

El Anzuelo

EUROPEAN NEWSLETTER ON FISHERIES AND THE ENVIRONMENT

THE ROLE OF SCIENCE IN FISHERIES MANAGEMENT



Photo credit: ICES, 2002.

Nine research vessels celebrating 100 years of ICES, but the role of fisheries science in management is increasingly under scrutiny.

James Brown
Editor

The poor state of many fish stocks in European waters is attributed to a range of causes. Scientists are blamed, particularly by industry, for providing poor, inaccurate or overly cautious management advice. Managers are criticised for being out of touch with industry needs. Management measures adopted by politicians are claimed to serve only short-term political ends. Climate change and pollution are seen as undermining marine ecosystem health. And fishermen are not let off the hook either, since they are directly implicated in unsustainable fishing practices.

While one factor cannot be singled out as the sole cause of fish stock decline, it is clear that tension between European stakeholders has grown on several fronts, in particular between fisheries scientists and industry. ICES scientists have recently re-issued stark advice on the state of several North-East Atlantic stocks, not least for cod. There are calls for moratoria on some stocks, together with severe quota cuts for others. Yet, industry is reporting that the situation is not as bad as scientists claim and that closures are not the right or necessary solution to rebuilding depleted stocks.

Although industry dismissals of scientific advice are often extreme, some criticisms do raise valid and important questions. In particular, models and data used by scientists have widely-acknowledged limitations. Assumptions are built into models, some of which may be reasonable but others of which

are highly questionable. Such assumptions and the inability of models to reflect the complexities of multi-gear and multi-species fisheries operating within complex market and regulatory systems inevitably raises the question of what role scientists have to play in fisheries management.

Reliability of data being used is often a central assumption. Data is either fishery dependent (eg catch) or fishery independent (eg collected through surveys). The high level of discarding and misreporting in the mixed species fisheries throughout Europe creates a gulf between the catch data being used by scientists and the number of fish actually being killed. This creates fundamental problems for the models used in a number of whitefish and long lived species fisheries, in particular. Where scientists collect data directly, such as through trawl surveys, industry criticises them for using ineffective fishing methods in areas that have no fish. The defence to this is that survey methods must be consistent between years to provide comparable data.

Further to these debates, there is an underlying problem of distrust between the two parties. Scientists are often considered part of 'the system' so they cannot be trusted, or worked with, and fishermen are viewed as having vested interests. Invaluable catch and discard data is therefore not being collected and experiences of fishermen are not being accounted for in estimating the state of stocks and determining management measures.

Steps are being taken to improve relationships between scientists and industry, and to improve the quality of data and subsequent scientific advice. This includes an improved Memorandum of Understanding between ICES and the European Commission for the period 2004-2006 and the development of Regional Advisory Councils (RACs).

Such changes are vital because the fact remains that we will never know exactly how many fish there are in the sea. Fish cannot be counted like trees or elephants. The challenge is therefore to identify a way forward in developing agreed scientific procedures and data collection systems which incorporate fishermen's knowledge and generate their trust without undermining the science itself. If people can begin to agree on science, then perhaps it will play a greater role in management as purely political arguments become less defensible.



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Edited by James Brown of IEEP London
Translations by Harry Huyton and Ilona Bossanyi

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Contributions from Mahfuzuddin Ahmed (WorldFish Center); Poul Degnbol (ICES); Michael Earle (Fisheries Advisor, Green Group, European Parliament); Henri Farrugio (IFREMER); João Gonçalves (APEDA); Tony Hawkins (North Sea Commission Fisheries Partnership); Alexandre de Lichtervelde (Belgian Federal Department of the Environment); Inger Näslund (WWF Sweden); Mark Tasker (JNCC); Sergi Tudela (WWF Spain); and James Brown, Niki Sporrang, Saskia Richartz, Amanda Bergqvist and Clare Coffey (IEEP).



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The paper for this document has been made from wood fibre from a sustainable forest

One Year on from CFP Reform

Jame Brown
IEEP London

As the December Fisheries Council meeting approaches, it seems a good time to reflect on developments in the Common Fisheries Policy since the 2002 CFP reforms were agreed. Evaluating progress is particularly critical as the 2002 agreement provided only the framework for sustainable fisheries management policies – not the policies themselves.

There has certainly been a lot of activity in Brussels during 2002, with the Commission working on numerous commitments it had made in the 'CFP Reform Roadmap'. Key 'outputs' have included proposed recovery plans for cod and hake stocks, proposals and an emergency measure to address the environmental impacts of fishing, plus a further set of Action Plans to tackle specific issues associated with the fisheries sector, including discarding, science and enforcement. The Commission has even proposed ground rules for the new Regional Advisory Councils. If the quantity of Commission documents produced were a reliable indicator of progress, then the Commission probably had a good year.

While the Commission's work is acknowledged, real policy change does not follow from Commission proposals alone. Fisheries ministers have to agree on proposals, or the CFP reforms will not take shape. Here progress has been less encouraging. Perhaps decisive and progressive Council positions are something to look forward to in 2004?

Strengthening ecosystem-based management

A recovery plan for the northern hake stock was tabled by the Commission in June. This takes a similar form to the cod recovery plan proposed in May, combining low catch quotas, fishing effort limitations, and specific

control and monitoring rules to ensure implementation. Similar recovery plan proposals are being developed for southern hake, sole, haddock and lobster; others may well be added to the list, following ICES' 2004 advice. Recovery plans are a key component of the new CFP, intended to provide the mechanism through which specific stocks can be strategically managed, based on effort limitation schemes. Combined cod and hake plans were originally proposed in 2001; the current proposals have been on the table for over five months however, despite the pressing need for action to be taken.

At the heart of the problem are differences between industry, the Commission and scientists. It is hoped that stakeholder consultation – including fishermen and public interest groups – can in future be strengthened through the new Regional Advisory Councils (RACs). The Commission's RAC proposals, published in October, suggest how they should be established and run. This is an important institutional development, and the inclusion of environmental interests on RACs should help them rise to the challenge of the CFP's new ecosystem based management principles.

Stakeholders have, in addition, been working on their own European Code of Sustainable and Responsible Fisheries Practices, adopted by the Advisory Committee for Fisheries and Aquaculture (ACFA) in September. The Code is intended to support the move towards more effective and participatory decision-making. Building on the FAO Code of Conduct, the European Code covers capture fisheries, aquaculture, marketing and the environment. It is envisaged that RACs will adopt and potentially develop the Code further.

These positive developments in governance, plus discussions over a new European constitution (see page 15), have important environmental implications. RACs

● New EU shark finning rules agreed

In June, the Fisheries Council adopted a new Regulation prohibiting the removal of fins of sharks on board vessels (1185/2003). The Regulation goes some way to meeting the EU's commitments under the FAO International Plan of Action for Sharks, although the initial Commission proposal has been watered down.

The practice of 'shark finning', the removal of the fin and

discarding the rest of the fish at sea, has developed to satisfy the lucrative Far Eastern market. Fins are easily dried or frozen, and fetch high prices, whereas the meat of sharks needs special treatment because of its potentially high ammonia content. It is very profitable, requiring less storage space on board; but it is also highly wasteful and increases pressure on shark populations since more fins can be landed per

fishing trip. Current data indicate that many populations are under serious threat.

The Regulation applies to all Community vessels and all elasmobranch species, with the exception of the cutting of ray wings. The trade in fins harvested in contravention to this Regulation is also prohibited.

The key weakness of the Regulation however is that vessels will be able to obtain a special

finning permit if they can demonstrate a capacity to use all parts of sharks and justify the need for separate processing on board. In such cases, fins must be accompanied by a corresponding weight of shark carcass, as determined by a conversion factor that is to be established by the Member States. There are fears that this will serve to simply legitimise current finning practices.

in particular offer great potential for defining ecosystem-specific policies, including recovery and management plans, but they could also result in pressure to water down EU wide measures. This is a real concern in the Mediterranean, where under the recently proposed Mediterranean Regulation, national management plans could be used to create derogations to regional standards (see page 12). A key objective is therefore to ensure that the approach to governance under the CFP is not used as a way of avoiding tough management decisions, but as a tool for ecosystem recovery.

Environmental developments

The Commission has made progress in relation to the protection of cold-water coral and cetaceans, coming forward with important proposals on the basis of the new CFP Regulation (2371/2002). A significant development has been the adoption of a Commission emergency measure to protect deepwater cold coral reefs off the north east of Scotland – something that was not considered possible under the ‘old’ CFP (see page 7). Further proposals are anticipated, to secure similar protection for other important seamounts and corals in the north east Atlantic.

Apart from being based on ICES scientific evidence, these measures also respond to obligations on the Member States to protect species and habitats. It is now up to the Council – ie the Ministers representing the Member States – to accept the proposals on the table, and call on the Commission to propose further measures needed to protect Europe’s vulnerable habitats and species from fishing activities. However, the stance taken by the Council during negotiations on

a shark finning proposal does not bode well. The final finning Regulation was significantly weakened, and has been strongly criticised as a result.

Future challenges

The annual total allowable catch (TAC) decisions to be made at December’s Council meeting will be an important test of the new CFP. Despite scientists continuing to warn of the state of several key fish stocks, negotiations on recovery plans are evidently not being taken forward with the commitment and urgency that they deserve. Adoption of strong recovery plans at the 2003 December Council would signal the EU’s commitment to the new CFP, and to the EU’s global commitment to the recovery of fish stocks by 2015.

While the Council has plenty of work yet to do, a number of major changes that lie ahead mean that the EU policy making machine as a whole will slow down considerably over the next 18 months. With enlargement, the number of Member States will expand from 15 to 25 on 1 May 2004, when the Commission will correspondingly expand by ten. Parliamentary elections are due soon after, in June 2004. To make matters even more complicated, an entirely new Commission is due to start work in November 2004. What the European political landscape will look like post-2004 is a subject of much speculation. But it is fairly safe to assume that things will be different, including for fisheries.

For further information about proposals and decisions on the reform of the CFP, more detailed briefings are available on the IEEP website: <http://www.ieep.org.uk>

● Commission plans to protect eel stocks

In a Communication in October, the Commission outlined intentions for an Action Plan on European eels stocks (COM(2003)573), which it considers to be in an ‘extremely high risk situation’. Because of the trans-boundary migration pattern of the eel, the Commission considers the management measures currently in place at the national level to be inadequate. Without wishing to restrict Member State management measures and targets, the Commission therefore intends to establish a rebuilding plan, including the following elements:

1. establish standard targets for eel management at different life stages;
2. develop standard data collection systems for monitoring progress against targets;
3. propose Community level measures to reinforce local measures;
4. improve coordination, information and research concerning eels; and
5. collaborate at the international level, including international

agreements with third countries.

The Commission foresees that some issues will be taken forward in the context of the water framework Directive (Directive 2000/60). Eels could be used as an indicator of ‘good ecological status’ of rivers, for example, and river basin authorities could be used for setting targets and implementing eel action programmes.

The Commission plans to introduce precautionary emergency measures while better scientific data is collected for developing more long-term measures. These are likely to include fisheries regulations and habitat restoration, with highest priority placed on the protection of mature (silver) eels.

The Commission also intends to ‘bring more clarity to the relevant legal texts’ by proposing an amendment to the definition of ‘living aquatic resources’ in Article 3(b) of the basic CFP Regulation (2371/2002), which currently states that management of catadromous (and anadromous) species is limited to their ‘marine life’.

● Measures proposed to protect cetaceans

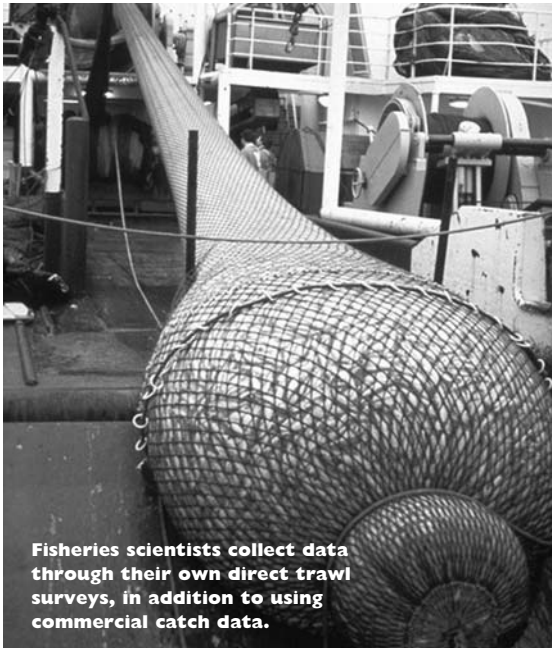
In June, the Commission proposed a Council regulation designed to reduce the bycatch of dolphins and porpoises in selected EU fisheries (COM(2003)451). There is widespread concern over the level of cetacean bycatch, partly as a result of strandings along the French and English coasts. The habitats Directive grants strict protection to all cetaceans, and the CFP further sets out obligations to minimise the impacts of fishing on marine ecosystems. The proposal builds on these provisions, by suggesting three technical measures:

- Restrictions on Baltic Sea drift-net fisheries, immediately limiting net length to 2.5 km, with their use being phased out completely by 1 January 2007.
- Mandatory use of acoustic deterrent devices (‘pingers’) in bottom-set gillnet, entangling net and gillnet fisheries in the Baltic Sea, North Sea and south western approaches.
- Use of on board observers to monitor fishing, incidental catches of cetaceans and the

use of pingers in order to develop more strategic long-term measures. The scheme would apply to fisheries in the North Sea, Baltic Sea, and in waters west of the British Isles, France and Spain and include high opening, and single and pair pelagic trawl fisheries, as well as drift-nets, gillnet and entangling nets.

Overall fishing effort reduction is expected to result from other Community measures to complement these technical measures. While the Commission proposes that this regulation comes into force on 1 July 2004, there are objections on several fronts from a number of Member States, including questions over implementation and costs of the observer scheme and the effect of the driftnet ban on fishermen’s incomes. Hopefully these objections will not delay the adoption of the Regulation for as long as the four years it took for the existing driftnet ban in other EU fisheries to be accepted (Regulation 1239/98, amending Regulation 894/97).

Changes in management mean changes in advice: the challenges for ICES



Fisheries scientists collect data through their own direct trawl surveys, in addition to using commercial catch data.

Mogens Busse

Poul Degnbol

Advisory Committee on Fishery Management (ACFM) Chairman

The International Council for the Exploration of the Sea (ICES) provides biological advice to the European Commission on the exploitation of fish and crustaceans in the North East Atlantic. ICES also provides advice regarding marine environmental and ecological issues to *inter alia* HELCOM and OSPAR. Fisheries advice has been closely linked to the prevailing fisheries management systems under the CFP, traditionally providing catch projections on a single stock basis, from which TACs were set. During the late 1980s and 1990s, when the precautionary approach was introduced as a cornerstone in environmental management, advice changed from optimisation to risk-avoidance – from emphasising ‘what we want to achieve’ to ‘what we want to avoid’.

The present situation for fisheries, and the marine ecosystems upon which they depend, does not justify a continuation of this approach to fisheries management. Changes are needed in management, and with it biological advice must be adapted. The new CFP includes instruments for implementing most of these changes, as did the former CFP. The crucial point is of course whether these possibilities are utilised. The role of ICES is now to support the necessary changes by providing supporting and relevant advice. Changes are needed in several aspects:

- *ecosystems approach* – ICES has been working to develop ecological quality criteria, including in a fisheries context. There is now a need to take this work, together with advice, to the operational stage

- where an ecosystem approach can be implemented;
- *long-term advice* – various international agreements, most recently the World Summit for Sustainable Development in 2002, call for fisheries management to work towards rebuilding stocks and ecosystems rather than just avoiding risks. From 2004 ICES will develop and implement a framework for fisheries management advice that relates to longer term benefits rather than only to short term risk avoidance;
- *effort control based advice* – new management tools are required to address complex fisheries in an ecosystem context. Given the shortcomings of catch quotas in the management of many mixed demersal fisheries, the EU is moving towards extended use of effort management and closed areas and seasons. ICES has for several years emphasised the need to use effort based management for certain fisheries and must further contribute to these changes by delivering advice which relates to these instruments;
- *Fisheries based management* – management (and thus advice) cannot deal with single fish stocks in isolation. Fisheries management relates directly to fisheries and only indirectly to stocks. Most European demersal fisheries are mixed fisheries exploiting several stocks simultaneously. In 2003 ICES started the process of providing fisheries based advice integrating mixed fisheries concerns. The main limitation is access to data on discards, which are crucial to any evaluation of mixed fisheries effects; and
- transparent and reliable data – management decisions have important implications for coastal communities and for the marine environment. It is important that the scientific advice informing these important decisions is produced in a *transparent* manner with effective quality control mechanisms. ICES has had an internal peer review process in place for several years, which in the future will be increasingly based on independent expertise. The uncertainties in stock assessments must be better understood and communicated to enable a decision making process which takes responsibility for risks. There is also a need to develop new delivery mechanisms for advice in order to assist administrators and stakeholders in exploring their options as an integral part of the decision making process.

The production of scientific advice from ICES will thus change in many ways in the coming years, both in relation to the scope of the advice and the process through which advice is produced and delivered.

For further information contact Poul Degnbol - Advisory Committee on Fishery Management (ACFM) Chairman, Institute for Fisheries Management and Coastal Community Development, North Sea Centre, Box 104, 9850 Hirtshals, Denmark, Tel +45 (0) 98942855 e-mail: pd@ifm.dk

Science and fisheries management - an outside perspective

Professor Tony Hawkins -
Chair of the North Sea
Commission Fisheries
Partnership

With dwindling stocks and questionable emergency management measures, the competence of the Commission and their technical advisers is increasingly in doubt. Under the current system, science lies at the heart of fisheries management, with advisory expertise essentially provided by the same narrowly-based cadre of scientists with its own culture and attitude. Advice is centred on the assessment of individual fish stocks. More broadly-based advice is largely lacking and

little use is made of the expertise of fishers and other stakeholders in stock assessments or decision making.

The data scientists use is slow to be collated, the models require long data series and the assessments are inherently long term. Catch data are poor in many fisheries, where misreporting and the unmonitored discarding of fish has become commonplace and fisheries themselves are changing, with new management measures introduced each year. In these circumstances the use of the backward-looking models still widely relied upon is no longer

appropriate. Independent information gathered from research vessel surveys is also unreliable.

There is little point in trimming and adapting the current models. There is a need for new paradigms, with greater use of statistically based models, and with much wider use of the information coming in from the fisheries. Stronger partnerships between fishermen and scientists could be used to transform fisheries management.

Within the North Sea Commission Fisheries Partnership, fishers have started to share their experiences, working

together with scientists and technical experts to resolve some of the current difficulties in managing fisheries. Such strategic alliances may make it possible to go beyond the narrow boundaries of the existing bureaucracy to establish more inclusive and more effective management bodies. Accepting the value of such partnerships, the European Commission is now intending to expand their use through the establishment of Regional Advisory Councils.

Professor Tony Hawkins - Chair of the North Sea Commission Fisheries Partnership, Kincaig, Blairs, Aberdeen, UK Tel: +44 (0) 1224 868984 email a.hawkins@btconnect.com

Fisheries research in the Mediterranean

Dr Henri Farrugio
IFREMER

Although the Mediterranean represents just 0.8 per cent of the world's marine fisheries biomass, and produces only around 1 per cent of the world fish catch, fishing carries significant social weight in the region. It is an area with a great oceanographic tradition, with around 50 EU marine research stations and more than 50 per cent of the potential marine research capacity of the African continent. However, in a number of countries, the growth in fisheries management and development research is relatively recent.

The situation in the Mediterranean is different from the Atlantic sector. Apart from the great migratory species such as tuna and swordfish, the habitat of most of the exploited populations is restricted to the littoral zones, restricted by the very deep waters separating the stocks on the opposing shores of the Mediterranean. Over the past decades, technological innovation has led to a growth in vessel and fishing performance, considerably increasing interactions between fleets and complicating fishery analysis.

Fish research and management

The main work in fisheries research has been conducted under the framework of the

General Fisheries Commission for the Mediterranean (GFCM) since 1949, the International Commission for the Conservation of Atlantic Tuna (ICCAT) since 1966, and the International Commission for the Scientific Exploration of the Mediterranean Sea (CIESM) since 1919. The roles of these international organisations have been reinforced by the EU's multinational programmes.

Because of the social importance of the small-scale vessels, research has increasingly focused on the interaction of artisanal vessels in fisheries also targeted by industrial vessels. Furthermore, current research suggests that, apart from some pelagic fish stocks, a large number of fisheries have been exploited beyond their maximum sustainable yields for a long period of time.

The absence of reliable official statistics is a considerable handicap for Mediterranean researchers. A large proportion of catches are not accounted for by traditional information collection systems, and knowledge of the fleets leaves a lot to be desired in most of the Mediterranean countries. Underestimates of catches in the order of 50 per cent are not unusual, and the only reliable data come from field based researchers.

There is a long history of this general lack of respect for the regulation of fisheries in the Mediterranean. This has led to the failed attempts to simply transpose models from other areas, although there are now calls for research into alternative solutions.

The management model for the Atlantic is poorly adapted to the Mediterranean, where there are generally no national fishing zones beyond inshore waters. Further to this, TACs and quotas are unsuitable in the highly multi-species fisheries of the Mediterranean, where methods that control fishing effort need to be developed. The argument that the Mediterranean is a special case because of the multi-species nature of the fisheries is, however, not necessarily a valid reason to reject single species analysis. In some cases, targeted species can be identified and used as indicators of the state of the composite stocks. For the north-east Mediterranean, a dozen species represent around 50 per cent of the total catch of European vessels: this is not entirely different from many of the Atlantic fisheries.

continued overleaf

Perspectives

Mediterranean fisheries research appears to be at an early, and unsatisfactory, evolutionary stage in comparison to regions with well developed scientific reputations. Nonetheless, the Mediterranean system is similar to the coast of semi-industrial Northern European fisheries, where there is also a lack of knowledge and scientific research in a number of areas and disciplines.

The development of new research methods, in particular those based on direct observation, is vital in improving the assessments of the Mediterranean resources. The success of the development of fisheries research in the Mediterranean depends on an increase in investment into fundamental research. Such an increase in funding, however, is contrary to the growing pressure from political bodies requesting immediate and

short-term advice. This situation prevails, at different levels and for different reasons, in the industrialised countries as much as it does in developing countries of the Mediterranean.

For further information contact Dr Henri Farrugio, Laboratoire Ressources Halieutiques, IFREMER, avenue Jean Monnet, BP 171, 34203 SETE – FRANCE Tel: + 33 (0)4 99573200 email henri.farrugio@ifremer.fr

Finally – Regulation to protect the Darwin Mounds

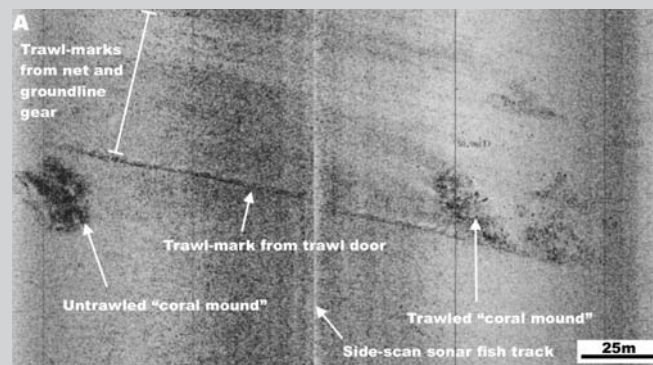
Mark Tasker
Joint Nature Conservation
Committee, UK

On 20 August 2003, the European Commission issued an emergency Regulation (1475/2003) to protect the deep water coral reefs off north-west Scotland called the Darwin Mounds. This is the first use of the powers now available to the Commission under Article 7 of the new CFP Regulation (2371/2002). Under this Article, the Commission may decide on emergency measures "if there is evidence of a serious threat...to the marine ecosystem resulting from fishing activities and requiring immediate action." The measure closes an area of about 1300 km² to all bottom-trawl or similar towed nets.

The Regulation follows a direct request, accompanied by supporting evidence, from the UK Government. The UK is intending to designate the Mounds a Special Area of Conservation (SAC) under the habitats Directive. Discovered in summer 1998

by large-scale oil industry funded surveys of the region, the Mounds are at about 1000m depth and their morphology is unique globally. These reefs are also particularly fragile as they appear to be built on sand mounds that are flattened when trawled over. Since evidence of considerable trawl damage in a summer 2000 survey, conservationists have been pressing for action to prevent further damage to these unique reefs. Partly in response to this pressure, the Commission asked ICES for their urgent advice in July 2000, and they confirmed the importance and sensitivity of the Mounds in late 2001.

The Regulation has a life-span of six months (potentially renewable for a further six months) during which time there is the opportunity to introduce more permanent measures and undertake wide consultation. A proposal for a permanent closure of the Darwin Mounds area was published by the Commission on 27 August 2003



Side-scan sonograph showing a "healthy" non-trawled Darwin Mound (centre left), a trawl mark (diagonally across the image) and a trawled mound (centre right) with reduced backscatter suggesting a decrease in the abundance of coral colonies (the dark spots).

Photo credit from Wheeler, A.J., B.J. Bett, D.S.M. Billett, D. G. Masson & D. Mayor (2003). The Impact of Demersal Trawling on NE Atlantic Deep-water Coral Habitats: the case of the Darwin Mounds, UK. In: J. Thomas & P. Barnes (eds) Benthic Habitats and the Effects of Fishing, America Fisheries Society, Bethesda, Maryland, USA., in press.

(COM(2003)519) and will be the subject of debate at future Fisheries Council meeting(s).

It is good to see this new power finally being used. However, the delay from first indications of serious damage through to Regulation seems excessive and must surely be addressed. The concept of emergency closure followed by a period of reflection and debate seems correct from a

precautionary point of view. It is worth noting that ICES identified several further sites that should be closed to bottom-trawling to protect cold-water corals, but none of these have yet been put forward for closure by the Member State in whose waters these sites fall.

For further information contact Dr Mark Tasker, Joint Nature Conservation Committee, UK. Tel: +44 1224 655701; email mark.tasker@jncc.gov.uk

Certification of marine ornamentals reaches Europe

Two European importers have now joined the growing number of globally certified Marine Aquarium Council (MAC) operators: Sierviskwerkerij Waterweelde in the Netherlands, and the UK based Tropical Marine Centre. The MAC is an eco-labelling

and quality control initiative for the marine ornamentals industry. It has a set of standards against which operators are assessed. This assessment is done by independent third-party certification companies, themselves accredited by the MAC as certifiers. The standards cover both practices (industry operators, facilities and collection areas) and

products (aquarium organisms). The entire chain of custody - from reef to retailer - can then be certified.

The growth in certified operators comes at a time when a new United Nations Environment Programme and World Conservation Monitoring Centre (UNEP-WCMC) report on the industry highlights the need for

eco-labelling in achieving sustainable marine aquarium trade.

For further information on the MAC, contact: info@aquariumcouncil.org or visit <http://aquariumcouncil.org/> The UNEP-WCMC report can be downloaded from http://www.unep-wcmc.org/resources/publications/WCMC_Aquarium.pdf

Sea of change in fish production, consumption and trade – outlook for fish to 2020

Mr Mahfuzuddin Ahmed
WorldFish Center

Food fish exports from developing countries to developed countries, in particular to Europe and Japan, are projected to slow down by 2020, while the further emergence of an urban middleclass in the developing world will make south-south trade increasingly important. Public policy in the North will increasingly have to favour import-friendly regimes for fish, while developing country trade policies will have to address food safety issues.

These findings come from *Outlook for Fish to 2020: Meeting Global Demand*, a report produced jointly by the WorldFish Center based in Penang, Malaysia, and the International Food Policy Research Institute, Washington DC. Its conclusions are based on economic analysis of the challenges facing the fisheries sector up to the year 2020.

Fish consumption in developing countries is predicted to increase from 62.7 million tonnes in 1997 to 98.6 million in 2020. By comparison, fish consumption in developed countries will increase by only 4 per cent, from 28.1 million tonnes in 1997 to

29.2 million in 2020, with EU countries seeing virtually no growth in their consumption of food fish over this period. This is due to both rapid population growth, increased purchasing power and urbanization in developing countries, and stagnating population growth and demand saturation for fish in the developed countries.

To meet the growing demand in developing countries, fish farming or aquaculture will continue to expand. Aquaculture growth in developing countries could however threaten the environment and livelihood and food security due to increased pollution, damage to wild fisheries, and competition for water and land use. Aquaculture growth is seen as the only means of ensuring stable or lower prices, which are projected to increase, in both developing and developed countries. More efficient use of fishmeal and fish oil would also be instrumental in mitigating price increases.

Developed countries are net importers of fish. Their total import value and volume is expected to decline however, largely due to declining EU imports. However, trade among the developing countries is expected to intensify, with their governments having to develop policies and



Bing Santos, WorldFish Center

Increasingly under pressure, sharks are high value species, caught, traded and consumed throughout the world.

measures to ensure that hygiene, food safety requirements and environmental standards are met in order to secure markets.

Traditional import barriers such as tariffs and quotas for fish commodities have been significantly reduced or eliminated in the developed countries since WTO recommendations. This is evident in the EU, where the average preferential tariff has decreased to 10.7 per cent from its pre-WTO level of 17.4 per cent. Nonetheless, policymakers in developed countries will increasingly need to develop import-friendly regimes for fish.

Food safety systems for seafood imports should be rationalized to promote safety, import barriers should be eliminated and tariff classifications should be harmonized and modernized across countries. For reasons of social justice and equity, as well as securing supply, technical assistance should be provided to associations of small-scale, developing-country fish exporters for achieving fair trade and eco-labelling certification.

The full report is available at <http://www.ifpri.org/media/fish20031002.htm>. Further details can also be obtained by contacting Mr Mahfuzuddin Ahmed, Principal Scientist and Program Leader, Policy Research and Impact Assessment, WorldFish Center, Penang, Malaysia Tel: +60 4 626 1606 email m.ahmed@cgiar.org

The benefits of protected areas

Under the theme *Benefits Beyond Boundaries*, delegates at the Vth World Parks Congress sought to take stock and set the conservation agenda for the coming decade.

The Congress, held in Durban, South Africa, agreed the *Durban Accord and Action Plan*. This outlines new thinking and key targets and

timetables for protected areas in the next ten years. Although not legally binding, 32 recommendations were adopted, reflecting in particular the call for greater community involvement, recognition of ecosystem service benefits, and improved financial and human resource capacity.

Moreover, a message to the Convention on Biological Diversity (CBD) called for the

expansion of Marine Protected Areas (MPAs) to include ecosystem processes and areas beyond national jurisdiction.

The Congress also highlighted the need to improve MPA management, particularly with respect to protecting biodiversity, and ecosystem functions, and increasing benefits for communities. Delegates called for MPAs to be integrated in

marine and coastal governance, and to expand MPAs in both the high seas and exclusive economic zones.

For further information visit <http://www.iucn.org/themes/wcpa/wpc2003/index.htm> or contact: David Sheppard, Head IUCN Programme on Protected Areas. Tel +41 (022) 999 0162; fax +41 (022) 999 0015; email: das@hq.iucn.org Ten-year high seas marine protected area strategy agreed by Marine Theme participants available at <http://www.iucn.org/themes/marine/pdf/10ystrat.pdf>

'Managing' EU fishing fleets?

Michael Earle

Fisheries Advisor, Green Group in the European Parliament

As part of the much-touted 'reform' of the Common Fisheries Policy of December 2002, the Multi-Annual Guidance Programmes (MAGPs) – the EU's fleet restructuring programmes - were scrapped. Considering that the objectives of the MAGPs had been to "achieve a balance on a sustainable basis between resources and their exploitation", yet many of the EU's most important fish stocks have continued to decline, it can be safely concluded that they had been a resounding failure. That does not mean that their demise should be welcomed, however.

The European Commission initially prepared the ground well for ambitious MAGPs (1997-2001/2), basing its proposals on scientific advice set out in the 'Lassen Report' of 1996. But the Council considered the proposals to be unacceptable, and instead established such modest objectives that the Community fleet as a whole was actually smaller than the overall objective – even before the MAGP IV began. Only certain fleet segments had to be reduced, and yet by the end of the six year MAGP IV period, only 78 of 96 fleet segments had met their objectives in terms of tonnage, and only Denmark, Finland, Portugal, Spain and Sweden had met both tonnage and power objectives for all segments.

MAGP IV had pleased no-one. Member States considered even the extremely modest reductions required under the programmes to be too difficult and did as little as possible to implement them. Industry viewed any compulsory reduction in capacity as utterly unacceptable. Environmental NGOs in contrast judged the programmes to be completely insufficient to secure fish stock recovery.

'The new CFP does not require any further reduction in the capacity of the Community fleets'

The new CFP does not require any further reduction in the capacity of the Community fleets. Instead, there is a reference level for each Member State (in GT and kW) for all of its segments combined. While these limits must not be exceeded, there is no mechanism to prevent capacity shifts among the various segments. Furthermore, only if subsidies are used is there any need to reduce these reference levels. Member States are to implement an 'entry-exit scheme', whereby entry of any new vessels must be preceded by the removal of an equivalent capacity. However, even if the nominal fleet tonnage does not increase, the inevitable effect of technological



(c) Greenpeace/Davison, 19/9/2001

Side view of Dutch super trawler *Maartje Theodora*, Las Palmas harbour, Spain.

innovation will clearly further increase the fishing power of the fleets, with negative consequences for fish stocks.

In theory, the reference levels for each Member State were to be the sum of the objectives for each individual fleet segment for the end of MAGP IV, at 31 December 2002. But when these reference levels were established this summer (Regulation 1438/2003), several significant increases in capacity were actually allowed. France and the Netherlands had their allowable tonnage increased by 4,500 GT and 44,888 GT, respectively, as a result of "additional fishing opportunities mainly in the waters off Africa (Mauritania)" for small pelagics. This follows the infamous retroactive absorption of the Atlantic Dawn into the Irish fleet a few years ago, accompanied by the export of the Irish *Veronica* to Panama. The Commission claims that it based the French and Dutch increases on "extensive scientific advice", but three scientific reviews of small pelagic fisheries conducted in 2001 and 2002 recommended that catches and capacity should not exceed the average level over the previous five years. When pressed to explain how "no increase" led to the addition of the equivalent of 3.5 Atlantic Dawns, Commission officials said that, as these vessels have already been fishing in Mauritanian waters during the past five years, it was a simple recognition of a fact, rather than an effective increase. Yet at least the Dutch capacity had been operating illegally, for the Commission had begun infringement proceedings against the Netherlands in July 2001 for non-compliance with its objectives for the pelagic fleet - coincidentally, the excess amounted to 44,276 GT. The Commission has, once again, resolved its difficulty by dumping excess EU capacity in the waters of developing countries.

For further details contact Michael Earle, Fisheries Advisor, Green Group in the European Parliament, LEO 6C99, Rue Wiertz, 1047 Brussels, Belgium Tel:+32 (2) 284-2849 email mearle@europarl.eu.int

Regional and global fish abundance and trends

Fish stocks are usually assessed on an individual basis, with little wider regional analysis of trends in fish abundance or ecosystems. The Sea Around Us Project, based in the Fisheries Centre,

University of British Columbia, aims to do just this.

Catch and ecosystem data are used to examine the impacts of fisheries on marine ecosystems at a global scale. This is achieved through mapping and modelling data at an ecosystem level. Conclusions are to be used to propose

measures to sustain or re-establish healthy ecosystems.

Outputs of the project so far include findings supporting the theory that there is a 'fishing down of the food web'. For example, a two-thirds decline in predatory fish in the North Atlantic over the last 50 years raises concerns over the future

of the region as a diverse healthy ecosystem.

For further information contact: Daniel Pauly & Dirk Zeller, Sea Around Us Project, Fisheries Centre, University of British Columbia, 2204 Main Mall, Vancouver, B.C., V6T 1Z4, Canada. Tel: +1 6048221021 email: d.pauly@fisheries.ubc.ca Project outputs available at: <http://www.saup.fisheries.ubc.ca>

Management of Mediterranean fisheries: pointing in the right direction



Tuna purse seiner in the Gulf of Lions

Sergi Tudela (WWF) reviews the proposed Mediterranean Regulation

The Council Regulation recently proposed by the Commission (COM(2003)589) is of paramount importance for the future of fisheries management in the Mediterranean. It is the first time since the CFP's inception that the management of Mediterranean fisheries has been specifically tackled in EU legislation in a comprehensive way, with current provisions only being for a few technical measures (Regulation 1626/94).

Among the positive elements contained in the new proposal, the following deserve to be highlighted:

- legal basis for Protected Areas, for the purposes of fisheries management and the protection of marine ecosystems;
- explicit commitment to end illegal driftnet fisheries, with a clear definition of driftnets as well as technical measures to discourage the use of driftnets disguised as artisanal fixed gears;
- measures to increase the selectivity of bottom trawling and reducing the impact of hydraulic dredges; and
- an annual 4-month moratorium on pelagic longlining to protect juvenile swordfish.

Other important aspects include the proposed extension of management to "Member States fishing zones" (beyond the territorial seas), to recreational fisheries and to EU citizens fishing on the Mediterranean high seas.

Notwithstanding these positive elements, there are several areas of concern in the proposed text. In particular, the proposal leaves the door open for selective "tailor-made" derogations from many of the technical measures, subject to the setting up of a Management Plan. There is a real danger that the very concept of management plans will be perverted so as to be used merely to justify à la carte derogations from the common rules. Other specific gaps include the following:

- complete absence of measures aimed at the regulation of deep-sea fishing and, particularly, of tuna farming activities;
- lack of measures to protect biologically valuable habitats other than seagrasses, such as coralligenous communities;
- non-inclusion of specific measures to reduce the by-catch of vulnerable and

protected species, eg marine turtles on longlines;

- lack of specific measures aimed at conserving elasmobranchs and other particularly vulnerable groups;
- lack of requirements to use bycatch-reducing square mesh and grid panels in trawl gears; and
- temporary lowering of the legal minimum landing size of hake, an important yet overexploited species, from 20 to 15 cm, far below the size at first maturity of the species.

Given the semi-enclosed nature of the Mediterranean Sea and the fact that a number of stocks are either in international waters or shared with third countries, it is vital to have regional management of marine resources. The Ministerial Conference for the Sustainable Development of Fisheries in the Mediterranean, to be hosted by the EU in Venice, from 25-26 November 2003, is intended to contribute towards this.

For further information, contact Dr Sergi Tudela, Fisheries Coordinator of WWF-Mediterranean Programme, C/ Canuda 37, 3º, 08002 Barcelona, Spain. Tel + email: studela@atw-wwf.org

New Mediterranean NGO

Recently created and based in Barcelona, Mediterranean Fisheries Watch – OPMed – is a not-for-profit association of scientists and environmentalists committed to the marine environment and fisheries. OPMed aims

to promote responsible fishing activities, contributing to the regeneration of marine ecosystems especially in the Mediterranean Sea. Amongst other approaches, they work by encouraging information exchange

amongst fishing communities and with scientist, supporting local control over marine resources, facilitating common projects between stakeholders to rebuild marine ecosystems, and

promoting better fishing practices.

Further details can be obtained from Mrs Anna Rosa Martínez Prat, OPMed, Nàpols 153, 3er, 1a. 08013, Barcelona Tel: + 34 232 05 08 provisional email: annarosam@yahoo.com

Status of Europe's seas

An ICES report *The Environmental Status of the European Seas*, written on behalf of the German Federal Environment Ministry, says that of the 113 stocks assessed by ICES in 2001, only 18 per cent were inside safe biological limits.

The report, drafted for the June 2003 OSPAR/HELCOM meeting,

provides an easily accessible overview of the key environmental conditions in the Northeast Atlantic, including the North Sea and the Baltic Sea. The Mediterranean and Black Sea are covered, but to a lesser extent.

The report is a comprehensive review of the status of Europe's Seas. The effects of human

activities on the seas are covered in depth. Global forces affecting the environments are examined, with climate variability being considered the most important.

The lack of knowledge of natural biological fluctuations is identified as a key management challenge, making it difficult to set limits on acceptable changes

in biodiversity for management purposes. Because these issues cannot be tackled on an individual piecemeal basis, an integrated management approach is advocated.

For further information contact Neil Fletcher, ICES, Palægade 2-4, DK-1261, Copenhagen K, Denmark. Tel: +45 33154225 email: neilf@ices.dk The report can be downloaded at <http://www.ices.dk/>, or a hard copy requested from info@ices.dk

Invasive species: a global problem



Roger Steene/IMO.

Crabs are one of many species that can be transported via ballast water during their larval stage.

The growing problem of Invasive Alien Species (IAS) was one of several issues covered at the *International Conference on the Impact of Global Environmental Problems on Continental and Coastal Marine Waters* held in Geneva in July. IAS appear to be affecting virtually all major rivers, lakes and coastlines in both tropical and temperate zones. The global economic damage of IAS is estimated to be as much as US\$400 billion per year.

IAS affect both the structure and functioning of ecosystems. They can also eliminate native species directly through predation, or indirectly through competition for food or light, for example.

Aquaculture (including 'superfish' produced through biotechnology) and aquaria are increasingly sources of IAS. Perhaps the main route for the spread of IAS however is in ship ballast water. It is estimated that 10,000 species are on the move each day on the world's oceans, as a result of increased global trade.

Suggestions to solve the problem include a new international convention on ballast water and an increased role for the World Trade Organisation, given the relationship between IAS and international trade.

To address the threat of IAS, a consortium of environment institutions, in partnership with the United Nations Environment Programme, are working together under the Global Invasive Species Programme. The Programme is supporting the implementation of existing conventions and developing further options for tackling the issue.

For further information contact: Jeff McNeely (Chief Scientist) or Frederik Schutyser, IUCN-The World Conservation Union, 1196 Gland, Switzerland, email: jam@iucn.org and frederik.schutyser@iucn.org respectively. Longer article available at: http://www.iucn.org/info_and_news/press/mtgiasgvapaper.pdf
Useful websites: GISP: <http://globalecology.stanford.edu/DGE/Gisp/index.html> IUCN: <http://iucn.org>
IUCN SSC IAS Specialist Group: <http://www.issg.org>
IMO Ballast Water Programme: <http://globallast.imo.org/>

Progress on subsidies

On the 3-4 November the OECD is holding a technical expert meeting on environmentally harmful subsidies as a follow-up to the OECD workshop in 2002. A report summarising the results of the 2002 workshop and the papers submitted, was released in September 2003 (see www.oecd.org/agr/ehsw). A final report on the project will be presented to the 2004 Ministerial Meeting of the OECD.

The work on environmentally harmful subsidies is a response to a demand in 2001 by OECD Ministers, who are committed to reducing trade-distorting and environmentally harmful subsidies. The long-term goal of the work is to develop tools to help member countries phase out or reform subsidies. The November meeting will address the issues of reforming environmentally harmful subsidies and particularly the question of obstacles to subsidy reform in different sectors, including fisheries.

Further to this, the United Nations Environment Programme (UNEP) is currently conducting an analysis of the impacts of fishery subsidies under different management and bio-economic conditions. The implications of the findings for fisheries subsidies reform will be discussed at an international UNEP workshop in early 2004.

This work comes at a time when fishing subsidies are on the agenda of the Doha Round of World Trade Organisation negotiations. In the WTO, fisheries subsidies are primarily negotiated in the Negotiating Group on Rules, which has however been unable to meet since the failure at the

Cancun Ministerial Conference.

For further details, contact Anthony Cox (Senior Analyst) or Carl-Christian Schmidt (Head of Division) of the OECD's Fisheries Division, Directorate for Food, Agriculture and Fisheries, OECD, 2, rue André Pascal, 75775 Paris Cedex 16 email anthony.cox@oecd.org; carl-christian.schmidt@oecd.org Tel +33-1-45 24 95 60. Information on the UNEP work can be obtained from Anja von Moltke, Economics and Trade Branch, Division of Technology, Industry and Economics, UNEP, Tel: +41 22 917 8137 email: anja.moltke@unep.ch

Fisheries extinctions a reality

Marine organisms have generally been considered to be less vulnerable to extinctions than those on land. It is also widely believed that fish are more variable in abundance from year to year than mammals. Further to this, it is often argued that fish become commercially extinct before becoming biologically extinct.

Each of these points is demonstrated to actually be incorrect in many cases in a recent paper by the Universities of Newcastle-Upon-Tyne, Hong-Kong and East Anglia, examining the vulnerability of marine populations to extinctions. In the analysis, the limitations in detecting and predicting extinctions are highlighted. The view that the seas are healthy because there have been no extinctions is argued to be incorrect - merely extinctions have occurred and we do not have the capacity to discover or monitor them.

The paper's findings could have significant implications for fisheries management and the application of the precautionary approach. Perceptions of high recovery potential, low risk of extinction and high variability are often used as a basis for not classifying fish species as

being under threat, and so avoiding precautionary management measures.

The report examined 133 local, regional and global extinctions of marine populations, including fish, mammals and birds. Most marine extinctions (80 per cent) were due to a single factor, be it exploitation (55 per cent), habitat loss (37 per cent), invasive species (2 per cent) or climate change, pollution and disease. For birds, mammals and plants, habitat loss is the main threat (87 per cent), followed by exploitation (21 per cent), invasive species (18 per cent) and poor dispersal, recruitment and juvenile survival (14 per cent).

For further information contact: Nicholas K Dulvy at his new address: CEFAS, Lowestoft Lab, Lowestoft, Suffolk, NR33 OHT, UK. Tel: +44 1502562244 email: n.k.dulvy@cefas.co.uk Full paper available at: http://www.uea.ac.uk/bio/reynoldslab/documents/Dulvy_et_al_F&F_03.pdf

Fisheries implications of the European Constitution

The Constitution for Europe is currently under discussion in the Inter-Governmental Conference (IGC). It has been drawn up to prepare the EU, including its institutions, for enlargement. The 265 page document – if adopted – would replace the current Treaty of Rome upon which the Common Fisheries Policy is based.

For the first time, the Constitution would explicitly name "the conservation of marine biological resources under the common fisheries policy" as an area subject to exclusive EU competence. This contrasts with other aspects of fisheries policy and environmental policy, where the EU and the Member States share responsibility.

Although elements of fisheries have been treated as

exclusive, this was not previously set out in the Treaty of Rome. Perhaps significantly, the term "marine biological resources" is not defined. Rather, the draft Constitution refers only to the CFP. As the CFP is laid out only in secondary legislation, which could be amended at any time, some argue that the management of everything living in the sea could potentially become the exclusively responsibility of the EU at some point in the future.

Significantly, the role of the European Parliament is to be strengthened in relation to fisheries. This would mean that the Parliament would share control with the Council of Ministers. Decisions concerning the setting of TACs and quotas would however remain the sole responsibility of the Council.

Final agreement on the new constitution is still awaited, at which point the text will need to be signed and ratified by the Member States before it can enter into force.

The full Constitution text is available at http://europa.eu.int/futurum/index_en.htm and the European Parliament Committee for Fisheries opinion can be downloaded from http://www.europa.eu.int/futurum/documents/other/oth100903_en.pdf

World's seagrasses 'in peril'



Some 15 per cent of global seagrass has been lost during the last decade. This is the warning from the UN Environment Programme (UNEP) at the launch of their new World Atlas of Seagrasses, in October 2003.

The main culprits blamed for the disappearance of one of the planet's most important shallow marine ecosystems, are land-based nutrient run-off and sedimentation, boating activity, land reclamation and other coastal developments, and destructive dredging and fisheries practices. Their destruction is thought to have significant implications for

marine life, not least commercially important fish stocks.

Europe has not been spared from dramatic seagrass declines. According to some figures, as much as 58 per cent of North Sea zostera beds have disappeared in the last decade or two; with figures rising to 82 per cent locally. Despite these sombre trends, Mediterranean posidonia meadows are the only seagrass protected by EU law.

A proposed regulation on the sustainable exploitation of Mediterranean fisheries would prohibit certain types of fishing over posidonia beds (COM(2003)589). It should add to the protection currently afforded under the EU's Natura 2000 system.

For information on the status of seagrass worldwide see <http://www.unep-wcmc.org/marine/seagrassatlas/>; or contact: Eric Falt; Spokesperson/Director of UNEP's Division of Communications and Public Information. Tel.: +254 20 623292, email: eric.falt@unep.info

For information on the proposed Community regulation for the Mediterranean contact: Franco Biagi, Fisheries Directorate General Conservation and Environmental issues Unit - Fish A 1. Tel.: +32 02 2994104 email: Franco.Biagi@cec.eu.int

Changes in Baltic Sea fisheries management

Inger Näslund, WWF Sweden

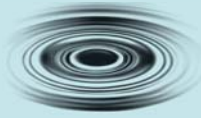
The 29th meeting of the International Baltic Sea Fishery Commission (IBSFC) was held in Lithuania, in September and October of this year. It may have been the last such IBSFC meeting, as after EU enlargement Russia will be the only non-EU country fishing in the area. Next year will likely see a formal closure of the Commission, after which agreements will be formed

bilaterally between Russia and the EU. The EU forum for this may be through a Regional Advisory Council (RAC). In preparation of this, the EU Accession countries were invited to closed discussions with the EU countries as part of the meeting.

Outcomes of the meeting included setting of quotas and management measures for 2004. The total cod TAC was set at 61,600 tonnes, revised up from the scientific advice of 42,600 tonnes. This may be revised, either upwards or downwards, in February 2004 when the 2003 fishing mortality is known. It was agreed to maintain the three month summer ban on cod fishing and to increase the cod spawning protection area. Poland and Russia opted out of the

decision that trawling for cod would only be permitted using the BACOMA 110 millimetre mesh trawls. However, Poland will have to follow the agreement upon joining the EU in the spring. In order to improve enforcement of a regulation to limit net soak-time to 48 hours, a compulsory gear identification system was agreed upon. This will include marking the year, month, date and time when nets are set. Enforcement agencies will then be able to confiscate nets left in the water for too long.

Further information can be found at www.ibsfc.org or by contacting Inger Näslund, WWF Sweden, Ulriksdals slot, S-170 81 Solna, Sweden, email inger.naslund@wwf.se Tel: +46 8 624 74 09



Apart from acting as a source of independent information on fisheries and the environment, *El Anzuelo* aims to present different perspectives on the issues, and thereby encourage discussion and debate among the various players. If you wish to respond to material included in this or the previous issue, we would be happy to hear from you.

CONTROVERSIAL SCIENCE

Dear Editor

■ I read with interest, as always, Volume 11 of *El Anzuelo*. The article on the paper *Rapid worldwide depletion of predatory fish communities*. (Myers, R.A. & Worm, B. (2003) *Nature*, Vol. 423: 280-283) is, however, incomplete ('Global depletion of predatory fish communities'). It does not reflect the indignation of most of the specialists in this field at this work, which is in conflict with 50 years of scientific consensus, starting from the hypothesis that the raw data on fishermen's catch rates are reliable indices of abundance. It is clear that a lot of these stocks are under excessive pressure, as demonstrated by these same experts. But for 50 years, scientists of all countries and schools of thought have been

analysing data bias and developing the methods allowing researchers to transform industry yields into reliable indices of abundance. The methods are numerous. None are totally reliable. The data on pelagic species, and in particular large pelagics, has always been considered as the least reliable of all because of the behaviour of the fish and the fishing vessels targeting them. Only by combining fishery data with additional information (scientific surveys, tagging, modelling) could the truth be approached a little. To erase all this with one swipe of the pen and interpret the raw data as the true abundance, while mixing up the regions, species and time periods, is scientifically unacceptable. Turning lead into gold is an old dream. Unfortunately, in this domain, the philosopher's stone is made of scientific

rigor, tenacity and international collaboration. For decades, the experts in this area have also noted that the important initial decreases in catch rates when catches were low were incompatible with the much smaller reductions of catch rates observed over the following decades in spite of much higher catches. Serious explanations do exist. Your article would have gained in balance if it had, at the minimum, indicated the serious controversies it caused among the scientific bodies most qualified in this subject.

Dr. Serge Michel GARCIA (PhD) Tel: +39 0657056467 Email: serge.garcia@fao.org (opinions expressed here are those of the author)

CALM BEFORE THE STORM

Dear Editor

The Azores is an archipelago of nine Islands in the middle of the North Atlantic, 1600 km from the Portuguese coast. Due to their geographic spread and isolation, the Azores have an extensive Exclusive Economic Zone of 948,439 km². However, because the islands are volcanic in origin they have only a limited continental shelf area, with only 0.8 per cent of the area being less than 600 metres deep. Fishing opportunities within the EEZ are therefore reduced, and any over-exploitation of the limited resources means that the impacts are more immediately felt.

Of an active population of 102,000 people, 4,201 are dependent on fishing either directly or indirectly. The fleet of 1,142 vessels is characterized by small and medium-sized boats. Eighty-two per cent of the vessels are nine metres long or less, while the remaining 18 per cent range between nine and 30 metres. Vessels work from one to ten days, using traditional artisanal fishing methods. The use of towed gear does not take place and longlining, both pelagic and demersal, is prohibited by regional regulation up to

three miles off the coast in order to protect this sensitive area. Large tuna are targeted using pole and line. This type of fishing was recently certified by the Friend of the Sea Project on the basis that the stocks are not risked by this fishing method, and management respects the FAO Code of Conduct for Responsible Fishing.

Under the CFP, the Azorean waters from 100 to 200 miles are being opened up to Community vessels, meaning that eight seamounts with summits above 600 meters in depth will be open to the Community fleet. Over time, Azorean boats will concentrate their fishing within 100 miles as they cannot compete with larger foreign vessels. The increased effort in this area will subsequently lead to over-exploitation, lower catches and consequently the decrease of the sector's economic value. All this will be in addition to the losses of the vulnerable hydrothermal vents outside the 100 miles zone, which are home to rich ecosystems, inhabited by unique and extremely sensitive species. In the face of increasing fishing effort, it is questionable how it will

be possible to guarantee the preservation of those species that might become overexploited as a result.

It is increasingly difficult to understand the declarations of Mr. Franz Fischler on the conservation of fishing resources. On the one hand Member States fleets are being reduced, while on the other, he defends the modernisation of fleets and liberalisation of areas such as the Azores, which will lead to the intensification of fishing. In the face of these challenges, representatives of the Azorean Government, environment organisations as well as fishing unions have consistently acted and stood together in the defence of the interests of the Azores.

Mr. João Gonçalves, Fisherman and President of the Fishermen's Union 'Associação de Produtores de Espécies Demersais dos Açores', email: m.arruaga@mail.telepac.pt For details on the Friend of the Sea Project email: info@friendofthesea.org (opinions expressed here are those of the author)

IEEP is an independent body for the analysis and advancement of environmental policies in Europe. While a major focus of work is on the development, implementation and evaluation of the EU's environmental policy, IEEP has also been at the forefront of research and policy development in relation to the integration of environmental considerations into other policy sectors.

This newsletter is part of IEEP's sustainable fisheries programme, which aims to identify, develop and build a consensus around alternative approaches to fisheries management. It is part-funded by the Esmée Fairbairn Foundation, and is sent free of charge to key practitioners in the Member States of the EU and in accession countries. If you would like to subscribe to *El Anzuelo* please send your details by mail, fax or email to: Debby Rosin, IEEP, 28 Queen Anne's Gate, London SW1H 9AB, UK. Fax: +44 207 799 2600; email: FisheriesUpdate@ieeplondon.org.uk

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