognizes rights based management as necessary to make fisheries more efficient and to reduce excess capacity. When fishing opportunities are controlled by well defined transferable rights, like ITQs, excess fishing capacity is not an issue. Markets provide an incentive and a mechanism for rationalizing capacity relative to economic conditions and resource availability.

The issue of rights bases fisheries management is usually controversial (in my opinion mostly for irrational reasons), and the EU is no exception. Usually, highly industrialized fisheries want rights based management, and small scale coastal fisheries are against it. Some Member States are in favour, others are not. Even so, most Member States apply some form of rights based management to their own fleets. Relative stability means that the Commission cannot impose rights based management, but it can encourage Member States to do so.

My experience in the US is that pushing too hard for rights based management causes a backlash that sets back the approach. In fact, the US lags behind most major fishing Nations in the implementation of rights based management, particularly ITQs, because of such a backlash.

For European Union fisheries there is already a trend toward rights based management. The barrier that relative stability imposes is gradually breaking down. There are some within year country to country quota trades occurring now. Gradually, these will probably evolve to multiyear understandings, even if they are informal. I would not be surprised if informal mechanisms are already being created to allow compensation (such as monetary) other than fish quota. While in theory, relative stability may be untouchable, its importance in practice over time is likely to diminish.

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[60] See: http://www.nmfs.noaa.gov/bycatchplanonline.pdf

[61] See: http://www.nmfs.noaa.gov/by_catch/SPO_final_rev_12204.pdf

[62] See: http://www.nmfs.noaa.gov/by_catch/bycatch_strategy.htm

[63] See: http://eur-lex.europa.eu/LexUriServ/site/en/com/2007/com2007_0073en01.pdf

My bottom line is that the Commission's initiative on rights-based management is important and worthwhile. The Commission should not push too hard, but it should keep the dialog alive, and it should not undermine formal and informal arrangement that facilitate a quasi market in rights between Member States.

7. MAKING THE COMMON FISHERIES POLICY WORK BETTER

In Part 2 of this report, David Symes proposes to reopen the debate on principles and objectives of the CFP. For now, I presume the Common Fishery Policy will continue to exist more or less the way it is. So what should be done to improve performance of the CFP?

7.1. Operationalise vague objectives of the CFP

As discussed above, the objectives of the CFP are vague and not very useful in distinguishing between acceptable and unacceptable fishery management options. It is common for high level policy policies and legal frameworks to be vague, thus requiring guidelines to document agreed interpretations and to codify protocols for implementation. This approach requires a large investment in staff work, stakeholder consultation, political negotiations, and ultimately the expenditure of political capital, but the investment should payoff in less controversy and better decision in the long run.

7.2. Make fisheries management processes transparent

Transparency is a common approach to improving governance by making government agencies and decision makers, more accountable. I do not know what can be done to make the actual deliberations of the Council more transparent, but the Commission can improve the transparency of the system overall by maintaining a formal administrative record of documents, including meeting records, public comments and responses, impact analyses and justifications for decisions. Scientific processes should also be made more open to improve credibility and take advantage of knowledge and insights that are not now used in advisory processes.

7.3. Share responsibility for fishery management

Even if there are guidelines to operationalise objectives and there is more transparency, Council decisions are inherently political, which makes "horse trading" a hard habit to break. A way to minimize the detrimental effect is to spread the risk by sharing fishery management responsibility and decision making power (e.g., co-decision making). Several approaches could be pursued.

7.3.1. Regional Advisory Committees

RACs are the most important step forward from the 2002 reform of the CFP. My impression is that they are doing well at this early stage in their existence. They will evolve and seek more responsibility and influence. I think it would be a positive step if RACs were seen as the vehicle for preparing Recovery Plans, Management Plans, or even Fishery Ecosystem Plans (as discussed above), within constraints of operational guidelines. Like the Council, RACs are inherently political. However, they are almost certainly a lot easier to guide and keep within the rules than the Council.

A positive aspect of the RACs evolving from bodies that primarily react to proposals from the Commission, into bodies that generate proposes for (a) Commission review and/or action, and (b) Council approval as appropriate, is that RACs would need to agree on proposals. I have heard that currently it is easy for RACs to put forward majority and minority opinions such that the fishing industry and environmental interests are not compelled to negotiate compromises. This is unfortunate.

If RACs are empowered to design fishery management within constraints of Commission policies and guidelines, Member States might need to play a more formal role, such as serving as members along side stakeholders. This would be a variation of the regionalization of fisheries management discussed by David Symes in part 2 of the report.

The future role of the RACs is an issue relative to their funding. The Commission is partially funding the RACs, and they are expected to be partially self-funded. If the RACs are advocates for the interests of the organizations their members represent, then they should be self funded. If they are given a responsibility to fairly perform functions of government on behalf of society, such as prepare management plans, they should be government funded. They will also need technical resources to do this job. The Regional Fishery Management Councils in the US, which lead preparation of most of the 42 Fishery Management Plans I described earlier in this report, receive about 2 million US dollars per year each. They also receive a lot of technical support from the National Marine Fisheries Service.

7.3.2. Multiyear frameworks

Developing multiyear frameworks plans that objectively and unambiguously specify future management actions conditional on stock assessment updates and other types of information, is a way of reducing the number of political decisions that need to be made by the Council. They also take the focus of decisions off individual winners and losers with respect to who gets how much fish, to more generic decisions, which hopefully, will spark less political excitement.

A framework approach can also be used to frame the debate in a manner that compels politicians to be “politically correct.” I recall a case where annual quota decisions were always much too high to be sustainable. A framework process for setting quotas was developed. The framework used data from the fisheries to calculate quotas based on the principle that reproductive output of recruiting year classes must on average be enough to replace their parents. It’s a principle that is not only a scientifically imperative for sustainability, but it is also politically correct in the sense it hard for politicians to vote against it.

7.3.3. Use Commission Working Groups

One of the Fishery Attachés to the European Commission suggested that some of the political decision making of the Council could be minimized if there was more use of working groups with Member State representation to negotiate proposals before they reach the Council for final approval. Of course, this approach would require that proposals are prepared earlier than is possible if October assessments are used as the basis for managing fisheries barely two months later. The Commission and ICES are considering ways that stock assessment advice can be provided earlier in the year. While this is “doable,” advice will be less certain for some key assessments that use data from

summer surveys. An alternative is to change the start of the fishing year from January 1 to a later date in the year. I understand a proposal to start the fishing year later was rejected, but the rationale for preferring an option that degrades the precision of stock assessment advice is unclear.

7.4. Embrace an ecosystems approach

As discussed above, the evolution toward and ecosystem approach is underway. The Commission should embrace it and implement formal processes, such as Fishery Ecosystem Plans, to structure application of the approach.

7.5. Consider scientific needs for fisheries management strategically

The processes for obtaining scientific support for the CFP and the roles of the scientific institutions that contribute to the scientific support have evolved in an ad hoc manner, more or less independently. In the last few years, ICES and the Commission have engaged in fruitful discussions on a regular basis. However, these discussions usually focus on short term priorities, and business arrangements. The relationship between ICES and STECF, ways to engage more university scientists, implications of the quasi privatization of laboratories in some Member States, research priorities, increasing the pool of experienced social scientists, the need for scientists to communicate more interactively with stakeholders and policy makers, and human resource needs (e.g., education and training, coping with burnout) are all topics that are ultimately important to the CFP. The Commission should encourage a broad dialog on these topics.

7.6. Find political will!

While the steps above can give the CFP a better chance of success, at the end of the day, success will require political will. My guess is bolstering political will depend on the following:

- The evolution of fisheries management from a local constituency issue to an important element of the “green” movement. This evolution is occurring, in part because of media attention fisheries problems receive. Unfortunately, a lot of the attention is unfair, but in some sense it is payback for many bad fishery management decisions in the past. Fishery Ministers and the fishing industry need to understand that shifting public opinion is a real threat to fisheries, unless they have the political will to earn respect for fisheries management.

- Incentives for the fishing industry to accept new approaches. Earlier in this report, I described the Australian’s conservation oriented Harvest Strategy Policy. As an incentive for the industry to accept the policy, the Government tied it to a 220 million Australian dollar fund to mitigate impacts on the fishing industry. Similarly, New Zealand linked acceptance of ITQ management (which made a lot of the industry people very nervous in 1986) to a 43 million NZ dollar government funded quota buyback. However, monetary encouragement should not be short term economic relief. It should help to mitigate transition costs on a path to permanent solutions.

8. CONCLUDING REMARKS (PART 1)

There is no sure fire way to solve fishery management problems. I hope my reflections stimulate the Commission to think broadly about options to improve management. I am not so naïve that I think I have come up with approaches that the Commission has not already considered, but maybe I have put them in a new light. The Commission has the expertise, experience and knowledge of European fisheries to decide on the way forward. It should not be afraid to push for real change.

I appreciate having had the opportunity to learn about the Common Fisheries Policy and the fisheries management situation in Europe. It has been a rewarding experience. Thank you.

REFLECTIONS ON THE COMMON FISHERIES POLICY

PART 2 - INSTITUTIONAL ISSUES

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9. DO WE NEED A CFP?

9.1. Introduction

Over the past 25 years (1982-2007), EU institutions have presided over an unparalleled period of decline for Europe's fishing industries. In denial of the basic principle of Sustainable Development, they have apparently allowed the satisfaction of demands by the present generation to compromise the ability of future generations to meet their needs from the living resources of Europe's seas. Had the present situation been foreseen as the probable outcome, it is unlikely that the CFP would ever have become reality.

Was this state of affairs inevitable? Was the CFP inappropriately structured, inadequately equipped or insufficiently robust in its attempts to meet the challenges of overfishing in the latter years of the 20th century? Why did the CFP so singularly fail to articulate its own objectives? A tentative answer might be that the CFP did provide a basic and sufficiently flexible framework for managing the resources of an expanding common pond - especially after the reforms of 1992. But timidity on the part of the Commission in making the fullest use of the instruments to implement the Policy and a lack of political will on the part of the Council to override national interests were largely responsible for the failure to prevent the depletion of major fish stocks, increasing instability within the industry and continued damage to the marine environment. There is a sense in which policy failure actually occurs during the transition from legislative proposal to practical implementation - 'a kind of Sargasso Sea, where policy initiatives lose momentum, founder and disappear from sight'. (Deas, 2006).

9.2. Future visions

In looking to the future, questions must be asked about the direction of fisheries management in Europe: whether the CFP as currently structured is fit for purpose; how more synergy can be developed within the institutional framework; and whether there are fundamental constraints and rigidities within the system that inhibit more innovative policy making. Are there alternative models which can realistically offer a better chance of success?

The next 25 years are likely to be characterised by increasing uncertainties relating both to environmental change and to the political development of the EU. Nonetheless, for the next Policy period (2012-22) we can begin to build a tentative vision of the future of Europe's fisheries. Certain elements of that future landscape appear inescapable: greatly altered/reduced fishing opportunities constrained by environmental change, the adoption of an ecosystem approach, marine spatial planning and the implementation of strategies for the recovery of fish stocks to MSY levels; a much smaller, leaner fishing industry; a switch from short term crisis management of individual fish stocks to long term fisheries planning based on effort regulation. Several goals have already been set for the period up to 2020 which will impact on fisheries management. These include the development of an integrated network of MPAs by 2010 (OSPAR and others); the adoption of stock recovery programmes leading to conditions of MSY by 2015 (WSSD) and the attainment of good ecological status for EU waters by 2020 (Marine Strategy).

Beyond these basic elements the vision is less clear. A number of alternative landscape features - alternatives to the present design of the CFP - can be envisioned.

(1) A return to the *status quo ante* where MS resume full and independent responsibility for management within their own EEZs subject only to the proviso that they act in accordance with the terms of the Single Market and the EU's basic competition rules. This would involve complex bi-lateral and multi-national agreements concerning access to resources in the regional seas. Several MS would be severely disadvantaged by truncated EEZs.

(2) A *regionalised system of management* based on an upgrading of RACs to Regional Management Councils with responsibility for developing regional management plans and appropriate regulatory instruments within their respective areas of jurisdiction. The Commission would retain responsibility for setting the broad aims and objectives of the CFP and overall monitoring of the policy system.

(3) A *single European fishing industry* created through the abandonment of relative stability and the establishment of a pan-European market in fishing rights. The much smaller integrated European fishing fleet so created would be more easily managed, with 'enforcement' achieved largely through on-board inspectors and management costs wholly or partly recovered through charges for annual licences and/or surcharges levied on all transfers of fishing rights.

(4) A *deregulated European fishing industry*: a desirable goal but very difficult to imagine the circumstances in which this might come about. EU policy objectives for a reduction in the burden of regulation and considerations of alternative systems of management (incl. co-regulation and self-regulation) and 'softer' forms of regulation seem incapable of early realisation in relation to fisheries and certainly not during the transition to a properly balanced relationship between fishing capacity and resource availability. Constraining factors include the technical complexities of management based on scientific assessments, the fragmentation of the industry into large numbers of discrete operating units, and the absence of any fully inclusive trade associations or unions making it difficult to identify legitimate negotiating partners or agencies for co-regulation. But the consequences of over-regulation - including non-compliance, sub-optimal fishing patterns, reduced competitiveness, enforcement problems, incomplete/incorrect implementation, litigation and ineffective outcomes - should serve to focus attention on the issues and the need for sufficient and appropriate regulation.

None of these alternative scenarios would obviate the need for an agreed, flexible but robust framework for fisheries conservation across Europe's regional seas. This is precisely what the CFP should aim to provide now and into the foreseeable future.

Even further removed from present day reality - and dependent on the pendulum of public and political opinion swinging much further in favour of marine environmental conservation - one could envisage a fifth scenario where commercial fisheries were subordinated to prior objectives for restoring marine ecosystems and large parts of Europe's seas designated as fishing exclusion zones. In such a situation, the criteria for determining where and under what conditions commercial fishing activity was permitted would be set through ecosystem management plans overseen by DG Environment.

9.3. An image problem

It is clear that the CFP suffers a serious image problem. The Commission is seen as 'regulator and enforcer' rather than as 'facilitator or enabler', authoritarian and élitist in its unquestioning adherence to conventional fisheries science (stock assessments) and remote, unresponsive and bureaucratic in its relations with the industry. Mocked by its persistent failures and condemned for its apparent intransigence over stock recovery plans, the CFP has lost the confidence of its client group (the fishing industry) and the public at large. The very legitimacy of the CFP is being challenged.

There can be little doubt that the very narrow system of policy making in fisheries - in which the Commission has 'exclusive competence' for the framing of proposals in respect of conservation policy and the Council of Ministers acts without the consent of the European Parliament in decision making - contributes directly to the CFP's image problem. Fisheries are virtually unique among sectoral policy domains in the insistence on the Commission's exclusive competence and the lack of direct democratic accountability due to the exclusion of the European Parliament from the decision making process. The Parliament is in effect sidelined within the policy system: although the Commission is required to consult Parliament on proposals for legislation, it is under no obligation to accept their 'opinion'. The failed Constitution would have confirmed the Commission's exclusive competence, but there were provisions for the adoption of 'co-decision making' involving Council and Parliament. In the absence of future moves for major constitutional reform, there is little likelihood of the current procedures being revised.

As a result the CFP retains the basic characteristics of a 'command and control' policy system. There are good reasons for the current system to remain in place despite the negative connotations. The need for a robust, coherent and consistent approach to fisheries conservation throughout the 'common pond' can only be achieved through the intervention of a single authority (the Commission); negotiated solutions would inevitably be weaker and lack consistency. Likewise 'co-decision making' would prolong the process, create the potential for disagreement between the parties involved and encourage still weaker, compromise solutions.

In seeking to counteract the negative image conferred in part by the severely constrained policy making system, DG Fisheries and Maritime Affairs (DG Fish) needs to embrace fully the principles of accessibility, transparency and proportionality in the handling of key issues and to emphasise the potentials for greater synergy in working informally with MS, regional and local institutions and with private enterprises. Above all it will need to

make more transparent use of the advisory sources - both internal and external - at its disposal.

9.4. Changing perspectives of the CFP

The core area of the CFP - conservation of fish stocks - was negotiated during the second half of the 1970s and the early years of the 1980s in circumstances very different to those today: a much smaller 'common pond', a Community of only 9 MS and a relative abundance of demersal fish. Since that time the Policy has undergone two reviews (1992 and 2002) and subsequent reforms.

Overall, the years 1982-2002 covered a period when the aims and objectives of the CFP were narrow and self-contained (though still not precisely defined) and when opportunities for developing positive synergies with neighbouring policy areas were limited. It is only during the last few years that assumptions underlying the Policy's objectives, its relationships with cognate policy areas and the mechanisms for implementing policy and the configuration of the policy process have been seriously questioned.

Of the two reviews, the first (1992) appears to have made comparatively little difference to the way the Policy was conducted. This was despite the fact that what are now seen as basic instruments for achieving the successful recovery of demersal stocks - long term management and effort regulation - were incorporated in the 1992 Regulation but not used until the end of the period. An important innovation in the 1990s was the move to tackle overcapacity and the restructuring of MS fleets through Multi-annual Guidance Plans; an attempt at performance based management, linking fulfilment of MAGP targets to access to the structural Funds was aborted.

According to the Commission's own evaluation of the situation at the end of the 20th century (Commission, no date) the problems of the CFP remained intrinsically the same but in a much altered global and regional context, including awareness of environmental issues, globalisation of trade, developments in international law and the burgeoning aquaculture sector. The Commission attributes the failure to deal effectively with the problems to a lack of political will to implement in full the range of instruments available. And it draws attention to the number of policy objectives and legal requirements which appear contradictory or incompatible at least in the short term, arguing for the need to rethink the Policy's objectives.

The first 20 years of the CFP do reveal a rather mixed record of achievement. They can be counted a political success in terms of the Policy's survival in the face of a more or less constant state of crisis, the expansion of the Community and the enlargement of the 'common pond', and the pressure of environmental imperatives. It is a moot point, however, as to whether the persistence of the Policy in its original form owed more to its resilience and adaptability or to inertia and intransigence. To the extent that a dynamic and modern fishing industry survives throughout much of Europe, albeit in somewhat reduced circumstances, the CFP may also be considered a qualified economic success. But again it is arguable whether this is due directly to the provisions of the CFP and FIFG or to private entrepreneurial initiative. The structural elements of the CFP may have helped to lay the foundations of a modern, efficient catching and processing sector but at a very high cost in terms of overcapitalisation, overcapacity and overexploitation. Indeed the high levels of public and private investment in the 1980s and 90s lie at the heart of the Policy's most outstanding failure - its inability to halt the serious decline in demersal

fish stocks, let alone engineer their recovery. As a consequence, the continuing decline in fisheries based employment and the ageing of the fishing population are evidence of failed social objectives, though it is difficult to distinguish between job losses due to modernisation of the industry and those attributable to policy effects.

Where the CFP has failed - especially in its attempt to halt the long term decline in demersal stocks - the explanation is most likely to be found in the behavioural characteristics of the fishing industry and weaknesses in the policy approach: a mixture of motive and opportunity. Fishing is essentially an individualistic, competitive and risk taking activity, with a weak sense of collective responsibility and lack of respect for management by regulation. For some fishermen, illegal fishing is a question of survival: they admit to breaking the rules but are not proud to do so, arguing that encumbered by debt rule breaking becomes a necessity. The nature of the CFP, with its complex multi-layered regulation difficult to monitor and enforce, provides the opportunity.

But there may be a more fundamental explanation. There is a sense in which failure is inherent in a policy which attempts to define and subsequently police some form of ‘sustainable limits’. Wherever those limits are drawn there is an inexorable tendency for the industry to cross the line in pursuit of profit, survival or protection of assets. The failure of the CFP, therefore, lies in characterising the problem of depleted resources as a series of contingent crises rather than seeking to understand why unsustainable actions become the norm. (Drummond and Symes, 1996). As a result, policy is directed at treating the symptoms rather than the underlying cause: the tendency of capital to innovate, invest and build capacity.

9.5. Changing direction

The 2002 reforms, with the renewed emphasis on long term management, the incremental adoption of an ecosystem based approach and the creation of RACs, may be seen as marking a vital transition from the earlier, exploratory and not particularly well coordinated or coherent phase of policy development to a more robust, strategic and vision led form of integrated management in the future. This change of direction is reflected not only in the realignment of the CFP but also in parallel initiatives concerning the management of the marine environment (Marine Strategy, 2005) and a more closely coordinated approach to the development of the maritime economy as a whole (Green Paper, 2006).

What is perhaps less clear is the extent to which the 2002 review questioned some of the fundamental assumptions underlying the CFP, namely: (i) the countervailing principles of non-discrimination and relative stability; (ii) the familiar but confusing litany of biological, environmental, economic and social objectives; and (iii) the long standing instruments of regulation (TACs and catch quotas) which have survived as the cornerstone of conservation policy since 1982. In essence, there are good grounds for arguing that the principles, objectives and mechanisms of the current CFP still reflect the conditions and aspirations of the 1980s.

There is, on the other hand, growing evidence of an evolving philosophy of management within DG Fish with (i) somewhat stronger and more consistent policy lines beginning to gel in the development of an integrated approach; (ii) a clearer assertion of the dividing lines of responsibility between the Commission and the MS; and (iii) an emphasis on retaining sufficient flexibility of institutional structures and policy instruments in the face of an uncertain future.

9.6. Structuring the debate

While some progress has been made it is not enough to ensure the successful implementation of the 2002 review. The need now is for a thorough debate, initially within DG Fish but very quickly engaging with the stakeholders about what kind of CFP can best deliver sustainable fisheries for the EU by 2020. The purpose of this report is to identify some key areas for the debate, focusing not on a critique of detailed features of the CFP but on outlining a limited number of institutional issues which could prove crucial in shaping a well balanced, clearly structured and robust policy and - just as important - an effective, inclusive policy process.

Three main themes are examined:

(1) the relationship between sustainable development, MSY and the articulation of precise, coherent objectives for the overall policy and its component parts (Section 10);

(2) progress towards integrated management, the implications for the CFP and the need for the Policy to demonstrate its environmental credentials through the ecosystem based approach (Section 11); and

(3) whether the existing system of governance is the most appropriate means of policy delivery or whether a rebalancing of roles between the European institutions, MS and the private sector might not promise a more successful outcome (Sections 12 and 13).

Finally the discussion returns to the principles underlying the CFP with a brief comment on the controversial issue of relative stability.

10. SUSTAINABLE DEVELOPMENT: REALIGNING THE GOALS OF FISHERIES MANAGEMENT

10.1. Sustainable development

According to the preamble of Council Regulation 2371/2002 ‘the objective of the Common Fisheries Policy should ... be to provide for sustainable exploitation of the living aquatic resources ... in the context of sustainable development, taking account of the environmental, economic and social aspects in a balanced manner’. Herein lies the central dilemma of the CFP and, indeed, of any sustainable development (SD) strategy. One of the more intractable problems lies in finding an appropriate balance between the biological and ecological objectives, on the one hand, and the economic and social objectives, on the other, and in creating the mechanisms through which economic and social objectives can be formulated and implemented without undermining the imperatives of stock recovery and ecosystem health. Experience over the past 15-20 years suggests that, at a time when stocks are depleted or in the early stages of recovery, it is practically impossible to maximise economic rent or job opportunities.

Within a policy that seeks to realise a long term strategic vision for fisheries development it is important to articulate clear and robust objectives for the policy as a whole. These should remain constant throughout the policy period. However, in dealing with specific management plans for particular fisheries, these objectives may be varied to the extent that they provide a better opportunity for the successful attainment of sustainable

fisheries, involving a limited trade off between the biological, ecological, economic and social objectives. Moreover, it may well be necessary to set realistic interim objectives covering distinct phases of the transition process, which may again involve some reprioritisation of the original objectives. Here the reasons may be either to assist the process of change through incentivisation or to provide compensation to those temporarily or permanently disadvantaged by ongoing changes.

SD remains a somewhat fuzzy concept. It is seen 'not as a fixed state of harmony, but rather a process of change in which the exploitation of resources, the direction of investments, the orientation of technical development and institutional change are made consistent with future as well as present needs' (World Commission, 1987: 9). Clearly the developments of the past 20 years in Europe's fisheries do not meet the conditions of sustainable development. The Brundtland report goes on to point out that 'the integrated and interdependent nature of the new challenge ... contrasts sharply with the nature of the institutions that exist today. Those institutions tend to be independent, fragmented and working to relatively narrow mandates with closed decision processes' (*ibid*: 310). These words still hold true today in respect of the CFP.

SD is capable of different interpretations. The CFP is at variance with the general thrust of the EU's economic strategy for sustaining economic growth, expanding employment opportunities, generating wealth and, through its regional convergence strategy, attempting to narrow the divide between rich and poor regions. By contrast the CFP has been concerned with managing the contraction of Europe's fishing industries and assisting the withdrawal of capital and labour from the fisheries sector so as to rebalance catching capacity with the depleted resource base. Convergence plays little part in the CFP. Despite attempts in the 1990s to assess the socio-economic status of fisheries dependent areas (FDAs), little attention has been paid within the CFP to the problems it poses for the more disadvantaged coastal regions. Indeed the social dimensions of fisheries policy are largely invisible. There is no evidence that social considerations are systematically taken into account in the formulation of policy proposals within the Commission, though there may be circumstantial evidence to support the argument that such considerations probably do influence Council decisions. Social factors only come to the fore when dealing with the outcomes of fisheries policy and in this DG Fish plays only a minor role. Moreover, it is left to MS and regional initiatives to map out detailed strategies for restructuring a contracting industry and redirect efforts to maximise wealth creation from the limited fishing opportunities.

10.2. MSY as sustainable development

Somewhat unwillingly, as a result of decisions made at the World Summit on Sustainable Development (WSSD), DG Fish has been obliged to adopt the concept of maximum sustainable yield (MSY) as a strategic goal for the management of Europe's fisheries. In its Communication on *Implementing sustainability in EU fisheries through maximum sustainable yield*, COM (2006) 360, the Commission has used MSY - a concept of dubious ancestry - to validate its basic approach to management set out in the 2002 reforms. Focusing attention on further reductions in fishing mortality so that increased numbers of fish can attain larger size and reproduce over longer time spans before exposure to the risk of capture, MSY requires a series of long term management plans for its implementation across all fisheries. In its previous incarnation, MSY was seen simply as the biological objective of management; it eschewed reference to economic and social goals of MEY and MSocY located at different points along the yield curve. Clearly MSY provides a rational choice for the future vision of EU fisheries and a mechanism for

achieving that vision, but it leaves the images of the future economic and social structures blurred.

As a strategic goal for management, MSY encapsulates all the customary socio-economic dilemmas. The real issue is not about the adoption of MSY - that is something of a *fait accompli* - but concerns the choice of target date for its attainment. Attempting to reach MSY as close as possible to the date of 2015 set by WSSD would require a greatly accelerated rate of reduction in fishing mortality and threaten serious dislocation of the prevailing economic and social structures that support fishing activity. It would generate a higher stream of socio-economic costs over a relatively short period. Opting for a more gradual approach to MSY would provide more time for structural adjustment, but at the price of a more prolonged stream of costs and a delayed reaping of the benefits. The choice is not an easy one, with uncertainty over the attainment of the promised long term benefits and their equitable distribution likely to influence the final decision. The pace of change must be judged so as to promote the greatest sense of certainty in achieving the goal of MSY. It will therefore need to be cautious enough to win the confidence of industry, to allow for adaptive management and to encourage appropriate investment during the period of transition - but not so gradual that progress towards the end goal risks being overtaken by accelerating rates of stock decline or that it postpones arriving at the final goal indefinitely.

More than perhaps any previous issue, MSY will test the negotiating skills and the resilience of the decision making processes within the Commission, especially with the ongoing frustrations of the cod recovery plan overshadowing the discussion. It will be surprising if the MS - and therefore Council - do not endorse the industry's plea for caution and opt for the slower route. The policy debate is certain to refocus attention on the economic and social outcomes rather than on the process by which MSY is implemented.

10.3. Rebalancing the objectives of fisheries management: the economic and social dimensions

There can be no doubt about the primacy of environmental and biological objectives - they have become the *sine qua non* of modern fisheries management. The task is to develop meaningful objectives for the economic and social aspects of sustainable development in the context of healthy fish stocks in productive, diverse and well integrated marine ecosystems and at a time of rapid environmental, economic and social change. The current economic and social objectives of the CFP are perhaps deliberately only sketchily formulated as 'to contribute to efficient fishing activities within an economically viable and competitive fisheries and aquaculture industry, providing a fair standard of living for those who depend on fishing activities' (Council Regulation 2371/2002: Article 2). The lack of precision, especially in relation to social objectives, reflects the reluctance of the Commission to engage in what is a complex and strongly contested area of debate. It also reflects the absence, until very recently, of a specialist unit within DG Fish dealing with economic and social aspects of fisheries policy. The establishment of E4, the proposed restructuring of STECF and the advent of policy impact assessments will do much to remedy this deficiency and bring socio-economic issues into sharper focus within the policy process.

Box 10.1 *Rights based management (RBM)*

There is a long-standing debate over the benefits and costs of introducing RBM - the granting of individual or private rights to harvest a fishery that can be traded through an open market - within European fisheries. The main themes of the debate, which reflects the classic dilemma in fisheries management between economic and social objectives, are well known. In favour of its introduction is the prospect that an open market in fishing rights (licences, catch quotas or days at sea) would accelerate a restructuring of the fleets that would eventually create equilibrium between catching capacity and available resources. The benefits to the industry are cast in terms of greater efficiency, profitability and competitiveness for the catching sector as a whole and for the individual fishing enterprise. Arguments against RBM focus on the likely social consequences and, in particular, on the risk of decimating the small scale sector and the impacts that further spatial and structural concentration would have on more marginal FDAs. It is possible to guard against the worst excesses of RBM through legal restrictions on transfers between under 12 m and over 12 m vessels and limiting the concentration of ownership in the hands of individual vessel owners. But any restrictions on the market's freedom of action would militate against the achievement of the desired economic effects.

The Commission is clearly supportive of RBM in principle. However only a few MS have so far adopted formal or informal systems for transferable fishing rights and it is likely that some MS will remain opposed to the concept as a result of constitutional issues concerning the alienation of public or common property through private ownership or their conviction that the social costs outweigh the economic gains. What is clear is that a pan-European market in fishing rights is out of the question, certainly while relative stability remains a bulwark of the CFP. There is little prospect of reaching a common position across the EU in the foreseeable future, a situation which could hamper the development of the CFP.

(a) **Economic sustainability** is certainly the easier and less controversial area in which to set more precise objectives. They relate to concepts of efficiency, profitability and competitiveness in a subsidy free environment for the sector as a whole and for individual enterprises in the catching and processing areas. They must also concern the ability of the economic structures to evolve in line with the availability of natural resources, technological development and changing market opportunities. Such objectives have in the past been secured principally through the normal processes of modernisation, involving economies of scale, substitution of capital for labour and spatial and structural concentration of fishing activity, rather than through policy intervention. In future they are more likely to be realised through a mixture of public and private initiatives relating to the implementation of rights based management (RBM) and the adoption of value adding activities within the fisheries sector. One further goal for the economic sustainability of the fishing industry, which lies largely outside the scope of the CFP, is the restructuring of financial provision for the industry away from a dependency culture based on subsidies, grant aid and debt rescheduling and towards a more commercially appropriate system of equity based financing.

(b) **Social sustainability** presents a more difficult challenge. Much of the difficulty surrounding the formulation of appropriate objectives relates to the way in which we characterise the concept. It is no longer realistic to cling to arguments in favour of maintaining employment levels in the fisheries sector: in relation to EU fisheries, SD is all about rationalisation of the industry and reduced levels of employment. Social sustainability is concerned with the renewal of social capital within the industry in terms of recruitment, skill acquisition and the transfer of traditional knowledge. The focus of attention is therefore upon the broader social environment in which the skills and

knowledge are acquired - the fishing communities and family networks - rather than on the individual enterprise. And the relevant social indicators refer as much to the demographic conditions (population structures, migration rates), educational opportunities and alternative employment sources as they do to the vital statistics of the local fishing industry.

Box 10.2 *Community based management*

Except for the provision of funding under the European Fisheries Fund (EFF), the CFP gives little encouragement to community based initiatives to sustain, develop and manage local fishing opportunities, yet the scope for such action is considerable (as the example of the Shetland Islands in Scotland amply demonstrates). Responsibility for making things happen at the local level rests with fishing communities themselves acting independently or in a collaborative framework. Those communities able to demonstrate initiative, leadership, the will to succeed and strong internal support through local management plans are the ones most likely to survive in the 21st century. Local strategies must identify and build on community strengths; they must aim to invest in human resources; and they must seek assistance at the regional/national level for the allocation of funds for the renewal of the industry's physical capital. More specifically they should aim to develop Action Plans which:

- create and protect community based fishing rights (quotas and licences);
- develop local stakeholder led organisations involved in the promotion, development and management of local fishing interests (cooperatives; POs);
- integrate fishing activities with other local assets or amenities (tourism; recreational fishing);
- assist the transfer of ownership of fishing enterprises from older to younger generations (education and training; start-up grants; early retirement schemes); and
- ensure that fish leave the local area at the highest added value (processing; marketing; quality assurance; ecolabelling).

Such plans should permit flexibility of choice at the level of the individual household. They should allow for the diversification of the local economy through expanding alternative job opportunities. They should not be driven solely by profit maximisation; many households can contribute directly to the sustainability of fishing communities through pluri-active lifestyles based on quality of life values. Community based management plans should be an integral part of national strategic plans and operational programmes; they conform to the priority axes III (Measures of common interest) and IV (Sustainable development of fishing areas) as outlined in Council Regulation 1198/2006 on the European Fisheries Fund.

Source: Symes 2005a

Remarkably, c 70% of the EU's fishing fleets and around half the fishing employment is made up of <10 m vessels fishing mainly in inshore waters - a sector largely ignored by the CFP and one for which management responsibilities have been substantially devolved to the MS. In effect, therefore, the MS assumes co-responsibility for setting the economic and social objectives of fisheries policy. If social issues were to be at the heart of such policy, they could best be addressed through stronger protection of local fishing interests by extending the present 'territorial limits' to say 24 nm. The case for subsidisation of the small scale inshore fisheries is difficult to sustain. Their survival will depend on local initiatives for developing markets for fresh fish and high quality fish products, on the transfer of cost saving innovations into the sector; in maintaining local and regional infrastructures linking fishing ports to the wider regional, national and international markets; and on the strength of certain non-monetary values associated with traditional fishing communities. This does not rule out financial assistance through the Structural Funds for generating a strong business environment in which local fishing industries can

flourish, encouraging the renewal of social capital through early retirement and new entrant schemes and promoting local management plans built around community quotas. What is clear is that the CFP alone cannot delineate the social objectives for FDAs; they need to be defined and pursued on a much broader level than that of the fishing industry.

11. INTEGRATED MARINE MANAGEMENT AND THE COMMON FISHERIES POLICY

11.1. Introduction

Until very recently fisheries policy suffered little interference from other policy areas. As a result, fishing has enjoyed a privileged status in respect of the use of the sea. That situation is changing - partly as a result of engaging with the principles of SD and partly as a consequence of increased competition for marine space. Together these two influences are shifting the emphasis from single use, sectoral management to the concept of integrated marine management (IMM). The CFP now faces the biggest challenge to its existence from the pressures of environmental integration and the incorporation of fisheries within the much broader concerns for maritime development and marine spatial planning. Fisheries management risks being squeezed between these two competing drivers of change. What will this mean for the future management of fisheries and how should the CFP respond?

11.2. New initiatives: threat or opportunity?

The proposed *Marine Strategy Directive* (MSD) and the recent *Maritime Policy Green Paper* offer two contrasting frameworks for IMM. The MSD takes as its starting point the premise that, hitherto, the sectoral approach involving several Directorates has proved incapable of halting the deterioration of the marine environment. Accordingly it outlines two alternative approaches to achieving a more coherent strategy for achieving 'good environmental status' (as yet undefined) for Europe's seas by 2021: (a) a voluntary, non-binding set of recommendations and (b) the preferred flexible legal instrument 'ambitious in scope but not prescriptive in the choice of tools'. The MSD sets out a timetable of actions and outlines the principal mechanism by which the Commission defines the common objectives at EU level, specifies a regional framework comprising three European Marine Regions and eight sub-regions, and requires the member states, individually and collaboratively, to look towards developing programmes of measures to achieve good environmental status for the relevant regions and/or sub-regions. It offers the 'best available framework' for guaranteeing environmental sustainability of the EU's marine waters, though the final shape of the Strategy could well be determined through conciliation between the Council, Commission and Parliament.

Proposals for a maritime policy are less well advanced. The Green Paper appears to offer a countervailing view of sustainable development as concerned with creating an expanding and competitive maritime economy through job provision, skill enhancement etc, while endorsing notions of environmental quality and healthy marine ecosystems as a *sine qua non* for realising the development potential of the maritime sector. It stresses the importance of a stable regulatory framework in relation to the location of economic activities, which will require 'a comprehensive system of [indicative] spatial planning for Europe's coastal waters'. As with the marine strategy, the Green Paper envisages the EU's role as the coordination of policy measures, identification of regional management units and definition of the basic elements of the planning process, but leaves responsibility for specific planning decisions to the MS.

The two initiatives have a number of key features in common: (i) an emphasis on integrated regional management; (ii) a reliance on subsidiarity for the implementation of policy goals; (iii) the need to establish new protocols for dealing with issues of mixed competences; and (iv) a surprising lack of reference as to how the proposed schemes might interface with the CFP.

Box 11.1 *Marine spatial planning (MSP)*

Despite the apparent importance it attaches to MSP, the Maritime Green Paper devotes little attention to elaborating the principles, processes and instruments involved. It therefore remains unclear as to what an EU system of MSP might mean - just how far down the road of prescriptive plan-led management the Commission proposes to go. This is not altogether surprising: MSP is a new concept and where it has been tried in the South Pacific (eg Great Barrier Reef Marine Park) the political topography has been far less challenging than that of the EU. In common with the MSD, it will need to establish new protocols for governance in circumstances where MS still retain legal competence over their EEZs in all matters except fisheries. The Green Paper is unclear as to how this might be resolved. To date there has been little practical application of MSP in European waters apart from the preparation of a master plan for Belgium's EEZ. A few MS, notably Germany and the UK, are relatively well advanced in developing MSP systems for their sovereign waters, based essentially on the principles and processes of terrestrial planning.

MSP will have as its broad objectives: (i) the protection of the marine environment, ecosystems and natural resources from inappropriate forms of human activity; (ii) a more efficient use of marine space which attempts to reconcile competing and sometimes conflicting uses; (iii) the anticipation of future demands for marine space use. All three objectives involve the allocation of space to specific activities (zonal management), with MPAs forming an integral part of an MSP strategy.

The fishing industry's concern at the prospect of MSP is rooted in its unique pattern of space use. Fishing involves an extensive form of space use (laterally and vertically): ubiquitous but often seasonal in occurrence and subject to fluctuations in stock abundance over time and space, reflecting the dynamic nature of the marine environment. Endemic uncertainty demands flexibility in the use of space. Zonal management is seen as a potential threat to the industry's ability to adapt to changing circumstances. Future planning is highly speculative; and in fishing, past patterns of activity are an unreliable guide to the future.

Source: Symes, 2005b

As far as the threat posed to fisheries and/or the integrity of the CFP is concerned, the devil will almost certainly lie in the detail and in the vigour with which the objectives are pursued. The more obvious threat comes from the MSD and the measures adopted to achieve good environmental status. Certain fishing activities could well come under very close scrutiny. By contrast the Maritime Task Force does not see the role of its strategy as hollowing out the exclusive functions of the CFP but rather as complementing the socio-economic objectives of fisheries management. It aims to create a more resilient economic structure for coastal areas through value adding linkages between traditional and modern forms of economic activity. For the fishing industry, however, attempting to coordinate the development of competing and sometimes conflicting interests through MSP could cause potentially serious problems (see Box 11.1). Much will depend on how far proposals for MSP adopt a softer strategy led approach or a more prescriptive plan led approach.

There are some particular issues of governance related to IMM. Not the least of these is how to avoid the decision making processes becoming more technocratic and thus further removed from the meaningful involvement of stakeholders. The policy community will

be broadened, the balance of interests altered and the representation of civil society - as distinct from sectional interests - will need to be strengthened. On a more technical level, resolving the problem of mixed competences, and particularly the Commission's exclusive competence in matters relating to fisheries, and the question of primacy between the CFP and environmental Directives, will be crucial to ensuring the efficient and effective implementation of either strategy.

11.3. Responding to the latent threat

DG Fish can anticipate the demands likely to be placed on the fishing industry by MSD by

- devoting more effort to *environmental integration*, adopting a proactive rather than reactive or passive approach; so far the Commission's response to environmental integration has been perfunctory, relying on well intentioned rhetoric and only sporadic action to enhance the status of the marine environment; an insistence on the use of Strategic Environmental Assessments (SEAs)in connection with fisheries plans and policies would be a useful starting point;

- a reappraisal of the *ecosystem based approach to fisheries management* (EBAFM) as a common currency shared with environmental interests; although Regulation 2371/2002 claims the 'incremental adoption' of EBAFM among the core objectives of the CFP, there appears to have been no serious discussion of the concept and what it means in the context of the CFP. There is no Communication setting out the Commission's interpretation of EBAFM - i.e. whether it sees it as an underlying principle, a focused objective or an operational procedure (policy instrument) - and how it might be implemented;

- facilitating closer dialogue between fisheries and environmental interests, forging closer and more fruitful liaison with DG Environment and establishing good working relationships with external regional bodies (e.g. OSPAR); and

- helping to develop the science behind EBAFM.

It is rather more difficult to 'second guess' the impact of a Maritime Policy Directive, but DG Fish will need to be fully aware of the opportunities and threats created by MSP and encourage the fishing industry etc to discuss its implications through fora like STECF, ACFA and the RACs. Some attention should be paid now to developing spatial data bases concerning fisheries, fish stocks and fishing activities at the regional level. And DG Fish should do its utmost to influence the eventual choice of regional planning units so that they complement the EMRs proposed under the MSD and those currently used for stock assessment purposes by ICES: it is imperative to avoid further proliferation of regional systems. Finally, on a more practical level, DG Fish should continue to elaborate its systems for negotiating the spatial definition and fishing restrictions relating to European marine sites designated under Natura 2000.

11.4. From the ecosystem approach (EA) to EBAFM

To avoid being out of step with the prevailing trend for closer alignment of sectoral policies with the goal of environmental sustainability, DG Fish will need to strengthen its environmental credentials both through action over particular issues but primarily through developing a credible methodology for implementing EBAFM.

The ecosystem approach (EA) is a potentially powerful, if somewhat controversial, concept. Confusion within the scientific community and among policy makers surrounds its interpretation. Some see it as a surrogate for SD - especially those who believe the latter concept to be too strongly oriented towards economic growth: for them EA is 'an organisational methodology for integrated management of natural resources which takes account of ecological, economic and social considerations within a single framework' (Maltby, 2007). By contrast the ICES Cooperative Research Report 273 (2005:4) more modestly portrays EA as 'embedded in the concept of sustainable development ... [which] ... puts emphasis on a management regime that maintains the health of the ecosystem alongside appropriate human use of the marine environment'. As such EA forms an integral part of the MSD both as a means of making it operational and as a principal mechanism of SD (*ibid*).

However defined, EA comprises a hierarchy of ideas ranging from a high level vision for the environment, through broad strategic policy statements, to the setting of ecological objectives and finally the development of operational objectives (the identification of appropriate indices, the setting of targets and the choice of policy instruments). The crucial stage in the hierarchy is the point where theory becomes practice and where EA is be translated into ecosystem based approaches to sectoral policy. It is at this stage that the capability of the institutional frameworks to deliver EA will be tested.

In order to build an ecosystem based approach, it is necessary to answer the question: what is actually required for the CFP to contribute fully to ensuring that marine ecosystems are productive, diverse and functionally well integrated? It is also essential to recognise that in Europe fisheries policy, in dealing with heavily impacted ecosystems, is looking to secure maximum sustainable benefits for society as a whole - both now and in the future - through patterns of fishing activity that give the best guarantee of healthy sustainable ecosystems. The danger is that the CFP will equate EBAFM simply with reducing the negative impacts of fishing on endangered habitats and species. Certainly there is an important role for the CFP in reducing discards and incidental bycatches of non-target species and minimising the physical impact of certain types of fishing activity on vulnerable habitats.

There is, however, an equally - if not more - important proactive role that seeks to make the fullest use of our growing understanding of ecosystem functioning and fish behaviour to develop more sensitive conservation measures. The Commission's *Community Action Plan to integrate environmental protection requirements into the CFP* (COM (2002) 186) identified a number of basic actions including the identification of key habitats and biotopes, more flexible use of temporal and spatial closures and developing guidelines for best practice. It is doubtful whether any of these have been fully implemented. As a minimum requirement, EBAFM will involve putting together a package of measures which ensures that fishing does not put undue strain on vulnerable ecosystems and puts in place remedial measures where this has already occurred. But it could mean identifying new biological objectives which, rather than limit the damage fishing practices may cause, focus on salient features of ecosystem structures (ecosystem limit and reference points, trophic interactions, etc) that may enhance ecological status (see Pope and Symes, 2000).

Certain basic parameters of EBAFM can also be identified - essentially the hallmarks of good management - namely the adoption of (i) the precautionary approach and adaptive management to take account of incomplete scientific knowledge, uncertain outcomes and the instability of ecosystems under the pressures of environmental change; (ii) a long

term, strategic perspective; (iii) a regional framework commensurate with the scale of the ecosystems; and (iv) stakeholder participation. The approach can also be assisted through a programme of supporting actions including appropriate financial incentives, local management plans and market recognition through eco-labelling schemes.

12. SUBSIDIARITY: REDEFINING THE ROLES AND RESPONSIBILITIES OF FISHERIES MANAGEMENT

12.1. Introduction

The command and control model of fisheries management that characterises the CFP is an archaic form of governance. But the argument for altering the institutional frameworks rests less on the theory of 'good governance' than upon the inadequate outcomes from the present system. Where policy failure has occurred, it has had less to do with the choice of inappropriate instruments and more to do with an institutionalised process of management that has lost the confidence of the industry.

In broad terms, the institutional framework of the CFP has remained virtually unaltered since the final piece of the jigsaw was put in place in 1982. It embraces a relatively simple top-down mode of delivery in which responsibility for the formulation of policy proposals, in the form of Regulations, rests exclusively with the Commission and Council is the sole arbiter of whether the proposals are adopted in EU law. Member states are required to implement the Regulations through direct translation into the body of national law and are responsible for their enforcement.

At the time when the CFP was being fashioned in the 1970s and early 80s, the limited extent of the common pond and the level of complexity of management probably helped to give the system its credibility. Today, however, there is something faintly ludicrous about DG Fish - a bureaucracy probably no bigger than the planning department of an average sized local authority - attempting to regulate the fisheries of an area that stretches through 40° of latitude from the Gulf of Bothnia to the Canary Islands and 60° of longitude from the Azores to the eastern Mediterranean. Even Napoleon might have baulked at an empire of these dimensions! There is little likelihood of DG Fish being granted extra resources to cope with increasingly complex issues in an enlarged EU. Instead it must reassess its role and give serious consideration to altering the balance of responsibilities within the existing hierarchy or take a step further and rethink the entire organisational structure and approach to the CFP. It must start with the realisation that the system has largely alienated those whom it seeks to manage.

The following paragraphs outline the general direction of institutional reform that could help to restore trust in the system of management and greater respect for and compliance with the policies for sustainable fisheries. Rather more attention is paid to the RACs - probably the single most important alteration to the structure of the CFP in almost 25 years - than their position in the hierarchy warrants. This is partly because they do represent an experiment in institutional design but also because the problems they have encountered reflect some of the underlying inertias within the overall system that may hamper reform. The assessment of the current structures must also include not only the role of public administrations but also the contributions to good governance and sustainable fisheries management that can come from within the private sector, through organisations that harness the strengths of the catching sector, retailers and consumers in driving forward the shared goals of SD. Much of the reallocation of roles and

responsibilities outlined below can be accomplished without necessarily amending the powers of the Commission and Council as embedded in the Treaties. First, however, we need to examine the contention that the CFP forms the basis of an overcentralised system of fisheries management a little more closely.

12.2. How centralised is the CFP?

The adoption of sole competence in framing policy proposals (Commission) and exclusive decision making (Council) certainly underlines the public image of the CFP as a centralised, top-down form of policy making. But, in practice, MS have considerable scope for intervention in fisheries management and adapting Community policy to suit their particular circumstances. Moreover, the Commission is keen to acknowledge and reinforce the dividing lines between EU and MS responsibilities.

Areas of MS responsibility include:

- *inshore fisheries management*, with opportunities to prepare national and local strategies within the 0-6/6-12 nm zones using national legislation and implemented through national or local organisations;

- *quota management*: while the Commission sets the TACs and national quotas are allocated to MS on the basis of fixed keys, detailed management (distribution of quotas to MS vessels; RBM systems) is left entirely to the discretion of the MS;

- *structural measures* where the Commission determines national reference points for the MS fleets but responsibility for deciding on the means of achieving these rests with the MS; and

- *inspection and enforcement* of EU and national regulations.

As a broad generalisation, it is reasonable to argue that, whereas EU institutions exercise exclusive competence in setting the rules for the conservation of fish stocks, responsibility for detailed implementation and for the economic and social aspects of the CFP are vested principally in the MS. A consequence of this is the highly varied pattern of devolved responsibility - at national, regional and local levels - still encountered across the EU today, which may in part hinder the realisation of targets and objectives set for the Community as a whole.

12.3. The division of responsibilities: Commission and Member State

The European institutions - Commission, Council and Parliament - are ill-suited to the ‘micro-management’ of Europe’s fisheries. They are too remote from the realities of the fisheries and the fishing industry and, in the case of Council and Parliament; they lack a sufficient understanding of the technical details of fisheries regulation.

In their analysis of fisheries governance, Kooiman et al (2005) argue that the shortcomings of current policy systems worldwide can largely be explained by the fact that too much attention is focused on the means of delivery (i.e. the choice of instruments) and too little on the basic values, principles and objectives which should be the starting point of rational decision making. The CFP is probably a case in point. Distinctions need to be drawn between (i) the functions of high order, meta-governance responsible for laying down the principles, determining the broad rationale of policy and

outlining the basic parameters of long term management strategies; (ii) a second order of governance primarily concerned with translating the principles etc into detailed plans and procedures which fit the particular characteristics of the fishery and organisational norms of the industries involved; and (iii) day to day management of the fishery. Taking this as a rough guide to the division of responsibilities within fisheries governance, it would suggest that meta-governance is the function of the European institutions. Second order responsibilities lie with the MS, while day to day management is the responsibility of industry based organisations, under the supervision of the MS.

It does not require a major shift to get the Commission to focus its attention on the principles, objectives and strategic thinking rather than on process and technical details. Long term management plans - the core of the new approach adopted in 2002 - should require the Commission to outline the strategy, define the targets and set a time scale. It should instruct the MS to get on with deciding how the strategy should be implemented, possibly devolving certain tasks to industry led groups. The change in emphasis over 'who does what' would limit the interventions of Council in deciding the detail of fisheries policy and possibly open up the opportunity for co-responsibility with Parliament, though at the not inconsiderable cost of delaying decision making and risking further interference with strategic management for political ends. Subsidiarity is less about empowering the MS over the European institutions than finding the appropriate level of governance where managers/policy makers are best able to work closely and in harmony with the fishing industry. But before such a transition can take place, MS will need to demonstrate a willingness and determination to implement and enforce the agreed policies in full - something that has been lacking in the past.

A partially devolved system, as outlined above, could also help to simplify the regulatory burden, making it more appropriate, flexible and sensitive to local conditions. At present the choice of Regulation as distinct from the 'softer' Directive reinforces the command and control culture of the CFP. Directives would complement the new approach, setting out the objectives etc and the obligations of MS in ensuring effective enforcement and monitoring but leaving the choice of implementation options to the MS. Certain basic tasks of the CFP still merit the greater stringency afforded by Regulation - especially those relating to the allocation of fishing opportunities governed by the principle of relative stability. But even here it is possible to draw a crucial distinction between (i) the allocation of TACs and catch quotas where the Commission and Council determine the national quota but leave it to the MS to decide how it is allocated within the industry; and (ii) effort management where the Commission is involved in the detailed allocation of days at sea entitlements rather than leaving it to the MS.

There is a second aspect of the institutional framework that needs addressing: how to facilitate the development of IMM as outlined in Section 3 above. Two alternative approaches are available. The more radical approach would involve institutionalising IMM through the establishment of a 'super agency' combining the functions of marine environmental management, fisheries policy and maritime development. In practical terms it might be achieved by merging DG Fisheries and Maritime Affairs with that part of DG Environment dealing with marine environmental policy. Alternatively, Fisheries could find itself relegated to the status of a single Directorate within a reconfigured DG Maritime Affairs. Less ambitious, much simpler and probably more appropriate in the short term is for the relevant DGs to work to a common brief concerning the overall management of the European seas with clarification of boundaries of responsibility and resolution of any anomalies and ambiguities, together with well defined protocols and

pathways for regular consultation. One possibility would be for the setting up of an inter-departmental standing committee, meeting on a regular basis. At present the mechanisms for consultation seem neither clear nor robust and appear to be seldom activated.

12.4. Regional Advisory Councils

It is clearly far too soon to pass any lasting judgement on the RACs. Only 5 of the 7 RACs have so far come into existence; the earliest is not yet three years old and the latest established only in May 2007. Each is at a different stage of development and embraces a different set of conditions. Moreover, any preliminary assessment must bear in mind the difficult circumstances into which they were born.

However, the broad consensus would seem to be that they are a good idea and probably here to stay despite lingering doubts in some quarters as to their real value. This is not to say that their progress has been smooth, nor that they are fulfilling their remits entirely satisfactorily. Neither is it true to say that they do not suffer from internal problems nor that a case may not be made at some future date for structural reform. But they have received endorsement of a kind from the Commission as 'institutions of European interest', to the extent that the funding arrangements have been improved and made permanent - reversing the original plans for regressive funding to cover establishment costs and the early years of operation before becoming essentially 'self-funding'.

It is important to remind ourselves of their intended purpose. As independent bodies with a legal identity of their own, though constrained by financial dependency, they were meant to provide stakeholders with a limited entry to the decision making processes through the provision of reasoned, professional advice on matters relating to fisheries policy. Although acting as regional advisory bodies, they were not intended as a first step in the regionalisation of the CFP; nor were RACs seen as the precursors of Regional Management Councils. Their purpose was to complement the advice provided by ACFA but from a regional rather than general perspective. RACs were in fact the first formal attempt to generate a network of multi-national, multi-interest advisory organisations with a strong regional focus.

It is not intended here to review the RACs' performance but to point out some of the issues which may prevent the RACs from fulfilling their undoubted potential to contribute directly to the decision making process by providing reasoned advice based on knowledge and experience. RACs face a difficult but rewarding challenge of two very different sets of interest groups (fishing and environmental conservation) being asked to reach agreed positions on issues that have divided them in the past. Compromise, in the sense of finding a common middle way, will not be easy.

Several positive attributes can already be identified: the opportunities to develop mutual understanding, respect and trust through constructive debate; to build knowledge through the exchange of information and ideas; 'to shed light into dark corners'; and to develop a limited sense of ownership of policy. RACs can provide a different but valid industry led perspective on fisheries management. Such benefits can be set against rather fewer negative experiences of entrenched, prejudicial views held by a minority of RAC members and the occasional example of the majority (fishing industry) view attempting to coerce the minority (environmental) interest into accepting a consensus.

From the large number of minor niggles and more serious complaints concerning the functions, structures and *modus operandi* one can identify five issues which limit the RACs' current effectiveness and raise doubts as to their future development.

(1) **The role of RACs and the expectations of the Commission**: there is a sense within the Commission that RACs are sometimes guilty of overreaching themselves, going beyond their advisory brief and 'attempting to write the legislation', as well as straying into debates on horizontal rather than regional issues. Conversely, within the RACs, there are some who see in the Commission's strong preference for consensus and its insistence on 'proper science' a search for 'false certainties'. Is the Commission simply looking for endorsement of its own position or is it willing to face up to well reasoned, evidence based disagreement? Does the Commission value 'critical tension' as a means of discovering the most effective route to the attainment of shared goals? These are questions of balance. RACs must be given some leeway in establishing their positions and venturing beyond their defined boundaries or they will be accused from within their own constituencies of becoming the Commission's 'lap dogs'. For RACs to retain any value, they must be able to demonstrate that they can make a difference. For their own part, RACs must exercise more discipline both in the choice of issues for debate and in the style of reporting.

(2) **The quality of the RACs' advice** will need to be well grounded, reasonable and practical if it is to carry weight with the Commission. But RACs face a problem of gaining access to a sufficiently wide range of knowledge and information on which to base that advice, in particular the fact that there is a single source of 'good' (i.e. acceptable) science, namely ICES. The Commission's unwillingness to entertain advice based on 'unorthodox' science is regarded by some as 'elitist and modernist'. What matters surely is that RACs are able without prejudice to take account of all forms of knowledge before making a reasoned judgement. RACs are by definition well placed to incorporate economic and social considerations within their advice but are severely hampered by the lack of standardised, authoritative data and are reliant, to a degree, on anecdotal evidence.

(3) **The structure of RACs**, as defined by the Commission's rules (24 Executive Committee members, with a 66:33 split between fishing and non-fishing interests) causes some difficulties, namely (i) the inadequate representation of the full range of fisheries stakeholders (What became of the 'shipowners, small-scale fishermen, employed fishermen, producer organisations as well as, amongst others, processors, traders and other market organisations' envisaged in the Council Decision establishing RACs (2004/585/EC)?) and (ii) the inability of NGOs to occupy the allocated seats at all RAC meetings because of a scarcity of manpower. The problems are exacerbated by the proliferation of meetings needed to cover the range of business adequately, which causes logistical problems for the Commission, scientists and NGOs. The absence of NGO representatives from WG meetings can mean that recommendations reach the Executive Committee as 'done deals' without a full and balanced debate. There is also a call from some RAC members for 'professionalisation' of the administrative support services provoking concern among others that it could contribute to the 'institutionalisation' of RACs and more rigid structures which could limit their flexibility and spontaneity.

(4) **Representation** is a familiar issue in participatory governance. In addition to the question of whether RACs truly reflect the range of stakeholders that make up the fishing interests, there are concerns as to whether those who serve on the RACs represent their own constituencies, reflect the opinions of civil society or are there as independent experts in their own right. Is there a danger of creating a new class of regional bureaucrats as far removed from the realities of fishing as those in the Commission? And how should one view the now fairly frequent overlapping representation where, because of the scarcity of expert opinion, individuals may find their services required on several committees advising the Commission with the danger that advice is, in effect, mediated by a small coterie of experts?

(5) It is hard to escape the general conclusion that while RACS can provide the public space in which to debate the Commission's policy proposals and attempt to mediate the environmental, economic and social concerns, they will find it difficult to escape their embedding in a governance system where institutional, rather than communicative, rationality is dominant. (Deas, 2006).

(6) Finally, **the involvement of member states** may become a cause for concern. A few MS have been highly supportive of RACs (in relation to financial assistance and/or administrative support) while others remain more detached. The concern surrounds (i) the motives behind the support and suspicion that RACs may be manipulated by particular MS; and (ii) the question of whether RACs may in the future begin to usurp the role of MS in the institutional hierarchy.

The prospects for the future development of RACs will depend on how their roles are interpreted. Are they to remain simply as an advisory body growing in influence as they gain in experience; are they to be seen as a prototype for regional management organisations or as an experiment in co-management? The most likely scenario is that their functions will remain essentially advisory rather than assume a wide range of management tasks. Implicit in many of the issues raised above is a clear indication that their structures etc are not suited to management roles. Nonetheless, they will need to evolve, assume more influence and responsibility if they are to realise their potential - and this will need to be a managed process. The danger is that their advancement will be governed not by the aspirations of the more successful RACs but by the rate of progress achieved by the least ambitious.

12.5. Incorporating the private sector

The involvement of fishing interests in advisory management bodies is unlikely, on its own, to persuade the industry to buy into policy decisions. They need a sense of part ownership of the policy process from the formulation of proposals to their implementation through systems known broadly as 'co-management', in which industry based organisations assume responsibility for day to day organisation of fishing activities (third order of governance). Without this sense of ownership the industry will not respect the systems that are put in place. At a time of scarce resources it is imperative that the industry focuses attention on creating added value for its products which can compete in both domestic and overseas markets. These rather diverse strands of a strategy for coordinating the downstream links in the distribution chain find a possible common denominator in the network of over 200 Producer Organisations (POs) which, with some restructuring, can play a major role in the future development of Europe's fisheries economy.

First established some 35 years ago, the original purpose of the POs was to assist their member vessels achieve the best prices for fish landed on the quayside markets, principally through the withdrawal price mechanism. In some MS the role of the PO has evolved to include the collective management of the member vessels quotas. Through their annual operational plans POs have the opportunity to regulate the flow of products to the market by coordinating the landings of member vessels and, where storage facilities are available, withholding fish from the market in times of abundant landings and/or low demand. And by investing in primary processing capacity, POs can also transform lower value whole fish into higher value fillets which are more readily acceptable to the secondary processors. But to operate effectively in the market place each PO must develop a critical mass. Some rationalisation of the overall structure is needed, especially in countries like the UK where over one third of POs have fewer than 30 member vessels and many are trading with very small volumes of fish.

POs are also well placed to apply for independent labelling of their products that identifies their geographical origins and certifies responsible fishing practice. Such ecolabelling is becoming a basic requirement for accessing the supermarkets. Public support is growing for systems that can 'deliver cost effective and affordable programmes which contribute to the sustainability of fisheries, the uptake of ecosystem based management and the integrity of fisheries ecosystems' (MSC, 2006). Schemes such as that operated by the Marine Stewardship Council, which currently certifies c 7% of globally traded fish and fish products, have been afforded credibility through their uptake by some of the more influential businesses in the processing and retailing sector.

Leaving accreditation to a range of independent organisations may create some confusion among consumers and lead to variations in standards of assessment. However, the certification process cannot embrace all types of fishery in a prescriptive 'one size fits all' approach. Flexibility is needed to cope with the huge range of circumstances encountered and 'sustainability' cannot be adequately assessed simply through the application of normative science.

Ecolabelling is an important tool for adding market value to a product and for using the market as a lever to persuade industry to act sustainably. It complements public policy by shifting attention away from regulation to incentivisation, helping to establish and protect niche markets for local produce and to promote local, national and international markets for quality products. As such it is an invaluable asset for community management plans.

13. REGIONALISING THE CFP

13.1. Introduction

A more ambitious but probably more effective way of resolving the problems outlined in the previous section is through regionalising the CFP. The underlying logic remains the same: it rests on the diversity of Europe's regional seas - differences in morphology, hydrological conditions and climate; in the resulting ecological characteristics; in the structure of the fisheries and the fishing industries; and in their political culture. The advantages for fisheries management are also identical: bringing policy making and management closer to the practical realities of the fisheries and those who exploit them; enabling more direct, two way communication between managers and the industry in the form of co-management; and focusing management solutions more precisely on the specific problems of the region. But the need for a regionalised approach goes beyond

that of rational fisheries management. It provides a more meaningful framework for coordinating different strands of marine policy - fisheries, environmental protection, maritime development and the common instrument of MSP. In short it is the only sensible design for developing IMM.

13.2. Issues of scale and institutional design

It is not intended to elaborate the architectural details of a regional fisheries management system for the EU but rather to identify two important issues and sketch in the broad structural features. The two issues are (i) deciding on an appropriate geographical scale and (ii) choosing the most appropriate institutional arrangement. The regional seas which currently define the boundaries of the RACs would appear to be a useful starting point. It is unlikely that for the purposes of fisheries management any larger scale would be appropriate; in some instances it may be preferable to subdivide these regions into smaller, more coherent management units, as indeed the North West Waters RAC has done in structuring its four working groups. Further fragmentation into a large number of management units would be cumbersome, inefficient and put at risk the integrity of a common fisheries policy.

The choice of institutional model for regionalising the CFP lies between promoting the RACs to the status of regional management councils - probably a step too far and too soon - and tasking the relevant coastal MS to manage the region's fisheries on a collective basis using the RACs as their principal advisory partners. It would require considerable cooperation from the Commission and Council and assured collaboration between the MS to make such a system work. The European institutions would remain responsible for establishing the principles, broad objectives and strategic framework for sustainable development and for monitoring progress at the regional level. Responsibility for translating the principles etc into specific long term management plans would rest with the regional authority. Only where regional management plans fall short of the principles, objectives and targets established through the CFP would the Commission be expected to intervene in the regional management process. Regional management would help to rationalise the decision making system. While it may be appropriate for all MS to share in decision making in relation to meta-governance, there is no logical reason why matters relating to detailed, regional management plans should involve MS with no direct interests in the region.

13.3. Benefits and costs of regionalisation

Summarising the benefits of regionalising the CFP, one can point to a more appropriate scale and focus for fisheries management; a more relevant framework in which to develop co-management and promote the functions of RACs; a suitable scale at which to progress EBAFM as an operational procedure; and the convergence of fisheries management with emerging strategies for the management of the marine domain (MSP: Maritime Green Paper). In short, it provides the ideal framework for a more imaginative implementation of the subsidiarity principle and for elaborating a new system of governance for marine areas.

Among the 'costs' of regionalisation are that it may appear to undermine the Commission's 'exclusive competence' in formulating policy proposals and raise questions as to the legal authority to delegate powers to other trans-national organisations; that it relies on an untested assumption that neighbouring MS can work together in an effective, responsible and consensual way; that it may threaten the

principle of relative stability and ideas of open access; that it may involve higher transaction costs; and that it could lead to the fragmentation of the CFP.

In practice, regionalisation of the CFP already occurs in many different but largely uncoordinated ways (TACs and quotas; technical conservation measures). Recovery plans and long-term management plans are essentially regional in character. Moreover there are fundamental differences in the way the CFP is implemented across Europe - most notably between Atlantic and Mediterranean Europe, characterised by common objectives but different organisational regimes and trajectories of development and with little prospect of convergence.

13.4. Overview

Institutional restructuring along the lines indicated above would serve several different purposes best summarised as promoting good working relations between the governors and the governed. It would encourage greater participation and collaboration between the different levels in the hierarchy; support co-management; reduce politicisation of the management process; make policy decisions more immediately understandable to industry and the public and help win support for the policies; strengthen the principles of good governance (proportionality, transparency, accountability etc); and create greater synergies through IMM. The overall outcome should be a more effective fisheries policy - and it is on this criterion that regionalisation of the CFP should be judged.

14. REMOVING THE OBSTACLE: RELATIVE STABILITY

Although most of the actions outlined in the foregoing sections do not challenge the legal framework of the CFP, there is one major obstacle to reforming the CFP which may prove difficult to shift. The so-called principle of relative stability was introduced as a means of securing agreement among the EC9 over the original basic Regulation for the conservation of fish stocks (170/83), appeasing those MS who were unhappy at the prospect of losing out over open access to Community waters. It took several different forms: principally through agreement on a fixed allocation key for the distribution of TACs for the original 7 quota regulated stocks among the MS. The criteria for deciding the key were (i) historic catch record; (ii) regional dependence on fishing (the Hague Resolution); and (iii) compensation for loss of distant water fishing rights following the declaration of EEZs. A second important element of the relative stability principle was the derogation concerning open access to MS territorial waters (0-6; 6-12 nm) which in effect conferred exclusive fishing rights and management responsibility on the coastal MS. These two concessions to the principle of open access (non-discrimination) were intended to serve as a form of guarantee against the risk of destabilising national fishing interests and to provide a degree of protection to the more vulnerable fishing dependent areas.

A debate concerning the future of relative stability will need to address the following questions:

(1) Was the notion of relative stability intended as a permanent principle underlying the CFP or a temporary expedient (transitional measure) to ease the accommodation of MS fishing industries within the new regime? Certainly the inshore waters derogation was intended as a short term measure to be reviewed after 10 years; the derogation has been renewed on each occasion that a new basic

Regulation has been introduced. The time horizon envisaged for the allocation key is less clear.

(2) How successful has relative stability been in achieving its aims? Without the benefit of detailed research, it is difficult to judge. It has certainly prevented any seismic shifts in the relative fortunes of the MS fishing industries over the past 25 years. However, with the expansion of the EU from 9 MS (8 coastal states) to 25 (20), the increase in the number of quota regulated stocks, the substantial shifts in the structure and distribution of fish catches in EU waters, and the effects of 'quota hopping', it is unlikely that the comparative performance of MS has remained 'relatively stable' over the period since 1982.

(3) What political purpose does relative stability serve today? For all the lack of precision about relative stability, it is seen by many fishermen - and probably most MS administrations - as the only surviving source of 'certainty' without which the CFP would risk losing what little popular support it still commands. It is, therefore, for many, the glue that holds the CFP together. Remove it and the future of the CFP is put at risk.

(4) What are the disadvantages of retaining relative stability? For those engaged in the formulation of policy (the Commission), relative stability acts as a force for conservatism and maintaining the *status quo* with regard to the overall structure of the CFP. It is used to block innovative policy proposals; it has been used to challenge the introduction of effort based management, RBM and MSY and it will probably be used to confront any proposal to regionalise the CFP. Moreover, relative stability is a denial of the concept of a level playing field, an infringement of free competition and a restraint on efficiency.

(5) What would happen if relative stability were removed? The most likely scenario would include the creation of a free market in fishing opportunities across Europe with the transfer of fishing entitlements (licences, quotas, days at sea) within and between MS, creating in fact a single European fishing industry. To prevent the decimation of coastal fisheries and protect vulnerable FDAs, it would be necessary to build in new safeguards (e.g. a firewall preventing the transfer of fishing rights between, say, under 12 m and over 12 m vessels and an overall restriction on vessel size/capacity fishing within the 12 nm zone).

(6) What should be done? The answer is not to remove relative stability but in some way to limit its influence over policy making in general. That is easier said than done, but consideration might be given to the following:

- a clear restatement of the meaning and purpose of relative stability, stressing that the 'principle' will be maintained solely through the use of fixed keys to allocate fishing opportunities (catch and/or effort quotas) between MS and the retention of inshore waters as the coastal state's exclusive fishing zone, subject to the recognition of historic fishing rights;

- a recalculation of relative stability keys on the basis of new historic track records and assessment of fisheries dependence but omitting the compensation for loss of distant water fishing rights;

- a reconfiguration of relative stability on a basis other than fixed *shares* of fishing opportunities defined by catch and/or effort quotas;

- the substitution of relative stability by a principle of 'regional equilibrium' (i.e. within and between management regions) in the event of regionalising the CFP; and

- compensation for the loss of fishing opportunities through the proportional allocation of funds from EFF specifically for use in the development of alternative employment in the affected FDAs.

15. CONCLUSIONS (PART 2)

The CFP is not necessarily a bad policy; but any policy designed in the 1970s will fall short of the challenges of the 21st century. Much has changed since 1982: the state of many demersal stocks has deteriorated; the size and structure of the catching sector has altered; environmental issues have assumed unexpected importance; and concepts of 'good governance' have moved on; not to mention the enlargement and diversity of the EU. Yet, in all this time, there has been no fundamental rethink of the nature of the CFP: the details may have changed but its broad architectural features have remained unaltered.

As a result, the approach to policy development has been incremental and eclectic, laying claim to a number of pertinent ideas (precautionarity, ecosystem based management, MSY, *inter alia*) but failing to meld them into a single, coherent and credible system. Policy objectives, largely inherited from the Common Agricultural Policy, now take on the appearance of tired clichés. Neither the industry nor the general public find it easy to understand how the different strands of policy fit together to satisfy the stated objectives. In some important aspects, therefore, the CFP is no longer fit for purpose. It fails to connect with the fishing industry and as the regulatory burden increases the industry becomes less convinced that it can deliver the desired outcomes. There is a growing problem of communication, notwithstanding the advent of RACs: the messenger (DG Fish) is seen as too insular and the message, in terms of policy objectives, is opaque, its syntax confused. Moreover, the channels of communication - both vertical and horizontal - are not yet sufficiently developed. There is urgent need for change.

The foregoing analysis has sought to identify key issues rather than point to particular solutions; it has asked questions rather than made firm recommendations - though Section 13 (Regionalising the CFP) takes the liberty of indicating one possible direction of change. What is clear is that the time has come for a thorough reappraisal of the CFP - challenging the values, principles, goals and mechanisms that define its present form. Policy objectives need to be revised, especially in the light of the decision to translate the SD agenda through the mechanism of MSY. The objectives should be made more explicit for the CFP as a whole and for each level and phase of implementation so that the industry has a better understanding of where policy is leading (Section 10). DG Fish will have to work hard to ensure that fisheries occupy the central ground of IMM or risk being squeezed by parallel initiatives in environmental management and maritime development. To do this it will need to develop and implement EBAFM (Section 11). But possibly the biggest challenge is to restructure the policy process, relinquishing some of the control over detailed management to MS and industry based organisations through the exercise of subsidiarity. Not only will this have the benefit of bringing responsibility for fisheries management closer to the fisheries but it should also help to relocate some of the

workload on detailed management and create more space for the Commission's core activity of policy development. DG Fish should look to grow the seeds of regional and community based management as a means of involving stakeholders more effectively and gaining their commitment to and compliance with strategies for achieving sustainable fisheries (Sections 12 and 13).

The next review period will be crucial. Failure to achieve sustainable fisheries by 2020 will not be tolerated by the industry, MS administrations, nor the public at large. The next few years must be used wisely to initiate discussion within DG Fish and stimulate debate with MS, the industry and civil society on the values, principles, objectives and the policy process that should underpin the CFP. It will no longer be enough simply to tinker with existing structures, rewrite the language of regulation and make relatively minor concessions to notions of good governance. Radical action may well be needed, and it will not be acceptable to hide behind the excuse that such actions have to be ruled out for constitutional reasons.

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