



for birds
for people
for ever

A blue fishing boat with a white cabin and yellow accents is on the water. The boat has several black tires along its side. In the background, there are blue mountains under a cloudy sky. Several birds are flying in the air. The foreground shows a rocky coastline with waves crashing against the rocks.

MANAGING EC INSHORE FISHERIES

TIME FOR CHANGE

Managing EC Inshore Fisheries: Time for Change

Clare Coffey and Janet Dwyer

This report was commissioned by The Royal Society for the Protection of Birds from Clare Coffey and Janet Dwyer of the Institute for European Environmental Policy, London, and written for BirdLife International.

wpo/jrw/inshore/4039
June 2000

Contents

Summary and recommendations	1
1 Introduction	3
2 What is the inshore access restriction and what are inshore fisheries?	4
2.1 The 6 and 12 mile Inshore Access Restriction	4
2.2 The definition of inshore fisheries	5
3 The natural value of inshore waters	6
3.1 Key characteristics of Europe's inshore waters	6
Biodiversity in inshore waters	8
3.2 Environmental impacts associated with the inshore fisheries sector	10
3.3 Policies to protect biodiversity in inshore areas	11
The Habitats Directive 92/43	13
Code of Conduct for Responsible Fisheries	15
4 A profile of Europe's inshore fisheries sector	16
4.1 The commercial inshore fishing sector	16
4.2 Recreational fishing and aquaculture	20
4.3 Conclusions	21
5 Overview of existing arrangements for managing inshore fisheries	21
5.1 The CFP dimension to inshore fisheries	22
CFP conservation and management measures	22
Marketing and processing fish and fish products	24
5.2 National management of the inshore sector	26
Voluntary Code of Conduct for Shellfisheries	30
5.3 Effectiveness of the access restriction	34
6 Strengthening inshore management after 2002	35
6.1 Options for improving the access restriction	36
6.2 Building a separate EC inshore regime	38
6.3 Conclusions	40
7 Political considerations for a new regime	42
References	45

Summary and recommendations

The forthcoming 2002 review of the Common Fisheries Policy (CFP) conservation and management regime, including the inshore access restriction, provides a critical opportunity for the EC to develop and refine arrangements for Europe's inshore fisheries. In particular, there is an opportunity to give the inshore sector an explicit and long-term role in sustainable social and environmental development. This report highlights the importance of Europe's inshore waters for biodiversity, and the need to manage inshore fisheries in ways that are sensitive to local needs. It examines the nature of the inshore sector and provides an overview of its socio-economic importance in many of Europe's remote coastal areas. It also analyses the existing policy structure for inshore fisheries management, highlighting the strengths and weaknesses of the inshore access restriction as a tool to promote sustainable fisheries.

A simple renewal of the present inshore access restriction in 2002 will be insufficient, on its own, to ensure better management of Europe's inshore fisheries in the future. The access restriction cannot in itself prevent overfishing in areas where larger vessels and the new methods employed by certain operators are likely to undermine the traditional, smaller-scale and often more environmentally-benign activities of local fisheries. More explicit inshore management systems, ideally involving a range of stakeholders, will be necessary if these issues are to be tackled effectively. Local management should intermesh effectively with national policies and the broader CFP framework. In sum, there is a need to promote a much more comprehensive and effective package of measures for the sustainable management of inshore fisheries.

This report sets out some specific policy options for the inshore sector which could promote a more integrated and sustainable future. These options vary from relatively minor changes to the existing access restriction, to the introduction of a new EC inshore fisheries 'regime'.

Improvements to the existing inshore access restriction could be secured in the following three ways:

- ?? by extending the explicit purpose of the access restriction to cover 'sustainable social and environmental development in inshore areas';
- ?? by limiting access to inshore fisheries to small-scale vessels only, rather than just excluding 'foreign' vessels; and/or
- ?? by extending Member States' management systems up to the 12 mile territorial limit - in other words managing both national vessels and 'foreign' vessels that have established rights to fish in the 12 mile zone.

While the access restriction appears to have provided some opportunity for Member States to manage their inshore fisheries, it was not designed to promote the sustainable development of inshore waters. The introduction of a '*new inshore regime*' would secure better management,

without increasing the regulatory burden and without compromising local diversity or flexibility. Components of such a regime could include the following:

- ?? the development of *inshore management objectives*, based on the concepts of the precautionary principle and the ecosystem approach and recognising the particular sensitivity of inshore waters;
- ?? a requirement for Member States to develop *national or regional inshore strategies* – setting out their own ecological and social objectives for the sector;
- ?? supporting implementation of these strategies through a ‘*menu*’ of *voluntary measures*, including the development of local management plans; these would be supported by
- ?? *new financial incentives*, for example, aids for the development and implementation of local plans and support for new environmental duties arising from environmental legislation.

A new regime of this kind would require new regulatory and institutional structures at EC and national level. In many ways, these could be similar to the structures which are being established for broader rural development policies within the EC. The fisheries sector has so far been reluctant to embrace such a comprehensive vision in policy development, but the 2002 review provides an ideal opportunity to reassess this approach, to the potential benefit of inshore waters and inshore fishing communities.

The most critical next step in achieving more sustainable inshore fisheries will be to win support for a broader vision of inshore management in Europe and concrete steps of the kind outlined here. This report has highlighted some of the interest groups with a stake in the debate and discussed their current stance on inshore issues. In order to promote a shared vision of future inshore management, environmental organisations will need to develop new strategies to influence all these groups, thereby advancing the process of policy reform in Europe’s inshore fisheries.

1 Introduction

Europe's inshore fisheries are characterised by their enormous diversity, employing a wide range of fishing methods and gear to target species as varied as anchovy and cod, cockles and lobster. They are also of varying significance for coastal communities and economies, with some regions highly dependent on the continued productivity of inshore areas. At the same time, inshore waters feature among Europe's most dynamic and complex environments, containing many valuable natural species and habitats. It is consequently of utmost importance that inshore fisheries are managed to conserve nature and to support diverse cultural and social interests.

Inshore fisheries are currently managed using a range of policy measures, including those developed under the European Community's Common Fisheries Policy (CFP). The CFP provides a common framework for managing Europe's fisheries, and allows all Member States' vessels access to all Community waters. However, a special clause in the CFP excludes most 'foreign' or non-Member State vessels from inshore waters, effectively giving Member States significant scope for instituting their own national or regional management systems. This clause, known as the 'access restriction', is widely endorsed because it allows a 'regionalised approach' to be taken to fisheries management, giving Member States the ability to manage inshore fisheries in ways which are locally appropriate. It is also seen as protecting the inshore sector from competition from more industrial and specialised offshore fleets. Many nature conservation and environmental organisations also consider the restriction to provide a suitable platform for delivering local sustainability.

As part of the forthcoming review of the CFP's fisheries conservation and management regime in the run up to 2002, the Commission is considering various aspects of EC fisheries management, including the access restriction in inshore waters. There is currently widespread consensus that the restriction should be reintroduced after the year 2002. However, there has been little critical analysis of whether the restriction has been an effective tool for delivering socially and environmentally sustainable fisheries in the EC.

This report by the Institute for European Environmental Policy is intended to inform and encourage debate on the future of the inshore access restriction, with a view to strengthening arrangements in favour of local communities and the natural environment. After an initial introduction and illustration in Chapter 2 of what is meant by 'inshore fisheries', Chapter 3 outlines some of the key environmental features of inshore areas which call for their careful and sensitive management. This is followed in Chapter 4 by a profile of the inshore fisheries sector. Chapter 5 provides an overview of the main measures and approaches which are applied to manage inshore fisheries at EC, national and local levels, which at present only provide partial support for sustainable development in inshore areas. Chapter 6 therefore presents some options for supporting more sustainable, regionalised inshore fisheries

management across the EC. Some political considerations for promoting such reforms are discussed in Chapter 7.

2 What is the inshore access restriction and what are inshore fisheries?

2.1 The 6 and 12 mile Inshore Access Restriction

The aim of this report is to draw out key environmental issues and concerns facing the EC fisheries sector, in order to inform the future of the 'inshore access restriction'. In practical terms, the access restriction essentially consists of a band around the Member States' coastlines from which 'foreign' vessels, ie vessels not registered in the coastal state, are predominantly excluded. The restriction is currently embodied in Regulation 3760/92 which provides the main framework for the management of EC capture fisheries, although the restriction is due to expire at the end of the year 2002. New arrangements will need to be proposed by the Commission and agreed by the Council if it is to apply beyond 2002.

The inshore access restriction was developed in response to attempts in the early 1970s to create a European common pond in which all EC vessels would have 'equal access' to all EC waters. In practice, however, this interpretation of 'equal access' was almost immediately seen to be unworkable, posing a particular threat to fishing communities in the UK, Ireland and Denmark, which were highly dependent on fishing for their survival. As a consequence, the 1972 Accession Act resulted in a watering down of the principle, instead introducing a time-limited restriction on access to inshore waters.

The 12 mile inshore access restriction was initially applicable only to a small number of regions considered to be particularly dependent upon fishing, including large parts of the UK, French and Danish coastlines, and all of Ireland's coastline. In contrast, the whole of the inner 6 mile limit was to be reserved 'to vessels which fish traditionally in these waters and which operate from ports in that geographical zone' (Article 100 of the 1972 Treaty of Accession).

Although the restriction was designed as a temporary measure, it has gradually been extended and currently runs up until the end of the year 2002. At the same time, the content and scope of the restriction has gradually evolved. It now covers all Member States' territorial waters (ie generally up to 12 nautical miles), although the extent of the restriction varies, as follows:

- ?? complete restriction on access up to 6 nautical miles - in the waters closer to shore, normally extending out to 6 miles, access by foreign vessels is prohibited altogether. However, in some cases, such as areas of the German, Danish and Dutch coasts, this inner band extends only out to 3 or 4 miles, whereas in Italy foreign vessels are prohibited all the way out to 12 miles.
- ?? partial restriction on access between 6 and 12 miles - in the outer band of the territorial waters, normally between 6 and 12 miles,

some access by foreign vessels is permitted based on historic rights. For example, as illustrated by the map (inside back cover) Belgian vessels are allowed to target demersal fish in the 6 to 12 mile zone along large sections of England's east coast. Similarly, French pelagic vessels are allowed to fish within the 6-12 mile band along parts of the Spanish Atlantic coast.

At the same time, the scope of the restriction has also developed. While the original derogation was explicit in its support for 'traditional' or 'local' fishing activities, the restricted access is now preserved for any vessels registered in the particular Member State which holds those inshore waters.

2.2 The definition of inshore fisheries

The term 'inshore fisheries', like 'artisanal', 'small-scale' and 'coastal', is subject to various interpretations in the EC, reflecting both legal and cultural traditions of the Member States, as well as the nature of fishing grounds and the structure of national fleets. Furthermore, inshore fisheries may be prosecuted by a range of vessels, including vessels fishing exclusively inshore ('inshore vessels'), as well as larger vessels which have the ability to fish further offshore ('offshore vessels'). For example:

- ?? in Greece, the fishing fleet is divided into coastal, medium-distance and Atlantic segments. The coastal fleet is by far the largest in numerical terms, including small and undecked vessels fishing close to shore. However, it also includes a small number of larger vessels, such as longliners which commonly fish offshore in international waters.
- ?? in England and Wales, inshore fisheries are often defined as fisheries prosecuted by vessels under 10 metres in length (the inshore sector) typically fishing out to 6 miles where the inshore management regime applies.
- ?? Denmark has no tradition of separating inshore and offshore fishing, and consequently has not developed a formal definition of 'inshore fisheries'.

These contrasting approaches can present problems for EC policy making, since research and statistics on 'inshore fisheries' or similar sectors generated at national level are likely to be based on different perceptions of the term.

This report seeks to draw out common issues and concerns facing the range of EC inshore fisheries, in order to inform the future of the inshore access restriction. *We consequently define 'inshore fisheries' as all those areas covered by the access restriction, ie capture fisheries normally falling within 12 nautical miles of the coast and under the jurisdiction of the Member States. 'Inshore fishermen' and 'inshore fleets' are defined as those predominantly active within the 12 mile territorial limit.*

3 The natural value of inshore waters

The inshore access restriction has developed on the premise that inshore waters are vital to the continued survival of fisheries dependent communities. Inshore fisheries have certainly supported fishing for several millennia and continue to be prosecuted by many thousands of fishermen throughout the EC's extensive 89,000 kilometres coastline. Although their overall contribution to gross domestic product is often minimal, they play a pivotal role in the economic and social welfare in many of Europe's outermost fringes.

At the same time, the inshore fisheries sector operates within some of Europe's most valuable natural areas, stretching from the Gulf of Bothnia in the north to the Ionian Sea in the south. It is therefore vital that Europe's inshore fisheries are managed in ways that are sensitive to the needs of our natural heritage, while also supporting dependent fishing communities.

This chapter highlights some of the main environmental assets in inshore waters, and outlines the principal EC and international policy responses aimed at conserving them. It is followed in Chapter 4 by a profile of the inshore sector, and its social and economic importance for coastal communities. Ongoing attempts to manage inshore fisheries and their contribution to sustainable development are presented in Chapter 5.

3.1 Key characteristics of Europe's inshore waters

Inshore waters are known to support an enormous range of habitat and species types, together thought to represent 50 per cent of the EC's richest and most sensitive ecological areas (Mitchell 1998). The benthos, sea bed and water column are not only essential for the survival of a great many species of commercial fish, but also many other species including marine mammals, birds, marine turtles and invertebrates, and extensive plant life.

Inshore waters are subject to many dynamic forces, including natural forces of waves and currents, weather, and alterations in sea level. Their landward boundaries include various partly or fully submerged habitats, such as the archipelagos along the Swedish and Finnish coasts, and the extensive salt marshes and mudflats typical of Germany, Denmark and the Netherlands. The Waddensee has the largest stretch of uninterrupted mudflats in the world (see box Pg. 7). In contrast, the shores of north and west Spain, Ireland and the west of Scotland are noted for being rocky and indented by sea lochs and rias. Rocky shores also dominate the northern parts of France, although sand dunes and beaches are more typical in the southern regions and along the Portuguese coast. The Mediterranean coastline is also characterised by rocky shores interspersed by a number of large and small alluvial plains (Kelleher *et al* 1995).

Important Inshore Habitats: the Waddensee

The Waddensee is a shallow sea extending along the North Sea coasts of the Netherlands, Germany and Denmark. It is a highly dynamic ecosystem with tidal channels, sands, mud flats – the largest continuous stretch of mudflats in the world – saltmarshes, river mouths and a transition zone to the North Sea offshore. Overall, the area provides important habitat for shellfish, fish, seals and birds.

Mussels, cockles and eelgrass are all characteristic species of the Waddensee and of great importance to its ecosystem. Cockles and mussels constitute the main biomass of benthic fauna and are keystone species in the Waddensee ecosystem; they provide food for the development of invertebrates, fish and birds, actively deposit suspended silt and exercise a positive influence on sediment processes.

The Waddensee is a critical resting point for up to 12 million birds which migrate annually along the East Atlantic flyway (Stanners *et al* 1995). Ten species are endemic to the area. The region is considered to contain some of the most important feeding areas for seaduck and shorebirds in the North Sea. Species occurring in substantial numbers in the Waddensee include eider (*Somateria mollissima*), common scoter (*Melanitta nigra*), oystercatcher (*Haematopus ostralegus*) and herring gull (*Larus argentatus*). These birds have high demands for mussels, cockles and trough shells and consequently compete with fishermen for food. The Waddensee fisheries also indirectly impact on the birds' habitat, raising further concerns over the effect on bird populations.

Of course, the characteristics of Member States' inshore waters are also heavily determined by the adjacent seas. The EC's thirteen littoral Member States border no less than three different seas, as well as the north-east Atlantic. These water bodies have the following key features.

?? The semi-enclosed *Mediterranean Sea* has high species diversity but a low biological productivity due to low nutrient concentrations. The sea is characterised by generally narrow continental shelves that attract large numbers of species of demersal and pelagic fish such as mullet, hake, tuna, swordfish, pilchard, anchovy and mackerel, as well as crustacea, shellfish and cephalopods. The fauna of the Mediterranean is considered 'richer' than that of the Atlantic coast; rocky intertidals, estuaries and seagrass meadows are of significant ecological value (Kelleher *et al* 1995).

?? The *Baltic Sea* is a relatively young and sheltered sea, and represents the largest brackish water area in the world. Consequently its fauna and flora are relatively poor. Notable species include seals and white-tailed eagles (*Haliaeetus albicilla*). Herring, sprat and cod make up around 90 per cent of total fish catch in the region.

?? The *North Sea* is situated on the continental shelf of northwest Europe. It is a transition area between the warm region in the southwest and the cold boreal region in the east and the north. The sea is home to significant numbers of seabirds, as well as seals and cetacea. A considerable number of commercial fish species are targeted in this sea, including cod, herring, sole, plaice and small pelagics such as sprat and sandeel.

?? The *North-east Atlantic coast* includes the relatively shallow waters of the semi-enclosed Irish Sea down to deeper waters off the shores of Portugal. The width of the continental shelf varies, extending as far as 300 kilometres off the English coast. In contrast, off the northern shores of Spain and Portugal the shelf can be as narrow as 10 kilometres. It is home to extensive and varied fisheries, including cod, haddock, redfish and saithe.

Biodiversity in inshore waters

The physical conditions and variety of substrates in coastal waters support a wide range of plant and animal life, quite apart from serving as vital nursery areas for many commercial demersal and pelagic fish, and shellfish. Plant life such as lichens and green, brown and red algae, is distributed between partially and fully submersed areas. Important species of alga include *Phymatolithon calcareum* and *Lithothamnion corallioides* that form fragile maerl beds in European seas. Sea-grasses such as eel grass (*Zostera marina*) and Posidonia seagrass (*Posidonia oceanica*) also feature among important inshore plant life. Mediterranean Posidonia beds are particularly noted for providing nursery areas for young fish, supporting 25 per cent of the region's flora and fauna and providing essential feeding grounds for turtles, waterfowl, cephalopods, crustaceans, shellfish and finfish. They also play an important role in preventing coastal erosion (Delbaere 1998).

Europe's inshore waters provide important habitats for a wide range of animal species (6,500 around the British Isles alone) ranging from single-celled creatures to complex multi-cellular animals. They include sponges, sea anemones, corals (see box Pg. 9), jellyfish, worms, molluscs, crustacea, starfish and sea urchins, as well as hundreds of species of fish, marine turtles and marine mammals. As many as 22 species of cetaceans are found in inshore waters, including the harbour porpoise (*Phocoena phocoena*) and seals such as the common seal (*Phoca vitulina*) and the Mediterranean monk seal (*Monachus monachus*) whose total world population is presently estimated to be only 320–475 animals (Mitchell-Jones *et al* 1999).

The Pink Sea Fan (*Eunicilla verrucosa*)

The pink sea fan occurs along the west coast of Ireland and southwards into the Mediterranean. Sea fans attach themselves to the rocky seabed usually on upward-facing bedrock or stable boulders, often at depths below 15 metres. A sea fan is attached to the sea bed by a broad base extending to a column which may be up to 8 millimetres in diameter and branches profusely from 20 to 40 millimetres above the base. Although sea fans are sometimes found in 'forests', individuals are usually widely separated. The species appears to recruit infrequently and large specimens may be as much as 40 years old. The pink sea fan is also a host species for the sea anemone.

Current factors contributing to the loss or decline of pink sea fans include commercial collection for souvenirs. The long-term impacts of intensive fishing using pots and nets on local populations are not known and need further investigation. However, entanglement in fishing nets and lines is a problem in some areas and is known to damage soft tissue and may ultimately damage or kill colonies.

(UK Biodiversity Group 1999)

Europe supports several breeding seabird populations of outstanding international importance: eg. 100% of the world's great skuas *Stercorarius skua*, nearly 99% of the world's lesser black-backed gulls (*Larus fuscus*), and over 75% of its great black-backed gulls (*Larus marinus*) and gannets (*Morus bassanus*) (Tucker & Heath 1994).

Inshore waters play a disproportionately large role in supporting many of these birds, providing areas for feeding, resting, moulting and raising young. In Europe around 30 bird species of European Conservation Concern use inshore habitats at some point during their life cycle (Tucker & Heath 1994). In particular, the survival of seabirds depends on the availability of food and the location of safe nesting areas in coastal regions and waters. Seabirds feed on most elements of the food web, except phytoplankton, and are therefore influenced by the presence of zooplankton, fish (both benthic and pelagic) and benthic invertebrates such as mussels and other bivalves. The example of the kittiwake (see box Pg. 10) illustrates this influence.

Kittiwake (*Rissa tridactyla*)

The north-east Atlantic is a stronghold of the kittiwake, supporting over half the world population. The species has extended its range southward during the 19th century, colonising Sweden, Denmark, France, Spain and Portugal (Skov *et al* 1995).

Kittiwakes are surface-feeding seabirds and forage typically up to 50 kilometres from the colony. Breeding success is closely related to losses of growing chicks caused by lack of food. The diet of kittiwakes in the Shetland Isles has been found to consist largely of the small shoaling sandeel, and to a much lesser degree sprat and zooplankton. The bird's dependency on small surface prey makes it particularly sensitive to annual variations in sandeel recruitment (Hunt & Furness 1996).

3.2 Environmental impacts associated with the inshore fisheries sector

Despite the high value of biodiversity in inshore waters, many inshore areas are under severe and increasing pressure from a range of activities, including mineral extraction, shipping, offshore oil and gas exploration, and tourism and recreation. Land-based sectors such as agriculture and industry also have important implications for inshore areas, leading to substantial inputs of hazardous substances or nutrients.

Fisheries are increasingly regarded as one of the main influences on the marine and coastal environment, leading to direct mortality of fish and other animals, damage to habitats or competition for food. The precise nature and magnitude of these impacts are poorly understood, with actual impacts varying according to the fishing and farming method and the sensitivity of the habitat or species concerned.

Broadly speaking, the environmental impacts from fisheries can be divided between direct and indirect impacts from capture fishing and impacts from aquaculture, as follows:

Direct impacts

- ?? mortality of target species – if fished at unsustainable levels this can lead to the collapse of a fishery and in some cases local extinction of the species targeted. Particular threats are posed to slow maturing species with low fecundity such as elasmobranchs;
- ?? mortality of non-target species, including other fish, mammals, seabirds and benthic fauna; and
- ?? physical disturbance to seabed habitats.

Indirect impacts

- ?? selective removal of species and sizes within species, altering the trophic relationships in the ecosystem. Globally there has been a general trend for fishing, having reduced stocks of top predatory fish, to increasingly exploit lower trophic levels such as small pelagic fish and crustacea, a phenomenon termed as 'fishing down the food chain' (Pauly *et al* 1998);

- ?? changes to the structure and composition of communities, including seabirds, mammals and benthic invertebrates;
- ?? damage to habitats, including biogenic structures such as mussel beds; and
- ?? discharge of discards and offal affecting local ecosystems and providing a source of food for scavengers.

Note: although the aim of fishing is to remove organisms from the sea, some fishing activities can actually be beneficial for wildlife by increasing available and accessible food. For example, discarding of unwanted fish and offal in certain fisheries represents a significant proportion of total food consumed by seabirds and other species, a proportion estimated to be 30 per cent in the North Sea (Hunt & Furness 1996). The diet of other scavengers, including commercially important fish such as cod, as well as some sharks, also benefits from discarding practices. However, this phenomenon – while beneficial in one sense – may also be regarded as a disruption of the ecosystem by altering the feeding behaviour and numerical balance of seabirds and other animal communities.

Impacts from aquaculture

Most EC aquaculture production takes place within inshore areas, using sea cages to produce salmon, sea bass and sea bream, as well as a variety of installations to support shellfish cultivation. The following are among the main environmental impacts:

- ?? impacts on water and sediment quality, including oxygen depletion, sedimentation with benthic enrichment and eutrophication;
- ?? introduction of disease organisms, including viruses, bacteria, fungi and parasites, as well as exotic pathogens or pests;
- ?? chemical pollution resulting from the use of medicinal and anti-fouling products;
- ?? high water demand with related impacts on water tables;
- ?? introduction into the wild of non-indigenous or genetically modified organisms;
- ?? degradation of natural or semi-natural habitats in coastal areas and visual disturbance to landscapes; and
- ?? mortality of fauna due to entrapment in anti-predator nets or intentional killing (CEC 1995).

Considerable additional research is needed to understand the exact nature and scale of environmental impacts resulting from capture fishing and aquaculture. Research relating to capture fishing is currently most advanced within the North Sea, an area which is also one of the world's most intensely fished. A major assessment of the North Sea was completed in 1997 and concluded that considerable changes have been observed in the size and species composition of the North Sea fish community during the 20th century. Furthermore, demersal gear has had 'a major impact on benthic habitats and communities' (Svelle *et al* 1997).

3.3 Policies to protect biodiversity in inshore areas

A number of important initiatives and measures have been developed both within the European Community and other international fora in

recognition of the threats posed to species and habitats by the fisheries sector and other economic activities.

EC biodiversity policy

Since its inception in 1957, the EC has developed a number of important policies to support the conservation of biodiversity. The Birds Directive (79/409) was the EC's first main piece of nature conservation legislation and was adopted in 1979. It has been followed by several other measures, notably the 1992 Habitats Directive (92/43) (see box Pg. 13). Both the Birds and Habitats Directives apply *inter alia* to inshore waters and require that Member States establish a network of sites to protect certain species and habitats. They require avoidance of deterioration of these sites and of any significant disturbance of the species for which the areas have been designated.

In addition to site protection, Member States are also required by the Directives to institute a more general system of protection for some species, including those killed incidentally during the course of fishing. The Directives are consequently a powerful tool for reducing some of the impacts of fishing in inshore areas.

The Habitats Directive 92/43

The Habitats Directive, adopted in 1992, aims to contribute to the maintenance of biodiversity within the Member States by conserving natural habitats and species. This goal is to be achieved through the establishment of a network of protected areas, known as Natura 2000, as well as a more general system of protection applicable to the wider environment.

Natura 2000 network

The Natura 2000 network of protected areas is to consist of Special Areas of Conservation (SACs) designated under the Habitats Directive, as well as any Special Protection Areas (SPAs) designated under the 1979 Birds Directive. Species and habitats of Community importance are to be maintained or restored to favourable conservation status. These include a number of marine and coastal habitats, such as shallow inlets and bays, and species such as Atlantic sturgeon (*Acipenser sturio*) and monk seal (*Monachus monachus*). Some of these are given priority status because they are considered to be in most danger of disappearing.

Specific provision is made for the designation of marine sites under Article 4(1) of the Habitats Directive. This also specifies that, for widely ranging aquatic species, sites should only be proposed where there is a 'clearly identifiable area representing physical and biological factors essential to their life and reproduction'.

For both SACs and SPAs, Member States are to take appropriate steps to avoid deterioration of the habitats concerned and any significant disturbance of those species for which areas have been designated. Plans or projects likely to have an effect on the site are to be subject to environmental assessment. The definition of 'projects' or 'plans' is not clear but could in theory include the development of new fisheries or the use of new technology.

System of strict protection

In addition to site based protection, Member States are to establish a system of strict protection for several animal species (Annex IV) in their natural range, prohibiting any deliberate killing, disturbance or destruction of eggs or breeding sites. States are also to establish a system to monitor the incidental capture and killing of these species. In the light of information gathered, Member States are to take further research or conservation measures as required to ensure that incidental capture and killing do not have a significant negative impact on the species concerned. This part of the Directive is important for fisheries such as the bottom-set gill net fisheries in Denmark and the UK which incur high levels of harbour porpoise mortality.

On the basis of surveillance of the conservation status of species and habitats, and where measures are deemed necessary, States may regulate the period and methods of taking some species, such as common seals *Phoca vitulina* or grey seals *Halichoerus grypus* (Annex V), including the introduction of licences, quotas and other fishing rules.

The Habitats Directive is now driving site-based conservation efforts in inshore waters, particularly in the UK. However, in this context it continues to be applied in quite a limited way, with relatively few sites designated often because of the difficulty of identifying, protecting and managing them. Outside the 6-mile limit, there are particular difficulties associated with the presence of foreign fishing vessels. In the UK, no marine SACs or SPAs have been designated outside 6 miles. There is consequently interest among environmental experts in additional sites being designated both within and outside the 6-mile limit, or for existing sites to be extended further offshore. The latter is of particular interest for the protection of seabirds whose nesting sites may be within a protected area but whose foraging ranges often extend many miles offshore, beyond the existing colony site boundary (eg RSPB 1997).

As the Directives recognise, it would be impossible to ensure protection of many marine species through site-based measures alone, since they range widely across different habitat types and may feed, breed, and perform other vital stages in their life-cycle in quite different locations. Furthermore, the nature of the aquatic environment means that activities outside a site can have major implications within it. For these reasons, both the Birds Directive and the Habitats Directive require that site-based protection be complemented by other more wide-ranging action. This is an area of particular relevance to inshore areas that are not designated as SPAs or SACs. It also has implications for fishing methods that result in accidental capture or killing of protected species.

The need for non-site specific measures is also recognised by the *EC Biodiversity Strategy* (COM(98)42) which calls for action to protect biodiversity in the wider environment. Implementation of the Strategy is dependent upon the development of sectoral Action Plans (including a Fisheries Plan) which are due in 2000. For fisheries, the aim of the plan will *inter alia* be to reduce the impact of fishing activities on non-target species and on marine and coastal ecosystems, in order to achieve sustainable exploitation of marine and coastal biodiversity.

More recently, the European Council called upon the Fisheries Council to report in 2000 'on the integration of environmental issues and sustainable development' into fisheries policy. This initiative, part of the so-called 'Cardiff integration process', has been triggered by revisions to the Treaty establishing the European Community which now includes the following in Article 6:

'Environmental protection requirements must be integrated into the definition and implementation of the Community policies and activities referred to in Article 3, in particular with a view to promoting sustainable development.'

The Commission's initial response has been to adopt a long-awaited Communication on *Fisheries management and nature conservation in the marine environment* (COM(1999)363). This reiterates many of the existing mechanisms for fish stock conservation and nature conservation, not least by further application of the Habitats Directive within coastal waters.

International efforts to conserve biodiversity

EC nature conservation policy, and particularly the Habitats Directive, clearly provide an important mechanism for improving protection in inshore waters. These and other measures are also being driven by international developments such as the Convention on Biological Diversity, the FAO Code of Conduct for Responsible Fisheries (see box), the UN Agreement on Straddling Stocks and Highly Migratory Stocks and the 1997 North Sea Intermediate Ministerial Meeting on the Integration of Fisheries and Environmental Issues. While none of these were designed specifically for inshore areas, they nevertheless make an important contribution to inshore conservation efforts.

Code of Conduct for Responsible Fisheries

The FAO Code of Conduct for Responsible Fisheries was adopted in 1995 and sets out principles and international standards of behaviour for responsible practices. This voluntary Code was developed in response to growing concern over the unsustainable levels and methods of fishing. It is now being used to promote the development and adoption of more sustainable fisheries management at national, regional and international levels.

The Code is global in scope, applying to all aspects of the sector and all levels of management. It recognises the nutritional, economic and social, as well as environmental importance of fisheries. The following are among the Code's General Principles (Article 6):

- ?? the right to fish carries with it the obligation to do so in a responsible manner;
- ?? fisheries management should promote maintenance of the diversity and quality of fishery resources;
- ?? states should apply a precautionary approach in order to protect and preserve living aquatic resources and to protect the environment;
- ?? selective and environmentally sensitive fishing practices should be further developed and applied;
- ?? all critical fisheries and habitats in marine ecosystems should be protected and rehabilitated;
- ?? decision-making processes should be made transparent and achieve timely solutions to urgent matters. States should facilitate consultation and effective participation in decision making;
- ?? awareness of responsible fisheries should be promoted through education and training; and
- ?? the rights of fishers and fishworkers should be protected, particularly those engaged in subsistence, small-scale and artisanal fisheries.

These initiatives have been particularly helpful in promoting new approaches to managing fisheries, based on the 'precautionary principle' and the 'ecosystem approach'. The former calls for preventative action to be taken where there is a serious threat of irreversible damage, even in the absence of conclusive scientific evidence of cause and effect. The principle has been elaborated in various texts, including the above-mentioned UN Agreement which outlines how the principle should be applied in practice. The ecosystem approach requires that the management of fisheries be based on a more holistic appreciation of fisheries, taking account of a wide range of factors and effects on the wider marine environment. There are various ongoing discussions as to how this approach should be interpreted and implemented within European fisheries policy (eg. Symes 1998, Dunn in press).

4 A profile of Europe's inshore fisheries sector

Of all human activities in inshore waters, fishing probably has the longest cultural tradition, with people in most coastal regions having engaged in fishing or fish farming since prehistoric times. A range of geographical, as well as social and political factors has shaped the structure of fishing communities and their methods of fishing. The result is a highly diverse sector, including both commercial fishing and fish-farming, and fishing conducted mainly as a recreational activity. This section focuses most heavily on commercial capture fisheries, although a brief outline of recreational fishing and aquaculture is also provided.

4.1 The commercial inshore fishing sector

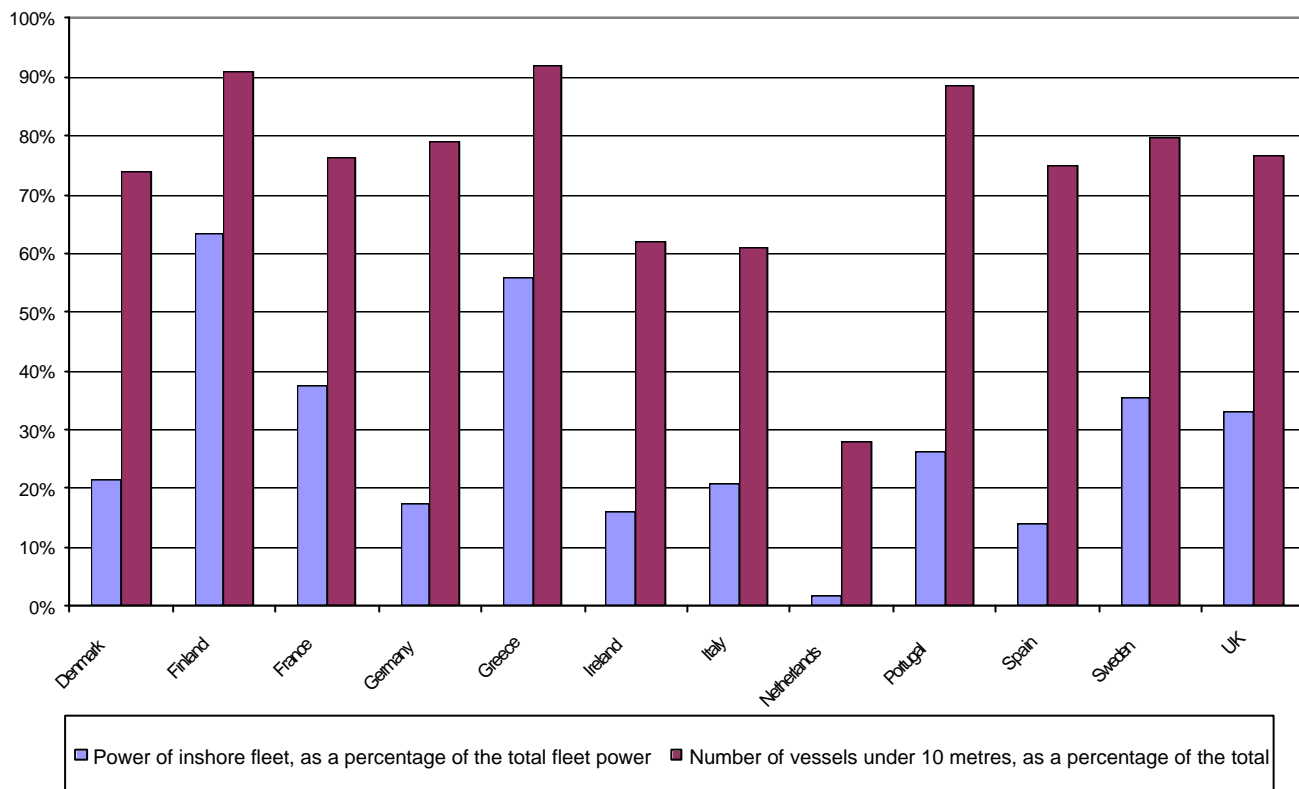
Europe's inshore commercial fishing sector is numerically significant, with registered fishing vessels under 10 metres in length amounting to over 77,000, representing over 75 per cent of the EC total; in Greece and Finland small-scale vessels make up as much as 90 per cent of national fleets. Inshore fleets are typically motorised, though in some areas many vessels are undecked. They are often also multi-purpose, able to use different fishing gear in response to opportunities and constraints imposed by the environment.

The Mediterranean inshore fleet is particularly noted both for its size and heterogeneity. In the order of 100,000 small scale boats are thought to operate in this region alone, including EC and non-EC states (Caddy 1996). The multi-purpose, small scale fishing fleet has become an important feature of national economies. In Italy, just over 60 per cent of the fleet is under 10 metres in length, and more than 80 per cent of the total fleet is multi-purpose, often fishing for several different species in coastal waters. Average earnings are often low despite the relatively good prices paid for fish. The price reflects the importance of local markets for fresh fish and the relatively short chain linking fishers and consumers (Symes 1999).

The following figure gives an indication of the relative importance of the Member States' 'under 10 metre' fishing fleets, in terms of engine power and total vessel numbers, in each case expressed as a percentage

of these measures for overall fleet capacity (source: MARSOURCE Fleet Statistics, Fisheries DG, CEC).

Relative size and power of Member States' under 10 metre fleets



Note: Statistics on inshore fishing activity, fleet sizes, catch statistics and employment are not complete, so that the above figures should be read as a conservative estimate only. In many areas actual boat numbers are simply not known, particularly if one includes vessels used on a seasonal or part-time basis. The statistics show no vessels for the Belgian under 10 metres fleet segment.

As can be seen, inshore fisheries engage a significant proportion of vessels and therefore can be expected to make a proportionately large contribution to local economies and communities in coastal areas of Europe.

The diversity of inshore fishing methods

A wide range of gear types is employed in inshore fisheries across the EC, including dredges, seines and trawls, as well as 'passive' gears such as gill-nets and trammel nets, hooks, lines and traps. Many inshore fishermen employ a variety of nets, pots and/or lines, used according to the season or the availability of fish. This is a key asset contributing to the economic and social stability of peripheral communities and mixed economies. The following box illustrates the

different gear types employed in Ireland's inshore fisheries, as well as the main structures in place to manage the inshore sector.

Irish Inshore Fisheries

Ireland's inshore waters are fished by a wide range of vessels, including large pelagic vessels (greater than 24 metres in length), polyvalent inshore vessels, dredgers and sea anglers. The 'inshore fleet' includes vessels up to 15 metres in length, and accounts for approximately 85 per cent of the total fleet. Approximately 2,700 people are employed full-time in the 'inshore sector', with an additional 1,000 employed on a part-time basis. The overall value of landings from the inshore sector in 1997 was estimated to be around IR£ 30 million, or 21 per cent of the total value of Ireland's fish landings.

A large proportion of the total Irish fleet depends on inshore waters for both quota and non-quota stock. The main inshore capture fisheries involve demersal otter trawls and seines (cod, haddock and whiting), midwater pair trawls (herring and sprat) and dredges (shellfish). A number of static gears, including gillnets, tangle nets and pots or creels are also used, particularly by the smaller vessels (under 10 metres) to catch salmon, monkfish and turbot, lobster, crab and crayfish.

Fisheries in Ireland are administered centrally by the Department of the Marine and Natural Resources which has responsibility for regulating, managing, protecting and developing fisheries resources. Specific management regimes are in place for herring, as well as pressure stocks such as mackerel, horse mackerel, sole, plaice, cod, hake, monkfish and megrim. Regimes for non-quota fish such as salmon are virtually non-existent. Where they do exist they primarily concern bivalves. Statutory responsibility for managing salmon fisheries and for protecting (but not developing) mollusc fisheries within the 12-mile zone is given to seven Regional Fisheries Boards and the Central Fisheries Board. *An Bord Iascaigh Mhara* (Board of Fisheries) is responsible for promoting and developing sea fishing and aquaculture.

There is growing conflict in Ireland's inshore waters due to two main problems: a lack of suitable regulations covering access to and allocation of non-quota fisheries; and overfishing resulting from over-investment in and incursions by larger offshore vessels.

(BIM 1999)

The particular choice of fishing gear and vessels is determined by factors such as the extent of the continental shelf, specific port specialisation and the type of fish which is being prosecuted, ie whether demersal, pelagic or shellfish. There are also various gears unique to specific regions. For example, verandah nets are used in

France and Italy and consist of panels of net mounted on mattresses of reeds floating on the surface, in combination with a submerged vertical panel. The nets are used to catch mullet that jump out of the water as they approach the submerged net, and land on the horizontal apron (Nédélec 1996).

Local dependency of the inshore sector

A common feature of the inshore sector is the small size of individual vessels and the sector's consequent inability to fish long distances offshore. In effect, this makes it dependent on specific groups of local fisheries within the 12-mile zone, in contrast to the offshore fleet which can target a much wider range of fisheries. Inshore fishing is often also widely dispersed along the coastline, serviced by large numbers of small harbours and ports. This is particularly characteristic of the Mediterranean where many small vessels have a very limited operating range (Symes 1999).

The high level of local dependency means that activities tend to be more extensive, often structured around seasonal or part-time employment, and combined with other incomes, such as farming. Even for full-time fishers, there can be long fallow periods when activities are shore-based (mending nets, for example), while the fisheries are left to recover or during the breeding season.

The fact that fishing is limited to a certain geographical area also means that local fishermen tend to have greater local knowledge of specific inshore areas, compared to fishermen moving between fisheries, including historical knowledge of how fisheries have developed in the past. They may consequently be better equipped to fish in ways which are sensitive to fish and shellfish stocks.

Key pressures facing the inshore sector

Inshore fisheries are often associated with sustainable, low impact fishing; one simple reason being the relatively low intensity of fishing, compared to larger, more powerful vessels. It is important to note, however, that not all small-scale, inshore activities are in fact sensitive to nature conservation and the needs of traditional coastal fishing communities. Indeed, there is growing concern over developments in this sector which are contributing to the erosion of fishing grounds and/or fishing communities. A number of specific problems have been identified, including the following.

- ?? Some inshore operators are *adopting more powerful, specialised and invasive* fishing methods or gear, with associated capital investment. If not compensated by reductions elsewhere, this can lead to increased fishing effort and pressure on fragile grounds. It may also involve the use of more damaging gears to extract fish, particularly shellfish. In many cases, this trend is encouraged by preferential treatment given to the smaller sector in the absence of suitable safeguards.
- ?? At the same time, many traditional vessels and fishing businesses are *unable to compete* with larger operators who may be targeting the same stocks or even sharing fishing grounds; they are also increasingly competing in the market place. The result is that small-

scale operators are pushed out, and replaced by larger or more intensive practices unless specific measures are introduced to protect fishing grounds or market shares.

Similar factors have also contributed to the progressive erosion of landing, processing and marketing facilities that are best suited to inshore fishing activities. For example, in some areas, new environmental and health regulations and the general capitalisation of production have contributed to the concentration of facilities into a few large processing units. These typically seek out year-round supplies of specific varieties of fish, a factor that makes them ill-suited to coastal fishing which is strongly influenced by seasonal variation.

4.2 Recreational fishing and aquaculture

This report focuses on the inshore access restriction which applies to commercial fishing vessels operating within the 12 mile inshore waters. Nevertheless, capture fishing is not the only form of fisheries 'production' taking place in inshore areas. Increasingly, aquaculture and recreational fishing is also assuming a prominent role.

Recreational fishing

The emergence of a separate and substantial recreational fishing sector is a relatively recent phenomenon; the activity has existed for some time but on a much smaller scale. Recreational fishing is not formally subject to management under the Common Fisheries Policy and, if regulated at all, is subject to separate national or local rules. Much of the fisheries data available at the European level consequently does not include recreational activities.

Despite the lack of EC wide data, it is clear that recreational fishing is becoming more important in many parts of Europe. In Finland, for example, around 600,000 individuals have invested in state fishing licences, compared to a much smaller number of 3,000 professional fishermen. In 1996, the recreational catch reached 61,300 tonnes, of which 25 per cent was taken from inshore areas. Recreational fishing is also dominating fishing in many of Sweden's privately owned archipelagos, reflecting rising prices of property and fishing rights. These recreational fisheries are now responsible for around 75 per cent of inshore catches (ESSFiN 1999).

The increase in recreational fishing has in many areas followed a general pattern of expansion in tourism activity. In Mediterranean countries, sport fishing is often on the 'menu' of local tourist attractions. Despite the potential synergies between fishing and tourism, particularly as a means of generating alternative employment and markets for the sector, many regions are witnessing growing tensions between recreational and commercial users. The predicted future growth in recreational fishing is therefore likely to create additional conflict between commercial and other inshore resource users in some regions at least, unless suitable coastal management regimes can be defined.

Inshore aquaculture activity

Although the CFP's inshore access restriction is concerned with capture fishing, it is important to register the growing significance of fish

farming in inshore areas generally, and its particular importance in relation to some capture fisheries.

In 1997, the EC aquaculture sector as a whole produced 1.19 million tonnes of finfish and molluscs (Eurostat 1999). Finfish production in inshore areas is dominated by Atlantic salmon, trout, sea bass and sea bream which are typically farmed using floating enclosures such as net cages. Mollusc production consists primarily of mussels and oysters, and is accountable for more than 50 per cent of the total aquaculture production in weight. Mussels are cultivated using suspended ropes or poles, or cultivated directly on designated growing plots.

In many countries, aquaculture is seen as an important growth area for the fisheries sector. It can generate local employment, for example in Ireland where there were believed to be around 200 aquaculture operations employing around 2,500 people in 1995. This compares to 3,700 jobs provided by the inshore capture sector (BIM 1999). In many communities fish and shellfish farming has actually replaced much of the traditional fishing. In the case of mussel fisheries, aquaculture has also become integral to the activities of the inshore fisheries sector. Furthermore, aquaculture techniques are also being used to enhance wild stocks, most notably salmon stocks in the Baltic Sea. Future output from aquaculture is widely predicted to increase and, as in the case of recreational fishing, can be expected to lead to increased conflicts with the commercial capture sector.

4.3 Conclusions

The fisheries sector has for centuries provided a vital source of employment and income for fisheries dependent communities. As Chapter 3 indicated, however, the sector's activities are coming under increasing scrutiny as attempts are made to protect Europe's coastal and marine environment. The sector is also struggling to survive in a modern economic environment which calls for more 'efficient' production methods which can compete with larger vessels and often more aggressive fishing practices.

The following chapter sets out some of the key ways in which fisheries management has developed in order to address these issues, and to try and support sustainable inshore fisheries for the benefit of both nature and fishing communities.

5 Overview of existing arrangements for managing inshore fisheries

The maintenance of healthy and productive inshore waters is critical for marine and coastal biodiversity, as well as the survival of local fishing communities. There is consequently a particular onus on the fisheries sector to develop in a way that can support and, if possible, improve the social and environmental value of inshore areas.

In the last decade new initiatives have been sought to address this issue by altering the way in which capture fisheries are managed or by adopting new management measures. Some have reflected local

concerns, while others have responded to international priorities for 'greening' fisheries policy.

This chapter explores current management structures and measures that exist or are being developed to manage inshore fisheries. The focus is on national experiences, although the discussion is first placed within the overall context and legal framework provided by the Common Fisheries Policy (CFP). The particular system in evidence in the UK is discussed in some detail, reflecting its rather unique approach towards sustainable inshore fisheries management.

5.1 The CFP dimension to inshore fisheries

There is often an assumption that the CFP does not reach into inshore waters but that these areas remain the sole responsibility of the Member States. This assumption is wrong on two counts. Firstly, the CFP establishes a framework for managing *all* capture fisheries in the EC, with the combined aim of 'rational and responsible exploitation of resources on a sustainable basis'. In legal terms, the only real difference between the management of the inshore and offshore fisheries sectors concerns the restrictions on access to inshore waters by 'foreign' vessels (see Section 2). Other aspects of inshore fish stock management, including the nature and extent of fishing that is permitted inshore, can be and sometimes are determined at EC level. Where Member States do act unilaterally, they must do so in compliance with other CFP conservation rules.

Secondly, the coverage of the CFP extends far beyond the management of EC capture fisheries alone. It also contributes to the management of other aspects of the fisheries sector, including policies on the common organisation of the market in fish and fish products, as well as policies designed to modernise and restructure the sector as a whole. Member States' efforts to manage their inshore fisheries sector should not therefore be seen in isolation, but must be placed within the broader context provided by the CFP.

CFP conservation and management measures

The basic CFP framework for fish stock management is provided by Regulation 3760/92 and 'daughter' Regulations. These stipulate the general conditions on fishing in the EC, with varying relevance to inshore waters. The following measures are among the most pertinent:

?? *Total Allowable Catches* are applicable to a total of 27 species or groups of species, defined according to selected stocks or groups of stocks. Although TACs normally cover stocks 'shared' between two or more Member States, many TACs apply to stocks which are prosecuted partly within the 12-mile zone. This means that inshore fishers will have quotas for all these species as well as offshore fishers.

?? In order to reduce pressure on commercial fish stocks, Member States are required to limit *fishing effort* of the total fishing fleet in line with national targets. In the most extreme cases, effort has to be reduced by 30 per cent over the period 1997 to 2001. Vessels under 12 metres

in length¹, with the exception of trawlers, can be exempted from these reduction rates, but overall capacity of this segment is not to increase above 1997 levels. In the small-scale sector which has been in decline over the past decade, this limit could be a significant constraint upon the future viability of some inshore fisheries.

?? Apart from the main inshore access restriction, access is also limited to other geographical areas or 'boxes', to protect species which are of special importance to that region and which are 'biologically sensitive'. Existing boxes that include areas within the 12 mile limit are used to protect, for example, mackerel, plaice, anchovy, Norway pout, hake and - most recently - Irish Sea cod.

?? A variety of *technical conservation measures* (TCMs) has been developed to control how fishing is carried out. These include restrictions on the types of gear that can be used in a given area or to target specific stocks, as well as specifications on minimum mesh and landing sizes. Key measures include restrictions on beam trawling within 12 miles of the UK and Irish coasts² and above sea grass beds in the Mediterranean. Other examples of technical measures applicable inshore are given in the following box.

¹ The definition of inshore vessels varies between Member States, although 12 metres is often used to define the upper limit of the inshore sector.

² Beam trawling is permitted only for vessels of power less than 300hp or 221kw, and using beams less than 4 metres in length.

Selected restrictions on fishing activities in inshore waters

Apart from specifying minimum landing sizes and conditions for using nets, technical conservation measures also limit fishing in inshore waters. A number of measures are currently in place, as set out in Regulations for the Baltic, the Mediterranean and the North Atlantic. The following activities are prohibited in inshore areas:

- ?? the use of explosives, poisonous or stupefying gases, electric shock generators etc (Baltic, Mediterranean, Atlantic);
- ?? the unauthorised release of exotic species (Baltic);
- ?? the use of St Andrew's cross or similar towed gear for harvesting coral, and the use of pneumatic hammers etc for collecting lithophagous molluscs (Mediterranean);
- ?? fishing with vessels exceeding eight meters length overall using beam or otter trawls (Belgium, Denmark, part of France, Germany, part of Netherlands);
- ?? some beam trawling (Denmark – Kattegat and Baltic Sea, Ireland, UK) (see footnote 2); and
- ?? the use of trawls, seines and similar towed gears between 0-3 miles or up to depth of 50m isobath, or above Posidonia beds (Mediterranean).

Source: Regulations 1626/94, 894/97 and 88/98

These controls are backed up by an EU system to monitor activities, using a fishing vessel register and fishing licences. Under the CFP, however, licences are not mandatory for vessels below 10 metres in length or vessels only active in Member States' inshore waters, thus presenting a major weakness in inshore controls.

Importantly, Regulation 3760/92 also allows Member States to introduce tougher measures applicable to their own vessels and/or to fisheries only of interest to their fishermen. Extensive use is made of this provision in inshore waters, as discussed in Section 5.3.

Marketing and processing fish and fish products

The common organisation of the market in fish and fish products was established in an attempt to align production to consumer demands. Attempts to dismantle internal barriers to trade and set up common marketing standards have been accompanied by a general drive towards liberalisation of fish trade at the international level, all of which has increased the level of competition facing the inshore sector.

The common organisation of the market sets standards for quality, grades, packaging and labelling of produce. In order to support a stable market in fish and fish products, there has also been a gradual development of official Producers' Organisations (POs), many of which

include inshore fishermen. Their function is to encourage better coordination between production and marketing, as well as to ensure that fishing is carried out along rational lines and that conditions for the sale of members' products are improved. POs can also access financial support if prices fall below an agreed minimum and fish has to be taken off the market as a result. They can also be given responsibility for handling quota allocations.

POs consequently represent an important route for adopting a more 'vertically' integrated approach to inshore fisheries management which takes account of various aspects of the supply chain, including resource conservation. The environmental or nature conservation responsibilities of POs can also be expected to grow in future. However, there are concerns about the impact POs may be having on other traditional producer groups.

Development of the sector

EC policy to modernise and adapt the fisheries sector represents another important part of the CFP. The Financial Instrument for Fisheries Guidance (FIFG) makes available funding for a range of project types, including the adoption of more selective fishing gears, the reduction in fishing capacity and development of conservation projects. The Funds thus provide an important opportunity to influence the development of the sector, both inshore and offshore, particularly by encouraging more environmentally and socially desirable practices.

Despite these opportunities, however, project funding has tended to support larger offshore vessels, reflecting national priorities. The exception has been for projects funded as part of the PESCA Community Initiative which have focused on more innovative small-scale projects, drawn up at the local level (Coffey 1999). These have included projects aimed at reducing the environmental impact of fishing, such as a project to monitor the seabird by-catch in a gill net fishery in the UK; another project is supporting the development of a sustainable artisanal fishery around Spain's Canary Islands.

Although PESCA is drawing to a close, similar types of support are expected to flow from the new round of the FIFG covering the period 2000-2006. For the first time, this will include specific measures to support small-scale coastal fishing communities.

Conclusions

In conclusion, many of the measures developed within the framework of the Common Fisheries Policy have implications inshore. Perhaps most significant among these are quotas, fishing effort controls and the various technical measures designed to protect juvenile fish stocks or nursery areas, and to reduce the impact of fishing on the sea bed. Nevertheless, there is also considerable scope for using EC funding to encourage and support the sustainable development of the inshore sector, promoting the role of Producer Organisations in inshore management.

5.2 National management of the inshore sector

There is clearly an important CFP dimension to inshore fisheries management. At the same time, however, the inshore access restriction provides the basis for separate national inshore management systems to develop: by excluding foreign fishing vessels from 6/12 nautical mile waters, individual Member States are able to manage *all* fishing activities in these areas, as long as EC rules are not compromised. The access restriction does not demand local management in inshore waters. Nor, as we have seen in Chapter 3, does it necessarily benefit nature conservation, but it does leave considerable *scope* for Member States to manage inshore fisheries in locally appropriate ways, and according to their own priorities and preferences.

In fact, all Member States do supplement EC fisheries management measures with specific inshore rules and arrangements. This section presents an overview of some of the institutional structures currently in place to manage the inshore sector, including the ancient producer organisations commonly associated with Mediterranean fisheries. It also highlights some specific tools employed in fisheries management, drawing on examples from different parts of Europe.

Alternative management structures

There are a number of different approaches to inshore fisheries management in Europe, with individual countries or regions having developed their own particular management structures. In some cases, this includes devolved inshore management or co-management where rights and responsibilities are shared between local stakeholders and national authorities. In other countries, inshore management is not specifically defined and is instead subject to general policy measures. Official EC Producer Organisations (see section 5.1) are also playing a growing role in management, introducing a more coordinated approach to catching and marketing fish.

The table that follows provides an overview of the main institutions involved in inshore management in the Member States, accompanied by examples of key types of management tools employed.

Member States' main inshore fisheries management structures

Member State	Principal inshore management bodies ¹	Examples of management measures used
Belgium	Ministry for Agriculture and Small and Medium Sized Business 1 PO	Annual limits on tonnage for trawlers in 3 mile zone; no bivalve fisheries in 12 miles
Denmark	Ministry of Food, Agriculture and Fisheries Ministry for Environment and Energy (Waddenzee) 3 POs	Licences, access restrictions, vessel and gear restrictions, numerous orders for nature conservation
Finland	Ministry of Agriculture and Forestry Fisheries Sections (regional) cover public waters Water owners and/or associations (500 m from 2 m depth line)	Licensing for private waters. General aims include conservation of habitats and heritage
France	Ministry for Agriculture and Fisheries Prud'hommes (Mediterranean) Comités Locales de Pêche (Atlantic coast) 27 POs	Licensing, gear restrictions, squaring, mesh size, net length and numbers of hooks
Germany	Ministry for Food, Agriculture and Forestry Länder governments (regions) Fishermen's Associations 11 POs	Time closures, minimum sizes, gear restrictions
Greece	Ministry for Agriculture Co-operatives/professional organisations 3 POs	Area and time closures, gear restrictions
Ireland	Department for the Marine and Natural Resources Regional Fisheries Boards and Central Fisheries Board Fishermen's co-operatives 2 POs	Access restrictions, licenses, fish sizes, gear, monitoring and enforcement.
Italy	Ministry for Agricultural Policies Syndicates/co-operatives/associations 16 POs	Time and gear restrictions, minimum mesh sizes, licences, access restrictions to trawlers in the 50 mt depth/ 3 miles coastal belt, with some exceptions
Netherlands	Ministry for Agriculture, Nature Management and Fisheries National Fisheries Board 5 POs	Closed areas, limits on harvesting, licensing, permits, leasing of mussel farming plots
Portugal	Ministry for Agriculture Ministry of Defence 13 POs	Seasonal closed areas, restricted licensing, gear restrictions
Spain	Ministry of Agriculture, Fisheries and Food Autonomous communities cofradías 14 POs	Gear restrictions, minimum sizes, area and time closures, time restrictions
Sweden	Ministry for Agriculture, Food and Fishery National Board of Fisheries 4 POs	Time restrictions, min size and protected areas, licences for stationary gear

(1) Producer Organisations are only listed if their members are involved in 'local inshore fisheries' as categorised in OJ C85 27.3.99. Some of these POs are also local fishermen's organisations/associations/co-operatives.

Member State	Principal inshore management bodies ¹	Examples of management measures used
UK	England and Wales Ministry of Agriculture Fisheries and Food/Scottish Executive/National Assembly for Wales/Department of Agriculture for Northern Ireland Sea Fisheries Committees – England & Wales 6 POs	Seasonal closures, gear restrictions, licences, closed areas, by-catch limit

(1) Producer Organisations are only listed if their members are involved in 'local inshore fisheries' as categorised in OJ C85 27.3.99. Some of these POs are also local fishermen's organisations/associations/co-operatives.

National and regional management

In all Member States, national and/or regional ministries have a role in overseeing management of inshore fisheries, not least because of responsibilities arising under EC fisheries legislation. In many cases, additional or complementary management responsibilities are devolved to state, regional or local level, or shared with user groups. In Sweden, where there is no dedicated inshore regime, some responsibilities are delegated from central government to provincial officials. The National Board of Fisheries is responsible for fisheries management and for overseeing sustainable use of resources. Similarly in Germany, inshore fishing is a function that is primarily devolved to the level of the Länder.

Responsibilities are not always devolved, however, with more centralised management structures evident in countries such as Greece, Belgium and Ireland. In Ireland, for example, regulations tend to be State led, and primarily directed towards national fleet segments or gear groups. Where local management systems exist, they relate primarily to non-quota bivalves.

Fishermen's organisations

In all littoral Member States, fishermen have formed some type of groups, be they associations, co-operatives or more recently Producer Organisations. Some play a relatively passive role in fisheries management, not actively engaged in managing local fisheries. For example, according to Hoefnagel (1999), the Greek fishing industry is poorly served by its user group organisations which are few in number and their influence on fisheries management is often weak. However, experiences in Spain and France illustrate the potential role for local fishermen's institutions. Both countries have a long tradition of workers guilds or committees that play a central part in organising and representing the sector, as well as managing resource use, as outlined below.

The Spanish system leaves most fisheries regulation to the central government, although some jurisdiction is shared with the government of the autonomous community. Nevertheless, the fishermen's guilds, or *cofradías*, play a central role in management, determining the nature of the local fishing community and formulating corresponding fishing plans to secure social and economic objectives. They also control first hand sales of fish and represent the industry in negotiations with the

administration. They have limited legal jurisdiction over fisheries, but the fact that they represent and manage fishermen gives them a central part in the management process, both locally and nationally.

The *prud'homies* are the local management institutions found in the French Mediterranean. Consisting of representatives elected by the fishermen, the *prud'homies* are able to share out local resources and regulate access to them. They also perform various other functions, such as providing supplies and facilities to service their members' needs. *Prud'homies* tend to exert limited influence at the national or regional, however.

Both the *cofradías* and *prud'homies* provide positive approaches to local community based management, although their ability to cope with modern management needs is being questioned by some (see Hoefnagel 1999). In contrast, and on a much more limited scale, Irish fishermen's co-operatives have recently become involved with stock enhancement and conservation issues. The role of the co-operatives tends to be limited to bivalves, however, and enforcement of their rules is only possible if the organisation has the required licences or the fishery is managed under an 'Order'. The Valentia Harbour Cooperative provides an example of such a regime, regulating the scallop fishery by setting an open season, fishing times, quota and minimum size (BIM 1999).

These powerful local fishermen's organisations contrast with arrangements in other countries such as England and Wales where several different inshore fishermen's organisations exist, but where only registered Producer Organisations, which combine inshore and offshore interests, have an official role in fisheries management.

Devolved management: the case of England and Wales

The UK's twelve Sea Fisheries Committees (SFCs) appear to be the only statutory regulatory authority in the EC designed exclusively to manage and control fishing in inshore waters. The Committees are funded by local authorities, and consist of representatives from the local authority and representatives put forward by the national Ministry of Agriculture, Fisheries and Food. In most cases they are responsible for managing fisheries in the 0 to 6 mile zone around England and Wales. To this end, they can enact bylaws to manage fisheries, subject to approval by the Ministry, as well as being able to manage fisheries using 'Regulating and Several Orders'. SFCs also enforce certain technical EC and national regulations. A number of committees are also increasing their role in surveying and assessing stocks (Gay 1998).

Since 1992, the Committees have been assigned various environmental responsibilities, including a responsibility to manage fisheries for nature conservation purposes. In support of these functions, one member of the committee must have environmental expertise. SFCs are among a number of 'competent authorities' to implement the Habitats Directive in marine and coastal areas; they are also required to ensure compliance with the provisions of the Directive in the exercise of their functions. While these powers have not been tested to the full, some Committees appear to be approaching their new role in an innovative way, including the North Western and North Wales SFC which has

recently adopted a code of conduct for intertidal shellfisheries (see box Pg. 29).

Voluntary Code of Conduct for Shellfisheries

The UK's North Western and North Wales Sea Fisheries Committee recently adopted a voluntary Code of Conduct, aimed at addressing some of the problems facing local intertidal shellfisheries. The following is an extract of the code:

Have regard to wildlife

- ?? don't disturb bird nests or eggs
- ?? avoid areas of nature reserves above high water mark
- ?? in any doubt, contact your local Sea Fisheries Committee office for advice

Use sustainable fishing practices

- ?? scatter riddled shellfish evenly on the shore – don't leave them in a heap
- ?? try to avoid harming juvenile shellfish – they are the future of our industry
- ?? ensure that vehicles used in fishing don't harm shellfish

The code is also accompanied by a short statement of advice to fishers and local residents.

However, the general increase in pressure on inshore fisheries, added to the SFC's new environmental responsibilities, is undoubtedly placing a strain on limited financial and human resources. While a few SFCs are well resourced, others are heavily under-resourced with consequent implications for their ability to discharge environmental obligations, particularly those arising under the Habitats Directive. There are also growing calls from both the SFCs and environmental interests for an extension of the SFC's remit out to 12 miles, a move likely to compound existing financial problems (see also 6.1 below).

Tools for inshore fisheries management

Whatever the institutional design for managing fisheries or the fishing sector, most countries have developed a body of management measures in an attempt to regulate fisheries and, in some cases, to secure sustainable development of the wider marine environment. Today, countries typically employ one or several of the following measures:

- ?? licensing to manage access and overall levels of fishing effort;
- ?? closed areas and seasons, to protect juvenile or spawning stock;
- ?? technical gear restrictions/prohibitions, preventing the use of certain gear or methods in order to protect the sea bed or non-target species, to reduce bycatch, etc;
- ?? quotas used in northern Member States but are not a common feature of Mediterranean inshore fisheries management; and

?? restrictions on entering or leaving ports often applied in southern States as a means of limiting overall fishing effort.

While many existing management tools rely on 'traditional' approaches such as these, new measures are increasingly also being tested and employed. Among these is the development of lobster 'v-notching' schemes, which rely on a combination of voluntary participation by the industry and legislation in order to enhance lobster stocks. In Ireland, schemes operate through a network of 30 local co-operatives, and involve cutting a 'v' in the tail of pregnant or 'berried' female lobsters and then releasing them back into the environment. It is illegal to sell or be in possession of v-notched lobsters. Similar programmes are being examined for crawfish.

A different approach is being developed in the south west of England, in attempts to reduce seabird bycatch resulting from a gill-net fishery. Based on cooperation between fishermen and nature conservationists, a local bylaw has been developed which sets a limit on the 'acceptable' level of seabird bycatch in the fishery. Once this figure is exceeded, the fishery will automatically close for 21 days. It is therefore in the interest of the fishermen to keep bycatch as low as possible. The bylaw is being accompanied by a PESCA funded project designed to monitor fishing effort and bycatch levels over two fishing seasons and to explore the prospects for more environmentally sensitive methods of fishing for the target species, sea bass.

Planning for inshore fisheries

Despite the innovative character of some management tools, inshore management continues to be rather incremental, with regulations often adopted in response to problems rather than preventing them from occurring in the first place. Systematic management planning has not been widely adopted. For example, the role of strategic fisheries plans has thus far been relatively limited. However, there are a few examples of plans being used. Two main types predominate:

- ?? nature conservation plans – there is now growing experience of using management plans in protected marine areas, including areas such as those designated as Special Areas of Conservation (SACs) under the Habitats Directive (see section 3.3). Under the Directive, Member States are to adopt necessary conservation measures, if necessary including site management plans, to maintain or restore sites. Economic activities, including fisheries, need to be managed in such a way as to avoid deterioration of a site or significant disturbance of the species for which the area has been designated. Importantly, projects or plans likely to impact on the integrity of SACs also have to be subject to environmental assessment.

- ?? sectoral plans - inshore fisheries may be subject to dedicated fisheries plans, within or outwith protected areas. In the Netherlands, spatial planning policy on fisheries is presented within a broader structure plan for rural areas, incorporating the objectives of a 1993 Sea and Coastal Fisheries Policy. It aims at 'achieving a harmonisation between fishing effort and nature where possible, and a separation of the two where necessary'. Specific targets are set out for the Waddensee area where, for example, 26 per cent of the inter-tidal area in the Dutch Wadden Sea is closed to cockle and mussel fishing to protect the development of mussel and cockle beds and of eelgrass.

The role of planning in inshore fisheries can be expected to grow with demands for more integrated development of the sector, giving more consideration to environmental, social and economic issues. A management plan developed for the Shetland sandeel fishery illustrates the potential for using plans to promote an ecosystem approach (Dunn 1998). Apart from supporting a more strategic approach, plans can also provide an opportunity for *ex-ante* environmental assessment and for participation in management by a wider range of stakeholders.

Enforcing the rules

Despite the growth in inshore fisheries management measures, there is widespread concern that these are not adequate to protect fisheries or biodiversity. A key problem, as with the offshore fleet, is the failure to implement and enforce legislation. In some regions, problems lie with the large number of unregistered fishing vessels, or vessels which are registered but do not respect existing rules. In many cases, problems are compounded by a lack of financial and/or political commitment to monitoring and enforcement in inshore waters.

While it is difficult to enforce legislation in a sector as disparate as this one, there are certain management approaches or tools that can be expected to support better implementation. Using the right institutional framework for developing and agreeing rules is often critical. For example, the close involvement of the industry, administrators and environmental groups in designing a management regime for the Shetland sandeel fishery can be expected to yield relatively good results. The same can be said for the co-management arrangements that exist in the Netherlands mussel and cockle fisheries.

Alternatively, different types of instruments are used to encourage or support more desirable practices, for example, giving inshore fishermen preferential access to specific fisheries or quotas. In parts of the Mediterranean, for example, artisanal vessels are given exclusive access to some zones in marine protected areas. Support from the local community is also sought through similar incentives.

Emerging trends in inshore management?

Although there remain shortcomings or gaps in existing inshore arrangements, there is a trend in certain countries towards developing or strengthening inshore management. This can be attributed to a heightened awareness of the importance of inshore fisheries in environmental and social terms, as well as the increasing need to manage the more powerful fishing methods now being employed in these areas.

Both Ireland and Scotland have a history of very centralised fisheries management, but in both cases there is now growing support for devolving powers to local organisations or user groups. A recent report published by BIM, the Irish Sea Fisheries Board, has recommended that a pilot scheme is set up to examine the feasibility of local inshore fisheries development committees. The report also calls for an examination of the devolution of inshore management and regulation to local groups, and consideration of zoning for management purposes. Recent developments in Scotland are outlined as follows.

Local management in Scotland

Inshore vessels (<10 metres) in Scotland account for around 60 per cent of total vessel numbers, most based in the Highlands and Islands region. These vessels predominantly target shellfish, as well as some demersal and pelagic species. The inshore sector is often located in remote coastal areas where fishing and farming play a critical role in sustaining crofting communities. Nevertheless, fishing effort is declining, and licences are being lost from the most vulnerable areas.

Powers to manage inshore fisheries are held centrally by the Scottish Executive. Primary legislation is used as the basis for Ministerial Orders issued for the 6-mile waters. Local management initiatives have thus far been confined to voluntary agreements, including those with Area Access Management Committees which are used to address conflicts between small and larger sectors.

However, inshore fisheries management in Scotland is undergoing a process of devolution through the granting by the Scottish Executive of Regulating Orders. These are a mechanism for managing commercial shellfisheries, conferring statutory duties on local regulators. Management plans must be drawn up to implement the Orders. Local committees will be responsible for assessing, monitoring, managing and enforcing the fisheries covered by their Orders. The first such Order was issued in September 1999, and concerns the Shetland inshore shellfisheries. A Shetland Shellfish Management Organisation will be given the right to regulate and manage fisheries for nominated types of shellfish for a period of ten years. Additional Orders are expected in the near future. There is some debate as to whether Orders allow fisheries to be managed for wider environmental purposes, however (House of Commons 1999). Powers to make bylaws will remain with the Scottish Executive.

In addition to these local changes, a new Scottish Inshore Advisory Group has been created, with a view to developing a more participatory management that will involve both administrators and fisheries representatives in decision-making.

The introduction of specific nature conservation obligations as part of inshore fisheries management regimes is also an emerging trend. However, in practice the UK is believed to be the only Member State which has given fisheries management bodies explicit responsibilities for implementing the Habitats Directive.

5.3 Effectiveness of the access restriction

In addition to the basic provisions established at EC level, most if not all Member States have over the years adopted supplementary measures to reinforce fisheries conservation efforts to suit their particular needs. The myriad of measures now in place in some countries, ranging from traditional quotas, mesh sizes and landing sizes, to more innovative

policies and measures, suggests a changing approach in inshore fisheries towards more integrated management. While it is difficult to make a comprehensive assessment of change in Europe, it seems likely that inshore management is developing more rapidly in some countries than in others.

It is beyond the scope of this report to undertake a detailed assessment of the role of the access restriction in promoting this change. Historically, management has not always been sustainable but the restriction has enabled progress, especially recently. The restriction has not always resulted in local and/or sustainable fisheries management, however. Even in cases where apparently suitable local structures and powers exist, the sustainability of inshore fisheries is not guaranteed. In the UK, with its unique Sea Fisheries Committees and their explicit environmental management duties, there remain problems in delivering sustainability. In the Wash on the east coast of England, according to Symes and Phillipson (1998), the access restriction appears to have supported a large degree of preference to local vessels. However, despite the endeavours of the Eastern Sea Fisheries Joint Committee, the decline of the local resource base has not been prevented. Nor has the inshore fishing industry been protected from the consequences of continuing growth in fishing capacity, increases which may have been generated from within the local industry.

More widespread failure of the access restriction is noted in those parts of inshore waters where 'foreign' vessels are allowed to be active, ie normally between the 6 and 12 mile limit. Again, the Sea Fisheries Committees in England and Wales provide an example of an inshore regime which is limited to the 6 miles; none of the inshore rules apply between 6 and 12 miles, despite the requirement for these areas to be managed in line with EC nature conservation legislation. This means that between 6-12 miles access to fisheries is less regulated, leading to potential problems of overfishing in this zone and at the same time reducing the viability for smaller boats fishing within the 6 mile zone only.

This 'management void' between the 6 and 12 mile limits is less evident where management is not area based and is instead directed at local fishing fleets. For example, the Spanish *cofradías* effectively manage the activities of their members, wherever they are fishing.

6 Strengthening inshore management after 2002

The European policy climate is such that there are now growing demands for inshore waters to deliver sustainable development, to arrest a current trend towards environmental and community decline. In the southern Member States, the particular emphasis is on maintaining and supporting the traditional artisanal fisheries and fishing communities that characterise many coastal regions. In the north, much of the pressure for better inshore management is coming from environmental interests, seeking to use EC nature conservation legislation as a lever for change.

These interests coincide with more widespread calls for fisheries policies to be made more sensitive to regional differences and local needs. There is also political pressure to improve environmental integration within the fisheries sector, based on various EC initiatives and currently manifesting itself in the high-level 'Cardiff integration process'. The latter in particular is supporting demands for alternative approaches that can improve synergy between fisheries and environmental policies.

The 2002 review of the CFP provides an obvious opportunity to redefine Europe's inshore regime, which currently is limited to the 6 and 12 mile inshore access restriction. Rather than agreeing the simple renewal of the current access restriction, the review provides the opportunity to consider other options, such as the development of a comprehensive inshore regime which is largely distinct from the main CFP management framework. Importantly, the *raison d'être* for an inshore regime could also be redefined, to take on board the new sustainable development agenda.

The following section discusses a number of options that could be considered as part of the 2002 review, as well as some of the main implications for existing management systems. Each of these options would be feasible without requiring amendment to the Treaty of Rome.

6.1 Options for improving the access restriction

The analysis in Chapter 5 suggests that the existing, time-limited access restriction has provided room for a range of inshore management measures, particularly within the 6-mile waters where foreign vessels are almost entirely excluded. It has also enabled management institutions to continue operating both in northern and southern Member States, apparently to the benefit of nature conservation and inshore communities. There is consequently a strong and widely supported case for reintroducing the restriction beyond 2002.

Serious consideration could also be given to placing the restriction on a permanent footing. This would provide the basis for a more strategic approach to inshore management, to the benefit of fisheries managers as well as the fisheries sector and environmental interests. It would also prevent the inshore sector from repeatedly being used as a bargaining chip in broader CFP negotiations, a process that inevitably uses up precious financial resources.

In line with the general objectives of European Community policy and the specific challenges facing inshore fisheries, however, the access restriction could also be improved in the following three ways:

- ?? The purpose of the restriction could be extended explicitly to cover sustainable social and environment development in inshore fisheries. This would encourage inshore areas to be actively managed with the goal of sustainable development, taking account of local fishing communities and local marine habitats and species, rather than simply protecting fisheries from 'foreigners'.

?? The inshore derogation, while excluding foreign vessels, does not protect dependent fishing communities from direct competition from larger offshore vessels. To do so, the restriction would need to exclude from inshore waters any non-inshore vessels, for example those above a certain size, whatever their nationality.

This approach would also make the derogation more defensible within the context of European integration.

In practice, it may be difficult to restrict access by non-inshore vessels that have previously established a pattern of fishing in the area. However, any new entries could be prevented.

?? The restriction currently applies out to 12 miles, though real opportunities for developing national or local area based management are often limited to the inner (normally the 6-mile) band where no foreign vessels are active. To improve management throughout the 12-mile zone, Member States should be able to manage all fishing activity up to the 12 mile limit, including fisheries prosecuted by foreign vessels.

The aim of the extension would be to close the regulatory gap that exists between 6 and 12 miles. It would not mean that foreign vessels would be excluded from these areas, rather that Member States had the power to impose management measures upon foreign vessels fishing inshore. The extension would of course need to be accompanied by adequate safeguards to protect the interests of foreign vessels that have established rights to fish in the 12 mile zone. In particular, there would need to be formal recognition of the all such vessels and guarantees that they would be able to participate on an equal and ongoing basis in the local management of the fishery.

Extending management out to 12 miles may have financial consequences, however, particularly if responsibilities for monitoring and enforcement are passed onto inshore management bodies such as the UK's Sea Fisheries Committees. Such costs would ideally be catered for using national or EC financial support mechanisms.

6.2 Building a separate EC inshore regime

While the restriction provides an opportunity for national or local management, it was not designed to create appropriate inshore fisheries management structures or policies. This would require a more sophisticated approach than simply the exclusion of foreign fishing vessels.

However, there is apparently little desire at local, national or European level, for additional EC legislation to support inshore management. This is perhaps surprising given the importance of inshore waters for Europe's natural heritage, and as spawning and nursery areas for many of Europe's commercial species. The reluctance is partly due to a generally negative view of EC level intervention. It is also linked to the fact that, as the previous sections have illustrated, existing inshore sectors and arrangements are highly varied, such that EC legislation could have very different effects in different Member States. These factors need to be borne in mind in designing any new regime.

New objectives and measures for inshore fisheries

There are a number of alternative measures that could be taken to secure better management without necessarily adding to the legislative burden and without compromising local diversity and flexibility. One option is to develop a largely separate management regime covering inshore

waters and designed to develop and sustain low impact or artisanal inshore sectors. In effect, such a regime could replace existing EC rules, introducing different management objectives and allowing measures to be applied to suit the range of needs and features. At the core of such a regime would be the objective of 'developing and maintaining inshore fisheries that are socially, economically and environmentally sustainable'.

Before designing such an alternative regime, there are a number of questions to address about the type of inshore sector that is desirable, both from socio-economic and environmental standpoints. It may be deemed appropriate for inshore waters, or parts thereof, to be reserved for low impact small-scale vessels (eg vessels under 10 metres). Alternatively, the small-scale sector might be left to operate alongside larger vessels, but be granted preferential access to inshore fisheries.

There are also a number of practical options for improving inshore management. For example, an integrated permit system could be introduced in order to support a more streamlined and efficient administration of the inshore sector. Integrated permits would combine in one instrument the licence, relevant quota allocations and technical regulations. They could be drawn up by a single 'competent authority', and be subject to annual reviews to reflect changes in stocks, etc. A system such as this could reduce the regulatory burden, rather than adding to it. It would also give the management authority greater flexibility to manage stocks in ways which are locally appropriate.

Developing national and regional strategies

In order to meet the objectives and apply the measures, Member States could be required by the EC to develop national or regional inshore fisheries strategies, outlining their main objectives for inshore management, including protection of sensitive areas or species, management of stocks, sustainable development of fishing communities, local infrastructure for landing, marketing and/or processing, creation of suitable management fora, etc.

Concepts such as the 'ecosystem approach' and the 'precautionary approach' would need to be central to the strategies, which would also provide a basis for strengthening the application of environmental and nature conservation legislation. Particular emphasis would need to be placed on the Habitats and Birds Directives, both through extension of existing site based measures and by integrating broader nature conservation considerations within the overall management framework for the inshore area.

As in other areas of EC policy, Member States could be required to submit their national or regional strategies to the Commission for approval. Ideally, these would be linked into a reporting cycle (eg triennial) to help monitor the implementation and effectiveness of the inshore regime.

Securing implementation of strategies

To support the implementation of strategies at the local level, a 'menu' of voluntary measures could be developed by the EC. Measures would

need to be sufficiently flexible to take advantage of local differences, possibly including one or more of the following:

?? *development and implementation of local management plans* aimed at optimising sustainable fisheries production and nature conservation, in line with locally defined environmental criteria. Plans would usually include details of local management arrangements, such as division of management responsibilities, procedural arrangements and the role of different groups in decision-making. The plan would also need to identify a suitable suite of management tools, including restrictions on fishing gear or methods, mesh sizes and landing sizes, restricted areas, etc, as well as measures targeted upstream at landing, processing and marketing facilities, and general information and education initiatives. The plans would need to be developed through an open and accessible process, involving key stakeholders in the process.

?? *codes of practice* could be used to provide guidance as well as baseline standards for acceptable fisheries practices, while also stimulating the sector voluntarily to improve its environmental performance. Observance of the codes could be made mandatory in particularly sensitive areas (for example, SACs or SPAs) or there could be outright restrictions on the improper use of certain gear types (for example, those longlines which take unacceptable bycatch of seabirds).

?? *advice, information, training or other guidance* could be part of any new strategy. This can be an essential accompaniment to other policy tools, resulting in a raised level of knowledge and understanding within fishing communities about the environmental impacts of their activities and the scope for mitigating these impacts.

Financial incentive schemes could be developed as part of the inshore regime, in order to encourage the take-up of some of the voluntary measures, as follows:

?? payments could be attached to the development and implementation of local plans, for bodies carrying out management functions, monitoring and data collection, etc;

?? funds could be provided for new environmental duties such as those arising out of the Habitats and Birds Directives; and

?? investment aid could also be targeted at local infrastructure projects or at setting up marketing and labelling schemes.

Payments such as these would need to be linked to compliance with management plans, environmental codes or other clearly set criteria.

6.3 Conclusions

In conclusion, it would be possible to replace existing EC rules with a new EC inshore regime designed to meet the specific challenges facing the inshore fisheries sector. Such a regime could be made sufficiently flexible to meet the individual and varied needs of local communities

and local environments. The option at Member State and local level of using a mix of policy measures, including voluntary codes, training and incentives, could also help to minimise the regulatory burden, while maximising opportunities for fishermen or fishing communities to continue operating in the future, within clearly defined limits.

It would therefore be consistent with the growing demands for fisheries policies that are regionally sensitive, and which deliver a more integrated and participatory approach to fisheries management (eg Symes 1998).

It is perhaps worth noting that the Agenda 2000 reforms to the Common Agricultural Policy have introduced a very similar approach to promote sustainable rural development in a terrestrial context. The new rural development Regulation (1257/99), which is intended to become a 'second pillar' of the CAP, requires Member States to draw up territorially-based plans through which they can deliver a broad range of measures including investment aids, environmental incentive schemes, training and other rural development aids in a balanced way that is compatible with the environmental needs and qualities of each area.

The main management implication of new strategies and measures for inshore fisheries would be to improve the structures for delivering sustainability. Where suitable management structures do not already exist, funding could be used to support their development. In other cases, codes could be defined in order to tighten management standards, while local plans could support more sophisticated and integrated management approaches. Importantly, the existence of plans and voluntary measures should encourage greater involvement of local fishermen's organisations and other stakeholders, including environmental interests, in the management process.

7 Political considerations for a new regime

In 1999, the Commission completed the first major consultation exercise on the future of the CFP beyond 2002. Responses to the consultation were wide-ranging but, according to the Commission, 'many demands were voiced in support of strengthening the current regime in favour of coastal fishermen' (COM(2000)15).

Member States and interest groups have shown great enthusiasm for defending the inshore access restriction because it provides a simple message; it is also widely regarded as protecting or defending vulnerable communities from 'foreign' vessels, even though the actual evidence of success may be limited. Environmental and fisheries organisations also support the restriction because it is seen as providing a suitable basis for sustainable management.

This report has argued that more is needed than a simple retention of the restriction, and that much could be gained by a more proactive reform of Europe's inshore fisheries regime. This poses much greater challenges, however, and there are a number of broader considerations that will need to be taken on board if such a reform is to be agreed. In particular, the different interests of the fisheries sector and the European dimension of fisheries policy-making demand a cautious and sensitive approach to the issues. It will be important to engage a range of actors in the debate on reform, including the Commission, the

Member States and fisheries organisations, as well as social and environmental interest groups.

Awareness of sectoral differences

Europe's fisheries sector, as earlier sections have indicated, is far from homogenous. There are strong differences between the organisation, functioning and local importance of inshore and offshore fishing fleets. These two sectors also have different relationships with the marketing and processing sectors and roles in national and EC policy-making. In the latter case in particular, the offshore sector is better organised and more vocal.

The two sectors are also likely to have different and sometimes opposing views on reforms. In relation to the proposals discussed here, the inshore sector is likely to call for measures to protect it from competition at sea and in the market place, with possible repercussions for larger vessels active in or near the 12 mile limit. The 'medium' sector in particular is likely to resist preferential treatment being given to the inshore sector. Attempts to strengthen the inshore regime will therefore need to consider the potential ramifications for other parts of the fishing industry.

Sensitivity to national interests

The varying importance of the inshore and offshore sectors are also often reflected in national positions. For example:

- ?? Spain has very significant offshore and long distance fleets in addition to its large inshore sector. Consequently, the Spanish government is often preoccupied with policies to support these offshore fleets, including improved access to European and third country fisheries.
- ?? The environment is high on the political agenda in many northern European countries, notably the UK, Sweden, Finland and Germany. Even if the inshore fisheries sector is not a priority for all these countries, there is a growing interest in reforms to 'green' fisheries policy.
- ?? In the southern States with large numbers of small-scale inshore fleets, particularly Greece, Italy and Portugal, there are continuing calls for policies which support and protect inshore fishing communities.
- ?? More broadly, there is growing interest, particularly among the North Sea States, in 'regionalising' EC fisheries management policies, introducing greater scope for fisheries management measures to reflect the specific needs and priorities of different parts of the EC.

Despite different political considerations, the northern 'environmental' and the southern 'community'-led countries have a common interest in securing sustainable development of inshore fisheries. Any attempts to reform the inshore regime will need support from most of these countries; it will therefore be critical for environmental groups to

demonstrate their willingness to embrace social as well as environmental concerns in any proposals that are put forward.

Specific advocacy targets

Despite the relatively widespread support for renewing the access restriction, and a general confidence in prospects for its renewal, Member States and other groups have expressed suspicion of attempts to develop arrangements further. There is consequently a need to broaden the debate on reform of the regime, as follows.

?? *European Commission* - will need to be convinced that any proposals are workable and that they have enough support at Member State level. A DG Fisheries group is currently tasked with reviewing the existing CFP conservation and management Regulation 3760/92, including the inshore access restrictions. DG Fisheries will also be taking the lead in drafting proposals for reform in 2002.

The newly reformed Advisory Committee on Fisheries and Aquaculture (ACFA) also provides an important avenue for influencing Commission thinking on the 2002 reforms. The ACFA recently released its initial views on the reforms, which included support for reintroducing the 6 and 12 mile access restriction. This and the recent changes to the Committee, amongst them an invitation to include a representative of European non-governmental environmental and development organisations, provide a unique opportunity to encourage the ACFA to push for a stronger and permanent inshore regime.

?? As noted above, national ministries will need convincing that proposals will support national priorities. Apart from getting broad support from a majority of Member States, it will also be important that at least one Member State, such as the UK, is actually pushing this issue forward.

?? It should not be forgotten that the inshore access derogation was created for the benefit of local communities and that any changes will need to secure the support and confidence of social actors, such as inshore fishermen's associations and representatives of associated trade groups. In the UK, dialogue between fisheries and environmental interests has strengthened considerably in recent years, with the Sea Fisheries Committees pressing for a more extensive role in inshore fisheries management, most obviously by seeking to extend their remit from 6 to out to 12 miles. In many Member States, there is some way to go before a similar level of dialogue and mutual trust is likely to be established.

References

- BIM (1999) Irish Inshore Fisheries Sector: Review and Recommendations. Bord Iascaigh Mhara, Dublin.
- Caddy J (1996) resource and environmental issues relevant to Mediterranean fisheries management, *Studies and Reviews. General Fisheries Council for the Mediterranean*. No 66. Rome, FAO.
- CEC (1995) Aquaculture and the Environment in the European Community. Commission of the European Communities, Luxembourg.
- Coffey C (1999) *Sustainable Development and the EC Fisheries Sector*. Institute for European Environmental Policy, London.
- Delbaere B (ed) (1998) Facts & Figures on Europe's biodiversity - state and trends 1998-1999, Technical Report Series. European Centre for Nature Conservation, Tilburg.
- Dunn E (1998) The Shetland sandeel fishery: the Ecosystem Approach in action, El Anzuelo – *European Newsletter for Fisheries and the Environment*, Vol 1, ed C Coffey. Institute for European Environmental Policy, London.
- Dunn E (in press) The Ecosystem Approach - where next? Paper in Earll, B (ed) *Marine Environment Review of 1999 and Future Trends*. Vol. 7.
- ESSFiN (1999) Inshore Fisheries Management: Task Group Final Report, FAIR CT95 0070. Department of Geography, University of Hull, UK.
- Eurostat (1999) EEA Aquaculture Production in 1997, Statistics in Focus: Theme 5 - 19/1999. Commission of the European Communities, Luxembourg.
- Gay R (1998) Fisheries Management in the Coastal Zone, *UK CEED Bulletin: Marine*, No 54 Autumn 1998. UK CEED.
- Hoefnagel E (1999) Professional culture, fisheries management and the concept of co-management, in *Europe's Southern Waters: management issues and practices*, ed D Symes. Fishing News Books, Oxford.
- House of Commons (1999) Sea Fishing, Eighth Report of the Agriculture Committee: Column I, Session 1998-99. The Stationery Office, London.
- Hunt GL & Furness RW (1996) Seabird/fish interactions, with particular reference to seabirds in the North Sea, ICES Cooperative Research Report No 216. ICES, Copenhagen.

Kelleher G, Bleakley C and Wells S (1995) A Global Representative System of Marine Protected Areas, Volume I Antarctic, Arctic, Mediterranean, Northwest Atlantic, Northeast Atlantic and Baltic. IBRD/World Bank.

Mitchell K (1998) Background paper, *European Seminar on Implementing the Habitats Directive in Marine and Coastal Areas, Proceedings of a Seminar held at Morecambe Bay, England, 22-24 June 1997*. Commission of the European Communities, Luxembourg.

Mitchell-Jones A J, Amori G, Bogdanowicz W, Kryštufek B, Reijnders PJH, Spitzenberger F, Stubbe M, Thissen J B M, Vohralík V, & Zima J (1999) *The Atlas of European Mammals*. T & A D Poyser, London.

Nédélec C (1996) Fishing Gear in the European Community. DG XIV, Commission of the European Communities, Luxembourg.

Pauly D, Christensen V, Dalsgaard J, Froese R and Torres Jr F (1998) Fishing Down Marine Food Webs, *Science*, Vol 279: 860-863.

RSPB (1997) Managing the Sea for Birds – the Outer Firth of Forth. RSPB, Sandy, UK.

Skov H, Durinck J, Leopold MF & Tasker ML (1995) Important Bird Areas for seabirds in the North Sea. BirdLife International, Cambridge.

Stanners D & Bourdeau P (eds) (1995) Europe's Environment: The Dobris Assessment, European Environment Agency. Luxembourg.

Svelle M, Aarefjord H, Tore Heir H and Øverland S (1997) Assessment Report on Fisheries and Fisheries related Species and Habitats Issues, report to Fifth North Sea Conference Secretariat. Ministry of Environment, Norway.

Symes D & Phillipson J (1998) Fishing within limits: inshore fisheries management and the concept of local preference, in *Property Rights and Regulatory Systems in Fisheries*, ed D Symes. Fishing News Books, Oxford.

Symes D (1998) The integration of fisheries management and marine wildlife conservation, JNCC Report No 287. Joint Nature Conservation Committee, UK.

Symes D (1999) The Mediterranean and its Fisheries, in *Europe's Southern Waters: management issues and practices*, ed D Symes. Fishing News Books, Oxford.

Tucker GM & Heath MF (1994) Birds in Europe: their conservation status, BirdLife International. Cambridge, UK.

UK Biodiversity Group (1999) UK Biodiversity Group Tranche 2 Action Plans – Volume V Marine Species and Habitats, published on behalf of UK Biodiversity Action Group. English Nature, Peterborough.

EC Fishing Rights: 6 to 12-mile band

Situation from 1.10.87

This map is illustrative not definitive



Adapted from a map (Crown Copyright 1987) supplied by the Ministry for Agriculture, Fisheries and Food (MAFF), with their kind permission