Inshore fisheries management in England and Wales: Facing up to the challenges of the 21st Century

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Inshore fisheries management in England and Wales: Facing up to the challenges of the 21st Century

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Foreword

Inshore fisheries provide important social and economic benefits for many coastal communities in England and Wales. Inshore areas also contain some of the best marine wildlife around our coasts and their conservation and effective management of inshore fisheries is crucial.

The Common Fisheries Policy (CFP) review is an important stimulus for this work, as any revision of the CFP will have repercussions for our inshore fisheries. Any examination of current management regimes needs to be comprehensive, clearly identifying strengths and problems and offering alternatives and opportunities for improvement. The current report on inshore fisheries management in England and Wales achieves all this.

The Sea Fisheries Committees (SFCs) are a key component of effective inshore fisheries management in England and Wales. Their work is critical to meeting the requirements of EU and UK fisheries and environmental legislation. The SFCs are themselves important stewards of the marine environment. The report suggests that they lack sufficient financial support and that most SFCs find it difficult to carry out their full range of duties.

English Nature and the Countryside Council for Wales welcome the report as an important contribution to an important issue. We hope it will stimulate further debate.

Martin Doughty
Chair, English Nature

John Lloyd Jones
Chair, Countryside Council for Wales

Preface

One of the more likely outcomes of the ongoing Common Fisheries Policy review is the continuing and possibly strengthened role for Member States in respect of the management of inshore waters. Anticipating this outcome and recognising the need for fisheries management to meet a range of objectives, English Nature together with the Countryside Council for Wales, have commissioned a review of inshore fisheries management in England and Wales which focuses not, as one might expect, on the interface with marine nature conservation but on the institutional framework for inshore fisheries management in general. The aims of the inquiry were to test the capacity of the existing system to measure up to the challenges of the 21st century, to identify any weaknesses in the structures of inshore fisheries management and to indicate how the system might be strengthened so as to meet these challenges more effectively. Its purpose was to provide the basis for informed debate. The following report hopefully fulfils these aims. Where other reports have looked to develop new approaches to inshore fisheries management and extend the role of key organisations, this is the first to attempt an in-depth analysis of the existing institutional structures in England and Wales and to elaborate specific proposals for reforming the system.

It is important to pay tribute to all those who agreed to talk with us for the very full, frank and insightful ways in which they responded to often lengthy interrogation. Without their contributions, this report could not have probed anywhere near as deeply into what turned out to be a fascinating and complex situation. In order to make the fullest use of their comments, I have deliberately refrained from identifying the sources of particular views expressed in the text. Though they may not always agree with the conclusions, hopefully they will find the report sufficient justification for giving so freely of their time, knowledge and experience.

The investigations were carried out jointly by David Symes of the University of Hull and Stephen J. Lockwood of Coastal Fisheries Conservation and Management, Colwyn Bay. David Symes was responsible for drafting the text of the report and he would like to thank Keith Scurr, also from the Department of Geography in the University of Hull, for his skilful execution of the maps and diagrams contained in the report.

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Terms of reference

To review existing arrangements for the management of inshore fisheries in UK waters; to provide clear and practicable proposals for incorporating economic, social and environmental objectives in an integrated management regime for inshore fisheries; and to recommend any necessary changes to the institutional and legislative frameworks for inshore fisheries management in England and Wales. In particular, the report is expected to pay particular attention to:

- the definition and prioritisation of objectives for inshore fisheries management;
- the disposition of various statutory and non-statutory organisations involved directly or indirectly in the management of inshore waters, including the delimitation of appropriate geographical and functional boundaries, and the relationships between such organisations;
- the representation of stakeholders' interests within the institutional framework;
- the efficacy of existing and alternative regulatory instruments;
- the provision of adequate and appropriate funding for the relevant organisations to discharge their statutory functions effectively;
- the development of an appropriate infrastructure for essential research and monitoring in relation to inshore fisheries and their management; and
- the legislative requirements for an effective and efficient system of inshore fisheries management.

The report should provide a vision for inshore fisheries management in England and Wales, consonant with the adoption of an ecosystem based approach to the living resources of the sea, and as such be capable of influencing any formal review of inshore fisheries management.

1. Reform of Inshore Fisheries Management: putting it in context

1.1 The Common Fisheries Policy: creating the bigger picture

The start of the 21st century is an appropriate time for a review of the structures, regulatory mechanisms and underlying philosophies of inshore fisheries management (IFM) in England and Wales. Such a review is long overdue. The system has been in place for well over a hundred years and its basic legislation was last overhauled in the mid-1960s at a time when scant attention was being paid either to the abundant resources or to the sensitivity of marine ecosystems in the inshore waters around the UK coast. Today fisheries management in Europe *could* be on the brink of major changes following the outcome(s) of the Common Fisheries Policy (CFP) review in 2002. However radical or conservative the reform of the CFP proves to be, the circumstances surrounding IFM are bound to change rapidly over the next decade or so, largely in response to the gathering momentum of trends which emerged towards the close of the previous century, namely the increasing intensity of inshore fishing activity and the growing political pressures for higher levels of environmental responsibility in the way we manage our inshore waters. If recent initiatives from the European Commission (Commission, 1999; 2001a; 2001b) relating to the closer integration of fisheries management and marine nature conservation are to take full effect, the underlying approaches to IFM will have to adapt and the institutional structures will need to demonstrate the capacity to deliver integrated management. This report provides an opportunity to explore these issues in respect of management systems in England and Wales.

The contextual debates informing the CFP review have *inter alia* focused attention on two related issues - the regionalisation of fisheries management and stakeholder participation. Here, a detailed analysis of IFM in England and Wales, which is possibly the most comprehensive and certainly one of the longest established systems of devolved management for inshore fisheries to be found anywhere in Europe, is also of relevance. In no sense is this meant to imply that the system can be presented as a model for others to copy. Indeed, one of the underlying themes of the report is the tension that exists between an individualism evident in certain features of the management system in England and Wales, born of a sensitivity to local environmental conditions, local patterns of fishing activity and local political culture, on the one hand, and the desire often expressed at higher levels of governance for greater uniformity of local management systems, on the other. Debates on devolved management and the possible introduction of regional advisory committees post-2002 provide valuable contexts for a review of existing arrangements for IFM in England and Wales and how they may need to change in order to be accommodated within a new vision of fisheries management in Europe in the 21st century.

1.2 Inshore fisheries in England and Wales: neglect of a dynamic sector

Inshore fisheries have for long been a neglected area of policy concern in Britain. In the case of England and Wales, successive administrations have used the existence of devolved management - where nominally the burden of responsibility is placed on local rather then central government - as an excuse to 'wash their hands' of what is a complex problem. They pay lip service to the need for reform of two key aspects of IFM: the seriously outmoded legislation and a funding system which, though it may appear to offer the funding authorities

'good value for money' on the basis that it comes relatively cheap, is increasingly proving to be a constraint on effective management.

Institutionally, the system of IFM currently in operation in England and Wales has been in place for over a century. Throughout this time, inshore fisheries have continued to supply good quality fresh fish to local, national and international consumer markets and provided a source of local employment. True, the relative significance of the inshore sector has declined over time reflecting the expansion of other forms of employment in coastal regions, not least in the holiday, tourism and recreational sectors which have surpassed the contributions of the fishing industry in local, coastal labour markets. Nonetheless, inshore fishing in England and Wales retains a local, if no longer regional, significance (see Chapter 3). Since the collapse of distant-water fishing following the 'nationalisation' of fishing opportunities in the North Atlantic in the late 1970s and the concomitant slump in the fortunes of the major distant water ports of Hull, Grimsby, Fleetwood and Milford Haven, the secular decline in the relative importance of the inshore sector has been reversed. Despite its neglect in policy terms and the absence of special financial assistance, the resilience of the inshore sector has been remarkable. Ten metre and under overall length vessels, which very roughly equate to the inshore fleet, remain the numerically dominant fleet segment, accounting for 80% of total numbers. Estimates of employment within the inshore sector are less reliable but probably they point to around 60% of the overall jobs in the harvesting sector. One can only hazard a guess as to the share of first-hand sales from landings in England and Wales attributable to the inshore sector: the best estimate is that it accounts for not less than 25% of the total value of fish and shellfish.

There is a problem, however, in defining inshore fisheries but it is quite common to define them as those which take place within national territorial waters – ie within 12 nm of UK baselines. It is this definition of inshore fisheries and IFM that is used in this report. Similarly, this report follows the convention of defining the inshore fleet as comprising vessels of 10 m and under overall length despite the fact that many such vessels now have the capacity to fish well beyond what are normally considered inshore waters. (Conversely, there is nothing to prevent certain types of vessel above 10 m from exploiting fishing opportunities relatively close inshore). In describing these vessels it is still customary to use terms like 'small-scale', 'artisanal' and 'traditional', thereby inferring that the sector is conservative, unmodernised and technologically unsophisticated. While such terminology, reinforced by 'picture postcard' imagery of quaint and colourful fishing harbours, may hold true for some elements of the sector, it is a gross misrepresentation of inshore fishing as a whole. Versatility rather than specialisation has been the keynote to the modernisation of the inshore fleet. A spate of new building is changing the face of the inshore sector. Fishing capital is being reinvested in a new generation of multi-purpose boats which, though capable of fishing well beyond the 6 nm limits, are designed to squeeze within the under 10 m category. For example, the Eyemouth based *Ostara*, with an overall length of 9.98 m and virtually full-length shelter deck, capable of making 48 hour trips and carrying up to 100 boxes of prawns (*Nephrops*) and whitefish (*Fishing News,* 3 August 2001), or the similar sized, Banff-registered *Osprey* which works eight or nine day trips with a crew of just three (*Fishing News*, 4 May 2001). Such vessels threaten the spirit if not the letter of regulations which seek to protect inshore stocks from excessive levels of exploitation and to reserve inshore waters primarily, though not exclusively, for local small boat fishing activity.

This restructuring of the fishing industry may call into question the efficacy of existing primary legislation governing IFM in England and Wales and the institutional structures

through which IFM is conducted. So too do decisions taken in the final decade of the 20th Century to invest Sea Fisheries Committees with a duty of care for the marine environment and with specific responsibilities for ensuring that environmental concerns are taken fully into consideration when framing byelaws. This significant broadening of the remit of SFCs, brought into sharp focus through their involvement in the management of marine Special Areas of Conservation (SAC) under the EU Habitats Directive 1992 - but without sufficient recognition of the increased workload and funding implications involved - places even further pressures on an organisation created in Victorian times to safeguard local fishing interests within the (3 nm) Territorial Sea.

The apparent invisibility of the inshore sector within national policy deliberations is to a degree matched by the under-representation of the sector within the industry's own national political organisations, the National Federation of Fishermen's Organisations (NFFO). Although the Federation seeks to incorporate inshore fishing interests through its regional committees, we encountered a number of areas in England and Wales where local inshore associations were either poorly developed or non-existent and where representation on national bodies was largely missing. In these circumstances, SFCs often find themselves under pressure to take on a representational role which certainly complicates and may possibly conflict with their statutory function as managers of inshore fisheries.

1.3 Integrated management

Management of inshore waters is a much more complicated and challenging task than the regulation of offshore fisheries. Inshore waters contain a far greater variety of fisheries - each with its own biological characteristics - including the highly migratory salmon and eel, the mobile demersal and pelagic species, less mobile crustacea (crab, crayfish and lobster) and the more sedentary molluscs (mussels, oysters and cockles). Each requires a different form of management reflecting the geographical distribution of the stock, its life cycle characteristics and the variety of fishing methods (Symes, 2001). But not only must IFM take account of the particularities of each fishery, it must also have concern for the sensitive and delicately balanced inshore ecosystems within which both commercial and non-commercial species co-exist.

Underlying our approach to IFM is the notion of integrated management which attempts to balance the various objectives - ecological, biological, economic, social, cultural and administrative - which are implicit in the concept of sustainable development. Until very recently, fisheries management in general has been dominated by a narrowly constructed approach based on an unequal combination of biological considerations (the sustainability of fish stocks), concerns for economic efficiency (the profitability of the fishing fleet) and administrative convenience. In response to global and regional initiatives engendered by the *Convention on Biodiversity 1992*, attention has been redirected towards an environmentally responsible policy framework. The overriding aim being to ensure the diversity, productivity and integrity of marine ecosystems. This has come to be known as an ecosystem based approach to fisheries management. Integrated management adopts the ecosystem approach as a core feature, but it also seeks to optimise the social utility of the resource base through a more carefully considered choice between the secondary objectives of economic efficiency and social benefit. When dealing with inshore fisheries there is an argument to be made for management strategies which prioritise the social objectives of sustaining local employment opportunities over economic objectives of rationalising structures through economies of

scale, especially in fisheries dependent areas. For an elaboration of integrated management see Chapter 8.

1.4 A spate of recent reports

The present report joins a stream of recent reviews and commentaries on IFM, in part triggered by the CFP review. Another important catalyst for this awakening of interest in inshore fisheries is the *Report of the House of Commons Agriculture Select Committee* (1999) which highlighted a number of issues which needed to be addressed through departmental or government action. Among its many wide ranging proposals concerning the fishing industry in general were a number of specific recommendations in relation to IFM, *viz*

- '…that the jurisdiction of the Sea Fisheries Committees and the Environment Agency be reviewed to ensure consistency of approach within individual fisheries' (§112);
- '…that MAFF initiate a full review of the powers of Sea Fisheries Committees and publish it together with a timetable for any necessary action' (§147);
- '…that the funding arrangements for Sea Fisheries Committees be re-examined in order to establish a secure, permanent financial framework within which they can plan and perform their duties' (§149);
- '…that the Ministry investigate the powers available to Sea Fisheries Committees and other local management bodies to take action on environmental grounds and publish proposals for consultation on action needed to close the loopholes' (§150);
- '…that the Government publish outline proposals within the next twelve months for the introduction of coastal and zonal management of fisheries which should involve the management of research, monitoring of activities and common regulatory processes'. (§153).

These recommendations attracted almost no comment in the ensuing parliamentary debate and little by way of positive reaction in the government's formal response to the Select Committee Report, preferring to await the outcomes of the inquiry into salmon and freshwater fisheries management and the internal review of SFCs being conducted through the Association of Sea Fisheries Committees (ASFC).

Indeed, the Association had already embarked upon its own review of 'the role of the Sea Fisheries Committees in the management and regulation of the coastal waters of England and Wales'. Among its conclusions (ASFC, 2000) were several specific recommendations in relation to the framing of a new Coastal Fisheries Act, the development of a more appropriate funding formula, the extension of the SFCs' jurisdiction to 12 nm and the need for closer integration with other statutory agencies. Several of these issues are taken up in the present report.

An independent inquiry into the salmon and freshwater fisheries had also been set up jointly by the Minister of Agriculture, Fisheries and Food and the Secretary of State for Wales in 1998, headed by Professor Linda Warren, even though the legislation governing these fisheries had been subject to a major review in 1975, almost a decade after the *Sea Fisheries (Regulation) Act, 1966* confirming the functions of SFCs had come into force. Apart from reconfirming the EA's responsibilities for regulating salmon, migratory trout and eel fisheries in coastal areas out to 6 nm and acknowledging the situations in which the EA is required to act as a SFC, the *Salmon and Freshwater Fisheries Review* (MAFF, 2000), reaffirmed the need for 'a full review of the role and powers of SFCs in coastal waters and of the

relationship between SFCs and the Environment Agency' (p158), setting out a number of specific terms for such a review.

Also of relevance is the document prepared by the Shellfish Association of Great Britain (2001) initially as part of the Sea Fish Industry Authority's (2001) strategy for the UK fishing industry. Concerned solely with the shellfish sector, it argues for the setting up of a dedicated development agency to help rationalise the uncoordinated interests of inshore shellfish activities throughout the UK.

Further contributions to the debate on the future of IFM have come essentially from organisations concerned with marine nature conservation. These include the report commissioned from the Institute for European Environmental Policy by the Royal Society for the Protection of Birds (Coffey and Dwyer, 2000), and the Wildlife Trusts' discussion paper (Edwards and White, 2001). As their provenance would suggest, each of these reports is concerned with promoting a more environmentally responsible approach to IFM. The former adopts a European rather than national perspective, looking for ways in which the EC's role might be strengthened, while the latter focuses on the situation in the UK and in particular, on the further development of relationships between SFCs and marine conservation.

Against this background, one might reasonably question the need for yet another investigation into IFM. Although sponsored by the two statutory nature conservation agencies – English Nature (EN) and the Countryside Council for Wales (CCW) – the present report does not focus primarily on the concerns for marine nature conservation. As its terms of reference (p v) indicate, it attempts a broader, more comprehensive and detailed analysis of the present management system in England and Wales than any of the previously mentioned reports. And, because it concentrates principally on the institutional arrangements for IFM, it focuses largely on SFCs as the statutory organisations responsible for managing inshore fisheries in England and Wales. Where it differs from the other reports is in its focus on the present and future systems of IFM, its detailed critical analysis of the existing situation, its emphasis on an integrated approach to the management of inshore fisheries as a sustainable resource and in its vision of how IFM can be adapted to comply with a decentralised and environmentally responsible CFP.

Reference should also be made at this point to the European Commission's (2001) Green Paper on *The Future of the Common Fisheries Policy*. Although there is little of direct relevance to IFM, other than its suggestion to extend full Member State regulatory authority to the 12 nm limits (p. 29) and its acknowledgement that a special case may be made for the artisanal small boat sector in relation to proposals for reducing overall fishing capacity (p.32), many of the broader issues addressed in the Green Paper will have important connotations for IFM. In particular, these include proposals for the creation of regional advisory committees (p. 28-29) and the development of 'an ecosystem-oriented approach to all areas of fishery management' (p. 22).

1.5 Methodology

Most of the information and many of the ideas contained in this report are derived from the extensive and wide ranging interviews with a variety of organisations concerned directly or indirectly with inshore fisheries and their management. These include the relevant government departments, fishermen's organisations, statutory agencies, NGOs and, of course, the Sea Fisheries Committees which bear the brunt of responsibility for management in the 0-

6 nm zone (see Appendix 1). In order to comprehend fully the diversity of IFM the Chief Fishery Officers in each of the twelve SFCs were interviewed, often along with their chairmen and/or other members of the committee. In almost every case the interviews lasted for at least three hours enabling considerable insights into the management structures and the key issues affecting IFM. This information was supplemented with written evidence in the form of reports, mission statements, papers and copies of the byelaws in operation in each Sea Fisheries District.

We were astonished by the variety of situations encountered. No two SFCs are alike and there is no real unanimity among those interviewed as to the future direction of IFM. Whether this diversity reflects the variety of circumstances confronting IFM at the local level or a lack of coherence in IFM is a moot point to which the report will return on more than one occasion. It has certainly made for unexpected difficulties in drafting the report.

The report has, to a limited extent, drawn on other written evidence in the form of reports, academic papers etc. We do, however, need to point out that attempts to set down the basic parameters for assessing the importance of inshore fisheries in terms of employment and production are frustrated by an alarming paucity of official statistical data. Not only are the data difficult to come by but they are constructed on the basis of a sampling system which renders its credibility very low indeed.

1.6 Organisation of the report

Following this introductory chapter, the report continues by putting the study of IFM in England and Wales into a somewhat wider European context, noting both the commonality of issues and the divergence of management approaches (Chapter 2), before attempting to describe the current situation for inshore fisheries in England and Wales in greater depth (Chapter 3) and examine the legislative basis in the UK (Chapter 4). The core analysis of the management system is contained in three central chapters, with the first reviewing the overall structures of governance and the detailed make up of SFCs (Chapter 5), the second examining the systems of regulation and enforcement undertaken by SFCs (Chapter 6), and the third assessing the level of integration between IFM and marine wildlife conservation (Chapter 7). The final sections turn from the analysis of the present to a vision of the future for IFM and how it can best face up to the challenges of the 21st century: Chapter 8 outlines the basis for developing a more strategic approach to IFM through integrated management and an ecosystem based approach. Chapter 9 explores the principal drivers of organisational change and outlines a programme for the institutional reform of IFM in England and Wales which will allow it to respond positively to the quest for sustainable and well regulated inshore fisheries. Finally, Chapter 10 summarises the findings and main recommendations.

2. Inshore fisheries and their management in Europe

2.1 Diversity: a challenge for integrated management

The complex and irregular configuration of Europe's coastline, with its many deep indentations and fringing islands both large and small, and a long history of coastal settlement have combined to ensure a well established and continuing tradition of inshore fishing throughout the region. The range of sub-littoral conditions, including different substrates of hard and soft ground in both shallow and deep waters and variations in salinity and temperature, leave their imprint in terms of the diversity of inshore fisheries found throughout Europe. Also, because fishing patterns have evolved over a long period of time - many of the earliest settlement sites were coastal in location and reveal evidence of dietary regimes which relied heavily on fish and shellfish - they tend to be strongly differentiated in cultural forms as indicated in the distinctive regional designs of boats and gears. Traditional inshore fisheries tend to be seasonally opportunistic in terms of the intensity of fishing activity and species targeted. In the sub-Arctic waters of the Gulf of Bothnia where ice cover can last for up to seven months, fishing is largely confined to the summer months (Nybacka, 2001). By contrast, along the Atlantic coast of Norway, the winter months were often a period of intense activity stimulated by the seasonal migrations of spawning cod and herring into inshore waters. Throughout much of western Europe, to fish the inshore waters all year round usually meant the combination of several seasonal fisheries, often deploying different gears and sometimes a different crew.

Across most of Europe inshore fishing traditionally formed part of a pluriactive local economy, most notably in some of the remoter, less developed stretches of coastline. The most common work combination was with farming where the demands of the agricultural calendar often defined the opportunities for seasonal involvement in the fishery. Whereas agriculture usually provided the basis for household subsistence, fishing offered not only a dietary supplement but also a means of cash income. In both spheres of activity, the family provided the core of the workforce. Boat crews were most commonly formed from agnatic kin (father: son; brother: brother), less usually from affinal kin (father: son-in-law) and were only rarely made up of non-related persons and 'strangers' (Symes and Frangoudes, 2001). Although the forms of work combination may have become more diverse, part time and seasonal involvement in inshore fishing remains a strong feature throughout Europe. Part time involvement may also be age related; many of those described as part time are in fact former full-time fishermen no longer prepared to engage in a physically strenuous activity on an all year round basis but equally unwilling to abandon their professional skills and a distinctive way of life. At the end of the spectrum are the recreational fishermen, participating in fishing as a sports activity and often discounted when it comes to IFM. In northern European countries, however, estimates of around two million Finns (40% of the national population) and circa 2.3 million Swedes (37% of the adult population) participating in recreational fishing at least once a year (Nybacka, 2001; Thoresson, 2001) indicate something of the potential effect on inshore fisheries.

Partly as a consequence of the imperfect division of labour implicit in pluriactive local economies and as a derivative of the small scale, often artisanal, nature of inshore fisheries, it is tempting to characterise inshore fishing as 'small commodity production' and to ascribe a significantly different economic rationale to the behaviour of those who take part.

Monrad Hansen and Højrup (2001) portray inshore fishing as a form of production relatively impervious to market fluctuations and able to function for long periods without earning revenues commensurate with the value of the capital investment - a circumstance which in other sectors might quickly lead to the redeployment of capital. While this evaluation may not hold good for all inshore fishing enterprises, it certainly adds still further to the complexity of inshore fisheries. Other authors (Boncoeur *et al*, 2000), approaching the analysis of inshore fishing from a more conventional, neo-liberal perspective, have concluded that it is difficult to identify appropriate indicators of economic performance in the small boat sector.

It was, until quite recently, self-evident that small boats operated within a virtually closed nexus of local relationships. Small boats, crewed by local men and engaged primarily in trips of less than 24 hours duration, fished local inshore grounds and disposed of their catches either through auction markets based in their home port or locally based agencies or privately to local restaurants and shops. They were, moreover, usually subject to informal regulation by their peers or to more formal systems of local management bent upon guaranteeing equality of opportunity for members of the local fishing community. Although this circle of local dependency may have been breached to some extent by the increased mobility of the inshore fleet, the inshore industry still exhibits a strong feeling of local identity, coupled with a sense of 'ownership' and 'stewardship' of local resources, especially when challenged by the incursion of nomadic, non-local boats.

It is the characteristic diversity of inshore fisheries, whether measured in terms of the physiographic and ecological basis, patterns of fishing activity, levels of participation or the social and economic behavioural criteria, which lays down the challenge for integrated management anywhere in Europe.

2.2 A European Community perspective

The Common Fisheries Policy (CFP) is intended to provide a common framework for the rational and responsible exploitation of fishery resources on a sustainable basis throughout Community waters. It was meant to apply equally to inshore and offshore waters: this had been the purpose of the initial Regulation 2141/70 setting down the basic principles for a common fisheries policy and establishing an *acquis communitaire* which all new Member States must accept. The assertion of 'equal conditions of access to and use of the fishing grounds situated in [Community] waters for all fishing vessels flying the flag of a Member State' implied the abrogation of guarantees of national sovereignty within the 6 mile limits established only a few years previously by the European Fisheries Convention of 1964. The threat of equal access 'up to the beaches' was to lie dormant (Symes, 1997): the Treaty of Accession in 1973 included a derogation authorising Member States to restrict fishing in waters under their sovereignty or jurisdiction, situated within a limit of six nautical miles…. 'to vessels which traditionally fish in these waters and which operate from ports in that geographical coastal area….' (Article 100). Further, the Treaty also made provisions to extend the derogation from 6 to 12 miles in areas particularly dependent on fishing, including parts of Denmark and the UK and most of the Republic of Ireland, but subject to the recognition of the historic fishing rights of other Member States. This extension has since been generalised to the benefit of all Member States.

The derogation was reasserted in Council Regulation 170/83 establishing a *Community system for the conservation and management of fishery resources* and again confirmed in

Regulation 3760/92. The Commission (1991:12) acknowledged that 'the reservation of the coastal band for fishermen from adjacent coastal areas… to ensure that fishing remains a component of the socio-economic fabric in the regions concerned… increases the degree of responsibility and safeguards local and regional fisheries'. Over time, however, the original presumption in favour of locally based fishing activity appears to have been relaxed in favour of a more broadly based reservation of inshore waters for vessels registered anywhere in the coastal state. In effect, territorial waters are divided into two quite distinct zones: an inner area (0-6 nm) where access rights are reserved exclusively for the coastal state's fishing vessels and an outer area where access restrictions need to take account of historic fishing rights of other Member States. Current access arrangements are due to be reconsidered as part of the 2002 review. Though many would wish to see them implemented on a permanent basis, it is more likely that they will again be renewed for a ten, or possibly, twenty year period.

All basic Community regulations concerning TACs and quotas, minimum landing sizes and gear restrictions apply to all Member State vessels, fishing anywhere within the 0-200 mile 'common pond'. The access derogation does, however, create the opportunity for coastal states to develop their own systems of inshore management through the implementation of supplementary regulations, providing these are fully compliant with the principles of the CFP. Because such regulations can only be imposed in respect of the coastal state's own fishing vessels, the opportunity is – for the time being at least – restricted to the 0-6 mile zone. However, the Commission's Green Paper on the future of the Common Fisheries Policy (Commission, 2001c) includes a recommendation that vessels fishing in the 6-12 mile zone should be subject to non-discriminatory conservation measures introduced by the coastal state.

Otherwise, the CFP makes only a few concessions to inshore fisheries, despite their crucial importance in sustaining economic activity in many of the more fisheries dependent areas. Perhaps the most significant is in respect of structural reforms where vessels under 12m have been exempted from the targeted reductions in fishing capacity imposed on individual Member States through the Multi-Annual Guidance Programme (MAGP) – though the size of the under 12 m fleet may not exceed the 1997 level. In general however, the inshore fleet has been declining quite markedly throughout most of the EC.

It is also likely that in the past the inshore sector has failed to secure its fair share of the structural funds available through the Financial Instrument for Fisheries Guidance (FIFG), much of which has gone to support the decommissioning of offshore vessels. By contrast, the short lived PESCA initiative (1995-2000) focused much more on small scale projects drawn up at local level (Coffey, 1999) mainly in support of inshore fisheries and especially the shellfish sector (see Steins, 2000a). The new round of FIFG (2000-2006) does contain specific measures to support small scale coastal fishing communities, thus in a sense continuing the work of PESCA.

In one important respect the European Commission has made a potentially significant impact on the way in which inshore waters are to be managed. The Habitats Directive 1992 has been instrumental in setting up the *Natura 2000* network of Special Areas of Conservation (SACs), including a significant number in inshore locations (see 7.1). Although management plans for SACs are not expected to have a major impact on current fishing activity they certainly pave the way for more rigorous scrutiny of proposals to develop new fisheries in the designated areas. Indeed, as the Green Paper implies, the European Commission is likely in

future to show more vigilance over the ways in which fishing activity impacts on the marine environment.

2.3 The response of Member States[1]

It is instructive to examine how different Member States have responded to the opportunities to develop their own distinctive systems of IFM, especially bearing in mind the Commission's recent recommendations for more decentralised and participative forms of management. (Commission, 2001c). What is immediately clear is that institutional arrangements, regulatory regimes and legal instruments differ between Member States according to their historical traditions and modern political cultures, together with the importance and nature of the inshore fisheries themselves. Four basic generic models can be posited (Symes and Phillipson, 1996):

- *centralised management,* where the state defines and implements all aspects of management;
- *decentralisation*, involving the transfer of authority for management to regional or local government, with the responsibility remaining within the ambit of democratic accountability;
- *delegated authority*, where most of the responsibility is delegated to national or regional organisations located outside the scope of democratic accountability;
- *autonomous self-management*, in which all management responsibility originates from within local user groups or community organisations.

The earliest forms of local, community based management – sometimes rooted in medieval guilds like the *cofradia* in Spain or the *prud'homie* in Mediterranean France – were usually preoccupied with issues of equity rather than resource conservation. Their principal concern was to ensure that all those entitled to participate in the fishery, by reason of membership of the local community, were able to enjoy free and equal access to the resource. Management action might therefore involve: (i) defining the start and end dates for particular fishing seasons; (ii) resolving potential gear conflicts; (iii) allocating fishing locations; and (iv) in certain seasonal fisheries organising the drawing of lots to determine the order of access to favoured locations, usually on a rotating basis. Such traditional systems have come under increasing pressure to switch from an approach based on guaranteeing equity to one based on restricted access; this has exposed weaknesses in their structures, powers and flexibility. Locally autonomous systems of management survive only in the Mediterranean region; elsewhere they have been stifled by the emergence of bureaucratic and predominantly centralised forms of management.

The basic choice between central and local forms of management is by no means an obvious one (Phillipson and Thom, 2001) with strong arguments in favour of both approaches. Centralised management is able to offer less fragmentation of responsibility, greater coherence of regulation, lower costs (or at least greater security of funding), as well as being able to dispel doubts over professional competence and democratic accountability. On the

[1] This and the following section are based on a survey of IFM in seven EC Member States undertaken as part of the European Social Science Fisheries Network (ESSFiN) Concerted Action. The full results of this survey are to be published by Kluwer under the title *Inshore Fisheries Management* in 2001. Additional material on Spain has been derived in part from another EU sponsored study on *Developed and Regional Systems of Fisheries Management in Europe.*

other hand, local systems, aligned with the principle of subsidiarity, should prove more sensitive to local circumstances, more effective in their incorporation of local user groups, better able to achieve legitimacy in the eyes of the local fishing industry and better placed to offer preferential access to locally based fishing fleets in line with the original purpose of the 6 nm derogation.

In practice, most Member States have developed systems which, to a greater or lesser extent, combine elements of both central and local decision making. Figure 2.1 attempts to locate the systems of eight Member States; indicating a degree of polarisation between those that remain essentially centralised and those which have already adopted more regionalised forms. However, the diagram somewhat falsely implies a static situation. In many parts of Europe the institutional arrangements for IFM are in a state of flux, with a clear tendency towards regionalisation. For example, consequent upon devolution, Scotland is seen to be moving towards a more delegated and decentralised approach (see Chapter 4); similarly, Ireland is currently experimenting with the idea of local inshore development committees. Nor, of course, can Figure 2.1 portray the subtleties of relationships between central and local management institutes in the eight countries.

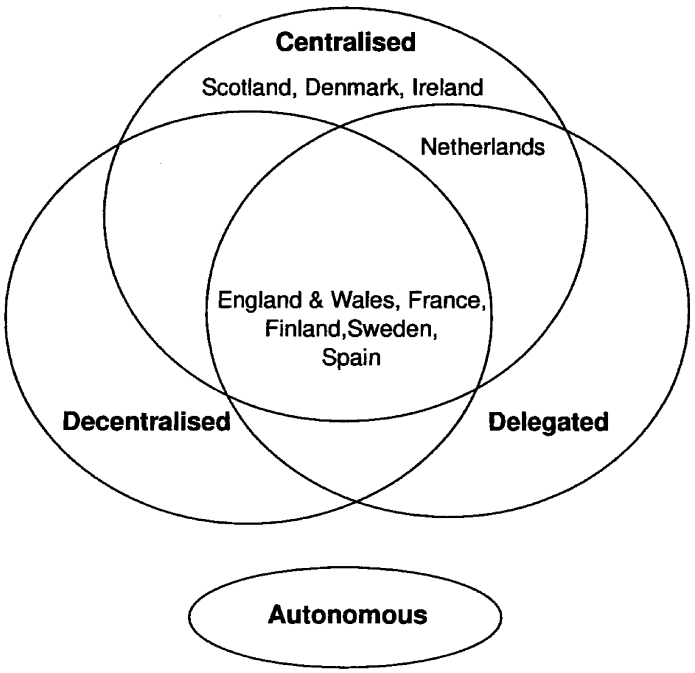

Figure 2.1 Management systems for IFM in Europe

What becomes clear from a closer analysis is that truly devolved systems, where authority for the initiation and implementation of IFM is effectively vested in local decision making, occurs only in England and Wales and in France. In France the hierarchical system of *comités des pêches* is both more complex and less exclusive to IFM. All participants in the fishing sector, including owners, crew members, merchants, processors etc, must register with their local *comité* which nests within regional and national levels of organisation. Proposals for local management and licensing arrangements formulated by the local *comité* are forwarded to the regional *comité* for approval, usually granted only after consultation with

the regional office of the central government's Department of Maritime Affairs. In this way central government remains the ultimate authority, in much the same way as in England and Wales, all SFC byelaws have to receive the approval of DEFRA. In Mediterranean France, the system of devolved management is further complicated by the activities of the *prud'homie* the successors to the medieval guilds with powers to regulate fishing activity in local, communally defined coastal territories. In practice, their activities are now largely confined to the fisheries of the brackish water lagoons (*étangs*) which fringe much of the coast from the Spanish frontier to the mouth of the Rhône.

2.4 Key issues for IFM

Whereas only a few decades ago fishing interests could be considered more or less paramount within inshore waters, today those interests have to contend with competing claims on maritime space made by other, often more powerful, interest groups. Those such as recreational fisheries and marine nature conservation are able to marshal considerable popular support through well organised local, regional and national associations, while others like tourism can justifiably claim to make a much greater contribution to the local and regional economy. The mobilisation of these different interest groups only serves to highlight weaknesses in the organisation of inshore fishing interests. Today, the management of inshore fisheries is enmeshed in a matrix of management institutions arranged both horizontally across a number of discrete sectoral interests and vertically in terms of geographical scale from European, through national and regional, to local levels (Symes, 2001b).

Four broad areas of concern for the future of European inshore fisheries and their management were identified in the ESSFiN study:

- inshore fisheries represent a declining area of local economic activity as evidenced by reduced participation, the ageing profiles of inshore fishermen and the comparatively low levels of capital renewal in boats, gear and quayside facilities;

- the potential collision of interests between inshore fishing and environmental conservation, coupled with a sense that fishing had been exploited as a soft target by conservationists when other causes for concern appear to receive less critical exposure;

- the dramatic growth of aquaculture which has affected markets worldwide, especially for shellfish and salmon, and stimulated local competition for space exacerbated by complaints of environmental contamination; aquaculture is a fundamentally different activity, closer to agriculture than to fishing - but often akin to industrial production in scale and organisation - and subject to very different forms of licensing and regulation often undertaken by management institutions unconnected with fishing;

- the increasing industrialisation and urbanisation of the European coastline is giving rise to pollution and the intensification of pressures from recreational users on both marine and foreshore space.

All but the last of these are issues which should properly be dealt with under an integrated approach to fisheries management; the last is more appropriately a concern for integrated coastal zone management.

3. Inshore fisheries in England and Wales: description and valuation

3.1 An overview of inshore fisheries

The inshore waters of England and Wales are home to a wide variety of commercial species, exploited by a range of traditional and modern fishing methods. Much of the essential diversity of inshore fisheries is the consequence of the general location of the British Isles and the complex physical geography (bathymetry, circulation, tidal range, currents, water temperature, salinity, substrates etc) of the tidal and sub-tidal inshore waters. The fisheries of England and Wales owe a good deal to the interplay of influences from the colder boreal waters of the northern Atlantic and the warmer Lusitanian waters associated with southern Europe. Indeed the location of the British Isles adds greatly to the variety of species and their seasonal range, lying across the southernmost extent of the cold water cod and haddock and, at the same time, the more northerly extension of the summer migrations of species such as red and grey mullet more normally associated with warmer southern waters. The abundance of fish is to a degree influenced by variations in the supply of nutrients which may be enhanced by the regional effects of frontal zones, causing an increased mixing of colder and warmer waters, and locally by inflows of nutrient rich fresh water from the major river systems. The distribution and densities of less mobile shellfish species are determined largely by local physiographic conditions (water depth, tidal range and type of substrate). Thus, for example, the availability of both hard rocky and soft sandy substrates off the north east coast of England and again off Devon and Cornwall have given rise to regionally important lobster fisheries.

The nature of the coastline may also help to explain the degree of concentration or dispersal of the inshore fleet. In general, the high cliffed coastlines of Northumberland, Durham and North Yorkshire afford relatively few small harbours in contrast to the low lying coasts of East Anglia and southern England where there are many more opportunities for safe anchorage or for hauling out the small inshore boats onto the beach. Regional variations in the nature of the coastline and in the pattern of fishing activities also contribute to the distinctive traditional designs of local inshore boats such as the cobles of the north-east coast, hog boats along the Sussex coast and nobbies in the north west.

Allied to the range of commercial species and the different local conditions in which they are exploited is the considerable variety of fishing methods deployed in coastal fisheries (Table 3.1). Many of these fishing gears do not coexist easily within the same fishing grounds and it is a function of IFM to resolve potential gear conflicts through zonation schemes and/or byelaws restricting the use of particular gears.

Among inshore fisheries, prime importance attaches to the shellfish fisheries which in England and Wales as a whole grossed £57.5 million in 2000, or 40% of the first hand sales from sea fisheries. Significantly in recent years it has been the buoyancy of the shellfish sector which has provided a much needed stabilising influence for the industry as a whole at a time of significant declines in both the demersal and pelagic sectors (Figure 3.1). The shellfish fisheries include fairly well defined - though not necessarily permanent - beds of sessile cockle, mussels, oysters, scallops, together with whelks and periwinkles, valued in 2000 at £24.5 million; the more mobile decapods (lobsters, crabs, crawfish, *Nephrops* and

Table 3.1 Inshore fisheries and principal gear types in England and Wales

Species group	Species	Gears
Demersal	Cod, whiting, haddock, saithe, pollack, dogfish	Demersal otter trawl, pair trawl, seine net, gill net, trammel net, longline, handline.
	Dover sole, plaice, flounder, turbot, monkfish, rays	Beam trawl, demersal otter trawl, seine net, tangle net, trammel net, longline.
Pelagic	Mackerel, herring, sprat, bass, mullet	Gill net, pelagic trawl, handline, beach seine, trolling
Migratory	Salmon, sea trout, eel	Gill net, beach seine, trap, hand held nets, otter trawl, fyke net
Shellfish	Lobster, crab, crawfish, *Nephrops*, shrimp	Pot, tangle net, beam trawl, demersal otter trawl
	Cockles, mussels, scallops, clams, whelks, clams, periwinkles.	Dredge, trawl, hand-gathering

Source: based on Gray, 1995

shrimps) valued at £27.8 million; and cephalopods (cuttlefish, squid) at £4.5 million. Many commercially important demersal species spend part of their life cycles in inshore waters, notably the spawning and nursery grounds often situated in the shallower coastal waters. Significant catches of cod, haddock, plaice and sole are also taken inside the inshore zone. Small but locally important fisheries for migratory salmon and eel occur along certain stretches of coast and in some estuaries. Finally, there are locally significant pelagic fisheries such as the Thames herring fishery and the southwest handline fishery for mackerel, both of which have recently been awarded Marine Stewardship Council certification and sustainably managed fisheries.

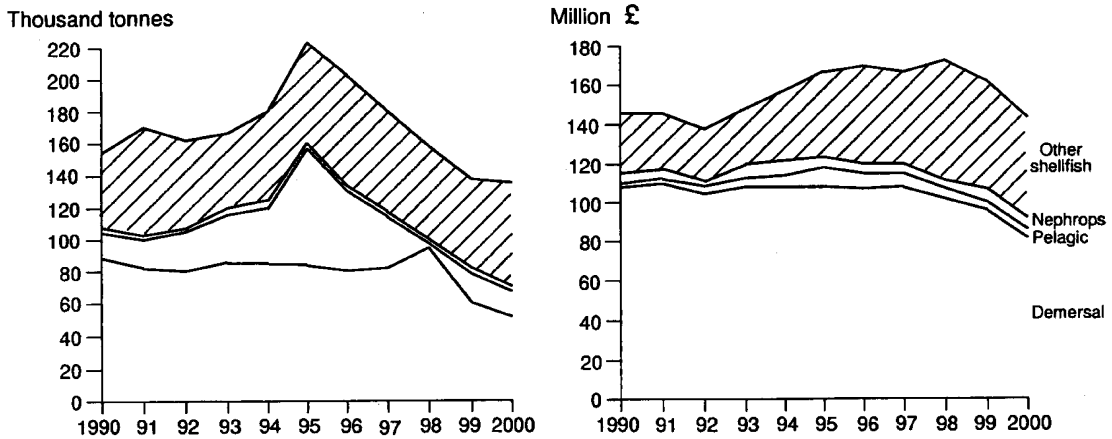

Figure 3.1 Landings by UK vessels into England and Wales, 1990-2000
Source MAFF/DEFRA, Sea Fisheries Statistics

3.2 Regional analysis

Notwithstanding the essential diversity in inshore fisheries alluded to above, it is possible to identify some five or six 'natural regions' around the coasts of England and Wales, based partly on environmental conditions and partly on patterns of exploitation:

(i) *The north east*, stretching from the Scottish border to the Humber Estuary, is characterised by rocky coastlines and a relatively rapidly sloping seabed down to 30+ m in depth. With prevailing coastal currents from the north, the bottom water is rarely warmer than 12^{o}C, though with stratification of the waters in summer surface temperatures of 14+^{o}C are widespread. These conditions favour cod, haddock, saithe, plaice and herring though warmer water species, such as mackerel, are found in the surface layers in the summer. Significant stocks of edible crab and European lobster are found along the coast together with important *Nephrops* stocks in the Farne Deeps. Whelks and edible crab are also fished offshore (6-12 nm and beyond) but with a few minor exceptions, there are no commercially exploited bivalve mollusc populations.

Off the Northumbrian coast modern under 10 m boats use 'twin-rig' trawls for *Nephrops* as well as for cod and other roundfish species, while traditional cobles may use light trawls on sandy grounds for flatfish but are more likely to deploy static gears. Winter longlining has been largely superceded by monofilament bottom-set gill, trammel or tangle nets. The traditional summer inshore fishing for crab and lobster using parlour pots has, in some instances, been extended into a year round activity with larger boats often fishing well outside the inshore zone.

(ii) *The eastern region*, lying between the Humber and Thames estuaries, is characterised by soft sediments, primarily sand, sloping gently to depths of less than 30 m. The shallow waters help to ensure that the water column is well mixed throughout most of the year, with little difference in the seabed and surface temperatures of around 5+^{o}C in winter and 15+^{o}C. Cod are still widespread, particularly in winter, but haddock and saithe are much less common. There are major spawning grounds for plaice and sole, the latter especially in the Thames Estuary. During the summer, the resident species are joined by warmer waters migrants - bass, mackerel, horse mackerel and mullets. Crustacean fisheries may be locally important but commercially exploited stocks are not widespread. In contrast, there are significant stocks of cockles in The Wash and Thames Estuary; oyster cultivation is widespread in sheltered coastal waters from north Norfolk southwards to the north Kent coast.

Small inshore trawlers use relatively light gears, including 4 m beam trawls deployed by the more powerful vessels, to target flatfish, especially in the spring sole fishery in the outer Thames Estuary. Monofilament, bottom set static gears are used throughout the year with the style and rig of the nets varying with the seasons and target species: cod and whiting in winter, flatfish, rays and bass in summer. Within both the Wash and Thames Estuary there are regulated cockle fisheries of national importance, while oysters are cultivated in the Essex estuaries and along the north Kent coast. Lightweight beam trawling for brown and pink shrimp also occurs in the Wash.

(iii) In terms of its physical environment and the range of commercially exploited species, *the southern region* - comprising the eastern English Channel (ICES Division VIId) from North Foreland to Durlstone Head - is broadly similar to the previous region. In essence, it constitutes a transition zone between the eastern and south western regions. Plaice and sole are found throughout the year; bass, mackerel and mullets move into the coastal waters in summer; and cod are present in winter. Inshore chalk reefs along the east Sussex coast and numerous shingle banks and rock ledges to the west offer suitable habitat for crab and lobster. There are no significant cockle stocks but commercially exploited natural stocks of native oyster are found in the Solent and Pacific oysters are cultivated in the Hampshire Harbours and in the creeks around the Solent, Southampton Water and Poole Harbour. In addition, feral stocks of Manila clam and natural mussel beds, are exploited in Poole Harbour.

Inshore trawling, mainly for flatfish, occurs on the sandy grounds off the Kent and Sussex coasts and set-net fisheries for flatfish and bass are found throughout the region, while potting for crab and lobster is more common towards the western part of the region and around the Isle of Wight. Within the Hampshire Harbours (Chichester, Langstone and Portsmouth) - and more especially in the Solent and Southampton Water - there are locally important dredge fisheries for native oysters and hard shell clams. Fishing for scallops occurs in the eastern part of the region and the cultivation of Pacific oysters takes place in the western part.

(iv) *The south west*, including the western English Channel (VIIe) and Bristol Channel (VIIf), has a varied inshore environment of rocky substrates and reefs intermixed with areas of shingle, sand and occasional muds. The seabed shelves steeply from the shore with the 50 m isobath corresponding more or less with the 12 nm limit throughout the region. Strong stratification occurs in summer with an associated frontal system in the area of south Devon. Water temperatures near the seabed rarely drop below 10^{o}C. The variety of commercial species is greater than in any other coastal region in England and Wales, but none of the stocks is particularly large. Plaice, sole, cod and herring are all present but it is the warm water species like mackerel, pilchard, bass and red mullet that characterise the inshore finfisheries. In addition to lobster and particularly crab, crawfish are exploited in small numbers, together with shrimp in the Bristol Channel. Scallops are widespread and there are significant stocks of mussels in the Exe Estuary and cockles in the Burry Inlet. Pacific oysters are also cultivated in the south Devon estuaries and in the creeks of the Fal-Helford estuary and Milford Haven.

Trawling by under 10 m boats features quite strongly, mainly from the south coast ports of Brixham, Plymouth and Newlyn, with plaice and lemon sole the main target species. Bottom set-net fishing occurs widely for bass, turbot, rays, crabs, lobsters and crawfish; crabs and lobsters are also caught in the traditional inkwell pots and, increasingly, in the modern parlour pots.

(v) *St Georges Channel and* (vi) *the Irish Sea* (ICES Division VIIa), stretching from St David's Head in Wales to the Scottish border, is considered by ICES as a single Division but can be divided into two quite distinct parts by reference mainly to the prevailing substrates. The coastline of the St George's channel from Pembrokeshire to the Llyn peninsula is essentially rocky with rock and cobble reefs both numerous and widespread. Along the coast of the Irish Sea proper soft sediments are much

more common, including extensive areas of mud or muddy sands around Liverpool and Morecambe Bays and the Solway Firth. Waters in the St George's Channel and in the eastern Irish Sea tend to be well mixed throughout the year, with a strong frontal feature across the North Channel between Scotland and Northern Ireland marking the northern boundary of the Irish Sea. Stocks of fish and shellfish tend to be sparse in the St George's Channel, though crab, lobster, pandalid prawn and the occasional crawfish are more widespread. Within the eastern Irish Sea the dominant species are cod, whiting, plaice, sole and *Nephrops*, with the inshore waters of north Wales, the Ribble Estuary, Morecambe Bay and Solway Firth providing important nursery areas for plaice and sole. Commercially significant cockle stocks occur in the Solway, Morecambe Bay, Dee Estuary and Menai Strait, together with extensive natural and cultivated mussel beds in all but the Dee. Shrimp stocks are exploited in the Ribble Estuary, Morecambe Bay and Solway Firth.

In the St George's Channel fishing is mainly limited to small boats, often well under 10 m, fishing close inshore and using mainly pots and bottom nets for crab, lobster and bass. Further north, in the Irish Sea, potting is less common and the main inshore crustacean fishery uses shank nets (lightweight beam trawls without trawl heads) for brown shrimp. Bottom set-net fishing is widespread with sole and rays the main targets in spring. In addition to the exploitation of the cockle and mussel beds, small scale oyster cultivation occurs in the Menai Strait and on Walney Island.

3.3 The economic significance of inshore fisheries in England and Wales

Any attempt to quantify the economic importance of inshore fisheries in England and Wales is bound to be an exercise in guesswork based on limited data available for the <10 m fleet and an informed understanding of the nature of inshore fisheries.

According to incomplete data made available by Department of Environment, Food & Rural Affairs (DEFRA), the <10 m fleet in 2001 comprised some 3506 boats or roughly 80% of all registered fishing boats in England and Wales. Assuming an average of 1.3 man per boat, the number of inshore fishermen is in the region of 4500 or approximately 60% of total employment in the harvesting sector. It is reasonable to suppose that most of the registered part time fishermen in England and Wales are to be found in the < 10 m sector, suggesting that between 35 and 40% of all inshore fishermen are engaged part time in the fishing industry.

DEFRA statistics, gathered from a variety of sources and unlikely to provide more than a rough approximation of the revenue generated by the <10 m fleet, nonetheless indicate a first hand sales value of *circa* £26 million in 2000 (see Table 3.2) - a figure which would account for *circa* 18% of all landings by UK vessels in England and Wales. What is clear from Table 3.2 is that the economic significance of inshore fisheries is very much stronger along the southern coasts of England and Wales. Two of the five 'natural regions' - Southern and South West - together account for almost two thirds of the value of landings from the <10 m fleet. Bearing in mind the existence of an internal 'grey' market for the handling of inshore catches from small boats, the figure of £26 million is likely to be an underestimate. Even allowing for the fact that many <10 m boats can and do fish outside the 12 nm limits, there are likely to be significant numbers of larger vessels fishing at least part of the time within inshore waters. Moreover, a small proportion of inshore 'landings' do not involve the use of

a boat. Taking these facts into consideration, it is more than likely that inshore landings exceed £30 million or 20% of the total value of landings in England and Wales.

Table 3.2 Landings by 10 metre and under overall length boats, by fishing region

Region	10 metre and under boats	
	Number (2001)	Landings £k (2000)
North East	417	3,951
Eastern	463	4,239
Southern	743	7,086
South West	1216	9,028
St George's Channel and Irish Sea	353	1,550
Total	3192	25,854
Unlocated	(314)	(131)
Total	3506	25,985

Source: DEFRA

Indeed, the actual values may be considerably higher. The *Study into Inland and Sea Fisheries in Wales* (Nautilus Consultants, 2000), commissioned by the National Assembly for Wales, also using relatively crude estimation techniques, arrived at a total annual value of £8.9 million for the inshore commercial fisheries in Wales. This figure comprised two elements: inshore vessel landings valued at £6.7 million and shorebased fishing at £2.2 million. Yet the Welsh fishing industry only accounts for 12% of the <10 m fleet registered in England and Wales. A simple multiplication of the value of Welsh inshore fisheries by a factor of eight to arrive at a proportionate figure for England and Wales would yield a total value in excess of £70 million - or nearly half the total value for all sea fisheries in England and Wales. This is almost certainly a gross overestimate.

An alternative approach is to disaggregate the value of landings for England and Wales of £143.3 million given in DEFRA's *Sea Fisheries Statistics* for 2000. Assuming that most shellfish landings (excluding *Nephrops*) are derived from inshore waters, and allowing for a fairly conservative estimate that 3.5% of demersal and pelagic landings are taken in inshore waters, the total annual value of the inshore sector would be close to £50 million or slightly more than one third of the value of all landings.

Using the three different estimates, it would seem reasonable to argue that the total value of commercial inshore fisheries in England and Wales lies somewhere in the range of £30-40 million - that is between 20 and 28% of all landings in England and Wales.

3.4 Recreational fisheries

It is abundantly clear that commercial fisheries alone do not adequately describe the economic value of the inshore waters. Sea angling has become a major recreational activity with an estimated one million people taking part on at least one occasion a year, mainly in the summer and at the weekend. However, with growing disappointment at the lack of sport due to depleted stocks of fish there is a tendency for new entrants to abandon sea angling at a relatively early age, while others are participating less frequently. Although in theory there is a degree of competition between commercial and recreational fishermen who target the same

stocks, in practice the competition is minimal partly because many sea anglers are now adopting a 'catch and release' approach to their sport. Much more significant than the market value of the catch is the level of expenditure by recreational fishermen in pursuit of their sport. Again, it is difficult to arrive at any reliable estimate of the direct contribution made to the coastal economy. In the case of Wales, the Nautilus Consultants' report (2000) cites a gross contribution to the coastal economy of circa £28 million, based on an estimated 40,000 local and visiting sea anglers, spending on average 15 days a year in their sport, with more than half the total expenditure attributable to charter boat angling. Significantly, Nautilus' estimate of 40,000 sea anglers falls well short of the Welsh Federation of Sea Anglers own estimates of around 250,000 active participants, in the sport. On this basis, it is certainly not unreasonable to project an overall annual expenditure of £125-150 million for England & Wales as a whole - a figure well in excess of the value of commercial landings.

3.5 Inshore fisheries and fisheries dependent areas

Overall, therefore, the estimated gross value of commercial and recreational fishing activities in inshore waters of something well in excess of £150 million represents a not insignificant contribution to the coastal economies of England and Wales. Locally, inshore fisheries assume an even greater relative significance, especially in those areas which have a higher than average dependence on the fishing industry for employment. In truth, it is hard to find any fisheries dependent areas in England and Wales. A survey carried out in the mid-1990s (Commission, 1999b) as part of the European Commission's Regional Socio-Economic Studies, identified only a handful of travel-to-work areas (TTWAs) where fishing or fishing related activities contributed more than 1% of employment or gross domestic product (Table 3.3). Apart from Grimsby, and to a lesser extent Lowestoft, where fisheries dependence is associated more with fish processing than with fishing, the areas identified in Table 3.3 all have a fairly strong component of inshore fishing activity. None, however, compare even remotely with the level of fisheries dependence found in parts of northern Scotland (Fraserburgh, 20.5%; NW Sutherland, 17.5%; Skye and Wester Ross, 14.1%; SW Sutherland, 13.0%; Peterhead, 12.5%; and Shetland, 12.0%).

Table 3.3 Fisheries Dependent Areas in England and Wales, 1996 (%)

TTWA	Employment			Gross Domestic Product		
	Fishing	Processing	Total	Fishing	Processing	Total
Grimsby	0.2	3.4	3.6	0.3	2.0	2.3
Newlyn	2.9	0.4	3.3	2.1	0.2	2.3
Whitby	2.3	0.0	2.3	2.0	0.0	2.0
Amble	1.1	1.2	2.3	0.8	0.3	1.1
Lowestoft	0.5	1.0	1.5	0.7	0.4	1.1
Brixham	1.1	0.1	1.2	1.0	0.1	1.1

Source: Commission, 1999b

At a more local level in England and Wales - that of the individual fishing port - the importance of the fishing industry, and especially the inshore sector, will in many instances be much more pronounced. In Cornwall, for example, dependence on fishing for employment in 1996 exceeded 10% in eleven ports with Helford and Manaccan (89.0%).

Coverack (41.7%), Cadgwith (40.6%), Mevagissey (30.0%), Padstow (30.6%), Portloe (25.0%) and Looe (20.4%) all exceeding fishing related employment values of 20% (Commission, 1999). All are essentially inshore fishing ports.

3.6 Conclusions

What emerges from this brief description of inshore fisheries in England and Wales is not only the huge variety of fishing activity taking place within inshore waters but, rather more surprisingly, the considerable economic value that attaches to the commercial and recreational fisheries. Although the estimates are based on a considerable degree of guesswork, they have been conservatively calculated and, if anything, are pitched on the low side. Nonetheless, they provide some indication of the national, regional and local importance of the resources subject to IFM.

4. Inshore fisheries management in the UK: the legislative basis

4.1 A hierarchical structure to IFM

Throughout the European Community, inshore fisheries are at present subject to a hierarchical system of management comprising at least two, possibly three and occasionally four clearly identifiable tiers of management: EC, national, regional and local. As was described in Chapter 2, the basic regulations of the CFP - especially those relating to TACs and quotas, minimum landing sizes (MLS), gear restrictions and closed areas and/or seasons - apply throughout Community waters. Member States do, however, have powers to vary the technical conservation measures referring, to gear regulations and MLS, but only to the extent that they can set more (rather than less) rigorous rules; such amended rules can only apply to Member State vessels. But as most inshore fisheries are either unregulated by the CFP or subject only to minimal forms of regulation (eg through MLS), the scope for Member States to develop distinctive, robust and comprehensive inshore management regimes is quite considerable.

These opportunities rest solely on the continuation of the access derogation in respect of the 6 and 12 mile limits. Were this derogation to be terminated, then it would be hard to see how any of the present concessions to Member States to allow them to develop independent systems of IFM could survive. Responsibility would almost certainly revert to Brussels. Arguments in favour of such a change after 2002 have not so far found much apparent support in the debates about the reform of the CFP. They are formulated primarily by those who would prefer to see the idea of free competition, implicit in the Single Market, extended to include the harvesting sector through the removal of all constraints on the principle of equal access agreed among the EC6 (Belgium, France, Germany, Italy, Luxembourg and the Netherlands) in 1970 (Marino, 2001). Should the countervailing principle of 'relative stability' hold firm after 2002, there is little reason to doubt that the current access derogation will remain in place.

At present Member States have the opportunity to delegate all or part of their responsibilities for IFM to national, regional or local organisations, usually with a strong degree of participation from the industry itself. As indicated in Chapter 2, the devolved, regional option has only been taken up fully by a handful of Member States, including England and Wales through the network of Sea Fisheries Districts and their quasi-independent management committees, but not Scotland or Northern Ireland.

It is also possible to discern a fourth tier of local management in parts of Europe: the *prud'homie* in Mediterranean France, independent of the *comités des pêches* and usually referring to a somewhat smaller geographical area, would be one such example. In England and Wales, several and regulating orders applied to molluscs and crustacean fisheries might be looked upon as the lowest tier of management, though in most cases these orders come under the direct supervision of the SFCs (see Chapter 6).

All national, regional and local management measures must be consistent with the principles and practice of the CFP. Brussels, in fact, maintains a watching brief over all management initiatives introduced at lower levels in the hierarchy: thus, all national policy proposals -

including, for example, SFC byelaws - have to be forwarded to the Commission for scrutiny before being approved by the competent Member State authority.

As a result of these different levels of management, three quite clearly defined zones can be identified around our coasts: an inner zone extending to 6 nm from the shoreline, quite heavily regulated by means of technical conservation measures introduced by SFCs; an outer zone (12-200 nm) under the control of the CFP where management is based primarily on TACs and national quotas and supported by technical conservation measures; and, sandwiched between the two, an intermediate zone (6-12 nm) where the coastal state's scope for supplementing CFP regulations may be quite severely constrained by the presence of foreign vessels exercising their historic fishing rights.

Although this hierarchical regulatory system - and more particularly the presence of several different tiers of management and the possibility of disjunctures of management regimes operating in the three zones - may cause some irritation on the part of local managers and give rise to anomalies and discrepancies in management practice, it does overall present a fairly sound and logical structure. It would clearly benefit from the adoption of the Commission's proposal for Member State regulations to apply to *all* vessels fishing within the 6-12 nm zone irrespective of their country of origin (Commission, 2001c: 29). Rather more problematic may be the existence of gaps within the national system for IFM, the overlap of responsibilities between national and regional organisations, as in the case of the SFCs and the Environment Agency, and the complicated mosaic of local regulations created by the uncoordinated actions of neighbouring management organisations.

4.2 A polarity of management approaches in the UK: the Scottish system of IFM

Even prior to Scottish devolution in 1999, two distinct systems of IFM had emerged either side of the Anglo-Scottish border: to the south a fully devolved statutory system of 12 Sea Fisheries Districts each with its own management committee, and to the north a centralised system where management responsibility remained securely vested in the Scottish Office Agriculture, Environment and Fisheries Department (SOAEFD). The Scottish Office had aligned itself with the recommendations of the Cameron Report (1970) which rejected the idea of local fisheries management structures in Scotland, principally because of the difficulties of marrying the interests of the local inshore fishermen and the more mobile deep sea fleets, which dominated the political scene. It is important here to recognise that because the baseline encloses the waters between the mainland and the Western Isles (the Minches), the area of inshore waters is much more extensive than in England and Wales. Powers granted to the Secretary of State were used to regulate mobile and static gear fisheries in parts of the Outer Hebrides by means of voluntary agreements developed through Area Access Committees and the constituent Port Committees (Symes and Phillipson, 1997).

Following devolution some significant developments have taken place. The Scottish Executive's policy statement *Working Together for Scotland: A Programme for Government* (2001) includes an explicit objective to encourage greater local involvement in inshore fisheries. So far this has involved the setting up in 1999 of a Scottish Inshore Fisheries Advisory Committee, chaired by a senior civil servant and comprising representatives from the fishermen's organisations, Sea Fish Industry Authority, Scottish Natural Heritage, Highlands and Islands Enterprise and the Convention of Scottish Local Authorities. Although its early meetings were largely concerned with identifying functions and some

'ritualistic foreplay', the Committee has recently begun to make its mark, bringing a series of specific policy recommendations to the Scottish Executive's Environment and Rural Affairs Department (SEERAD) which now oversees Scotland's inshore fisheries.

But thus far, in terms of local management initiatives there has been relatively little change from the pre-devolution stance taken by SOAEFD. Any such initiatives remain essentially rooted in the voluntary principle and there has certainly been no movement towards developing a devolved statutory framework for IFM similar to that provided by the twelve SFCs in England and Wales. Instead, SEERAD has continued to encourage the establishment of 'local' regulating orders, which apply only to shellfish (see 5.3), under the supervision of specially constituted local management committees. Unlike their counterparts south of the border, the regulating orders cover very much larger areas and are essentially regional rather than local in scale. To date only the Shetland Order is fully operational but several others including Orkney, the Solway Firth - set up jointly with Cumbria SFC - and one proposed for the mainland coast of north west Scotland stretching from Ardnamurchan in the west to Nairn in the east, incorporating a coastline 'longer than that of France', are in various stages of completion. Unlike regulating orders in England and Wales, which are mainly under the aegis of the SFCs with their own independent enforcement capabilities, those in Scotland are likely to remain dependant on 'self-regulation'. The Scottish Fisheries Protection Agency has already turned down requests from Shetland to undertake the enforcement of the regulating order. Moreover, the status of regulating orders in Scotland could prove vulnerable to legal challenge from disadvantaged and disaffected fishing interests.

There is one further significant difference between inshore management in Scotland and that south of the border, namely the need to embrace the burgeoning aquaculture sector. This has already given rise to somewhat uneasy relationships with local fishing interests, marine nature conservation and the tourism industry over concern for water quality, the possibility of disease transmission and genetic interference from escapees and the 'visual pollution' of the coastal landscape. Hitherto, throughout most of Scotland management responsibilities have been divided between the Crown Estate Commissioners with powers to grant licences for the establishment of marine fish farms, the River Purification Boards, now the Scottish Environment Protection Agency (discharge consents) and the local authority (planning consent for land based infrastructures). An important variation on this fragmented management authority has been in place in Shetland since the mid-1970s, following a private Act of Parliament (*Zetland County Council Act 1974)* which gave the local authority powers to regulate all development in its coastal waters (Van der Schans, 1999).

Legislation is currently in hand to transfer overall responsibility for the licensing of marine aquaculture sites to the local authorities in an attempt to increase the transparency of the system operating throughout most of Scotland and to bring it more firmly under local accountability. But the need for more effective integration of aquaculture with IFM remains.

4.3 Inshore fisheries management in England and Wales: the legislative framework

One of the most frequent complaints from within the inshore sector – and especially from those charged with its management – is that the principal legislation governing IFM in England and Wales has become seriously outdated to a point where it now constrains the very effectiveness of the management system. The core legislation (see Box 4.1) dates from the

mid-1960s, that is from a time before the UK's accession to the European Economic Community in 1972 and the extension of national sovereignty to 200 nautical miles in 1977. More importantly the legislation was drafted at a time when, relatively speaking, there was much less commercial interest in the inshore sector – Britain still depended on its distant water fleets to sustain the demands of the national consumer market – and very little public concern for the state of the marine environment in inshore waters.

Box 4.1 Summary of legislation governing IFM in England and Wales

Legislation	Relevance to IFM
Sea Fisheries Regulation Act 1966	Consolidates the provisions of Sea Fisheries Regulation Acts 1888 – 1930, confirming the establishment of Sea Fisheries Committees (SFCs) in England and Wales, setting out the constitution of the committees and the appointment of sea fisheries officers to enforce SFC byelaws.
Sea Fisheries (Conservation) Act 1967	Consolidates provisions for the regulation of sea fisheries and authorises measures for improvement of resources by the issuing of statutory instruments, for example, to restrict the commercial use of undersized fish, to restrict the size of vessels using mobile gears within the District, to regulate the use of nets and gears… and powers to restrict fishing by order of the Minister and to take measures to increase or improve resources.
Sea Fisheries (Shellfish) Act 1967	Authorises the Minister to make, by order, regulations for the establishment or regulation of shellfish fisheries (several and regulating orders). Holders of orders have exclusive rights of deposition, propagation, dredging for and taking shellfish; consolidates previous Acts.
Salmon and Freshwater Fisheries Act 1975	Lays down the legislative framework for salmon and freshwater fisheries in inland and coastal fisheries (<6 nm): prohibits the use of certain fishing methods, establishes rules governing closed seasons and allows for the regulation and salmon and migratory trout fishing through licensing schemes for both rod and line and commercial net fishing; grants powers to water bailiffs for the purpose of enforcing these regulations.
Water Resources Act 1991	Imposes a duty on the National Rivers Authority (now the Environment Agency) to maintain, improve and develop salmon, trout and eel fisheries within 6 nm of the baseline.
Sea Fisheries (Wildlife) Conservation Act 1992	Requires Ministers and relevant bodies (including SFCs) to have regard to the conservation of marine fauna and flora in discharging their functions.
Conservation (Natural Habitats, etc) Regulations 1994 (SI NO 2716)	Authorises the making of regulations for implementing the Habitats Directive (92/43/EEC).
Environment Act 1995	Establishes new byelaw making powers for SFCs *inter alia* and makes provision for the representation of wildlife conservation interests on the committees; also establishes the Environment Agency (EA).

Source: based on Phillipson and Symes (forthcoming)

Moreover, the 1960s legislation still bears the imprint of earlier legislation and reflects the origins of the system of IFM in the late 19th century. It, therefore, fails to provide a relevant or appropriate framework for the management of what has emerged, largely since the 1960s, as a highly dynamic, innovative sector of the UK industry operating within what is today a more intensively exploited, competitive and conflictive environment. In particular, the current legislation fails to give those directly responsible for IFM the powers to limit the growth of fishing effort through the introduction of restrictive licensing systems (except by way of regulating orders). The main mechanisms for regulating inshore fisheries – byelaws – mean that local management can only be reactive. Byelaws cannot be introduced to control new methods of fishing before it can be demonstrated that they have an adverse impact on the fishery. As Huggett and Bartram (1994) point out, proactive management is constrained by the need to prove that a new byelaw is necessary for management or conservation of the fishery and by the lengthy delays which appear to characterise the byelaw making process (see 6.2). In effect, therefore, the conditions of the *Sea Fisheries Regulation Act 1966* prevent the application of what has become recognised as a fundamental principle of good fisheries (and environmental) management: the precautionary approach.

Possibly the sternest challenge to the system of IFM envisaged in the 1966/67 legislation has come from the growing concerns about the state of the marine ecosystem, the need to protect endangered species and threatened habitats and the requirement to demonstrate compliance with various global and regional concordats, conventions and treaties relating to marine environmental protection. This challenge, seen by most as inevitable, has been variously interpreted as a threat to existing fishing practice and as an opportunity for a radical change to the nature and ethos of IFM. It is doubtful, however, whether the makeshift changes to the roles and responsibilities of SFCs brought about by supplementary legislation in the 1990s have created the ideal framework for the realisation of an effective integrated management system for inshore waters.

These changes came largely, but not exclusively, as a consequence of the two major European environmental Directives on the *Conservation of Wild Birds* (79/409/EEC) and on *Natural Habitats and the Wild Fauna and Flora* (92/43/EC). The *Sea Fisheries (Wildlife Conservation) Act 1992*, promoted originally by the Royal Society for the Protection of Birds, imposed a duty on SFCs to consider the environmental implications of decisions taken in the exercise of their normal functions – an innocent enough obligation. Later, the *Conservation (Natural Habitats etc) Regulation 1994* required SFCs, along with other marine regulating authorities to exercise their functions in respect of Special Areas of Conservation (SACs) so as to secure compliance with the requirements of the Habitats Directive. At the same time the Regulation recognised SFCs as among a number of 'competent and relevant' authorities with powers to implement regulations relating to the marine environment. But it was the *Environment Act 1995* which had the most direct impact, redefining the structure and role of SFCs so that they could more effectively fulfil their new responsibilities in relation to the marine environment. Specifically the act permits SFCs to use their byelaw making powers to regulate fisheries for environmental reasons and it also makes provision for the inclusion of persons with environmental expertise among the appointed members of the committees (Symes and Phillipson 1997). In effect, the remit of the SFCs is significantly widened and the workload considerably increased but without adding substantially to their armoury nor to their basic resources. The implications of this realignment of IFM is considered further in Chapter 7.

4.4 Inshore fisheries management in other parts of the British Isles

In order to complete this brief overview of IFM within the UK mention must be made of arrangements made in Northern Ireland and in the quasi-independent island communities of the Isle of Man and the Channel Islands.

Sea fisheries in Northern Ireland are managed centrally by the Department of Agriculture and Rural Development (DARD) which forms part of the Northern Ireland Executive. Under the terms of the *Fisheries Act 1966* and the *Fisheries (Amendment) (Northern Ireland) Order 1991*, the Department is empowered to introduce secondary legislation and to make several and regulating orders similar to those in England and Wales (see 6.3). An important feature of inshore management is the need for cross-border arrangements in Loughs Foyle and Carlingford, including supervision of the salmon and trout fisheries and aquaculture development which is currently undertaken by the Foyle, Carlingford and Irish Lights Commission. Following the 'voisinage agreement' of the 1950s, fishermen from Northern Ireland and the Irish Republic share equal rights of access within the Irish Sea, subject to the recognition of various byelaw regulations introduced by either of the two administrations. Apart from the fisheries of the designated Marine Nature Reserve of Strangford Lough, which are regulated through the *Inshore Fishing (Prohibition of Fishing and Fishing Methods) Regulation 1993*, there is little direct control of commercial fishing in the intertidal zone in Northern Ireland (Edwards and White, 2001).

Within so-called British territorial waters are two distinct entities which are more or less independent of the UK government in terms of the administration of their inshore fisheries. In the case of the Isle of Man – a Crown dependency - the Department of Agriculture, Fisheries and Forestry (DAFF) is responsible for initiating policy within the 0-12 nm limits, and under the terms of the *Sea Fisheries Act 1971* is empowered to make byelaws similar to those in England and Wales (see 6.2), to issue special licences for vessels fishing within three miles of the Manx coast, and to appoint sea fisheries officers charged with enforcing the byelaws. In practice, DAFF has exclusive authority to regulate fishing within a 0-3 nm zone and, since 1991, can formulate byelaws for the regulation of sea fisheries within the 3-12 nm limits subject to the 'concurrence' of the UK government – nominally the Lord Chancellors office which takes appropriate advice from DEFRA.

As the Isle of Man is not a full member of the EC, Manx boats presently fish against UK quotas, though the number of vessels fishing for whitefish pressure stocks is small. The majority of the commercially licensed fleet is engaged in fishing for scallops and queen scallops, with around 60% of the catch taken within the 12 nm limits. Scallop fishing is regulated by a combination of gear restrictions referring to the size and number of the dredges, minimum landing size (110 mm), a closed summer season (1 June – 31 October) and limitations on the hours of fishing (0600 – 1800 hours within the 3 nm limits and 0500 – 2100 hours in the 3 – 12 nm zone). Separate licensing regimes cover the fishing of crab, lobster and whelks within the 0 - 3 nm zone. The island's fishing industry is anxious to broaden its very narrowly based range of fishing activities and there are proposals for the purchase or lease of quotas mainly in roundfish species as the basis for establishing an independent producers' organisation.

Finally, although the Channel Islands share something of the traditions of inshore fisheries management in England and Wales, they probably have more in common with the inshore

fisheries of France as their proximity to that country's mainland coast would suggest. The Channel Islands are administered as two separate groups or bailiwicks: the island of Jersey and Guernsey, which covers all other islands except Jersey. Once again, Channel Island fishermen fish against UK quotas where appropriate and their fisheries officers hold both local and British Sea Fishery Officer status. Liaison between the islands' fisheries departments and DEFRA is necessarily quite close. Similarly, interactions between the two separate island administrations are both frequent and essential, though in the case of Jersey the maintaining of close relations with their counterparts in France in perhaps even more fundamental. In both Jersey and Guernsey, there is a relatively strong level of participative governance with the Sea Fisheries Advisory Panel in Jersey and the Guernsey Sea Fisheries Committee each having a direct line of access to the relevant fisheries department which has virtually autonomous powers to regulate fisheries within their own 0-12 nm limits.

One of the more interesting recent developments concerning IFM in the Channel Islands has been the signing of the *Granville Bay Treaty 2000*, hopefully bringing to an end long running disputes between Jersey and local French shellfish interests over the regulation of the important crustacean fisheries in the narrow strait separating Jersey from the Cherbourg peninsula. The agreement, brokered between the French and UK governments - the latter acting on behalf of the Jersey authorities - has defined a management zone, established a joint advisory committee (including four fishermen from each of the Jersey, Breton and Basse Normandie regions, together with biologists and administrator) which will advise the respective authorities on appropriate management measures, and make arrangements for their enforcement (Bossey, 2000).

5. Inshore Fisheries Management in England and Wales: Sea Fisheries Committees - understanding the diversity

5.1 Introduction

The role of SFCs, as the primary statutory organisations concerned with the management of inshore fisheries in England and Wales, was confirmed in the *Sea Fisheries Regulation Act 1966.* The geographical pattern of Sea Fisheries Districts has evolved over time since the establishment of eight committees in the period immediately following the 1888 Act to the present situation where, since the separation of the Isles of Scilly from the Cornwall Sea Fisheries District in 1972, there are 12 autonomous SFCs (see Figure 5.1). Various attempts at restructuring the system of local government in England and Wales – without redefining the lateral boundaries of the Sea Fisheries Districts – have left a number of minor anomalies. Otherwise, the geographical definition of the Districts normally approximates to local authority (ie county council) boundaries. Seaward, the jurisdiction of the SFCs was extended as recently as 1993, from the original nineteenth century definition of 3 nautical miles from the baseline to 6 nautical miles. Landward, the committees' authority extends to the high water mark and, in the case of major river estuaries, to a point normally coincident with the lowest bridging point. There are, however, certain exceptions – usually the result of specific historical events – where formerly the National Rivers Authority and now the Environment Agency (EA) assume the role of a sea fisheries committee in the administration of sea fisheries within estuarine waters, in addition to their normal regulatory responsibilities in relation to salmon and freshwater fish. The most remarkable of these exceptions occurs in the Bristol Channel where there is no statutory SFC covering the area of the Severn Estuary from roughly the eastern boundary of Devon through to the western boundary of Gwent in South Wales: within all of this area, the EA nominally acts as a sea fisheries committee, though the Devon SFC maintains a watching brief throughout much of the Somerset and Gloucestershire coastline. The geographical boundaries to Sea Fisheries Districts do not appear to coincide with any general or specific characteristics of the fisheries contained within them (see Chapter 3). As a result most, if not all, SFCs have to face up to the task of managing complex, multi-species, inshore fisheries and to the need for neighbouring SFCs to share in the management of common, trans-boundary stocks.

Many Districts are simply too large or too complex to be controlled effectively from a single operational centre. In a number of cases, therefore, the Districts are divided into sub-areas for the purposes of administration, data collection and shore based enforcement. This is very much a matter of choice for the individual CFO and is not necessarily governed by the factor of size. For example, both Devon and Cornwall despite having long coastlines to monitor and a clear case for dividing the Districts into northern and southern sub-areas have eschewed the idea of subdivision, while Northumberland with the shortest and simplest of coastlines has chosen to identify three separate sub-areas. The decision may, in fact, be related to the CFO's strategy for maximising the output from relatively limited human and physical resources.

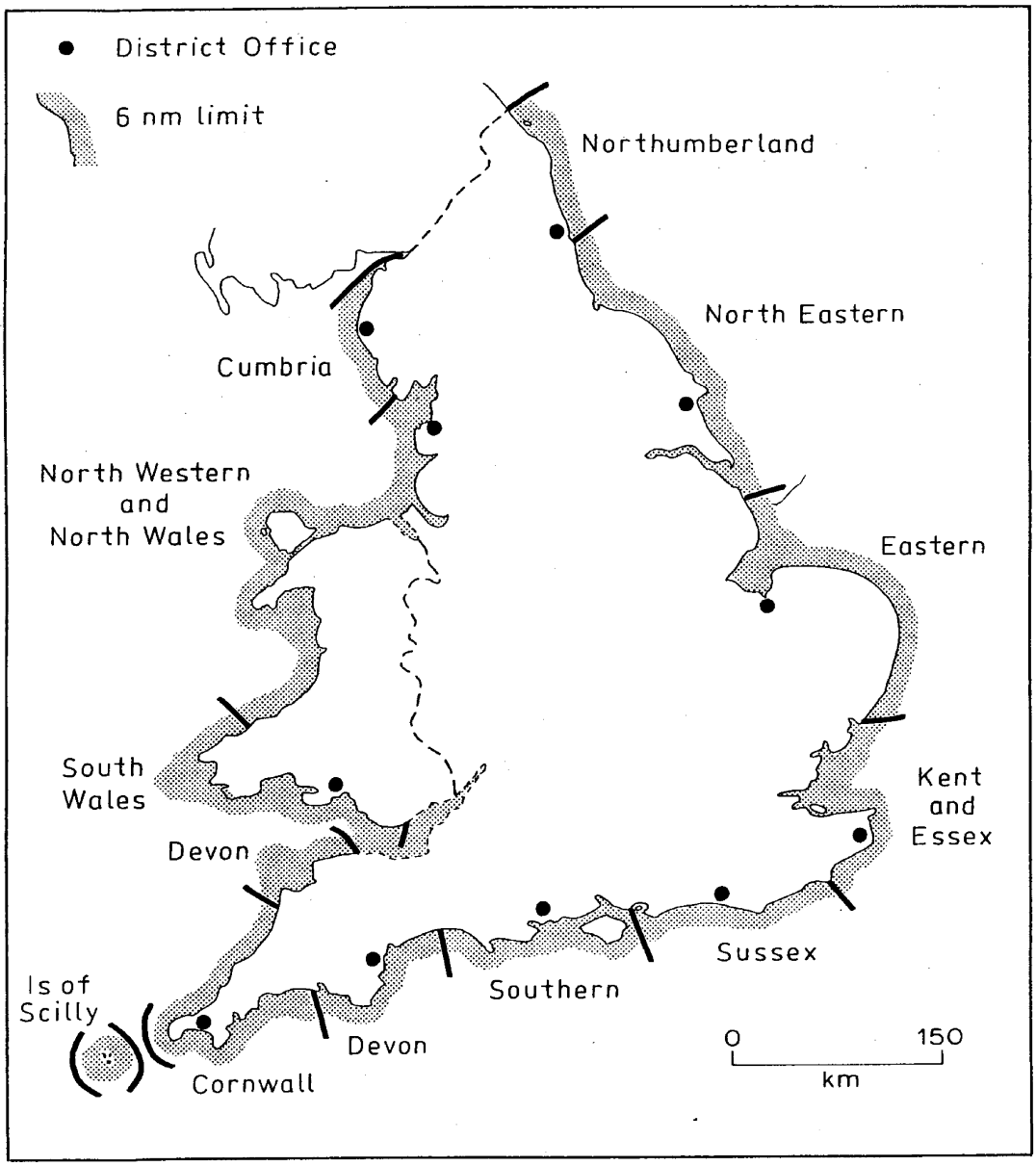

Figure 5.1 Sea Fisheries Districts, 2001

As currently defined, Sea Fisheries Districts in England and Wales vary greatly in terms of their geographical size from the smallest – Northumberland with a coastline of c60 miles and a management area of c360 square miles – to the largest – North Western and North Wales (550 miles: 1935 square miles). The Districts also vary quite markedly in terms of the number of local authorities included within their boundaries. The situation has been further complicated by the effects of recent reorganisation which have introduced an additional element of diversity into the structure of local government in terms of unitary and two tier systems. Only a handful of Districts comprise single authorities (Cornwall, Cumbria and the Isles of Scilly): the rest are divided into anywhere between two and a maximum of eleven local authorities – as in the case of the North Eastern and North Western and North Wales SFCs. In the past each county authority has been expected to contribute to the funding needs of the SFCs, roughly in proportion to their coastal interests. In recent years, however, local government reorganisation has created the opportunity for some restructured authorities to exercise their rights in opting out of any funding obligations (see 5.2 below).

But the diversity shown by the 12 SFCs is by no means confined to their geographical parameters. In terms of funding level, the size and structure of the workforce, the committee structures and the number and content of the regulatory instruments, SFCs are subject to very considerable variation. In short, no two SFCs are alike: there is no standard model by which to describe and compare SFCs. While this makes for some difficulty in assessing the efficiency of the institutional framework for IFM overall, it also means that the analysis will tend to focus upon the diversity, deviations and inequalities that occur.

Attention was drawn to fundamental variations in the key parameters used to describe SFCs by Cornwall SFC's document *Vision 2000: A Successful Past and Now Looking at the Future,* issued in 1996. As it has not been possible to update the basic information given in that document for all 12 SFCs, we are obliged to use the original figures which in the case of financial data refer to 1994/95. Although the detailed circumstances will have altered since the mid-1990s, it is probable that the level of variation between SFCs has remained more or less constant.

The principal question in terms of the evaluation of SFCs as appropriate bodies for the conduct of IFM is whether this diversity is a necessary reflection of the underlying diversity of inshore fisheries throughout England and Wales or simply the unfortunate consequences of history and, as a corollary, whether this diversity enhances or detracts from the management capabilities of the more 'disadvantaged' SFCs.

5.2 The funding factor

The variation in absolute levels of funding is indicated in Figure 5.2 and as is clear from Figure 5.3. the variation bears little or no correlation with basic parameters used to describe the size of the Sea Fisheries District. The suggestion of an unlevel playing field is revealed in Figures 5.4 which demonstrates funding per unit of coastline and per fisherman – and, perhaps more crucially in an organisation where around two thirds of the budget is taken up by labour costs – in the numbers of Fishery Officers per unit of coastline and per fisherman (Figure 5.5). True, there may be particular reasons why some Districts, because of their complex geography or their particular combination of fisheries, need rather more by way of enforcement capability; but such explanations are unlikely to account for the scale of variation demonstrated in the histograms.

It is much more likely that historical relations with local authorities, stretching back over many decades, provide the key to understanding the very unequal levels of funding that SFCs experience. To explore the funding issue more fully would require a detailed examination of SFC budgets to determine how funding levels have increased (or decreased) over time and in relation to the general rate of cost inflation. It would also be instructive to examine the extent to which there are significant differences in the heads of expenditure between different SFCs. Both of these exercises lay outside the remit and competence of this report. Although there are general guidelines for allocating the local authorities' contributions as a share of the total budget, which take account of the length of coastline and the relative importance of the fishing industry in each local authority, there are no rules governing the overall size of the annual budget.

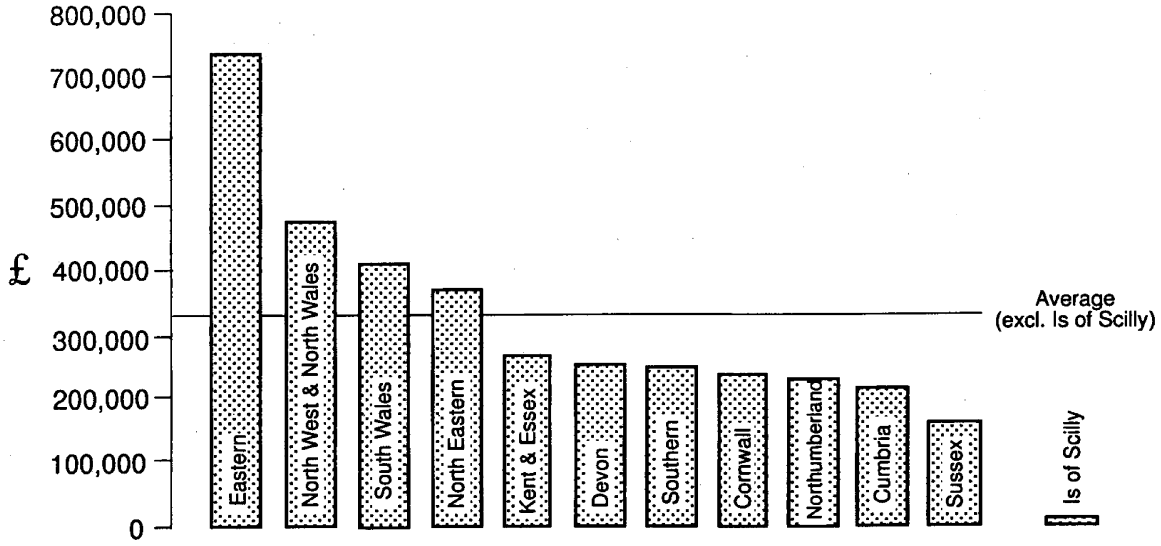

Figure 5.2 Variations in funding of Sea Fisheries Committees, 1994 / 5

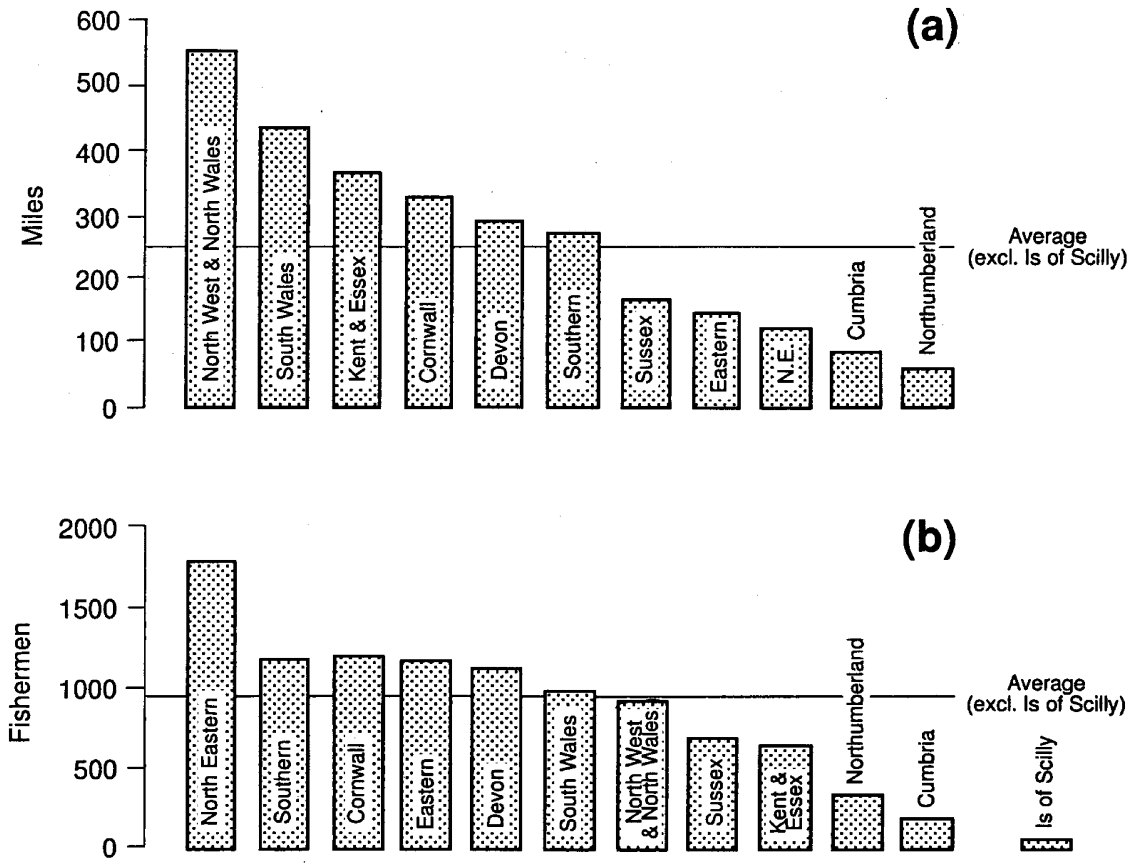

Figure 5.3 Variations in the size of Sea Fisheries Districts, 1996
(a) length of coastline (b) numbers of fishermen

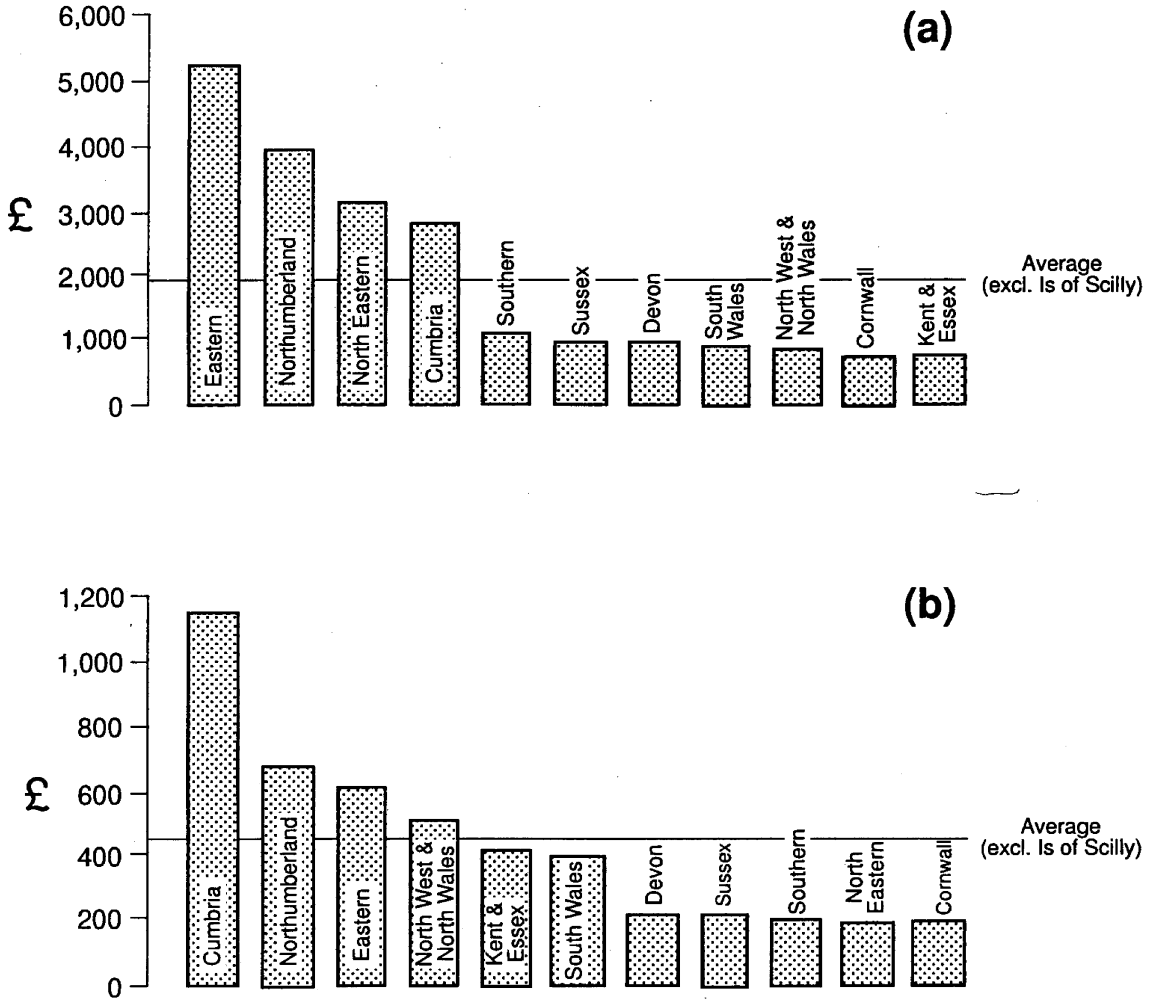

Figure 5.4 Funding of Sea Fisheries Committees in relation to size
(a) expenditure / miles of coastline (b) expenditure per fisherman

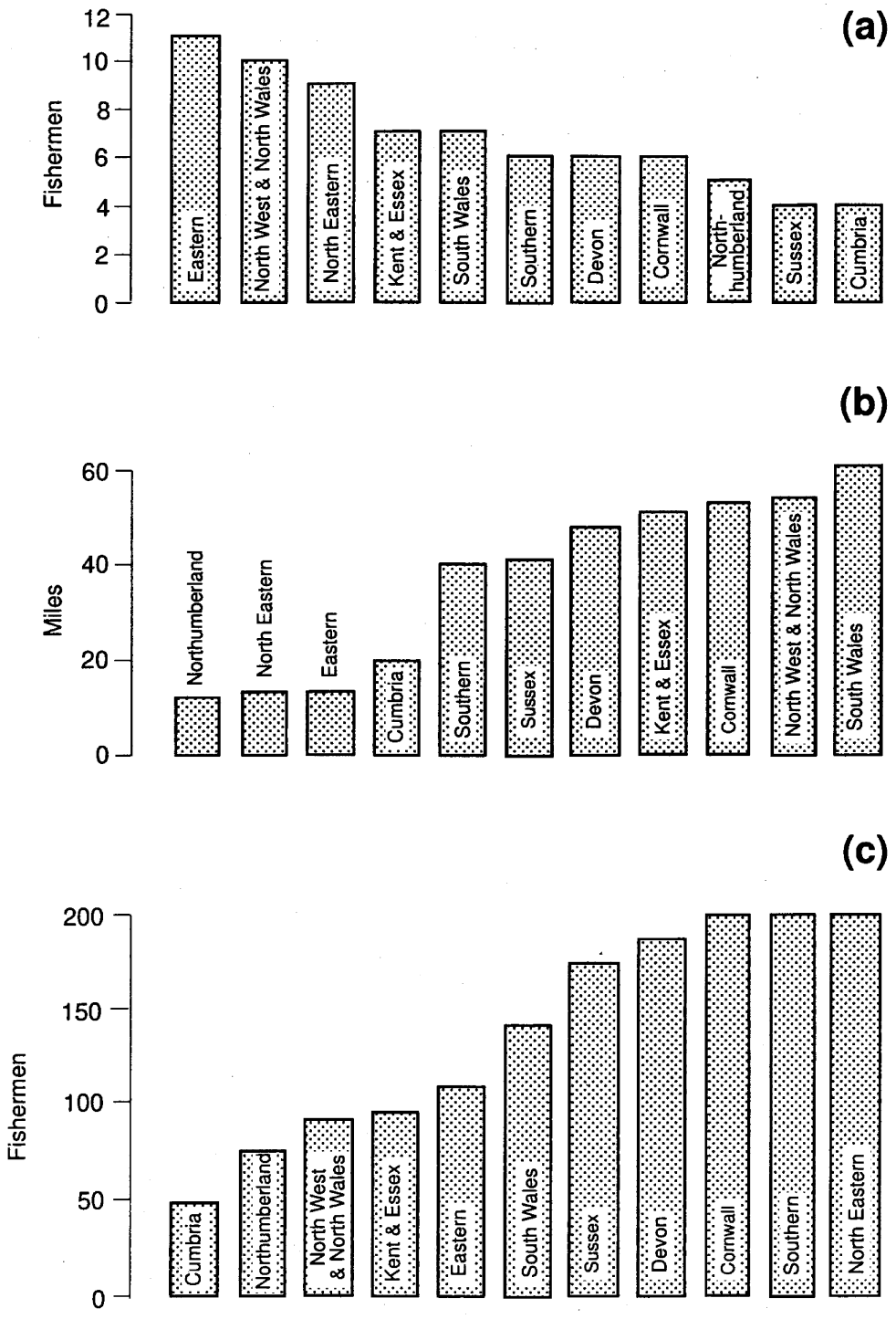

Figure 5.5 (a) Number of Fisheries Officers (b) miles of coastline per FO (c) Fishermen per FO (1996)

Because of the scarcity of reliable statistical data, it is difficult if not impossible to derive any meaningful formula by which to measure the comparative importance of the inshore fisheries sector from District to District. Such a formula, if it were to exist, would probably attempt to combine three separate indices: (i) an index of the commercial value of landings made in the District from fishing activity conducted within the 0-6 nm zone; (ii) the level of locally generated employment in harvesting, processing, distribution and repair activities; and (iii) the overall contribution of inshore fisheries to the Districts' coastal economies. We are, of course, very far from achieving this level of sophistication in the analyses of inshore fisheries.

SFCs are heavily dependent on the precept from the funding authorities to meet the recurrent annual costs associated with the normal discharge of their statutory duties and, from time to time, the renewal of their capital assets. Except for those SFCs with special facilities and with latent capacity for the redeployment of their resources, there are only very limited opportunities for supplementary earnings. Probably no more than 10% of total expenditure can be set against income from services rendered or from grant aided projects.

Although there may be some preliminary, behind the scenes, discussions with the local authorities' finance officers, it would seem that in most cases the estimates of future expenditure, drawn up by the SFC's Finance Sub-Committee – on which the local authorities' own representatives are able to exert considerable influence – and agreed by the main committee, will be adopted by the funding authorities as a reasonable and responsible basis for the annual precept. There are, of course, exceptions to this rule. The long running problem over funding of the South Wales SFC reflects a more or less unique combination of a decision on the part of some local authorities to withdraw their financial support and the refusal of the remaining authorities to meet the budgetary proposals drawn up by the SFC. In the event, the SFC's submission for a budget of £396k in 2001/02 has been capped through an order of the Welsh Assembly at £354k - a deficit of 11%. According to the Director of the South Wales SFC, had expenditure been allowed to rise at inflation proofed rates, current funding would have been in the order of £480k.

Most SFCs - while concerned about the low level of funding overall - are content in their relationships with the funding authorities and reasonably confident that existing funding is secure and that their local authorities will do their best to meet the committee's budgetary requirements. However, there is some concern at the rise in external administrative costs for services provided by the local authorities, or by private firms, at a time when some SFCs are facing a need to reduce internal administrative costs and to make savings wherever possible in the conduct of their statutory duties and in the use of their capital assets. To date, most committees would claim that the level and standards of these duties have not been adversely affected. But this is not necessarily the same as stating that they are fully capable of discharging their responsibilities to the highest possible standards. Faced with tight budgets at a time a modest level of cost inflation, the quest for cost saving economies points in any one of three directions:

- savings in office overheads - these have already been effected 'down to the last postage stamp';
- the redeployment of existing manpower and the freezing of new posts; and
- the use of the committee's capital assets and the deferral of plans for capital renewal.

What is clear is that some committees have, in the past, made a virtue out of their parsimonious housekeeping and now suffer from inadequate levels of funding, as a result. These committees have unwittingly put themselves in a position where it is difficult to negotiate significant increases in their budgets commensurate with their increased portfolios of responsibility. It is not difficult to see why funding is becoming an increasingly critical issue: the proper functioning of SFCs today demands increasing levels of expensive scientific and technical support at a time when inshore fisheries are being characterised as a declining sector of the local economy in both absolute and relative terms. Sustaining the inshore sector inevitably ranks low on the local authorities list of spending commitments. The situation has been complicated by the repercussions of recent local government re-organisation and the withdrawal of funding support by a few restructured local authorities. As a political issue, the funding question has been overshadowed by the *cause célebre* in South Wales where, as a consequence of local government reorganisation, funding levels have fallen back to the position in the mid 1980s. However, the undue emphasis given to the South Wales situation - serious though that may be - has tended to deflect attention from, and to obscure the view of, a more fundamentally disturbing and widespread concern for the under funding of the IFM system in general.

Nonetheless, certain other SFCs have by some means or other evidently found it possible to convince their funding bodies of the value of inshore fisheries to the local or regional coastal economy and of the need to invest in their SFCs in order to secure that value for the future. A handful of SFCs are thus well found and fully equipped to undertake a complete range of activities demanded by a modern fisheries management organisation, while others must struggle to keep pace on limited budgets. The funding factor is seen to be the crucial source of diversity or inequality which in turn helps to define the variation in the internal structure of the SFCs, the extent to which their functions and responsibilities have been able to develop and, to a degree, the management ethos.

5.3 Organisational structure

At this point it is relevant to pose the question: in what ways are differences in levels of funding likely to affect SFCs? Several aspects of the ways in which SFCs conduct their business may be affected: the size, structure and degree of specialisation of the SFC's staff; the deployment of the patrol boat(s); the level and development of non-enforcement related activities; the morale of the staff; the ease or difficulty in recruiting and retaining staff; and the level of aspiration concerning the future development of the SFC. Although we could find no direct evidence to suggest that the morale, recruitment and aspirations were adversely affected by the alleged under funding of certain SFCs, the size and structures of the SFCs' establishment clearly were.

Three different types of structure for SFCs can be identified (see Figure 5.6):

A. *SFCs as simple organisations* where normally fewer than nine staff are employed in total, and where all Fishery Officers (FOs) - including the Chief Fishery Officer (CFO) - are usually involved in both shore based and sea going enforcement duties. There is little internal specialisation and little by way of support staff either in the scientific or administrative fields. Designations such as 'marine environmental officer' take on a relatively subdued meaning and are usually combined with the normal FO duties. In most instances, the CFO comes from a background in fishing and/or service in the Royal or Merchant Navy and has previously served as FO within

the same Sea Fisheries District. Although these smaller, more closely integrated SFCs provide very few opportunities for internal promotion, turnover among the FOs is surprisingly low, suggesting a high level of job satisfaction and/or a lack of further career ambition. The most serious problem facing the small SFCs is undoubtedly their inability to provide adequate cover in the event of holidays, illness and other forms of absence without seriously prejudicing the basic enforcement routines. Not surprisingly the most persistent expressions of concern over inadequate staffing came from within this category.

B. *Intermediate organisations* are generally larger in terms of establishment from the previous category, ranging between nine and twelve staff overall, with a clearer segregation of functional roles - including the appointment of a qualified, specialist environmental officer - and a tendency for the FOs to be separated into distinct sea going and shore based activities.

C. *Complex, hierarchical organisations* with establishments of twelve or more staff and a much clearer separation of titles and functions, including the distinction between shore based and sea going enforcement roles. The CFO and his Deputy are more likely to hold academic qualifications, to be less regularly involved in day to day enforcement duties and to be tied to office based (or external) activities. In some cases, the head of service no longer takes the title of CFO, indicating perhaps something of the evolution from a technical to an administrative post. Indeed, in two instances, the senior post is held by someone with no previous fisheries or sea going experience. Not surprisingly, these larger and generally more generously funded SFCs are able to provide a more substantial and specialised administrative and/or scientific support staff.

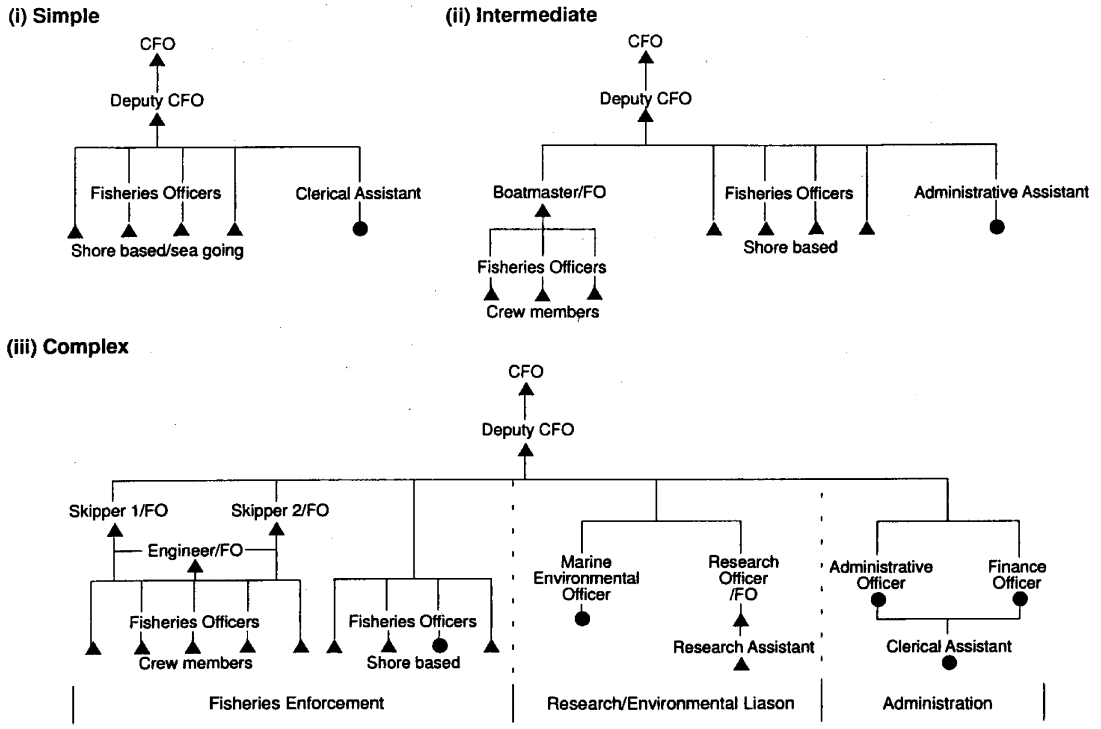

Figure 5.6 The internal structure of Sea Fisheries Districts, 2001

While it may be reasonably easy to identify these three 'ideal models', it is somewhat harder to ascribe individual SFCs to one or other of the three categories - again illustrating the assertion that no two SFCs are alike. The first category of 'simple organisations' accounts for the majority of SFCs today and would probably include the Northumberland, Sussex, Southern, Cumbria and Devon SFCs. The second, or intermediate category, which in all probability reflects a transitional stage, would probably include North Eastern, Kent and Essex and Cornwall, though Kent and Essex SFC could equally well be described as two 'simple organisations' united by the Thames estuary. The final category is reserved for the Eastern and North Western and North Wales SFCs, with the South Wales SFC aspiring for inclusion but at present frustrated by its funding problems.

The Isles of Scilly SFC fits within none of these categories. Operating within an annual budget of £5720 and with no full time officer responsible for IFM and no independent enforcement capacity in terms of either patrol vessel or retained and qualified FOs, it scarcely satisfies the definition of an independent SFC. It is fortunate in dealing with a relatively simple, low intensity, local fishery based mainly on crab and lobster and some longlining, and it relies on the neighbouring Cornwall SFC - from which it split nearly 30 years ago - to exercise what amounts to a token enforcement presence in Isles of Scilly waters on one or two occasions a year.

Symptomatic of the constraints imposed on funding in the case of the great majority of SFCs is the fact that few committees have benefited from significant increases in their establishments since the mid-1990s when not only were their jurisdictions extended from 3 to 6 nm but also, as a consequence of the *Environment Act 1995* their responsibilities were – in theory, at least – greatly enlarged.

Over this same time period, however, there has been a perceptible shift in the profiles of FOs from the traditional 'new entrant' – often in his late 30s or early 40s from a military/merchant navy or, less commonly, a fishing background with appropriate sea going experience and practical qualifications (Skipper's Certificate) – to a much younger, graduate entrant with qualifications in the biological or environmental sciences but very little practical experience. For many of the newer graduate recruits a post within a SFC is most likely to be a relatively early step on a career ladder which cannot reasonably be completed within the limited career opportunities afforded by IFM. Significantly, high rates of turnover within the service occur among the younger, more academically qualified personnel than among those recruited at a later age from a more practically relevant background.

There is still a division of opinion among CFOs as to the most appropriate background for newly appointed FOs. Some argue strongly that graduate recruitment is the only way forward for an organisation which is increasingly having to cope with the leading edge of scientific research. Others, somewhat less enthusiastically, bow to the inevitability of changing job descriptions in line with society's evolving perceptions of the need for professional services to be staffed by academically well qualified personnel. But there are a few who would continue to press that only in a few specialised posts are academic qualifications to be preferred to practical experience. In truth at present, except where the organisational structure has become more hierarchical so as to allow the relative luxury of specialised appointments, the role of the FO remains multi-faceted and demands a wide range of interpersonal skills, practical experience and technical knowledge for which he is paid a starting salary of c£15.5k (with two years experience of the fishing industry and with a

degree) rising to c£30k as the start-up salary for a CFO. As one CFO explained "it is difficult to identify the ideal specification for a FO: they need technical knowledge and to be able to talk with technical experts; they need practical experience, preferably in the local industry. But above all else they need good interpersonal skills: they will have to deal with fishermen as individuals on a recurring basis and so be able to deal with a particular instance in a manner which does not prejudice dealing with the same individuals on some future occasion. They must reflect absolutely the standards of the service and be responsive to discipline and be able to command respect – sometimes through the exercise of their physical presence!"

In-house training of new recruits is limited by the lack of numbers and attendance on short courses may prove difficult, especially for the smaller, resource starved SFCs. Attention is focused on the need to ensure that all FOs receive appropriate training in enforcement procedures (including rules of evidence) at least on a par with that given to British Sea Fishery Officers.

The trend towards further professionalisation of the service is likely to be encouraged by the appointment of much younger, university trained personnel to head the local SFC, though the transition is unlikely to proceed rapidly while size and funding constraints of some SFC's continue to rule out the luxury of specialised posts. While more highly qualified entrants are certainly to be encouraged in view of the increasingly scientific nature of the tasks involved, there are also good reasons for supporting a non-graduate entry stream through the Modern Apprenticeship Scheme already embarked upon in the case of the North Eastern SFC. Ultimately, the work of SFCs will depend on maintaining a sensible balance between graduate specialisation and all round skills forged through practical experience.

In all but a handful of cases, the 'front line troops' provided by a SFC's FOs are supplemented by only one or two support staff usually in the form of an administrative officer and/or clerical assistant. It is important in this context to consider the role of the Clerk to the Sea Fisheries Committee: the designated officer responsible for calling statutory committee meetings, the preparation of committee papers, the presentation of byelaw proposals to the appropriate government department and acting as the focal point of contact with outside organisations – a post which is part 'office manager' and part 'legal assistant'. Again, the SFCs subscribe to significantly different models: either through the use of the county council's legal department, which can provide valuable links to other parts of the county council administration; or through engaging the services of an independent solicitor's office; or, in two instances by combining the title and functions of the Clerk with that of the CFO. Few CFOs would be willing and able to shoulder the burden of extra duties and responsibilities in what is already a very demanding and stressful job even though it clearly makes for more expeditious conduct of the formal business of a SFC, creates a closer relationship with the Committee and, perhaps most important of all, contributes to considerable cost savings.

Two SFCs stand apart from the rest as having dedicated, though necessarily small, teams of scientific staff able to conduct basic investigations into local fish stocks (usually shellfish) and into local environmental issues. In one case, the scientific capability of the SFC has been enhanced by the acquisition of an additional sea going vessel designed specifically for scientific work, yet funded entirely through the constituent local authorities.

5.4 Enforcement and the redeployment of resources

As the primary function of SFCs is the regulation of sea fisheries within the 0-6 nm zone, it follows that most of the day-to-day activities of the FOs are directly concerned with the enforcement of regulations laid down by SFCs themselves, in the form of byelaws and regulating orders, together with technical conservation measures authorised through the EC's Common Fisheries Policy or through separate national legislation. Because at present their jurisdiction extends only to the 6 nm limits, SFC officers are concerned only with UK registered fishing vessels; nor do their enforcement duties include quota regulations, logbooks or national fishing vessel licensing.

There are two complementary modes of operation: (i) the use of sea-going patrol boats, usually manned by a crew of three, four or occasionally five FOs – at least one of whom will hold a watch-keeping officer's certificate – involving boardings at sea to check gears etc; and (ii) shore based inspections carried out in the landing ports – a much less intensive use of available manpower, usually involving only one FO. Decisions relating to the deployment of potentially scarce manpower resources will help to shape the organisation of the SFC. It is the regular sea going enforcement capability which gives the SFCs their distinctive character as IFM organisations. Although the mere presence of the patrol boat within the inshore waters probably does act as a significant deterrent to rule breaking, it is an expensive means of enforcement, both in terms of manpower, running costs and capital investment.

In all Districts the two activities are combined in some manner. It is clear that different CFOs attach different values and priorities to the two modes of regulation, but most would agree that shore based inspections are more cost effective. Some CFOs prefer to make a clear distinction between sea going enforcement personnel and the shore based FOs who will tend to be allocated to particular sub-districts and work from home. The majority, however, make no such distinctions, preferring to combine sea going and shore based duties – though in most instances this 'solution' is forced upon the CFO by the small number of FOs available. Significantly, when the patrol boat is fully manned at sea, in most Districts this implies a greatly reduced enforcement presence ashore. Enforcement activity tends to vary seasonally, in line with inshore fishing activity, with the first and fourth quarters of the year showing the lowest levels of activity. Deployment of the patrol boats is also likely to be weather sensitive.

The patrol boats represent far and away the SFCs' most important capital assets. Most Districts operate at least two boats – a larger vessel, usually over 10 m in length, capable of working the whole of the District's coastal waters out to 6 nm, and a small boat, most commonly a rigid inflatable boat (RIB) for use in shallower waters close inshore with a smaller complement of crew. Although built to a 20 year life expectancy, it is usual for the larger boats to require replacement – or refitting – after 12 years' fairly intensive service. A number of patrol boats will shortly be due for replacement or refitting, but should the SFCs' jurisdictions be extended to 12 nm several more may need to be rebuilt to new specifications.

At an overall cost of anywhere between £500k and £2 m, depending on their detailed specifications, the replacement of the main patrol boat is a major challenge for the funding authorities, especially since the availability of co-funding through the EC's Financial Instrument for Fisheries Guidance (FIFG) is currently in doubt. Building a new patrol boat is a major capital undertaking, requiring long term planning and the ear-marking of significant

sums of money over a period of several years to provide a capital fund to finance the new build or a sinking fund to meet the annual charges on borrowed capital. Under the increasingly uncertain conditions relating to EC funding and to the future of IFM, local authorities can be expected to exercise caution over requests for funding the acquisition of new patrol boats: at least one local authority has recently decided to defer an agreement to finance the replacement of a 13 year old patrol boat.

5.5 The committee

It will come as no surprise to learn that the committees which oversee the management of the Districts' fisheries are themselves prone to variation in size, composition, sub-structures and protocols for the election of the chairperson, *inter alia*. But the variation is certainly less marked and somewhat less disconcerting than that described in the previous sections, and characterised mainly by occasional anomalies rather than by an underlying randomness. Moreover, it is much less likely to exert a disabling effect on the efficiency of the SFCs. Nonetheless, it prompts questions as to whether the diversity is necessary, appropriate and beneficial to the conduct of the SFCs' management process.

Most notable among these variations is the very size of the committees (see Fig 5.7) which ranges from as few as eight in the Isles of Scilly to as many as 36 in the North Eastern and North Western and North Wales SFCs. These two extreme values are readily explained by reference to the comparative sizes and complexities of the Districts concerned: the Isles of Scilly is a small, part time, 'community based' SFC, while others have either a very long coastline (North Western and North Wales SFC) or very complex political structures (North Eastern SFC with no fewer than 11 constituent local authorities'). It is still a moot point, however, as to whether even in these circumstances their committees need to be quite so large. Within these extremes, there is a strong modal value of 20 members, shared by seven SFCs, but a curious and unexplained deviation affecting two single authority SFCs – Cumbria with a committee of 14 and Cornwall, almost twice the size at 26.

5.5.1 Local authority representation

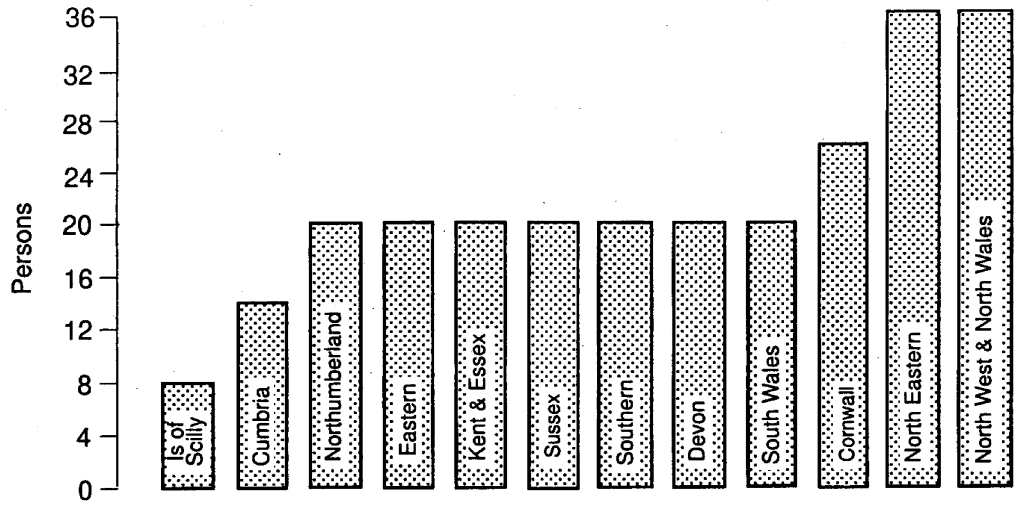

Figure 5.7 Sea Fisheries Committees, 2001 : the number of committee members

One very important, standard formula underlies the composition of all 12 SFCs, namely the 50:50 distribution of seats between the local authorities which provide the basic funding for the SFCs, on the one hand, and the Ministers' appointees, on the other. In theory, at least, this distribution offers a balanced combination of democratically elected local councillors and key stakeholder representation which is considered ideal in a system of co-management in fisheries (see Jentoft, 1989).

The key variable in determining the overall size of the committee is the number of local authority representatives: the distribution of seats between the various local authorities is determined roughly in proportion to their relative contributions to the annual budget precept. Thus, in the case of the North Eastern SFC, with the largest number of contributing authorities, the East Riding and North Yorkshire County Councils have the largest share of the District coastline, make the greatest contributions to the precept and provide the most councillors (see Table 5.1), though together they do not form a majority on the committee. Significantly, there has been some attempt to address the problem of numbers arising from the complex political geography of the District in that two of the smallest funding councils (Hartlepool; Redcar and Cleveland) appoint only one member between them, alternating on an annual basis.

Table 5.1 North Eastern SFC: derivation of funding and distribution of committee seats, 2000-2001

Council	Budget		Committee seats	
	£	%	Number	%
East Riding of Yorkshire	102,264	22.6	4	22.2
North Yorkshire County.	94,832	20.8	4	22.2
Kingston upon Hull City	51,132	11.3	2	11.1
North East Lincolnshire	51,132	11.3	2	11.1
Durham County	25,566	5.6	1	5.6
Lincolnshire County	25,566	5.6	1	5.6
North Lincolnshire County	25,566	5.6	1	5.6
South Tyneside Metropolitan district	25,566	5.6	1	5.6
Sunderland City	25,566	5.6	1	5.6
Hartlepool District	12,783	2.8	1	5.6
Redcar and Cleveland District	12,783	2.8	1	5.6
Total	452,756	100	18	100

Source: North Eastern SFC: *Performance Plan, 2000*

There is some concern generally about the potential instability of the local authority constituency, in terms of its susceptibility to turnover as a result of local elections. This may be particularly marked in the case of single authority Districts where an election may bring about a change in the balance of power and wholesale new appointments to the committee. There is also some disquiet over the calibre of a small minority of local authority representatives. The latter issue may arise as the result of several factors: the precedence

given to appointments to particular committees of the council and the concern that, in some cases, SFCs are accorded a relatively low priority; the limited knowledge and understanding of technical matters relating to inshore fisheries; and an alleged preoccupation with cost efficiency. If and when all of these factors combine together with relatively short political life cycles, the contribution from the local authority representatives could become at best limited and at worst unconstructive. It is important to stress, however, that only in a couple of instances were we made aware of such concerns being translated into reality, both in the recent past.

5.5.2 Industry representation

According to a *Guidance Note on Nature Conservation and the Role of Sea Fisheries Committees*, prepared by MAFF in February 2001:

> 'Minister's members are appointed for a period of 4 years at the Minister's discretion and can be re-appointed to serve for more than one 4 year term. Minister's members appointed from 1 July 1997 are required by Section 2 (2) of the Sea Fisheries' Regulation Act to be "persons acquainted with the needs and opinions of the fishing interests of that district or as being persons having knowledge of, or expertise in, marine environmental matters".'

The selection of Ministers' appointees lacks transparency. Nominations are invited through public advertisement and the distribution of information to around 200 organisations through the DEFRA Fisheries Conservation Group's circulation list; the advice of DEFRA's District Inspectors of Fisheries (DI) is also sought. It is, however, unclear as to how far the SFC's chief officers and/or chairmen are able to influence the process. Some chairmen claim simply to be 'handed a list of their members', while others suggest that informal discussions may take place between the CFOs and DIs over the suitability of particular nominees. In the event however, comparatively few applications are received – around 100 in 2001, roughly twice the number compared with the previous round of appointments – despite the fact that some interested organisations, including the National Federation of Fisheries Organisations (NFFO), may submit up to 20 names.

Two particular areas of concern were frequently expressed in relation to the Ministers' appointments. The first relates to what is seen by the CFOs, committee chairmen and the industry at large as the progressive dilution of the fishing industry's representation as the principal stakeholder. In fact, from the initial allocation of half the seats, one is taken up by the EA, a second by a representative of marine environmental interests (usually, but not always, from the local Wildlife Trust or an institute of higher education) and a third by a person to represent recreational fishing interests, the latter a non-statutory requirement 'imposed' by a previous Agriculture Minister with a strong personal interest in sports fishing. Thus, in a modal committee of 20 members, commercial fishing interests are reduced to seven, or a mere 35% of the seats. In practice the situation may be far worse: an earlier study (Symes and Phillipson, 1997) found that even among seats nominally reserved for the fishing industry, the holders were frequently drawn from outside the inshore harvesting sector *per se*. The results which date from before the reservation of seats for marine environment and sports fishing interests show that of the 113 Ministerial appointments only a very slight majority (62) were active fishermen and/or vessel owners: roughly a third were retired fishermen, processors, merchants and marine scientists. Valuable though this breadth of representation may be in enriching the debates within committee, the under-representation of active fishing

interests is problematic – especially in those Districts where as few as two, three or four committee members were active fishermen. An extreme example of this imbalance has occurred in the latest round of appointments by the National Assembly for Wales to the North Western and North Wales SFC: no fewer than five of the Welsh Minister's nine appointments were marine or fisheries scientists.

To a degree, this problem relates to the difficulty in attracting applications from younger, self-employed, working fishermen able and willing to devote time and energy to committee work. In an industry where the situation, both globally and locally, is changing rapidly the presence of older, retired fishermen and former fishery officers may not be an adequate substitute.

The second concern, directly related to the previous argument, is over the calibre of Minister's appointments – a problem frequently raised in general discussions with the SFCs but rarely documented. There are four distinct elements to this issue: the basis for selection; the level of understanding of the committee's powers and procedures; attendance; and the role of the committee member within the wider fishing community. There is a fairly widespread sense that a number of the industry representatives have been chosen for the wrong reason, namely their availability, with the tendency for those with the lowest level of current engagement in the industry to be most readily available for selection. Secondly, there is a belief that some of the younger new appointees have an exaggerated view of what the committee can achieve and may rapidly lose interest when they start to appreciate the statutory limitations on their ability to change the world – a loss of interest which can easily translate into poor attendance at the quarterly meetings of the committee. Persistent non-attendance can lead to a decision by the Minister to rescind the appointment in mid-term. Claims for 'loss of earnings allowance' at local government rates are unlikely to compensate a self-employed fisherman for a day's lost fishing, let alone make provisions for loss of earnings on the part of his crew members.

Arguably the most serious concern is the failure of some members to fulfil the role of representing the industry in its widest sense. Minister's appointees are chosen as 'persons acquainted with the needs and opinions of the fishing interests of that District' and not as representatives of particular sectoral interests or of their own private interests. The question of balancing the representation of different sectoral interests, seen as an important issue in some Districts, is a matter for the initial selection of the industry members. But the role of the individual member, as a representative of the wider industry, requires that he both consults widely before committee meetings and reports back equally widely on the outcomes of the meetings. Many fishing industry representatives fail in these two crucial areas, thus contributing to allegations of secrecy surrounding the conduct of the committee's business and of the non-accountability of SFCs.

Charges of secrecy can be readily countered by pointing out that all main committee meetings are open to the press and the general public, though only rarely do the meetings attract a significant number of the public. Notices of committee meetings, together with full minutes of the previous meetings and the annual accounts, are normally circulated to local fishermen's associations. Democratic accountability is guaranteed through the strong presence of local authority councillors on the committees. One committee has gone further than any other in attempting to allay concerns over secrecy and non-accountability by setting up twice yearly open meetings at different ports along the District's coastline to allow a frank exchange of views between the industry and the officers of the SFC: attendance at such

meetings is variable. The SFC also held a large and lively open meeting to discuss MAFF's consultation paper on the shellfish licensing scheme, when most SFCs conducted their response on the basis of invited written comments and internal discussions.

5.5.3 The chairperson

The efficiency and effectiveness of the SFC's work will largely be determined by the leadership given by the chairperson of the committee and by the interactive relationships between the chairperson, the vice-chairperson and the principal officers of the District. In a sense, the choice of chairperson is left to fate: only in a very few instances is the means of selecting (as opposed to electing) the chairperson explicitly written into standing orders. In the case of the Eastern SFC, standing orders require that the chair rotates between the three local authorities (Lincolnshire, Norfolk and Suffolk County Councils), while in the Cumbria and South Wales SFCs the chair alternates between the local authority and Minister's appointee constituencies. Elsewhere, the choice is left entirely to the committee and, as a result, in eight of the remaining SFCs the chair is currently held by a Minister's appointee. This clear preference almost certainly reflects the committee's recognition of and respect for their deeper understanding and concern for the needs of the local fishing industry. It is a widely held convention that in such cases the role of vice-chairperson will fall to a local authority representative.

Nor do most standing orders prescribe a maximum term that a chairperson may serve in that capacity. In fact, many have been in office for six or more years; in one instance, the current chairman has served as vice-chairman and chairman for an unbroken period of 24 years. While this record clearly represents a considerable vote of confidence in the individual, such continuity may prompt questions over the level of innovation and the extent of fresh perspectives brought to bear on the work of the committee. Again, the problem which initially afflicts the selection of good Minister's appointees – namely the scarcity of suitable persons willing to put themselves forward – may contribute to the longevity of some chairmen. Overall, the system seems to work well: there is very little history of any SFC being constrained in its business by an unfortunate choice of chairperson.

5.5.4 Sub-structures

Even where the main committee is quite small, there is a tendency for much of the detailed work, particularly on the financial and technical sides, to be undertaken by small sub-committees. There are clearly no guidelines as to the number or composition of such sub-structures. Thus, the North Eastern SFC has only one standing sub-committee – an Executive Committee comprising seven members (three from the local authorities, four from the Minister's appointees, together with the CFO or his deputy) with quarterly meetings interleaved between the meetings of the main committee. Devon SFC similarly has only a General Purposes Committee, slightly larger in membership, and Cornwall an Emergencies Committee which happily has not met in the past four years. By contrast, Eastern SFC supports no fewer than five sub-committees, with varying levels of membership, including a Finance and General Purposes Committee meeting two or three times a year; a Personnel Committee, scheduled to meet after each main committee meeting; and a Wash Management Committee meeting twice a year – together with Byelaws and Vessel sub-committees which are convened as necessary. In the case of Southern SFC, much of the detailed work is undertaken by two regional sub-committees: an Eastern committee which services the needs of the Solent Regulating Order and a Western committee, which includes the Poole Harbour

Regulating Order in its purview; the other sub-committees (Staffing and Byelaws) meet only occasionally, for example when a new byelaw is under consideration.

In general, the principle of equal representation enshrined in the composition of the main committee is relaxed when it comes to the make-up of the sub-committees. One of the advantages to be gained from sub-committees is the opportunity to make the best possible use of the available expertise and experience, transferring part of the burden from the main committee onto the more committed members and also those with appropriate specialist knowledge. This same division of labour is also discernible within the main committee: industry members will commonly defer to their local authority colleagues on financial matters while, on the other hand, industry members will tend to make the running on matters relating to fishing practice.

In addition to the formal sub-committee structures and *ad hoc* working groups, put in place to thrash out particular issues, it is quite common for an informal chairman's group – usually involving the chair, vice-chair, CFO and his deputy or administrative officer – to keep in close contact by phone, fax, e-mail or through personal meetings, on a regular weekly basis. This group not only provides for continuity between quarterly meetings but also represents the 'engine room' of the SFC, monitoring progress, scoping the District for particular problems, giving early consideration to externally transmitted pressures for change and generally, generating a source of momentum for the SFC's development. It follows, however, that the work of the main committee and its formal and informal sub-structures imposes a very considerable demand on the time and energy of all those most intimately concerned with the work of the SFC.

5.6 External relations

5.6.1 Relations with the fishing industry

It is clear that the successful development of IFM is reliant on building good relations between the SFCs as managers and regulators, and the local inshore fishing industry. This relationship will in large measure be a function of the way in which FOs are able to discharge their formal duties and still provide a valuable source of information, advice and guidance to the local fishing community. A close meaningful relationship is perhaps best achieved through the deployment of shore based FOs, 'community bobbies' who know their patch intimately both in terms of the fishing and the characteristic behaviour of the individual fishermen. Treading the line between 'enforcer' and 'the fisherman's friend' is a difficult task, making heavy demands on the interpersonal skills of the individual FO. SFCs have their critics both inside and outside the sector – but it is only within the offshore sector, hostile to any hint of territorial preference, that they are held in deep suspicion.

Part of the reasoning behind the particular make up of the committees is for the Minister's appointees to provide a direct link between the regulating authority and the local industry. In many cases the link is reinforced by the strength of personality of the committee member and his status within the fishing community. Where the link is weakened for whatever reason, the task of communicating with, and representing the interests of, the local fishing industry may well fall to the chairman or the CFO who are in regular contact with the industry. This can place a CFO in a difficult situation: his primary function is to supervise the regulation of the local fishery, not to represent the industry's interests. Often, however, the CFO will find himself in advisory or policy making forums where he is the only person with the technical

knowledge of the industry and an informed understanding of the industry's position and problems. Moreover, along many stretches of the England and Wales coastline, political representation of inshore fishing interests, either through active local associations or representation on the NFFO's regional and executive committees, is poorly catered for. In these circumstances, a CFO may find himself inevitably but unwillingly drawn into representing some of the political concerns of local fishermen for the future of inshore fishing within the area. This situation is not entirely dissimilar to that which faced producer organisations (POs) in the early 1990s; ostensibly responsible for managing the sales of their members' catches, they gradually became more deeply involved in the politics of fishing at regional and national levels, simply as a consequence of their closeness to the fishing industry. Significantly, POs became incorporated within the NFFO's political structures. The same is unlikely to happen with SFCs though at present they do provide one of the very few means of drawing both public and political attention to the concerns of the inshore sector.

5.6.2 The Association of Sea Fisheries Committees

Potentially, the most important structure both for promoting political awareness of inshore fisheries and their management and for coordinating the activities of the individual SFCs is the Association of Sea Fisheries Committees (ASFC). But the functions of the Association are at present severely constrained – as is so much that has to do with IFM – by a dearth of financial resources. With an annual budget of *circa* £40k, generated by flat rate subventions from all except the Isles of Scilly SFC, the Association comprises a chairman and vice chairman, chosen from representatives of the 12 individual committees, and a Chief Executive Officer employed on a part-time basis and with little or no administrative assistance. Since the appointment of the present CEO – a retired local authority Chief Executive with administrative experience of coastal local authorities – some 10 years ago, the Association has worked hard to extend and substantiate its role. The CEO provides regular briefings on a wide range of national and European policy developments to all CFOs and Clerks to the SFCs; represents the interests of the SFCs at a wide range of conferences throughout the UK; is in frequent contact with officials in the relevant government departments; and will 'button hole' government ministers as and when the situation dictates.

The Association meets four times a year in London at which up to four representatives from each SFC are permitted to attend, normally the committee chairman, Clerk and CFO. It also acts as the umbrella organisation for the meetings of CFOs held three times a year to discuss common issues and for the unscheduled Technical Panel meetings which may be convened from time to time to address particular technical issues common to all or some SFCs. In addition, it jointly convenes an annual 'Heads of Department' meeting with senior officials from DEFRA and NAWAD at which the Fisheries Minister will be present for part of the time – this part of the meeting is largely orchestrated by the DEFRA Fisheries Secretary.

The consensus from within the SFCs is that the Association is doing a useful job as 'watchdog', 'pressure group' and in networking the different SFCs by 'bringing people and their ideas together'. But a view expressed by some outside is that the Association is 'weakened by a lack of corporate identity and a dominance of parochial attitudes', so that the major task for the CEO lies in trying to balance the conflicting views of strong individuals rather than coordinating the disparate management regimes in a meaningful way. These views make it all the more important for the Association to ensure its role is clearly understood outwith the SFCs so as to dispel any misconceptions.

While most members and outside observers would agree that the Association's responsibilities and capabilities are already overstretched as a result of the prevailing resource constraint, there is considerable interest throughout the inshore sector and the relevant government departments as to the course of its future development. Opinions differ: there are those who would wish to see a strengthened Association take on a greater coordinating role, seeking to harmonise regulations wherever feasible, and to develop a more clearly defined common strategy for the development of IFM. Others are more cautious about the risks of interfering with the jealously guarded autonomy of individual SFCs and of disturbing the existing patronage of the local authorities, fearing for the consequences of investing greater authority and leadership in the Association. They would be happier to see the Association build up its service functions to assist the SFCs in developing their own individual roles and avoid the duplication of effort which characterises the present system. They also see the Association as providing a stronger voice for the SFCs, taking national and local issues to a wider audience, and generally adopting a promotional role. We return to the question of the Association's future in Chapter 9.

5.6.3 Central government

While it may be quite normal for tensions to develop between local agencies and the sponsoring government departments, the relationships between SFCs, on the one hand, and the Department of Environment, Food and Rural Affairs (DEFRA) and the National Assembly for Wales Agriculture Department (NAWAD), on the other, appear to have reached dangerously low levels which could prove inimical to the development of sound management strategies for inshore fisheries in England and Wales. In Wales, the relatively new Department responsible for fisheries within the 0-12 nm limits has already found itself embroiled in the acrimonious relations between the South Wales SFC and its funding authorities (see 5.2). This dispute has been brought to a conclusion through the issuing of the South Wales Sea Fisheries District (Variation) Order 2001, capping the total local authority spending on the SFC and determining the actual contributions to the budget to be made by the constituent authorities. It remains to be seen precisely how NAWAD will respond to its wider responsibilities for IFM and to the development of working relationships with the two SFCs - South Wales and the North Western and North Wales SFC.

From our interviews it appears that the uneasy relationships between the SFCs and DEFRA have a much longer history and seem to be based as much on institutionalised distrust as upon personal antipathy or specific areas of disagreement. Some observers point to the recent history of MAFF, its declining status as a department reflecting the diminishing role of agriculture in the UK economy, the loss of responsibility for management of both agriculture and fisheries through the development of 'common' EU policies in both areas and, more specifically, the Cinderella image of fisheries alongside the more influential agriculture and food responsibilities. Others point to the fact that inshore fisheries sit somewhat awkwardly within the Fisheries Division, cross cutting all four sections with no one section able to take overall responsibility or develop initiatives in relation to IFM. But the negative attitudes towards the central bureaucracy found amongst some SFCs probably reflected a more specific concern for the outdated and inadequate legislative framework within which SFCs operate and the apparent unwillingness of MAFF (now DEFRA) to take effective remedial action.

While the need for new legislation is tacitly accepted within DEFRA, SFCs feel that their responsibilities and functions are not sufficiently valued to merit the parliamentary time or

the administrative effort required. Yet to leave the situation in its present state of disrepair is only to deepen the problem. To suggest the dismantling of the system would be unthinkable – running counter to the momentum in favour of decentralised, participative governance. And in any case, no government department is likely to willingly take on the management of so complex and sensitive a situation as that presented by IFM. On the other hand, to put in place an alternative structure of devolved management would require a fundamental reform of the very same legislative framework. Caught up in an embarrassing 'Catch 22' situation, Ministers can use the outcome of the CFP Review as a reason for delaying action to address the issues.

In fact, SFCs have been left largely to their own devices. The only regular points of contact between DEFRA and the SFCs are the quadrennial appointment of members to serve on the committees and the confirmation of byelaws and regulating orders. Otherwise the level of interference by central government is minimal. Even so, the accusation and counter-accusation over byelaw making clearly demonstrates the tensions. Byelaw making is a complex process (see Chapter 6); nonetheless, the process should be capable of completion in significantly less time than is presently the case. SFCs complain that the process can take up two years accusing the Departments of delaying tactics and inconsistencies in the handling of byelaw applications by their legal advisors. The Department on the other hand, attributes much of the delay to poor initial drafting of byelaws by the SFCs which, if uncorrected, would make bad law.

There is some recognition of the faults on both sides. For their part, DEFRA is prepared to acknowledge some apparent inconsistencies in the legal opinion on similar byelaw proposals from different SFCs which they attribute to differences in the interpretation of *ultra vires* by different experts in a department characterised by a high turnover of personnel. They also recognise that the failure to provide new, up-to-date legislation contributes to the uncertainty and insecurity of the SFCs' position in relation to their legal competencies.

The disbanding of MAFF and its reincarnation within DEFRA provides an important window of opportunity for the reconstruction of the relationship between central government and the SFCs. However, even though there may be mutual understanding over the need for fundamental change, we found little indication that DEFRA are predisposed to set aside the time and manpower necessary for a thorough review of IFM and the drafting of appropriate legislation, notwithstanding the recommendations of the House of Commons Select Committee's report in 1999.

5.7 Conclusions

Throughout our enquiries we were made all too well aware that the system of IFM in England and Wales carries the considerable burden of its historical past, that it is too easily depicted by its critics as an archaic system with its origins in Victorian times, and that its activities are constrained by a remarkably unlevel playing field. Our findings point to the following sub-optimal structural conditions under which SFCs are expected to discharge their duties:

- a number of relatively minor anomalies to the current boundaries of Sea Fisheries Districts caused largely as a result of local government reorganisations, so that in some cases the geographical limits of the Districts no longer coincide with the appropriate local authority boundaries;

- evidence of a general underfunding of SFCs, exacerbated by pronounced inequalities in the level of funding to individual SFCs and uncertainties over the ability of local authority funding to match the rising costs of IFM;

- as a consequence of the funding factor, considerable variations in the levels of expenditure per unit of coastline etc and in terms of the ways in which the scarce manpower resources are deployed. It was unclear as to how far such variations materially influence the effectiveness of management or the level of services provided by the SFC;

- concern over the size and composition of the committees which direct the work of the CFO and his staff, especially in relation to the proportional reduction in representation of the commercial fishing industry and the extent to which both local authority and Ministers' appointees fully understand and are able and willing to fulfil their roles and responsibilities of membership;

- the ineffective political representation of inshore fishing interests through active local associations or national organisations which may add a dimension to the CFO's activities not necessarily compatible with his primary responsibilities for fisheries management;

- the need to strengthen and develop the role of the ASFC in its advocacy of effective IFM through the agency of the SFCs, in coordinating the activities of the SFCs in line with more strategic objectives, but without unduly interfering with the autonomy of the individual SFC, and in providing a range of services to ease the pressure of work among individual SFCs;

- relations with central government have deteriorated to a very low level, though it is unclear as to how far this is due to a powerful mythology or an exaggerated caricature of central: local antipathies or to a genuine, deep-seated, mutual distrust. The present situation owes a good deal to the reluctance on the part of government to formulate new legislation to replace the outmoded 1966 and 1967 Acts. There is an important opportunity arising from the formation of the new Department – DEFRA – to repair the damaged but vital relationships between central government and its devolved management institutions.

6. Inshore fisheries management: regulation and enforcement

6.1 Introduction

It is surprisingly difficult to determine precisely the statutory aims and objectives of the system of Sea Fisheries Committees which encompasses almost the entire coastline of England and Wales. Established over a hundred years ago with powers to regulate sea fisheries within a very narrow coastal zone out to 3 nm, SFCs predate concepts of fisheries management as we recognise the term today. Certainly, at the time of their inception, there was little or no sense of a strategic vision of the future development of sustainable inshore fisheries. The regulatory powers vested in SFCs at that time were essentially reactive: they were to be used to prevent further damage to inshore fisheries caused by inappropriate fishing activity. Regulatory powers – both then and now – are a means to an end; but in IFM the end has never been fully defined. Today, most SFCs probably have a much clearer perception of their overall aims, namely 'to manage, regulate and protect the fisheries within their District with a view to ensuring the sustainability of the marine environment both now and in the future'. Whereas 'management' in the context of sea fisheries normally refers to the regulation of human activity. In the realm of shellfish management there is greater scope for direct intervention to improve stocks *per se* through habitat management and the application of cultivation techniques.

There are, however, some unanswered questions surrounding the role of SFCs. The first is whether implicitly or explicitly SFCs are concerned with managing the fisheries for the benefit of the local inshore industry. Although it was the express intention of Article 100 of the 1972 Treaty of Accession, subsequently embodied in the access derogations of the CFP, to restrict fishing within the 6 nm zone 'to vessels which traditionally fish in these waters and which operate from ports in that geographical coastal area', it is unclear whether SFCs are intended to have in mind the benefit to the local fishing industry when designing their byelaws and regulating orders. The very construction of the committees, combining both local authority and local fishing industry representation, would seem inevitably to point to this as an outcome if not an original intention.

A second, and possibly more important, question is whether SFCs do take a strategic view of the development of inshore fisheries both collectively and locally, and whether their present regulatory powers actually permit them to adopt a strategic, forward looking approach. In situations where the status of the resource may fluctuate quite markedly over relatively short time scales in response to both natural and man made circumstances, effective strategic management calls for a precautionary approach, implying both flexibility of response and the ability to act in anticipation of the scientific evidence. As independent organisations responsible for the regulation of sea fisheries within clearly defined Districts, SFCs tend to find their own solutions to local problems and, as a result, a complex mosaic of local regulations has evolved, raising questions as to whether this helps or hinders the development of an effective management strategy for the coastal waters of England and Wales. Finally, we need to concern ourselves with the relationship between regulation and enforcement in inshore waters, for regulations which are unenforceable or situations where the enforcement capability is lacking are of very limited assistance to good management. These are some of the issues that the present chapter must inevitably address.

6.2 Byelaws

Although SFCs were originally set up for the purpose of regulating all fisheries within the 3 nm limits, over time their regulatory functions have come to be focused much more on the shellfish fisheries. Economically, they are of the greatest overall importance to the inshore sector (see Chapter 3). Moreover, as shellfish stocks are in most cases made up of relatively well defined local populations, they are particularly well suited to local management. Recently, the position has been reinforced by the emergence of a much greater level of finfish management through national and especially European legislation.

6.2.1 Byelaw working: the legal basis

Currently, SFCs have at their disposal just two instruments with which to regulate fisheries within the 0-6 nm zone – byelaws and regulating orders – though a third measure in the form of a shellfish licensing scheme is to be introduced shortly. Of the two instruments, byelaws are by far the most widespread covering most forms of commercially important inshore fishing activity. In general they serve the purpose of fisheries management by imposing restrictions on fishing activity which are designed to ensure a responsible and rational exploitation of the resources. Almost all recent byelaws have been introduced at the behest of the local fishing industry anxious to protect its inheritance. They are intended to benefit the fishery as a whole rather than favour any one group of fishermen. Though in practice byelaws may appear to discriminate against particular groups, through the limitations imposed on vessel size or on the use of certain types of fishing gear, the arguments for introducing the byelaw in the first place will normally have been made on the grounds of protecting the stocks from risks of overexploitation and collateral damage to their habitats, or preventing conflicts arising as a result of the deployment of incompatible fishing gears in certain fishing areas. No byelaw may seek to introduce restrictions which are less strict than those imposed through national or community legislation. However, EC Regulation 850/98 does specifically allow a Member State to implement measures for the conservation and management of local stocks, deemed to be of interest to the fishermen of that Member State alone, which go beyond the minimum requirements of Community measures.

In England and Wales the purposes for which byelaws may be introduced are defined in the *Sea Fisheries Regulation Act 1966* (Chapter 38, Section 5) as follows:

"(a) for restricting or prohibiting, either absolutely or subject to any exceptions and regulations, the fishing for or taking of all or any specified kinds of sea fish during any period specified in the byelaws;

(b) for restricting or prohibiting … any method of fishing for sea fish or the use of any instrument of fishing for sea fish or for determining the size of mesh, form and dimensions of any instrument of fishing for sea fish;

(c) for the regulation, protection and development of fisheries for all or any specified kinds of shellfish, including:

  i. the fixing of the sizes and condition at which shellfish may not be removed from a fishery, and the mode of determining such sizes;
  ii. the obligation to re-deposit in specified localities any shellfish the removal or possession of which is prohibited by or in pursuance of any Act;
  iii. the protection of shellfish laid down for breeding purposes;

iv. the protection of culch and other material for the reception of the spat or young of any kinds of shellfish; and
v. the obligation to re-deposit such culch and other material in specified localities.

(d) for constituting within their district any district of oyster cultivation for the purposes of [Section 16(2) of the Sea Fisheries (Shellfish) Act 1967] (which prohibits the sale of oysters between certain dates);"

Such byelaws may be made in respect of the whole or specified parts of the Sea Fisheries District, except where they would prejudicially affect any several rights (see 6.3) enjoyed by individuals, without their prior consent. A byelaw intended for purposes other than those indicated above would be *ultra vires* and therefore not confirmed by the relevant government department.

However, under the terms of the *Environment Act 1995*, byelaws may now be introduced for 'marine environmental purposes' :

"(a) of conserving or enhancing the natural beauty or amenity of marine or coastal areas (including their geological or physiographical features) or any features of archaeological or historic interest in such areas; or
(b) of conserving flora or fauna which are dependent on, or associated with a marine or coastal environment."

The significance of these additions will be considered in Chapter 7, though we are unaware of any byelaw introduced under (a) above.

6.2.2 The byelaw making process

The byelaw making process is long, cumbersome and prone to delays: it requires careful drafting procedures, prior consultation with the local fishing industry and due notification of the relevant government department(s) even before the byelaw will be considered for confirmation. In practice most byelaws have a long gestation period between the initial perception of the problem which needs to be addressed and the institution of formal proceedings. The reasons for this is that a byelaw cannot normally be made in anticipation of a problem but only when the problem has materialised and where sufficient scientific evidence is available to support the argument for its introduction on management or environmental grounds. Although confirmation of byelaws, where the management benefits cannot readily be demonstrated through scientific evidence, are not automatically ruled out 'it is difficult to justify a byelaw which imposes obvious and possibly contentious restrictions on fishing, without a reasonable expectation of benefits' (MAFF, NAWD, 2001).

In theory the process should be completed within three to four months at the outside. According to the *Sea Fisheries (Byelaws) Regulation 1985*, SFCs are required to advertise the proposed byelaws in the local and/or fishing press over a period of two consecutive weeks, allowing a further 28 days for the lodging of objections which have to be considered in advance of their submission to the Department for confirmation. SFCs are also required to give the Department 14 days notice of their intention to submit the byelaw for approval, though in practice informal consultations with the Fisheries Department may already have taken place in order to clarify the grounds for presenting the byelaw and to resolve any legal

or technical matters before the Department formally considers the proposal. Once the application has been received, the Department will notify the European Commission in cases where the byelaw will apply to areas beyond the baseline used to define the 6 and 12 nm limits, allowing one month for the Commission to decide whether or not it proposes to submit an objection. At the same time, the Department commences its own assessment of the byelaw's validity in relation to the conditions laid down in Section 5, its compatibility with existing national or local regulations, its coherence with the principles of rational exploitation and its probity in matters concerning 'reasonableness'. According to the *Guidelines on Making and Confirmation of Sea Fisheries Committee (SFC) Byelaws* issued by MAFF and NAWAD :

> "Byelaws will not be confirmed if they are "unreasonable". Byelaws which may be regarded as unreasonable are those which are improperly discriminatory and inequitable in their operation as between different interests; those which are manifestly unjust; those disclosing bad faith; or those involving such interference with the rights of those subject to them as a reasonable man could not justify" (para 9).

Although the *Guidelines* intimate that a period of one month should be allowed for the expression of the Department's views, case history indicates that it usually takes far longer for a byelaw to be confirmed. As indicated in the previous Chapter such delays are attributed by DEFRA mainly to inadequate drafting on the parts of the SFCs. In an attempt to minimise such delays, SFCs have in the past requested assistance from MAFF in the form of 'model byelaws' that could act as a template to be used, where applicable, for many of the situations currently faced by SFCs. Support for this has not been forthcoming.

6.2.3 The pattern of byelaws in England and Wales

As indicated at the start of this section, SFCs have become much more closely associated with shellfish management than with finfish. Relatively few byelaws relate specifically to demersal or pelagic fisheries. It makes little or no sense, for example, to vary the minimum landing sizes for finfish species from those set nationally or through the CFP when vessels operating just outside the 6 nm limits are legally permitted to land fish of smaller size. Indeed, apart from the Cornwall SFC district, only three finfish species are affected by SFC byelaws: bass in South Wales where the minimum size is set at 37.5 cm compared with the EC limit of 36 cm; grey mullet in the Kent and Essex, Southern (30 cm) and South Wales (36 cm) Districts; and skates and rays where length limits are set at 40 cm in Kent and Essex, South Wales and 45 cm in Cumbria. In the case of both grey mullet and skates and rays no minimum landing sizes are imposed through European or UK legislation. Cornwall SFC have restored the old EC limits on 13 species (these having been removed by changes to EC regulations) and also have a minimum size for bass, set at 37.5 cm.

On the other hand, all Districts have introduced restrictions on vessel size, regarded by many CFOs as perhaps the single most important regulation, and on the use of gears – both static and towed – either as prohibitions throughout the entire District or in certain specified locations. The variation in vessel size restrictions across all 12 Districts is summarised in Table 6.1: the range is considerable – from 18.3m in the North Eastern District to 11.0 m around the Isles of Scilly – but what is even more remarkable is the fact that no two adjacent Districts have similar restrictions. Although clearly these vessel size limits reflect what was considered appropriate to the individual Districts' fisheries at the time of their enactment,

seen from the outside the variation from District to District appears to make little sense. Indeed, it would probably be hard to find any scientific justification for this apparently random pattern of variation. Moreover, a minority of SFCs have not revised their original byelaws – put in place when the SFCs' jurisdiction was limited to 3 nm – to take account of their extended jurisdiction since 1993, leaving them exposed to incursions by larger, more mobile non-local vessels. Indeed, of all the features of byelaw regulation, it is the overall variation in vessel size restrictions that would appear to lend the most obvious support to the argument for greater harmonisation of byelaws throughout England and Wales.

Table 6.1 Limitations on size of vessels (length in metres)

District	Area		Notes
	0-3 nm	3-6 nm	
Northumberland	11.59	24.00	Trawling only
North Eastern	18.30	-	Trawling only; specified areas
Eastern	15.24	-	Trawling only; specified areas
Kent and Essex	17.00*	17.00	*for cockle fishing, limit is 14 m
Sussex	14.00	14.00	
Southern	12.00	12.00	
Devon	15.24	15.24	
Cornwall	18.28*	18.28	Trawling only; *shellfish boats limit is 16.46 m
Isles of Scilly	11.00	-	
South Wales	14.00	-	
North Western & N Wales			
(a) Southern	15.24	-	} All gears except hook & line, drift nets
(b) Northern	13.70	-	} and mussel dredges
Cumbria	13.72	21.34	Except hook and line

Source: SFC byelaws

In general, the most extensive use of byelaws to control finfish fisheries is found along the west coast adjacent to the Celtic and Irish Seas. South Wales SFC has no fewer than 18 finfish related byelaws, North Western and North Wales nine and Cumbria six. By contrast, Eastern SFC has only one composite byelaw relating to inshore trawling (vessel size and closed areas), while Sussex has two (vessel size and the detailed specification of gears).

In the context of shellfish, the use of byelaws is not only more widespread and comprehensive but also prone to variations in detail that are not readily explicable. Table 6.2 demonstrates the range of shellfish species protected through byelaws in each District but it cannot reveal anything of the complexity of regulation involved, whereby a single species may be subject to as many as five or six separate byelaws each of which may have been enacted at a different date. Only the South Wales SFC has attempted to clarify the complexity of its byelaws in its handbook by grouping them under related headings.

Table 6.2 Shellfish species protected through SFC byelaws

	North'land	North Eastern	Eastern	Kent and Essex	Sussex	Southern	Devon	Cornwall	South Wales	North Western and N Wales	Cumbria
Molluscs											
cockles		✓	✓	✓		✓			✓	✓	✓
mussels		✓	✓			✓	✓		✓	✓	✓
Oysters			✓	✓	✓	✓			✓		
Clams			✓		✓	✓					
scallops			✓		✓		✓	✓	✓	✓	
American clams						✓					
periwinkle				✓	✓	✓	✓		✓		✓
Whelk	✓	✓			✓				✓	✓	✓
Crustaceans											
Lobster	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
Crab	✓	✓	✓				✓	✓	✓	✓	
velvet crab	✓	✓	✓								
spider crab								✓	✓		
Crawfish								✓	✓	✓	✓
Shrimp/prawn		✓				✓			✓	✓	✓
Nephrops											✓

Source: SFC byelaws

Molluscan fisheries are, by and large, the more closely regulated – though the most comprehensive management systems are to be found in the form of regulating orders usually applied to specific areas within the District (see 6.3 below). Outside the orbit of regulating orders, cockle, mussel, oyster and scallop fisheries are separately controlled through restrictions on gears, closed seasons and minimum sizes and occasionally, as in Cumbria, by imposing daily catch limits per crew member or per vessel, together with more general rules relating to the closure of shellfish beds, the redeposit of shellfish etc. By contrast, the crustacean fisheries are subject to fewer individual regulations – mainly concerned with minimum landing size and, in the case of the Irish Sea, with the specification of gears used in the shrimp and prawn fisheries – together with general restrictions on the landing of parts of crabs and lobsters. There is one important exception to this rule: the lobster fishery, is now subject not only to a complex raft of byelaw regulations but to a variation in the package of measures from one SFC to the next (see Table 6.3). Once again it is difficult to believe that this variation can be justified either in terms of science or in relation to the relative importance of the lobster fishery to the particular District.

Table 6.3 Variation in the management of lobster fisheries

	EU	UK	North'land	North Eastern	Eastern	Kent and Essex	Sussex	Southern	Devon	Cornwall	Isles of Scilly	South Wales	North Western and N Wales	Cumbria
Minimum landing size	85	87	87	87	87	87	87	87	90	90	90	90	90	87
Maximum landing size												✓		
Ban on landing soft lobsters			✓		✓									
Ban on landing berried females					✓	✓			✓	✓				✓
V-notching			✓	✓					✓	✓		✓	✓	
Escape vent in pots										✓				✓
Permit scheme (landing records)			✓	✓	✓		✓	✓		✓		✓	✓	✓

Source: based on Addison, 2000

6.2.4 Byelaws: an archaic instrument of management

Overall, therefore, it would seem that byelaw regulation is a rather piecemeal, fragmented and inadequate management instrument and one which fails to satisfy the criteria of precautionarity, flexibility and proactivity which jointly underlie any modern resource management system. Part of the reason for the complex and disjointed pattern of byelaw regulation is the fact that modification of the regime can only usually be achieved through the introduction of new byelaws rather than the periodic redrafting and consolidation of the

system (Symes and Phillipson, 1997). Indeed, a system of management which has to rely on byelaw making powers as defined in Section 5 will inevitably struggle against being labelled 'archaic'. A more cynical view would suggest that most fishermen are content with a system which offers plenty of scope for exploiting the inevitable loopholes. Huggett and Bartram (1994) summarised the limitations of byelaw making powers held by SFCs. Principal among these were: their inability to remove or suspend rights of fishing through the introduction of licensing schemes; their inability to take anticipatory, proactive measures to control new methods of fishing before they demonstrably begin to affect the fishery – significant damage can therefore be inflicted on the stocks or their essential habitats before a byelaw can be put in place; and, related to the previous point, the insistence that byelaw applications must be based on affirmative scientific evidence. Together these three conditions severely disable SFCs in terms of their management, as opposed to regulatory, capabilities. In particular, the denial of the precautionary approach – whereby managers are encouraged to take positive action to conserve fish stocks even in the absence of full scientific proof – forces SFCs to be out of step with the received wisdom of contemporary fisheries management. Thus far, the Departments have resisted the arguments in favour of allowing time limited, emergency byelaws to suspend potentionally damaging activity pending the collation of scientific evidence.

6.3 Regulating and several orders

Some of the criticisms levelled at the SFCs' byelaw making powers do not apply to the second regulatory instrument which the SFCs have at their disposal. However, regulating orders are somewhat more limited in their application. Until 1997, they applied only to molluscan fisheries and, despite the so-called 'Wilcox amendment' intended to remedy this limitation by extending regulating orders to cover crustacean fisheries as well, there has so far been very little movement on the part of the SFCs to introduce regulating orders for purposes of managing lobster and crab fisheries. Indeed only Devon SFC has to date formulated a regulating order which specifically targets crustaceans. The reason given for this apparent lack of interest is that regulating and several orders are designed for the management of stocks which because of their immobility can be regarded as territorially prescribed. Molluscan shellfish beds are locationally fixed: crab and lobster populations are mobile. In effect, regulating orders are based on the assumption of individual or community use rights while several orders specifically convey those property rights to groups or individuals for periods of up to 60 years.

Under the provisions of the *Sea Fisheries (Shellfish) Act 1967,* SFCs can apply for a regulating order to manage shellfisheries within their District and for a several order to facilitate shellfish cultivation. Where the two functions of 'management' and 'cultivation' are combined in a single order, it is commonly referred to as a 'hybrid order'. Several orders, which may also be granted to groups of fishermen, afford the grantee exclusive rights of "depositing, propagating, dredging or taking shellfish" and permits them "to make and maintain shellfish beds, to collect shells and remove them from one place to another". The right of a several fishery is granted for up to 60 years, although its specific area will not be defined in the order as it may be subject to change as new lays are added and old ones removed. The SFC will from time to time mark out the active lay areas on the ground. Several orders also include powers to lease out portions of the seabed to individuals as lays: such leases will usually be granted for areas less than 10 ha and for periods of not more than 10 years.

Important though the provisions of several orders may be in terms of encouraging the principles of good husbandry in relation to shellfish stocks and the idea of reinvesting in the fishery *per se*, the more widespread and important instrument for the effective management of shellfisheries is the regulating order, granted for up to 30 years. It bestows on the SFC a range of management powers with which "to carry into effect and enforce regulations and restrictions, levy tolls and royalties, deposit or propagate". These apply to all areas not previously specified as a several fishery and to all persons engaged in the fishery. Regulating orders, in conferring these powers, offer SFCs certain important management opportunities which are not available through byelaws. However, these opportunities are not without their inbuilt limitations and regulating orders themselves not without their critics.

The cardinal advantage of a regulating order is that it permits the SFC to issue licences to fish for shellfish "in such numbers and to such persons for such periods…. at such times, in such a manner and to such extent as may be determined". In other words, SFCs are in a position to restrict the method of fishing and limit the number of licences and so cap fishing effort. Changes to regulations within the framework of the regulating order can be made more speedily than is the case with byelaws, thus investing the system with greater flexibility. Together with opportunities to build the resource base through the relaying and careful maintenance of the shellfish beds, regulating orders are considered by most CFOs to provide a platform for scientifically based management and for forward planning which is otherwise denied to the SFCs. Moreover, the levying of licence fees enables the committees to recover some of the management costs; the income from licence fees must be reinvested in the fishery.

There are, however, a number of quite significant limitations. In the first place, the number of licences can only be reduced by natural wastage and the operation of a two year rule before a licence can be withdrawn or reallocated inevitably delays the process by which resources and fishing capacity can be brought into balance. As the number of licences cannot be varied to reflect actual or predicted stock levels, effort reduction relies mainly on varying the operating and closing dates for the fishery and restricting the number of days fishing per week. All licence holders must be treated equally: there is no opportunity to vary the conditions of the licence, as between full time and part time fishermen. In the case of the Thames Estuary Regulating Order, for example, the TAC for cockles of 9800 tonnes in 2001 is divided equally among all 14 licence holders irrespective of vessel size, with a daily maximum harvest of 10 tonnes per vessel, a six month closed season and a restriction on the number of days fishing – opening with two days a week, rising to three and reducing to two days at the end of the season. In reality, therefore, the system lacks much of the very flexibility which is commonly ascribed to regulating orders. Changes to an order requires 'renegotiation' which may prove relatively protracted, though not usually as lengthy as that for byelaw applications.

Although regulating orders are still seen by most CFOs as providing the 'best available means' of managing molluscan shellfisheries, some of their strongest advocates in the past are becoming much more wary of the potential for legal challenge especially in the new environment created by the *Human Rights Act 2000*. In effect, regulating orders appear to create a 'closed shop': free entry to the fishery is apparently denied, thus breaching the principles of open access embodied in the notion of a public fishery. Moreover, there is an implicit conflict of interest between the private enterprise aspects of an order which permits the granting of property rights to individual fishermen for a period of up to ten years and the general principles of collective management of the fishery which may well limit the freedom

of action of the individual layholder and inhibit the profitability of the enterprise despite the layholder's personal investment in the fishery. Such circumstances seem likely to bring about more restrained management or more frequent litigation in the future, adding to the suggestion that regulating orders may be so expensive in terms of the inputs of time and effort on the part of the SFC as to be 'out of all proportion to the economic value of the fishery'.

Nonetheless, regulating orders remain popular in those Districts where molluscan shellfisheries form an important sector of the inshore fishery. A number of new orders have been drafted quite recently, including the Solway Regulating Order – a joint venture between Cumbria SFC and Scottish inshore fishing interests – activated by a need to protect what only a few years ago was a virgin fishery but soon threatened by the interest shown by non-local fishing fleets. Overall the geographical distribution of regulating orders remains concentrated around the coasts of south-east England. They can cover considerable areas ranging from a few hundred hectares up to 68,865 hectares in the Wash and 116,000 hectares in the Thames Estuary – but even these are certain to be eclipsed by current development in northern and western Scotland.

6.4 The shellfish licensing scheme

Plans for a shellfish licensing scheme to remedy some of the deficiencies in the current arrangements for the management of crustacean fisheries, outlined in the previous sections, have been on the agenda for a considerable number of years. After a lapse of several years following the initial proposals formulated by a MAFF Working Group convened in 1994, a consultation paper was issued by the Fisheries Departments in January 2001. According to this proposal, fishing for crustaceans [lobsters, crawfish, edible, velvet, green and spider crabs] will be "subject to the grant of specific authority … to the holders of existing fishing vessel licences who can demonstrate a track record of fishing for crustacea by means of pots or nets in any consecutive 12 month period between 1 January 1998 and 31 October 2000" (MAFF, 2001). To qualify, an applicant will have to demonstrate the landing of more than 200 kg of lobsters or 750 kg of crabs. Special provision would be made in respect of fishermen who, though not qualified under the above conditions, could demonstrate 'an enforceable financial commitment' to construct or purchase a vessel equipped to catch crabs or lobsters using pots or nets, or who had recently taken delivery of such a vessel but not yet established a track record.

Licences would be introduced for no more than 1500 pots (or 10,000 metres of net) with the intention of reducing the maximum number of pots to 1200 at the rate of 100 per year. A condition of the licence would be the submission of monthly returns specifying daily fishing activity in terms of the number and types of pots fished, their location, the number, weight and species of shellfish retained and landed, together with the place of landing. Any entitlements under the scheme would be transferable, together with the licence, as part of a normal licence transaction but not as a separate entity.

Unlicensed professional fishermen would be allowed to continue working a limited number of pots for their own use or interest, providing no more than 5 lobsters or crawfish and 25 crabs are retained on board on any one day. Hobby fishermen, fishing for pleasure or home consumption, would be restricted to retaining one lobster or crawfish and 5 crabs each day. Also under review is the possibility of banning certain types of pot (eg the more efficient

parlour pots), the periodic prohibition of shellfishing in certain areas and at certain times and the appropriateness of existing minimum landing sizes.

The proposed scheme would be introduced in two phases. In the first, a national scheme would be operated by the Fisheries Departments, during which local initiatives to restrict fishing effort under SFC byelaws would remain in place or be strengthened. Subsequently, at a date as yet unspecified, new legislation would be introduced 'to allow for a comprehensive shellfish licensing scheme to be operated locally, be that through the Sea Fisheries Committees of England and Wales or other bodies'.

The response to these proposals has been mixed. 'Too little, too late' summarises the most frequent reaction, but not all fishermen are happy to see government legislation wrapped around the only remaining fishery of any significance in the UK (*Fishing News*, 19 January 2001). Some would argue that licensing is unnecessary, stocks are not in any danger and the economics of shellfisheries are sufficient to regulate fishing efforts. Other concerns are raised over the impact on traditional, small scale, polyvalent inshore fishermen who use the unlicensed crustacean fisheries as a safety valve when the stocks of other species are stressed, moving into commercial potting from time to time rather than on a regular basis.

Those who favour a licensing system believe it to be necessary to protect the industry from the overspill of decommissioned demersal fishing effort into inshore potting activities through reinvestment in the <10 m sector; to put an end to large-scale abuse of stocks by unlicensed fishermen who sell their catches 'by the back door'; and to introduce the basis for a precautionary approach to shellfish management (*Fishing News*, 19 January 2001). Doubts were raised, however, over the ability to police particular aspects of the proposals, notably the progressive reduction in the maximum number of pots from 1500 to 1200. Among the representatives of the SFCs interviewed, there was a near universal opposition to the attachment of the shellfish licence to the main licence and to its tradability, fearing for the effect this would have on the structure of the local inshore fishing industry. Some concern was also expressed over possible delays in introducing the second phase which would bring shellfish licensing under local control. Any such delay could disrupt the development of local management plans which have been emerging though the introduction of shellfish permit schemes, the careful monitoring of fishing activity and the bringing together of appropriate byelaw regulations.

6.5 Enforcement

SFCs have a duty to enforce EU, national and local regulation within their Districts. The effectiveness of such enforcement duties is a function of four factors:

- sound, well drafted regulations which are fully enforceable;
- an adequate enforcement capability at sea and on land;
- an ability and willingness to bring prosecutions; and
- adequate sanctions imposed by the courts.

Doubts were raised in some interviews in relation to all four factors.

One of the most persistent complaints from the SFCs concerns the archaic and irrelevant framing of the principal legislation – the *Sea Fisheries Regulation Act 1966*. In one particular instance, the Act states that byelaws can be introduced ' for restricting or

prohibiting… the fishing for or taking of…. specified kinds of sea fish'. At landing ports or, indeed, at sea it is impossible to determine exactly where the fish retained on board a vessel or landed for sale were caught. Thus, when FOs are confronted with fish which contravene local regulations referring only to waters within the 6 nautical mile limits, they are likely to be told that the fish in question was taken outside rather than inside the limits. To this extent, several local byelaws referring to the minimum size of fish and shellfish are unworkable. By contrast, national and EU minimum landing size regulations typically refer to the landing and/or carriage on board rather than the taking of fish.

Inshore waters around England and Wales, covering somewhere in the region of 29,000 km^2, are probably among the most heavily policed anywhere in Europe. With the exception of the Isles of Scilly, all SFCs have the capability to patrol their inshore waters on a regular basis, as well as being able to establish a presence on the quayside of most harbours in the District, at least from time to time. At the time of our study, excluding RIBs used mainly for work close inshore, there were some 15 patrol boats and *circa* 84 enforcement officers deployed around the coast. By way of comparison, DEFRA's Sea Fisheries Inspectorate responsible for enforcement in an area of some 270,000 km^2 outside the 6 nm limits has only four fisheries protection vessels, under charter from the Royal Navy, at sea at any one time, and as few as 55 fisheries officers based around the coast.

The basic enforcement capability of the SFCs is not, therefore, in doubt, but during the course of our interviews some questions were raised both from within and outwith the industry about its efficacy on three principal grounds. First, whether the expensive hardware available is put to sufficient use; for whatever reasons – restrictive fuel budgets, shortage of manpower, mechanical breakdowns etc – some SFC patrol boats may not be at sea often enough or long enough. Secondly, in relation to problems not unique to the fishing industry that may arise where the person responsible for reporting those who break the rules lives in the same community as the offender, and where his role as enforcer overlaps that of the friendly adviser. A third issue relates to the training of Sea Fisheries Officers: a five day enforcement course is run each year, primarily designed to equip officers with the skills to investigate fisheries offences and compile evidence in accordance with the Criminal and Investigation Procedure Act, and officers will normally attend the course every two to three years to refresh their skills and update themselves on matters relating to the law. Nonetheless, there is some criticism from outside the SFCs that the level of training is insufficient. In the current climate of resource constraint it is hard to see how the training provision can be significantly increased.

Although only a few SFCs publish the results of their enforcement activities in detail, it is clear that very few inspections result in court proceedings. In line with Home Office procedures, preference is given to informal verbal warnings with written warnings issued for repeated offences. The primary purpose of enforcement is to prevent the occurrence of infringement and the low numbers of prosecutions may simply indicate that the threat of inspections at sea or in port is sufficient to ensure that there are few serious infractions. But from some of the views expressed to us in the course of the interviews, there may be other reasons why few cases reach the courts. SFCs may be less inclined in taking court cases where there is uncertainty over the interpretation of the regulations and there is a lack of adequate funds to meet the costs of legal action, especially where a case could go to appeal. They may also be discouraged by concern over the industry or public reaction to proceedings. Finally, doubts were expressed as to whether the punishment meted by the courts does serve as a sufficient deterrent either to the individual fisherman or to others.

At present the skipper and owner of a vessel used for fishing in contravention of a byelaw are each liable to a fine not exceeding £5,000 and the court can also order any gear used or fish taken to be forfeit. In practice, however, many of the fines awarded by the courts are set at so low a level as to make little contribution to the effective enforcement of the regulations.

6.6 Overlapping jurisdictions: SFCs and the Environment Agency

Devolved responsibilities for IFM are, in fact, shared on a somewhat unequal basis between the SFCs and the Environment Agency (EA). Concern is expressed that the overlap of responsibilities is confusing and unnecessary, and can lead to anomalies in the regulation of inshore fisheries.

The House of Commons Select Committee (1999) recommended that the relationship between the two organisations should be reviewed so as to establish a clear rationale and, where necessary, resolve any problems that exist. That review has been deferred pending the outcome of the CFP review in 2002. While in the context of the present report it would be inappropriate to try and reach any conclusions as to how the problems might be solved, it is useful to explore the situation in some detail and to identify the differences in organisational structure and the ways in which the two bodies tackle their responsibilities.

There are two distinct elements to the overlapping jurisdictions: first, throughout the 0-6 nm limits, the EA has direct responsibility for the protection of migratory species (salmon, sea trout and eels) and for the issue of licences for salmon netting and eel nets and traps; secondly, in a few specific instances where normal SFC coverage is missing - as in the Severn, Dee, Taw-Torridge estuaries - the EA assumes the responsibilities of a sea fisheries committee.

The EA is a very different kind of devolved organisation to the SFC: a non-departmental government body now responsible to DEFRA and the National Assembly of Wales, and funded in part by grant-in-aid for its salmon and freshwater fisheries management activities; but the greatest single source of income for fisheries management is derived from rod licence fees. Its remit is very much wider than fisheries management - and even in that limited context, the significance of its recreational freshwater fisheries responsibilities far outweigh those relating to the management of migratory species in coastal waters. As with the SFCs, the EA has powers to make byelaws to regulate the fisheries in its charge, to enforce those byelaws and to prosecute any offences through the courts. The EA is also directly involved in IFM through responsibility for the Shellfish Waters Directive (EEC 79/923).

Currently, the EA's fisheries activities are serviced by eight Regional Fisheries, Ecology and Recreation Advisory Committees (RFERACs) which meet quarterly to consider national and regional issues. Unlike the SFCs, these committees have no democratic basis and no standard format except that membership is limited to 21 people. The EA appoints its own committee members, though the chairperson is appointed by the appropriate Minister. Representation of sea fisheries interests varies: all RFERACs are expected to have a representative nominated by the local SFC(s) - in the same way that the EA nominates its own representative to a SFC. However the EA's representation on SFCs is guaranteed by the Statutory Instrument which defines the constitution of each and every SFC (except the Isles of Scilly). Reciprocal representation of the SFCs on the RFERACs is not statutorily prescribed but is more by way of 'grace and favour' appointment. In those regions where

there is a strong commercial salmon netting interest, a second sea fisheries seat may also be allocated. Otherwise there is no direct representation of commercial fisheries on the RFERAC.

Significantly, the *Salmon and Freshwater Fisheries Review* (MAFF, 2000, p 152) reported a 'high level of criticism of the role and composition' of the RFERACs and noted that it was 'often replaced by informal forums and consultative groups; in some regions local fisheries advisory committees have been subsumed by Area Environment Groups', leaving the impression that the views of fisheries interests are less highly valued than previously. To what extent this criticism applies in areas where the EA assume the role of a SFC is not clear. The Review recommended the restoration of the formal local committee system to focus on fisheries interests, with at least one committee in each of the EA areas and with all local committees represented on the appropriate RFERAC. The regional committee would have a requirement to consult the local communities on local issues and to develop local 'fisheries action plans'.

The EA's principal involvement with sea fisheries is in relation to the problematic migratory salmon stocks. Its policy decisions, clearly influenced by the recommendations of the International Council for the Exploration of the Sea (ICES) and the North Atlantic Salmon Conservation Organisation (NASCO), are implemented through 68 separate Salmon Action Plans to be finalised in 2002, covering all the salmon rivers in England and Wales. Greatest concern is directed to the so-called 'mixed fisheries' - coastal net fisheries which exploit stocks from a number of different rivers as in the case of the north-east drift-net fishery which accounts for around half the commercial salmon catch in England and Wales. This fishery has already been the subject of a detailed review following the *Salmon Act, 1986*. Phasing out of the coastal net fisheries was initiated in 1992 since when the number of licences has fallen from 142 to 72 in 1999. The *Salmon and Freshwater Fisheries Review* recommended the acceleration of the process through the offer of compensation to those who voluntarily leave the industry. At present the regulation of the commercial fishery through net limitation orders, which cannot be used regressively, is considered inadequate and the Review Committee would prefer to regulate the fishery through a byelaw with specific provision for actively reducing the number of licences.

In those instances where the EA assumes the role of a SFC, it claims to act proportionately to the local needs for regulation. As a result, there is a fairly intensive level of management effort in the Dee Estuary compared with the Severn or Taw-Torridge. Byelaws made under the *Sea Fisheries Regulations Act 1966* have been introduced to control net fisheries and the cockle fishery in the Dee and a regulating order drafted for the management of the cockle fishery. There are, nonetheless, some minor anomalies which present the situation in a somewhat unsatisfactory light: for example, the Dee Estuary cockle fishery beyond the mouth of the estuary where it is managed by the SFC may be closed while it remains open within the estuary under the EA's jurisdiction - or *vice versa*. Elsewhere, in the Helford River in Cornwall where the limits of the SFC's and EA's jurisdiction overlap, different minimum landing sizes for sea bass apply (37.5 cm under SFC byelaws and 36 cm where the EA has jurisdiction).

Although the EA does not have the powers formally to establish a SFC in areas like the Dee Estuary, it has set up an *ad hoc* committee to discuss management issues with the local fishing industry. The EA's functions as a SFC are not independently funded but rely on the grant-in-aid budget allocated to the region. Nor do these functions require earmarked

capital investment. Thus the enforcement role is covered through the use of the EA's patrol boats or land vehicles available for routine fisheries duties undertaken by the Agency. It is perhaps worth noting that the EA's total annual expenditure on inland and coastal fisheries in the late 1990s was in the order of £21m while expenditure on the management of the migratory salmon and trout fisheries at *circa* £9m pa was approximately twice the total budget available to the twelve SFCs.

Although the relations between the EA and SFCs are generally regarded by both parties as good - both at the national and local levels - there are clearly some areas of concern. According to the *Salmon and Freshwater Fisheries Review* (MAFF, 2000:156-7).

> "In some regions we were told that (the relationship) was good with Environment Agency bailiffs and SFC fisheries officers cross-warranted… and there is active cooperation; in others, we heard, little cooperation took place. Even in Sea Fisheries Districts where byelaws to protect salmon have been introduced, and sea fisheries officers hold Environmental Agency warrants, we are concerned that the protection of migratory salmonids is low on the SFC's list of priorities…
>
> We conclude that a much closer cooperation is needed between the Environment Agency and SFCs in respect of their functions in coastal waters. It is a waste of resources to have SFC and Environment Agency vessels patrolling the same waters without an agreed and coordinated approach to enforcement…"

From the SFCs' point of view there are counter accusations that where the EA assumes the role of SFC it does not always take its duties seriously and lacks the appropriate expertise to deal with management issues in a structured way. Perhaps not surprisingly, the view of a few SFCs was that there were no reasonable grounds for the EA to be involved in the regulation of sea fisheries whether in the estuaries or off the coast. On balance, a more conciliatory view prevailed stressing that in most areas SFCs and the EA coexist quite happily.

Neither the *Salmon and Freshwater Fisheries Review* nor our own enquiries brought to light any fundamental issues arising from the overlap of responsibilities between SFCs and the EA and only a few minor discrepancies in management practice. Even though the situation may appear to be irrational, it is tempting to question whether there is a problem to be solved, except internally through closer collaboration, better exchange of information and more understanding and respect for the roles of the two organisations.

6.7 Conclusions

Our enquiries have revealed some serious deficiencies in the scope of regulatory powers available to the SFCs, which prevents them from developing strategic management plans for their Districts, and some basic defects in the process of byelaw making. Whatever changes to the structure of IFM may be envisaged for the future, the following issues will need to be addressed as a matter of some urgency:

- powers to contain internal pressures for the expansion of fishing effort, to prevent the incursion of powerful nomadic fleets into inshore fishing grounds and to anticipate any potential adverse effects caused by the exploitation of new fisheries and the introduction of new fishing methods are lacking;

- part of the problem can only be satisfactorily remedied by new primary legislation which grants comprehensive and relevant powers to the SFCs; but part of the problem can also be addressed by the SFCs themselves through the development of a more structured approach to local IFM, and closer cooperation and consultation between SFCs so as to create greater consistency in the application of byelaw regulation between neighbouring SFCs;

- one reason for the apparently complex and disjointed pattern of byelaw regulation is the fact that modifications to the regime are at present brought about only through the introduction of new byelaws rather than through periodic redrafting and consolidation of the overall system;

- although regulating orders represent a significant improvement in the regulation of molluscan shellfisheries by comparison with byelaws, their value as an instrument for good management is impaired by the relative inflexibility of the licensing system and by the increasing disquiet among the industry at large over the 'exclusivity' of a regulating order;

- the long awaited shellfish licensing scheme threatens to prove unequal to the urgent task of creating a robust framework for the management of crustacean fisheries, in terms of the doubts over its ability to deal adequately with the distinction between full time and part time fisherman, the difficulties of enforcing the controversial proposals for reducing the maximum number of pots per licence, and the likely delays in transferring responsibility for the scheme from national to local (SFC) level;

- there is a need to enhance the image of SFCs through creating greater awareness of the functions they are expected to undertake; including those in relation to enforcement; the wider publication of performance targets and achievements across the range of activities might be helpful.

However, we could find no conclusive evidence to support a view that the overlap of responsibilities between SFCs and the EA poses any serious threats to the effectiveness or efficiency of fisheries management in coastal waters, though there may be a need to improve working relationships in some Districts.

7. Integrating fisheries management and marine nature conservation in inshore waters

7.1 Introduction

Possibly the most significant - and potentially the most traumatic - changes to the roles and responsibilities of SFCs, since the framework legislation for IFM was put in place in the mid-1960s, were brought about by seemingly peripheral legislative acts. These required SFCs to take account of environmental matters in the discharge of their normal duties and eventually gave them specific authority to control fishing activity on environmental grounds. This action was precipitated by a combination of growing concern among environmental NGOs for the negative impacts that fishing activity could exert on the marine ecosystem and by specific obligations imposed on the UK government in accordance with EU legislation. But it was also very much in line with international treaty obligations and with emerging guidelines for 'responsible fishing' (FAO, 1994).

Both the general trend and the specific legislation, which is detailed in 7.2 below, had the potential to alter the direction of IFM, to introduce what has become known as the ecosystem approach, and to cause a major shift in the activities of SFCs in England and Wales. In practice, the effects have been very modest. In fairness, however, we must bear in mind that the attempts to integrate fisheries management and marine nature conservation have only a very short formal history internationally and nationally, and that within the European Commission the Fisheries Directorate has been quite slow in catching up.

Nevertheless, at this early stage, questions do need to be raised concerning the slow progress in integrating the two areas of policy concern. Does the role of marine nature conservator sit comfortably alongside that of commercial fisheries manager? Are SFCs an appropriate organisation through which to develop the integration process or is there a fundamental conflict of objectives which cannot easily be overcome? Or does the failure to progress reflect more fundamental weaknesses in the UK's marine conservation strategy?

In theory, the concepts of marine nature conservation and the development of sustainable commercial fisheries should gel quite effectively : 'sustainable fisheries within a diverse, productive and integrated marine ecosystem' is a mantra often repeated in conservation and fishing circles. But in practice the marriage of fisheries management and marine nature conservation is being attempted not through the development of a common management philosophy but much more pragmatically through the adjustment of particular fishing practices to suit the conservation goals in respect of certain endangered species or threatened sites. In these circumstances, lack of empathy can quickly turn into suspicion and ultimately into hostility between the conservationists and the fishing industry: the conservation of seals in UK waters is a case in point.

7.2 Legislative change

In recent years the main thrust for the extension of marine nature conservation through the legislative process has come from two different directions : first, the persuasive lobbying powers of the environmental NGOs and second, the EU Directives on the *Conservation of Wild Birds* (79/409/EEC) and, more importantly, the *Conservation of Natural Habitats and*

Wild Fauna and Flora (92/43/EEC), known familiarly as the Birds Directive and the Habitats Directive.

The initial move to broaden the responsibilities of the agencies dealing with IFM came as a result of pressure from the Royal Society for the Protection of Birds. The *Sea Fisheries (Wildlife Conservation) Act 1992* imposed a duty on SFCs to consider the environmental implications of decisions undertaken in the exercise of their normal duties. Under the Act

> "In discharging any functions conferred or imposed on him or them or under the Sea Fisheries Acts, the Minister or Ministers or any relevant body shall, so far as is consistent with the proper and efficient discharge of these functions -
>
> (a) have regard to the conservation of marine flora and fauna : and
> (b) endeavour to achieve a reasonable balance between that consideration and any other considerations to which he is or they are required to have regard".

Its practical impact was minimal but it did at least alert SFCs to considerations beyond those normally associated with their statutory functions as regulators of inshore fisheries. It imposed a duty of care but left the SFCs with no clear indication as to how that duty was to be exercised and without any additional powers. It was, in short, little more than 'a sign of the times' or a declaration of intent.

Much more significant were the legal implications that flowed from the two European Directives, especially the Habitats Directive. What the two Directives envisaged was the conservation of biodiversity across Europe through a series of terrestrial and marine Special Protection Areas (SPAs), linked to the earlier Birds Directive, and Special Areas of Conservation (SACs) associated with the Habitats Directive, to create a coherent and sufficient network of conservation sites described collectively as *Natura 2000*. To implement the system and to ensure the proper conservation of sites in marine areas - all of which fell within the 0-12 nm zone and the vast majority within 3 nm of the coast - it was necessary to identify the prevailing legislation governing IFM in England and Wales. The *Conservation (Natural Habitats, & c) Regulations 1994* required SFCs and other maritime regulatory bodies to exercise their functions in respect of marine SACs so as to ensure compliance with the Habitats Directive. SFCs were recognised, along with other public bodies as 'competent and relevant' authorities with powers to implement regulations relating to the marine environment.

But the more far reaching piece of new legislation was the *Environment Act 1995* which *inter alia* effectively redefined the structure and roles of SFCs and vested in them powers to implement their newly defined environmental responsibilities. In particular, the Act required the amendment of the *Sea Fisheries Regulation Act 1966* defining the constitution of local fisheries committees to include "persons having knowledge of, or expertise in, marine environmental matters" and to allow committees to appoint "such number of persons with knowledge of or expertise in maritime matters as it thinks fit as further members of the committee for those occasions on which it is considering any proposed byelaw under section 5A". Section 5A confers power on SFCs to make byelaws for marine environmental purposes only after consultation with English Nature and the Countryside Council for Wales.

7.3 Implications for IFM

As a consequence of legislative action in the 1990s, the environmental arm of the SFCs has been strengthened by an obligation to include among its formal committee structure at least one 'environmental expert', the option to co-opt additional environmental expertise as the need arises, and the introduction of powers to formulate byelaws to regulate fisheries for environmental reasons.

All SFCs now include an environmental representative, most likely drawn from a county Wildlife Trust and less commonly an environmental scientist from one of the region's institutes of higher education. Despite their concern at the consequential loss of a fishing industry representative, the general response from both CFOs and chairmen is that the committees have clearly benefited from the greater breadth of scientific knowledge and understanding of the local environmental issues that these new members bring to the committees' proceedings. It has taken time for the environmental representatives to find their feet in what are often highly technical discussions relating to fishing practice. Possibly some have felt a little intimidated in a minority of one. Certainly they have not proved to be the disruptive influence that some had feared at the outset. The option to co-opt additional environmental expertise seems to have been taken up only very rarely.

In all cases new byelaw proposals need to be assessed by the committee for any possible environmental implications, a task no doubt taken up by the environmental representative in particular. Rather surprisingly it is not standard practice for SFCs to inform the statutory conservation agencies of any new byelaw proposals, except where they relate specifically to environmental purposes. Some SFCs do submit copies of their proposed byelaws to English Nature or the Countryside Council for Wales, more by way of courtesy than in the expectation of a formal response. It is unclear whether, and to what extent, the environmental credentials of byelaws are scrutinised by the relevant Departments before granting approval.

The ability to create byelaws to regulate fishing activity for environmental reasons - seen by some as a major opportunity and by others as a clear threat - has so far borne very little fruit. Only one environmental byelaw has been adopted; the St Ives Bay Gillnet Fishery Byelaw, enacted by Cornwall SFC in November 1999, permits the CFO to close the fishery for a period of 21 days "when the deaths of birds through entanglement with gillnets, as witnessed by fisheries officers and other relevant officials, exceeds a predetermined level over any consecutive five day period". The byelaw is interesting for a number of reasons: it involves external conservation expertise and incorporates a degree of flexibility in the decision to close the fishery in as much as the threshold which triggers the closure is set annually in consultation with English Nature, local conservation interests and local fishing representatives. So far it has not been necessary to invoke the byelaw, suggesting perhaps that the local industry has responded by moving some of its activities to less vulnerable areas. The supportive response within MAFF to the application, suggests that the Department is more than ready to encourage the use of the new byelaw provision.

By far the most significant attribute of environmental byelaws is their incorporation of the precautionary principle, denied under Section 5 of the 1966 Act. This is made explicit in the Departments' *Guidelines on Making and Confirmation of Sea Fisheries Committees (SFCs) Byelaws* which states that

> "Environmentally-based byelaws should only be considered where the absence of legislation creates a risk of significant environmental damage. In considering environmental risk, SFCs should have regard to the precautionary principle. This means that where there are real threats of serious or irreversible environmental damage, the lack of full scientific certainty, should not be used as a reason for postponing measures to prevent such damage. In all cases it is essential to balance costs and benefits and to balance fisheries interests against the interests of the environment".

If the precautionary principle can be applied in the case of environmental byelaws, it is hard to understand why it should not be allowed to operate for the protection of inshore fish stocks. In the case of an environmental byelaw there is an obligation on the part of SFCs to consult the statutory nature conservation agencies before the application is submitted to the relevant Department for approval.

Although the St Ives Bay byelaw is to date the only one drawn up specifically for marine wildlife conservation benefit, other byelaws introduced primarily for the regulation of fisheries *per se* have used their environmental credentials to ease the passage of the byelaw through the formal approval stage. The recent byelaw enacted by Southern SFC to ban scallop dredging and trawling in two areas of Lyme Bay clearly builds on work undertaken by the Devon Wildlife Trust to protect underwater habitats from damage caused by the use of spring loaded dredges (Devon Wildlife Trust, 2000).

No new money has been earmarked to assist SFCs to fulfil their new environmental commitments. In view of the modest responses outlined above, this may not seem all that surprising. But one of the more important repercussions of the environmental legislation has been the increase in the workload of SFC officers and the need to designate responsibility for environmental matters to a particular member of staff. Only in a few instances has the inclusion of a marine environmental liaison officer among the complement of staff employed by a SFC been the result of a dedicated new post taken up by a qualified environmental scientist, with or without appropriate fisheries experience. More commonly the designation has been added to that of a replacement post where it has been possible to appoint a suitably qualified person. In other cases, where the opportunity for an additional or replacement post has not presented itself, the responsibility has simply been added to the existing duties of the CFO or his deputy. As a result, one or two SFCs still lack a suitably qualified marine environmental officer.

Much of the increase in the workload of CFOs and/or their dedicated marine environmental officers has been associated with the development of management schemes for marine SACs and the SFCs' status as 'competent and relevant authorities' with appropriate byelaw making powers. Only one SFC has undertaken the role of 'lead authority' in the coordination of the SAC management plan - Eastern SFC in relation to the Wash and North Norfolk Coast SAC. Nonetheless, it is all too clear that SFCs are likely to prove instrumental in the successful realisation of the objectives set for most marine SACs. In the first place, SFCs are one of the few means by which local authorities can extend their influence beyond the low water mark; fishing is one of a number of activities which can damage the conservation status of a SAC; SFCs have established powers for invoking secondary legislation in the form of byelaws; and, most important of all, they are the only non-departmental organisation with a seagoing monitoring and enforcement capability able to operate throughout the 0-6 nm zone, though the EA has a limited capability along certain stretches of coastline.

There are some 18 marine SACs covering almost 475,000 ha in England and a further 5 sites (c470,000 ha) in Wales. The process of bringing each site to a point where management can be initiated has been slow. To date, the statutory nature conservation agencies have been involved in preparing Regulation 33 advice, setting out the conservation objectives and indicating possible causes of damage to the conservation status for each site, and in assisting the relevant authorities with the formulation of management schemes under Regulation 34.

As Figure 7.1 and Table 7.1 indicate, all SFCs, except Sussex have at least one marine SAC within their District boundaries, though the proportion of the District covered by designated areas varies from total coverage in the case of the Isles of Scilly to relatively small areas in Devon and Cornwall. The uneven distribution of the numbers of SACs – and, therefore, the number of management plans - rather than their total extent simply adds to the problems facing certain SFCs in relation to the inequalities in funding and manpower outlined in Chapter 5.

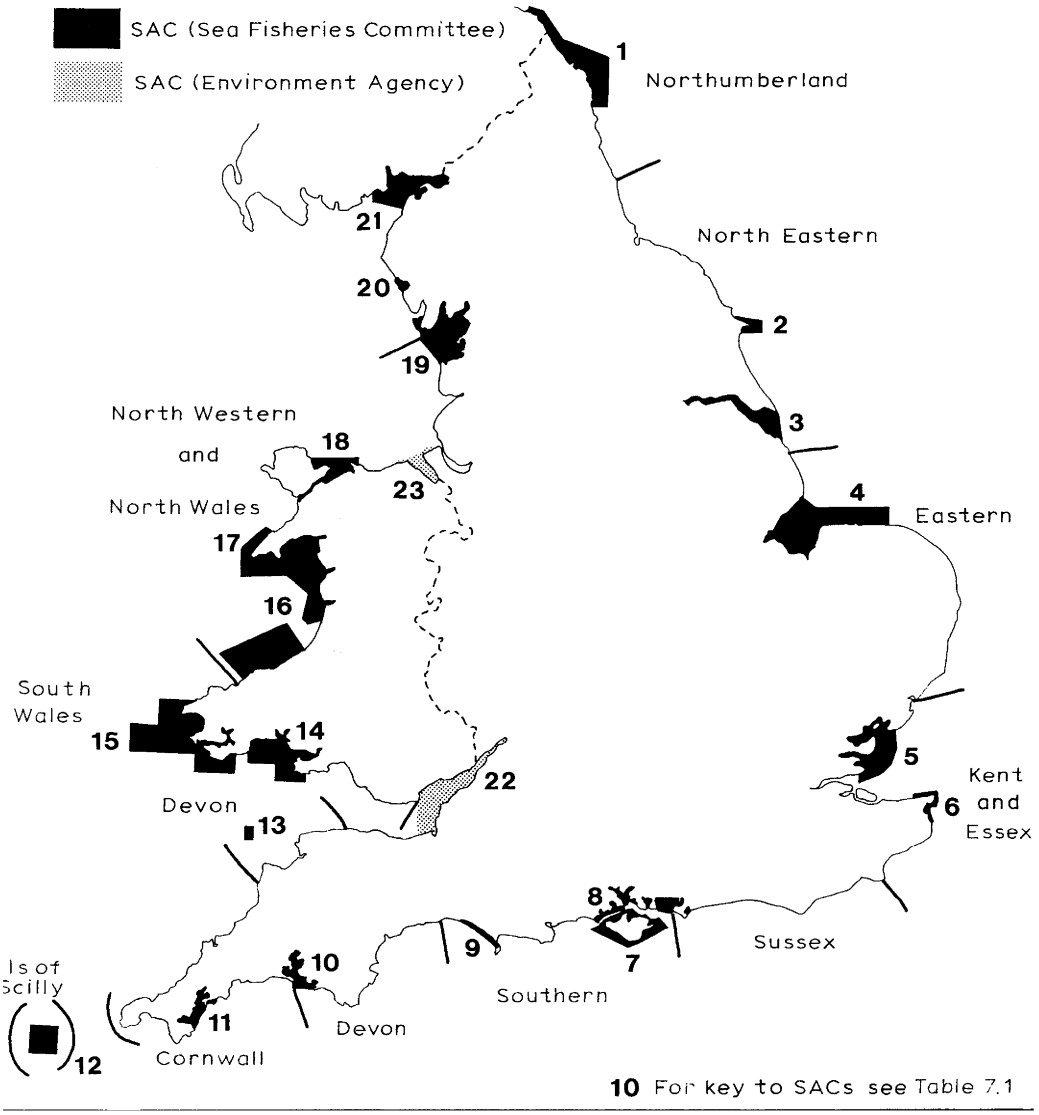

Figure 7.1 Distribution of Special Ares of Conservation (SACs), 2001

Table 7.1 Marine SACs in England and Wales

Sea Fishery District	Special Area of Conservation	Area ha	Subtotal (ha) for District
Northumberland	1. Berwickshire and Northumberland Coast (part)	58,148	*58,148*
North Eastern	2. Flamborough Head	6,312	
	3. Humber Estuary	39,493	*45,805*
Eastern	4. The Wash and North Norfolk Coast	107,761	*107,761*
Kent and Essex	5. Essex Estuaries	46,141	
	6. Thanet Coast	2,804	*48,945*
Sussex	7. Solent Maritime (part)	11,325	
	8. Dungeness	3,121	*14,446*
Southern	9. Solent Maritime	11,325	
	10. South Wight Maritime	19,863	
	11. Chesil and the Fleet	1,632	*32,820*
Devon	12. Plymouth Sound and Estuaries	6,402	
	13. Lundy	3,065	*9,467*
Cornwall	14. Fal and Helford	6,388	*6,388*
Isles of Scilly	15. Isles of Scilly Complex	26,851	*26,851*
South Wales	16. Carmarthen Bay and Estuaries	65,834	
	17. Pembrokeshire Marine	136,166	*202,000*
North Western and N. Wales	18. Cardigan Bay	96,770	
	19. Llyn Peninsula and the Sarnau	146,051	
	20. Menai Strait and Conwy Bay	26,387	
	21. Morecambe Bay	57,473	*326,681*
Cumbria	22. Drigg Coast	1,392	
	23. Solway Firth (part)	13,587	*14,979*
SF Districts (total)			*894,291*
Environment Agency	22. Severn Estuary	58,000	
	23. Dee Estuary	7,100	*65,100*
Total			*959,391*

Source: English Nature and Countryside Council for Wales

The initial misgivings of the fishing industry over the threat of further interference with their customary patterns of activity have, for the time being at least, been allayed by joint statements indications from MAFF and the statutory nature conservation agencies that SAC management plans would be unlikely to impose any further restrictions on current fishing practice, though they could limit opportunities to introduce new fisheries or new fishing methods in the future. It remains to be seen how far the undertaking on the part of DEFRA is actually realised when the management plans become fully operational. The concerns for many CFOs is that the involvement of SFC personnel and resources could rise significantly once the SAC management plans are in place.

7.4 Limited gains … future prospects

The events of the 1990s have certainly not had either the strong positive benefits nor the negative impacts that were anticipated by different interest groups at the time the *Environment Act 1995* was going through the parliamentary process. In terms of substantive change, the first few years have witnessed only modest gains for marine nature conservation. However, there is little doubt that underlying attitudes have changed. There has been a considerable *rapprochement* between the fishing industry, fisheries managers and marine conservation interests; a reasoned dialogue has been initiated, largely replacing the stereotypical posturing of opposed interests. As a result of much more positive interaction, not least within the SFCs' committee meetings themselves, there has been a gradual improvement in mutual understanding and respect for the other party's point of view. But this much improved, but still potentially fragile, relationship still has to be tested by controversial events at the local level; an overzealous, unsubstantiated accusation levied at the industry by local conservationists or an ill-considered act of ecological damage on the part of the local fishing industry could rekindle the old antagonisms.

Within the SFCs opinion is very much divided over the present and future partnership between IFM and marine nature conservation. There is a small minority of CFOs who remain sceptical, believing that little has changed and that there is little scope for any further integration in the future. "We have managed to keep the environmental interests at arm's length, otherwise concern for marine wildlife would have driven the fishing industry to despair". Others, while recognising that IFM and marine nature conservation can be complementary and mutually supportive, believe that the process of integration has already gone as far as most SFCs can reasonably be expected to accommodate, hinting no doubt that the real barrier to further progress is the availability of time and money. But there is also a clear indication that their first priority must lie in sustaining the resource base of the local fishing industry - a view which has particular resonance at a time of increasing resource scarcity.

More positive responses suggest that IFM is only just at the start of the integration process, arguing that - by comparison with many other industries - fisheries has made very little progress in what is seen as a global as well as local driving force for the diffusion of a new management approach. At present, partly because of fisheries' delayed engagement in the integration process and also because of a fundamental lack of knowledge about ecosystem interactions in the marine environment, the efforts made on the part of the fishing industry appear rather crude and simplistic. More concerted action on the part of SFCs acting together rather than independently to identify the basic needs and appropriate means of integration was recognised as an essential step towards achieving a sensible balance of interest between fisheries and nature conservation. Nevertheless, even the 'optimists' still counsel caution

over portraying SFCs as 'green organisations' - most committees are not interested in taking a proactive role on environmental matters - and diluting the original purpose of SFCs : "otherwise we will lose the respect and support of the fishing industry". But as one CFO remarked "the integrated approach lacks a strategic direction; we are not yet looking at the marine environment as a whole. Simply by adding new designated areas and by introducing new byelaws, we run the risk of overkill. When everything becomes a special concern, then in fact nothing can be very special". We return to the question of 'strategic direction' below (7.5) and to a more holistic view of integrated management in Chapter 8.

Underlying this polarisation in attitudes is the familiar question of unequal resource allocation and a sense that some privileged SFCs have been able to take full advantage of the integration agenda to build up an independent scientific capability in terms of manpower and facilities - an advantage denied to the majority of SFCs. Yet, enhanced scientific understanding of local ecosystem processes lies at the heart of balancing the interests of fisheries and nature conservation in a truly integrated way. Two related sets of constraints need to be addressed: first, the lack of effective coordination of research relevant to IFM which is being undertaken by universities, national marine laboratories and SFCs; and secondly, the absence of real collaboration between SFCs in identifying a common agenda for future research in support of IFM and marine nature conservation.

Despite the reservations expressed by a number of CFOs, it is hard to see SFCs being able to avoid still further engagement in the integration process. Moreover, the renewed enthusiasm for integrated coastal zone management currently demonstrated by the European Commission (Commission, 2001) seems destined to draw SFCs more deeply into the network of intersectoral relationships at the local level. All CFOs have become increasingly involved in non-fishing related activities within their Districts in recent years - an involvement which is regarded generally as "neither a top propriety nor an irrelevance, but certainly burdensome and frustrating". Its value lies in being fully informed as to what is going on in the local maritime domain and in having an opportunity to ensure that the local fishing industry's position is more widely and fully understood. On the other hand there is a widespread feeling that the range of issues on which SFCs are expected to have a view is becoming too large, and there is a growing need to be much more selective in deciding which non-fishing related activities should command the attention of the CFO or his deputy. Some CFOs admit to feeling at a distinct disadvantage when involved in certain projects alongside other organisations with much greater resources and more relevant expertise to hand. Through the increasing 'extramural activities' which CFOs have taken on, they have unwittingly positioned themselves as important, if not actually indispensable, links in the nascent local coastal zone management networks.

7.5 A strategy for marine nature conservation: the missing link in the integration process

Little blame attaches to the SFCs - ill equipped and under resourced - for their lack of a strong proactive response to the challenges laid down in the 1990s. We need to look elsewhere to explain the failure to grasp the opportunity provided by the new legislation. Identifying the basic cause is relatively simple: it is the absence of any strategic view as to how the integration process should take effect and the consequent lack of agreed objectives, targets etc. As a result, progress has been limited to local *ad hoc* arrangements. Allocating culpability for this situation is a little more difficult. Responsibility for developing a strategic approach certainly does not lie with the SFCs, upon whom a duty of environmental care has

been imposed, but rather with the relevant government departments and the principal wildlife conservation organisations in general, and the statutory nature agencies in particular. At the time, most NGOs were focussing on the protection of particular species and habitats or on a 'single agenda approach' to marine conservation through the promotion of 'no take zones', for example. Initiatives in relation to IFM were left largely to locally based organisations, notably the Wildlife Trusts, whose strengths lay in their knowledge of local environmental issues but whose perspectives were essentially 'parochial' and weak in strategic vision. European initiatives, meanwhile, in creating the *Natura 2000* network of conservation areas, directed the integration process towards a site based management approach.

In the absence of a strategic direction to the integration of fisheries management with marine nature conservation being developed either by central government or the NGOs, inshore fisheries management has not been obliged to alter its approach in any fundamental sense. As a result, SFCs remain fully committed to their primary objective of managing local fisheries for the benefit of the local industry. So far they have been required to make very few concessions to their established practices in regulating fisheries within their Districts. In some senses, it is perhaps surprising that the local authority members of the SFCs have not shown more direct interest in marine conservation issues and in forging closer relationships with the environmental representatives. After all, there are more votes in environmental conservation than in fish or, indeed, fishermen.

A recent review of marine nature conservation in the UK (DETR, 2001) - one of a sequence of such reviews dating back over 30 years - has acknowledged the inadequacy of the policy response to pressures on the marine environment and to the opportunities created through international agreements. It points out that in the UK we continue to rely on a combination of statutory and voluntary measures and that there are, in fact, relatively few statutory measures designed to deliver marine conservation in UK waters. The system of management in the coastal zone is sectorally based. As a consequence, environmental considerations have been grafted on to existing policies and are peripheral to the main objectives of management. Accordingly,

> "… the present system draws criticism from regulators, the regulated and conservation interests. No one believes it is satisfactory and everyone concedes that there is a need for rationalisation, many believing this should be in the context of a root and branch reform" (DETR, 2001: 22).

The review goes on to point out that environmental policies and regulatory measures are characterised as being "haphazard responses to specific issues or particular stimuli" (p23) and that the approach has been largely influenced by a culture of non-intervention. It concludes by advocating

> "a combination of stronger legislation, partnerships and placing existing sectoral approaches in a clearer common context … There is … a demonstrable case for a *strategic*, marine nature conservation framework. The current reactive approach, with its lack of any effective, cohesive supporting legislative or policy base, could be developed into a strategic, coordinated, proactive approach that provides practical mechanisms to manage marine biodiversity" (pp23-24).

Responsibility for conservation strategy and the overseeing of its implementation in the UK has been devolved to the 'country agencies'. English Nature (EN), the Countryside Council

for Wales (CCW) and Scottish Natural Heritage (SNH), together with the Joint Nature Conservation Committee (JNCC). It would be unfair to accuse the agencies of failing to develop policy statements in respect of the integration of fisheries management and marine nature conservation. English Nature, for example, produced policy statements in relation to marine fisheries and molluscan shellfish cultivation prior to, and in anticipation of, the *Environment Act, 1995*. Moreover, the interagency Marine Fisheries Task Group prepared a paper on *Developing an Action Programme for Sea Fisheries and Wildlife*, focusing on site and species protection, linked to the evolving system of European Marine Sites. More recently English Nature (1999) has identified sea fisheries as one of its eleven sectors for achieving nature conservation objectives and defining priority actions for 2000-2003. Similarly, CCW has very recently issued a document drawing together its sea fisheries policies (CCW, 2001). What is in doubt, however, is firstly whether any of these documents present a truly strategic vision for the integration of IFM and marine nature conservation, as opposed to an 'action plan' approach focusing on areas of immediate concern and, secondly, whether they have made a sustained impact on the approaches adopted by the different parties involved in the integration process.

For their part, the NGOs have belatedly turned their attention towards more general issues concerning the relationships between marine conservation and fisheries management. Rather like the statutory agencies, however, their minds have been focused on the CFP review. WWF-UK has been occupied on two main fronts: its contribution to the Oceans Recovery Programme (McGarvin and Jones, 2001), of marginal relevance to IFM, and more significantly its exploration of the issues involved in integrating biodiversity and EC fisheries policy (Heaps, 2000) as an input to the EC's Biodiversity Action Plan for Fisheries, which sets out broad principles and guidelines for incorporation within fishing policy (Commission, 2001b).

In similar vein, the Royal Society for the Protection of Birds (RSPB) has directed its energies to influencing the CFP review, seen as "a critical opportunity for the EC to develop and refine arrangements for Europe's inshore fisheries … and to give the inshore sector an explicit and long-term role in sustainable development". The report *Managing EC Inshore Fisheries: Time for Change* (Coffey and Dwyer, 2000), commissioned by the RSPB, proposes a new inshore fisheries regime, developed within the context of the CFP, which would involve:

- the development of specific inshore management objectives based on the precautionary principle and the ecosystem approach;
- a requirement for Member States to develop national and/or regional inshore fisheries strategies;
- support for the implementation of strategies through voluntary measures, including local management plans; and
- provision of new financial incentives for the development of local plans and for new environmental initiatives or duties arising from environmental legislation.

By attempting to act out their campaigning roles on the wider, international stage, the high profile NGOs have rather tended to neglect their domestic responsibilities. It has been left largely to the Wildlife Trusts and, to a lesser extent, the Marine Conservation Society to

address issues of policy integration at the national and local levels. The Wildlife Trusts, which can reasonably claim to be the leading environmental organisations when it comes to IFM and which base most of their work on collaborative projects with local fishing interests, has produced a discussion paper *The Future of Inshore Fisheries* (Edwards and White, 2001). It endorses much of the SFCs' work, though is surprisingly critical of their lack of accountability; more importantly, the paper acknowledges the need for a framework within which to elaborate an overall strategy, to develop objectives and mechanisms for resolving conflicts between nature conservation and fisheries and to reorganise management boundaries in line with 'natural fishing areas'. But it has little to say on the integration process itself.

In truth, none of the documents presented by NGOs or the statutory agencies offers a strategic view of the way to progress the integration of fisheries management and marine conservation. They are mainly concerned with trying to complete a jigsaw puzzle made up of bits and pieces of legislation, voluntary incentives and outline action plans. What is missing is the blueprint for integrated fisheries management which will help the would-be solver of the puzzle to piece together the wider picture.

7.6 Conclusions

From the evidence available to us, we are drawn to the conclusion that little has so far been made of the opportunities to forge a new relationship between IFM and marine nature conservation, though we recognise that the time scale has been short. In particular, we would wish to lay particular emphasis on the following points:

- no additional money has been made available to SFCs to enable them to develop their environmental roles and responsibilities;

- it is doubtful whether the inclusion of a single environmental expert, chosen more for their knowledge of local environmental circumstances than for their appreciation of the wider policy context, could be expected to make an immediate and profound impact on the deliberations of SFCs; there may well be a case for the broadening representation of marine nature conservation interests still further with the inclusion of an additional member from the appropriate statutory agency;

- despite the ability of SFCs to make byelaws to regulate fisheries for environmental reasons, incorporating the precautionary principle, only one such byelaw has been introduced (and that has not so far been invoked);

- there has, to our knowledge, been no attempt by SFCs (or by other bodies) to carry out an audit of fisheries:environment issues within their Districts as a basis for identifying areas where action may need to be taken now or at some time in the future;

- one important benefit to emerge from the rather cautious approach to the integration process is a much improved understanding between fisheries mangers and conservationists of the complexities of the fisheries:environment interactions operating at the local level;

- the range of environmental and other coastal zone projects which now demand the attention of SFCs has made for a considerable additional workload for the CFOs and/or their deputies; there is, however, no input-output or cost-benefit analysis by which to assess the utility of this involvement either in terms of improved IFM or better working relations in the wider coastal environment; and

- the limited progress so far made towards the integration of IFM and marine nature conservation is due not so much to the reluctance on the part of fisheries managers or conservation organisations to participate, but a failure to develop a strategic view on how the integration process should take shape; in this central government, the statutory agencies and the conservation organisations must all accept some share of the blame.

8. Developing a strategic view of inshore fisheries management: the concept of integrated management[2]

8.1 Introduction

We turn in this chapter from analysis of the present situation concerning IFM to a consideration of how IFM needs to evolve in the future not only to provide a more rational basis for fisheries management in inshore waters but also to achieve the elusive integration with marine nature conservation. Emphasis in the previous chapter was placed on the constraints imposed on the integration process by the lack of strategic thinking in relation to marine nature conservation. But, in fact, the problem goes very much deeper. It would be hard to identify any underlying strategy for the sustainable development of inshore fisheries within either the EU or the UK at present. Are we then to assume that IFM should be considered simply as an extension of the aims and objectives which presently underpin the CFP, even though the circumstances of inshore fisheries are so very different from those that attend the offshore fisheries for which the CFP was constructed? We do not believe that this should be the case, though there will surely be some overlapping characteristics.

In this chapter we attempt to sketch out the principal features of integrated or holistic fisheries management, as they would apply in the context of inshore waters, in the belief that this offers the most comprehensive framework for the future development of IFM. Subsequently, in Chapter 9 we consider a range of options for the institutional reform of IFM, in the light of a strategic vision constructed around the principles of integrated fisheries management.

8.2 Defining the objectives of integrated management

The concept of integrated management grows out of a sense that one reason for the failure of fisheries management in general is that its objectives have been far too narrowly based around the sustainability of the resource base without giving due consideration to other important factors. Sustainable development, as the World Commission on Environment and Development (1987) reminds us, is not simply about maintaining the stock of resources which future generations can utilise; it is also about deciding how society may want to see these resources used now and in the future. Mainstream fisheries management in Europe is highly centralised and organised as a sectoral policy based on scientific advice relating to the dynamics of fish populations. It has demonstrated little direct concern for the marine ecosystems within which the stocks occur and upon which they depend, nor for the social ecology of the fishing community. Moreover, it has tended to ignore the knowledge and experience of working fishermen by excluding them from the policy community.

In some important respects, the system of IFM in England and Wales departs from the uncompromisingly centralised and technocratic management model outlined above. In the first place, the system of devolved management embodied in the SFCs is based on the incorporation of local knowledge and experience relating to both fisheries and the environment; so far, the local co-management system has proved itself capable of resisting

[2] This chapter is based on the Buckland Lectures 2000 on the theme of Integrated Fisheries Management: A Challenge for the Common Fisheries Policy (Symes, 2001).

any attempts to incorporate IFM within a more centralised system. Secondly, IFM is subject to rather less scientific direction: a lack of resources both nationally and locally has meant significantly less public investment in stock assessment exercises for inshore fisheries. Local policy decisions are made on the basis of experience, careful observation and collective judgement. Nonetheless, IFM still falls somewhat short of an integrated model.

A key to understanding the concept of integrated management lies in the identification of a comprehensive set of objectives which ultimately define the approach and form the basis for constructing a clear and enduring strategy for IFM. Briefly, these objectives can be listed as follows:

- *biological objectives*: to secure the sustainability of present and future commercial stocks through the implementation of the precautionary approach;

- *economic objectives*: to promote the sustainable development of commercial fisheries as a viable sector of the economy in which individual enterprises can entertain reasonable expectations of profitability without recourse to persistent or undue use of subsidies;

- *social objectives*: to provide a basis for the sustainable development of fishing communities and fisheries dependent areas through the maintenance of adequate and appropriate levels of job opportunities, providing incomes close to the average for the region;

- *cultural objectives*: to protect the norms and cultural values associated with artisanal fisheries which serve to reinforce the ethos of sustainability;

- *ecological objectives*: to ensure the sustainability of sound and healthy marine ecosystems capable of maintaining their essential structures, functions, productivity and diversity within the prevailing environmental conditions; and

- *administrative objectives*: to achieve a proactive, cost effective and stable system of management capable of buffering the ecosystems, fish stocks and fishing populations, as far as is reasonable, against unexpected fluctuations in the natural and economic environments.

It is one thing simply to list the objectives, but quite another to set them down in a hierarchy of priorities. Yet this is precisely what is demanded by the idea of integrated management - and exactly what is missing from the definition of the CFP, for example - otherwise consistency in policy making will founder on the shifting sands of political expediency. It is the prioritisation of the objectives which gives the policy its structure and direction and underpins its strategic vision. Today, there can be little doubt that sustainability of the marine ecosystem should claim top priority. Unless a healthy, productive and properly functioning marine ecosystem can be guaranteed, all other objectives, including the biological aim of sustainable commercial fish stocks, may be put at risk. In this sense, therefore, the biological objective is subsumed within the ecosystem objective.

Much more difficult is deciding on the second order of priority - the choice between the economic and social objectives. Here, there is the opportunity to vary the priority. In the case of offshore fisheries, for example, it may be more appropriate to place the goals of

economic viability, cost efficiency and positive returns on capital ahead of social concerns. For the inshore sector, on the other hand, the very nature of the inshore fishing industry and the continuing, though threatened, interdependence of local fishing enterprises on local fishing grounds, local landing facilities and the local community would seem to argue in favour of prioritising social objectives over economic ones. Within a framework of a sustainable marine ecosystem, therefore, IFM would seek to achieve sustainable levels of local employment and income generation, commensurate with maintaining viable fishing communities. It could look to achieve this policy objective through systems of preferential, if not exclusive, access to inshore fishing grounds, including local licensing schemes to control access to shellfish resources and the use of surrogate measures such as limitations on vessel size to prevent the incursion of 'foreign' fishing capacity into local inshore waters.

There are also sound reasons for believing that preference for locally based, small scale fishing enterprises in inshore waters would help to reinforce the ecosystem objective. Although small scale fisheries remain vulnerable to the pressure of numbers and are certainly not immune from technological innovation, locally based artisanal fleets are more likely to deploy environmentally sensitive fishing methods and to demonstrate attributes of 'good stewardship' in relation to local ecosystems and resources than the nomadic fleets whose operational range is much less restricted.

In no sense is the subordination of purely economic objectives a reason for neglecting the principles of good housekeeping nor an excuse for subsidising the inshore fishing industry. Throughout Europe the inshore sector probably draws down less in the way of subsidy than the capital intensive offshore sector. The small scale, family based, inshore fishing enterprise attaches far more importance to generating acceptable levels of income for those directly involved than to returns on capital, the classic parameter of economic performance in the industrially structured offshore operation. In economic terms, inshore fishing is more about 'earning a living' than it is about making a profit. Because ownership and operation of the enterprise is often confined within the boundaries of the family and because much of the ancillary work - repair and maintenance of the boat and fishing gear, disposal of the catch - is handled directly by the skipper owner and his crew, there are usually fewer people to take a cut out of the revenue generated. Where the boat is new, however, repayment of the bank loan is likely to be a severe external obligation. The social obligations to family and community, implicit in small boat fishing, may mean that the skipper owner will choose to ride out periods of poor fishing or weak market prices through a strategy of entrenchment, fishing for as long as the returns will cover the basic costs of the individual trip (Monrad Hansen and Højrup, 2001). Alternatively, where circumstances permit, small boat operators may often choose to supplement their fishing revenue and subsidise the fishing enterprise through undertaking part time, non-fishing related activities.

Bearing in mind the emphasis now placed on devolved, participative management as a hallmark of good governance, it is clear that the administrative objective is best served by some form of local co-management. Surprisingly few countries in Europe have formally adopted such systems, and, in the UK, the contrast remains between the devolved management systems in England and Wales and the centralised system in Scotland. It would be difficult to develop a universal model for devolved inshore management as, in practice, any such system must conform to established patterns of organisation for the inshore fishing industry as well as to the national and local political cultures. Despite their shortcomings, SFCs in England and Wales seem to provide the basis for a well balanced, effective and cost efficient system of devolved management and one which has clearly demonstrated the ability

to adapt to changing conditions in the inshore sector. Equally, however, SFCs do show signs of organisational fatigue and the need for rejuvenation.

8.3 Developing the strategy: an ecosystem approach to fisheries management

Even though the prioritisation of objectives provides a clear signpost as to the future direction of fisheries management, it does not describe the means by which the goals are to be achieved. Certain theoretical developments which have emerged in recent years may provide the means ; the most persuasive of these is the ecosystem approach which incorporates and broadens the application of the precautionary principle. Both concepts currently suffer from a lack of clarity and a degree of inconsistency in their definitions which leaves them exposed to misinterpretation and, on occasion, wilful abuse. The ecosystem approach is more than simply a means of harmonising fisheries management and environmental protection or a shorthand term to describe the development of a multi-annual, multi-species approach to the management of commercial fish stocks. There is a tendency to use the ecosystem approach as a wrap-around phrase to describe an existing package of technical conservation measures (gear selectivity, seasonal closures of spawning and nursery grounds etc) rather than accept that the ecosystem approach demands a more fundamental redirection of the way in which we assess and manage our commercial fisheries.

The ecosystem approach starts from an assumption that the long term sustainability of commercial fish stocks - and the opportunity to keep open as many options relating to the future use of the living resources of the sea as possible - depends ultimately on being able to guarantee a diverse, productive and healthy marine ecosystem. At present that means having to take a more cautious approach and to work within what are rather tightly constrained limits of our current understanding of how marine ecosystems function. Applying the precautionary principle has several important implications. In a general sense, it means that fisheries management must be careful not to stray beyond the boundaries of ecosystem sustainability - a difficult task in view of our limited understanding of species habitat interactions within the marine ecosystem and the fact that marine ecosystems are themselves dynamic and strongly influenced by external factors, both natural and man induced. The precautionary approach therefore means being willing to take prudent preventive action even in the absence of full scientific proof that such action is necessary; in this way we are simply purchasing insurance for the sustainability of the ecosystem. It also means shifting the burden of proof onto those wishing to initiate new developments to demonstrate that no significant or permanent damage to the ecosystem will result from their proposed actions. But the precautionary principle also demands a proportionality of response; in other words, the regulator must also be convinced that any restrictions do not impose an unduly heavy burden on society (Boehmer-Christiansen, 1994).

What the ecosystem approach requires, therefore, is that the precautionary approach - only very recently introduced by ICES into the management of commercial fish stocks - be extended to the ecosystem as a whole. But this can only be a gradual process. As Pope and Symes (2000) have argued, fisheries management has only a very limited range of operational measures currently available. Fisheries scientists can provide best available assessments of the ecosystem impacts alongside their advice on fisheries management options. In some instances, ecologists can begin to identify the key indicators of a healthy ecosystem and develop effective monitoring programmes. Together, fisheries scientists and marine ecologists can work towards establishing limit reference points for selected non-target

species. Meanwhile fisheries managers can develop measures to protect essential habitats for commercial and certain important non-target species (gear limitation, no take zones, marine protection areas) and they can make a clear statement of intent that the exploitation of commercial fish stocks will henceforth only be permitted within a framework of rational and environmentally responsible fishing. Despite the modesty of these measures, which will certainly not be sufficient to convince some conservationists, they do at least provide a starting point for the implementation of the ecosystem approach which can be built on as our knowledge of the marine ecosystem develops in the future.

A corollary of the ecosystem approach is the introduction of a regionalised system of management for areas like the North Sea which equate, roughly speaking, to large marine ecosystems, and the development of integrated regional management plans (Symes and Pope, 2000). These integrated plans would include a baseline assessment of the current state of the regional ecosystem, a regional strategy for fisheries management which would help to maintain or, indeed, improve the status of the ecosystem, and action plans to deal with issues of immediate concern. The linkages between the regional strategies and local management plans would be crucial and involve a two way flow of information and advice. Careful coordination would be required, especially in relation to finfish management where inshore waters often furnish the spawning and nursery grounds for species which are principally harvested in offshore waters. By contrast, shellfish stocks - except for *Nephrops* - are likely to be the specific concern of local inshore management plans. Generally, it will be important to ensure tensions do not arise as a consequence of hierarchical decision making where the regional strategy seeks to impose measures in inshore waters - designed essentially for the benefit of offshore fisheries (eg essential habitat protection) - which are simply too restrictive for the development of inshore fisheries.

8.4 The ecosystem approach in the context of inshore waters

The question remains as to how comfortably the ecosystem approach will fit within the particular circumstances of IFM. Arguably, the ecosystem approach is of even greater relevance in inshore waters. Here, the ecosystems are generally more complex in structure and rather more sensitive to human interference through fishing and other anthropogenic activities, as well as to naturally induced modifications resulting from regional climate change, for example. The inference is that in inshore waters ecosystem stocktaking will need to be conducted in greater detail and the precautionary measures much more subtle in their design than the existing genus of byelaws allows. In certain situations - as for example with the molluscan shellfish beds - there is a somewhat greater opportunity for positive intervention through the relaying of beds. But there is also greater need for vigilance over the ecosystem effects of introducing non-local and alien species for the benefit of commercial fishing.

The ‘competition’ between man and nature for the products of the marine ecosystem is more explicit and also subject to greater public scrutiny in inshore waters. The management systems applied to the cockle and mussel fisheries in the Dutch sector of the Waddensee, where specific shares of the annual harvestable production are reserved for resident and overwintering bird populations, provides an unstated example of the ecosystem approach. But the example of the Waddensee where agreed management procedures are under threat, also demonstrate the fragility of relationships between the fishing industry and the nature conservation interests (Steins, 2000). In areas like the Waddensee, ecologists have also been working to develop a model for a well integrated ecosystem based on an ideal distribution of

species (Lanters and Ensernik, 1998). But only very rarely will the opportunity arise for the management system to recreate the conditions of a pristine ecosystem. That lies well beyond the aims and objectives of the ecosystem approach. What the approach can expect to achieve in inshore waters is a more logical framework for the management of the somewhat fragmented network of discrete, site based conservation initiatives (MNRs, SACs etc) and for the integration of the non-site specific habitat and species biodiversity action plans (BAPs).

Perhaps the most important feature of the ecosystem approach to management in coastal waters is the need to take full account of other activities (oil and gas production, sand and gravel extraction, navigation, tourism and recreational fishing, waste water disposal *inter alia*), many of which can exert a much more disruptive impact on local ecosystems. A logical inference is the need to develop IFM within a wider context of integrated coastal zone management (ICZM).

8.5 Conclusions

Throughout the fishing industry there is understandable concern that the outcomes from adopting an ecosystem approach could prove too severe a burden for the industry to sustain. Symes and Pope (2000) concluded that the introduction of an ecosystem approach in the context of the EU's fisheries would probably require an overall reduction in fishing capacity of around 40%, a figure already widely used to describe the reduction necessary to restore the balance between fishing effort and present levels of commercial fish stocks in EC waters. It would be difficult to disaggregate this global figure between the inshore and offshore sectors. There is certainly some overcapacity in the inshore sector, where the growth in fishing effort has been less closely regulated, but lack of reliable statistical data makes it impossible to quantify. It is, however, likely to be somewhat lower than that which has contributed to the serious declines recorded in some of the major demersal stocks. Under an ecosystem approach, two parallel courses of action are available. The first is the introduction of regional licensing schemes where the number of licence holders can be progressively reduced should the circumstances warrant it. Secondly, a reduction in the use of those fishing gears which exert the most pressure on stocks and cause the greatest collateral damage to habitats and non-target species can be achieved through the attachment of conditions to the licences and/or through a significant variation in the level of licence fees to penalise those who insist on deploying less environmentally friendly fishing gears.

9. Institutional reform

9.1 Introduction

So far, the analysis has revealed both considerable strengths and certain significant weaknesses in the existing system of IFM in England and Wales (see Fig 9.1). In some senses, the strengths put the current system well ahead of the game by comparison with most other countries in Europe and with other parts of the UK, in terms of what are generally regarded as the elements of good governance. At the same time, we are inevitably drawn to the conclusion that simply to maintain IFM at its present level of responsibility and achievement will require immediate action to remedy the evident weaknesses. It would be overstating the case to argue that IFM is on the edge of collapse but it is certain that SFCs cannot continue to respond to increasing pressures and work as effectively as they have done, unless they are freed from the constraints of inappropriate legislation and inadequate and insecure funding arrangements. These are areas where the central government departments, working in collaboration with local authorities, must take responsibility for initiating change. For their part, SFCs will need to take a much closer and more critical look at their own shortcomings and restrictive practices in order to derive the fullest advantages from a new legislative framework and funding mechanism.

With a more ambitious vision for the future of IFM as a fully integrated process (see Chapter 8), more profound changes will be needed to develop the latent opportunities afforded by the present system and to resist the threats that inaction might set in train. Otherwise, IFM will simply be unable to face up to future challenges or to maintain a credible approach to the sustainable development of inshore fisheries.

Inshore fisheries are likely to come under increasing threats both from within the industry and from external sources. Internally, the development of a new class of inshore vessel providing considerable fishing capacity 'concealed' within an <10 m hull, together with the redeployment of surplus fishing effort from offshore to inshore waters, will greatly intensify the pressure on certain of the less depleted and, in some respects, less protected resources in inshore waters. At the same time, IFM must cope with increasing competition for marine space from such diverse sources as nature conservation, tourism, recreational fishing and the extraction of non-renewable resources, in combination with the increasing urbanisation of the coastline with its attendant risks of pollution. The need is for IFM to develop a robust means of resisting the pressures of over exploitation of inshore fish stocks and to define an arrangement for coexistance with non-fishing interests within the inshore zone.

In this final stage of our analysis, we re-examine the balance of opportunities for reform of the system, identify what we believe are the key factors acting as the catalyst for change and outline alternative strategies for future development which will allow IFM to face the challenge of the 21st century with confidence.

9.2 IFM: a SWOT analysis

The results of our analysis of IFM in England and Wales are summarised in the familiar SWOT diagram (Fig 9.1). Although the weaknesses would appear to outnumber the strengths, our firm belief is that the strengths - local decision making, local democratic

accountability and the incorporation of professional knowledge and experience within the decision making process - are to be regarded as the essential elements of 'good governance'. The transfer of responsibility for policy making from central bureaucracies to local institutions capable of mobilising local expertise clearly helps in developing more relevant solutions. It would be hard to find an area of policy making where the purposeful development of devolved responsibility is more apt. Surprisingly for a system which is already more than a hundred years old, SFCs look - at least in outline - as though they were designed for the 21st century.

However, the system does betray evidence of organisational fatigue: weaknesses are clearly evident that suggest that SFCs are at present operating sub-optimally, largely as the result of constraints imposed through outmoded legislation and an inappropriate funding mechanism. As a consequence, most SFCs are not properly resourced and their organisational development has not kept pace with demands imposed by recent changes in the style and scope of modern fisheries management, including the increasing scientific basis for decision making, the broadening of management and the development of a precautionary approach to natural resource management.

Action is now urgently needed not simply to remedy these weaknesses but also to realise the opportunities for IFM in England and Wales to become recognised as a model for integrated management. The risks that attend a failure on the part of the relevant authorities failing to respond positively to the need for reform are serious: at best, a gradual deterioration in the quality of local fisheries management and, at worst, the progressive undermining of the present system's cardinal strengths. It goes without saying that just as important as taking action to confront the problems is the need to ensure that the action taken is the right one. In reforming the systems of IFM, therefore, care must be taken not to disturb its unique strengths in terms of local decision making and democratic accountability that have proved so elusive in other parts of the UK and throughout much of Europe.

9.3 The catalyst for change

In addition to the increasing pressures placed on inshore waters as a result of the failure to sustain the resource base for offshore fishing activities, we believe we can identify a number of emerging factors which taken in combination amount to a very powerful catalyst for change. Some of these are external to IFM *per se* in that they relate to possible new developments in the CFP post-2002 as outlined in the Green Paper (Commission, 2001). In turn, these are likely to bring pressure to bear on existing structural weaknesses within the present system of IFM which are properly the concern of the national fisheries administrations. We summarise each of these factors below.

(i) *Integration of fisheries management and environmental protection.* Over the past couple of years the European Commission - more specifically DG Fisheries has issued a number of policy statements which in concert proclaim an intention to ensure that in future - no matter what the outcome of the CFP review - fisheries management will have to pay very much closer attention to notions of environmental responsibility, the protection of biodiversity in marine ecosystems and the integration of fisheries management and marine nature conservation. As pointed out in Chapter 7, relatively little progress has been made in the context of IFM where the need and opportunity are probably greatest, largely for want of a clear strategy for integration.

Strengths

- **local decision making**
  - detailed knowledge of local fishery
  - indepenent byelaw making capability
- **local democratic accountability**
- **participative management**
  - incorporation of local fishing knowledge and experience
- independent enforcement capability
- good working relationships with conservation objectives

Weaknesses

- **archaic legislative framework**
  - reactive legislation (byelaws)
  - lack of precautionary and emergency measures
  - no clarity of aims, objectives, responsibilities and powers for SF
- **inadequate and insecure funding**
  - variation in scale and structure of SFCs
  - inadequate staffing
- deficiencies in committee structures
  - difficulty in recruiting suitable members
  - dilution of commercial fishing industry representatives
- insufficiently developed central functions of Association
- lack of harmonisationof byelaw regulation
- overlap and duplication of functions (EA)
- no proactive strategy for integration of IFM and Marine Nature Conse
- inadequate relationships with central government departments

Opportunities

- provide **a model for integrated management** for inshore waters
- **new legislative framework** (Inshore Fisheries Act)
  - clarification of aims, objectives etc.
  - strengthening of powers
  - adoption of proactive, precautionary, ecosystem based approach
  - new funding arrangements
- **extension of IF jurisdiction to 12 nm**
- evolution of zonal management regime
- **strengthening of institutional structures**
  - rationalisation of SF Districts
  - stronger local: central relationships
- strengthening of scientific research capabilities

Threats

- annulment of access derogation
- deterioration in level and quality of local management activity
- replacement by new organisational structure involving either disaggre within broader ICZM framework
- loss of independence of SFCs and/or weakening of relations with LAs
- greater level of intervention by central government departments
- dilution of principles of local participative governance and democrati

Figure 9.1 Inshore fisheries management 2001: a SWOT analysis

It is far from clear as to how DG Fisheries will interpret those responsibilities in terms of policy making. At present it involves little more than a statement of intent and a renewed emphasis on existing technical conservation measures which can be accredited with environmentally responsible characteristics. But it is hard to see how in the longer term the Commission will be able to resist the demands for the adoption of a more precautionary, ecosystem based approach to fisheries management.

(ii) *Regionalisation of fisheries management*. The Green Paper lends support to the establishment of regional advisory committees (RACs) involving administrators, fisheries scientists, fishermen's organisations and NGOs. Although the Commission is careful to stress that these are not likely to be involved directly in decision making, they could nevertheless prove influential in the first instance in initiating minor variations in the approach to fisheries management at the macro-regional level. Eventually they could also be instrumental in developing distinctive strategies for the regional seas. As indicated in 8.3 above, IFM will need to be an integral part of these developments. What is determined at the regional level will need to be reflected in inshore waters but refracted through the prism of a distinctive inshore or zonal management approach.

(iii) *Extensions of Member State responsibilities and powers in inshore waters*. The Green Paper in endorsing the retention of the derogation governing access in the 0-12 nm zone also indicates a need to harmonise management arrangements in the 0-6 and 6-12 nm zones by extending the Member States' powers to regulate all fishing activity within the 12 nm limits, irrespective of whether vessels are registered in the coastal state or in another Member State, in compliance with EC fisheries policy and with the principle of non-discrimination. This concurs with the ASFC's own proposals to extend the SFCs' jurisdiction to the 12 nm limits as a logical and sensible development providing a more accurate reflection of the inshore industry's current capabilities and a more realistic management regime. There are concerns in other quarters as to whether this would be the most appropriate outcome. The reservations are based on the fact that the 6-12 nm zone is fished as much by nomadic fleets as it is by local inshore boats and doubts as to whether SFCs with their ethos of looking after local interests are an appropriate organisation for managing part of the national fishing space. Of the external factors, the extension of Member State powers to 12 nm would bring the most immediate pressure to bear on the existing institutional framework for IFM.

(iv) *Funding arrangements*. Those responsible for IFM are likely to find themselves with a growing burden of responsibility for fisheries management and, in collaboration with other organisations, for matters relating to coastal zone management. It is clear that existing funding arrangements are neither adequate nor secure enough to allow SFCs to embrace any further increase in their duties. It is also unlikely that local authorities will be willing to meet the additional enforcement and manpower costs resulting from the extension of the SFCs' jurisdiction from 6 to 12 nm. There is, therefore, an increased urgency about developing a new, more generous and reliable funding formula.

(v) *Structural reform of IFM*. The archaic geographical structures (5.1) and evidence of an unlevel playing field (5.2) raise some important questions as to whether the

existing structures for locally devolved management are appropriate to the needs of the 21st century and whether a more regionally based structure would not be more conducive to effective IFM. A process of restructuring could be set in motion should a decision be taken to create a single inshore fishing authority in Wales, with fairly obvious knock-on effects in north-west England. Any geographical restructuring would need to demonstrate positive advantages in terms of cost efficiency or a more coordinated approach to IFM, rather than simply following the fashions of theoretical argument. In particular, it would need to retain and build on the established strengths of local decision making, democratic accountability and incorporation of user group knowledge and experience within the policy community.

(vi) *A new legislative framework.* Should all five factors listed above come together – or, indeed, if only some of these were to be realised in the near future – there would be an unassailable argument in favour of a replacement of the existing Acts which govern IFM in England and Wales by a new consolidated *Inshore Fisheries Act* which would redefine the roles, responsibilities, structures and powers of a remodelled IFM system in line with the principles of integrated management.

9.4 Three alternative circuits of reform

There is, of course, no certainty that all six factors will converge to create an irresistible case for a fundamental change. It is, in fact, more likely that each of these factors will come into play at different times and with different effects to those indicated. Nonetheless, we believe that the present situation – with or without the added pressures arising from a possible reform of the CFP – is a sufficient condition for arguing the case for reform of IFM in England and Wales. The present system is under considerable stress and is probably performing less efficiently than it could given certain basic changes.

There is no single, preordained programme of reform. The challenges identified above can be countered in different ways ranging from a minimalist, 'do only what is absolutely necessary to survive' approach to a maximalist, radical agenda for reform sweeping away what is already there and replacing it with something startlingly different.

We analyse three alternative 'circuits of reform', choosing the term 'circuit' to denote a complete route or course of action. The first of these, which we identify as 'local reform' implies a limited circuit of change based on the familiar administrative principle of 'make do and mend', involving relatively small scale adjustments to the existing systems and minor amendments to boundaries, legislation and structures. The second, or fundamental, circuit of reform is designed to accommodate both the internal and external factors and requires a basic restructuring of the system while retaining the principal strengths of the existing set up and, in particular, the identity of SFCs. By contrast, the third alternative takes us into the realms of radical reform, rebuilding the concept of IFM within a very much broader institutional framework of integrated coastal zone management and redesigning the organisational structures which would replace the existing SFCs.

Although we examine each alternative in some detail, we reject the idea of 'local reform' as being a wholly inadequate response to existing problems and future challenges. Nor are we in a position to endorse the radical agenda of ICZM, principally because this lies outside our terms of reference and the scope of our present enquiry. We do, however, recognise that the ICZM approach is likely to gain in prominence in the future. For the time being, our priority

is to provide a vision of how a truly robust and relevant system of IFM should develop; once in place, it can be accommodated within a broader framework of ICZM, without running the risk that inshore fishing interests will be overwhelmed in the wider scheme of things.

9.5 Local reform

By simply endorsing relatively minor remedial work on the existing system, IFM would be able to catch up with some of the recent changes to the roles and responsibilities of SFCs allowing them to accomplish their existing tasks more efficiently and effectively. It would not, however, take the game forward and place SFCs in a position of strength to deal with future challenges. Nonetheless, even this very modest level of reform involves a fairly lengthy list of actions:

(i) *amending the existing basic legislation* especially in relation to (a) remedying deficiencies which prevent SFC FOs from taking enforcement action over the landing of illegally caught fish and shellfish, and (b) allowing the introduction of the precautionary principle into byelaw making for purposes other than environmental regulation, for example though provisional or emergency byelaws to be confirmed after a suitable period of time during which appropriate evidence can be collated;

(ii) examining ways by which the *process of byelaw making* may be speeded up;

(iii) *redesigning the existing funding arrangements* to increase the overall level of funding so as to match the full range of responsibilities now being undertaken by SFCs and to secure the agreed level of funding. This could most easily be achieved by ring-fencing local authority spending on SFCs with guaranteed reimbursement from central government funds for all or an agreed proportion of the expenditure;

(iv) *tidying up the boundaries of existing Sea Fisheries Districts* and resolving problems arising from the overlapping functions and jurisdictions of SFCs, SFI and EA especially in the event of a decision to extend Member States' regulatory powers in the 6-12 nm zone;

(v) *rationalising SFC structures* limiting the size of the committees, where reasonable, to not more than 20 members and redistributing the seats so as to restore the proportion of seats available to the representatives of the local fishing industry and strengthen the representation of the environmental experts. This could be achieved by altering the distribution of seats to 9 (local authorities), 9 (industry), 2 (environment) in a committee of 20 and amending the status of the EA representative to that of an observer (ie similar to the DI). For the local authorities to retain a measure of control over budgeting proposals, a simple two thirds majority requirement in voting on the annual budget would suffice;

(vi) *strengthening the structure and role of the ASFC* through the funding of a full time Chief Executive and support staff, the creation of an executive committee of 12 persons made up of CFOs, Chairpersons and Clerks meeting four times a year with the full meeting of the Association (24 persons) being held once a year, together with the redefinition of the roles of the ASFC in terms of responsibility for strategic direction, coordination and servicing of SFC activities, without interfering unduly with the autonomy of individual SFCs;

(viii) *improving the training of FOs* in line with that provided for British Sea Fishery Officers and providing effective induction courses for new committee members;

(ix) *harmonising existing byelaws* between neighbouring SFCs, where appropriate, (and between SFCs and the EA) and developing guidelines for greater consistency in forming new byelaws;

(x) *improving relations between the relevant government departments and the SFCs* through the creation of a standing IFM liaison committee incorporating representatives of DEFRA and NAWAD and the ASFC's executive committee, meeting at least twice a year.

The above programme of action could be set in motion by convening a working party comprising representatives of the relevant government departments, local authorities and ASFC to develop detailed proposals for each of the ten points outlined above.

9.6 Fundamental restructuring of IFM

9.6.1 Introduction

The case for a more fundamental reform of the IFM system is initially based on the premise that its geographical structures are archaic, have no convincing rationale in the 21st century and are of little relevance to modern concepts of fisheries management. The only argument for retaining them is rooted in the values of tradition and local identity. The stresses and strains exhibited by most SFCs today are not simply the result of underfunding and irrelevant legislation; they also occur because in a majority of cases SFCs lack a critical mass of management skills and an ability to develop specialised functions internally. In a number of cases the management burden cannot be shared or devolved: we were continually amazed at the range of tasks which a CFO has to perform, sometimes on his own but more often with support from his deputy and/or his chairman. For most SFCs there is simply no adequate cover in the case of emergencies – but, unlike some other small enterprises, there is no opportunity to hang a 'closed for business' sign on the door.

The aim of fundamental reform is not, therefore, first and foremost a cost saving exercise. Indeed, we firmly believe there is a very strong argument for considerably raising the level of public expenditure on IFM. Rather, the aim is to define a structure – and with it a level of staffing – which can provide an effective service in respect of an expanding range of responsibilities and an enlarged area of jurisdiction and prove responsive to strategic direction. Broadly, two alternative models are available. The first envisages IFM as the devolved responsibility of central government; it would involve a hierarchical structure with a separate non-departmental government body – a National Board for Inshore Fisheries – similar in form to English Nature, responsible for formulating a national strategy for inshore fisheries, and a series of regional organisations through which the strategy is implemented. The advantage of this model is that it places the front line organisations at arm's length from central government; but it also removes the connection with local government and the notion of democratic accountability, and reduces the opportunities for local initiative and decision making.

Instead, we prefer to retain the connection with local government and to build up an integrated management system from well defined, regional, sea fisheries districts with a strong coordinating function provided by a revamped Association. Thus, we make the case for a rationalisation of existing structures through a marked reduction in the number of Sea Fisheries Districts which would:

(i) create a more relevant geographical framework for IFM;
(ii) provide an opportunity to create a critical mass of management skills and expertise and an appropriate division of labour;
(iii) facilitate an efficient use of resources for the effective enforcement of fisheries regulations throughout the 0-12 nm limits;
(iv) enable IFM to make use of limited facilities for scientific studies.

This should be done without sacrificing the quintessential benefits of local decision making, democratic accountability and incorporation of professional experience which characterise the existing situation.

Creating a balance between the greater concentration of specialist resources while retaining the local touch is a difficult task and we are conscious of the dangers of moving towards a more bureaucratic 'solution' in which the new organisations will tend to lose some of their sense of local identity.

9.6.2 A new geographical framework

While a case could be made for rationalising the system through the simple amalgamation of existing Sea Fisheries Districts, with minor adjustments to their boundaries, or by 'borrowing' some other geographical structure already developed for coastal regions in England and Wales, we feel it important to begin by trying to identify 'natural fishing regions' and then to see how these relate to existing boundaries. We begin, therefore, by revisiting the regional pattern described in Chapter 3, correlating this with ICES divisions and the possible regional units which may form the basis of the Commission's Regional Advisory Committees (RACs), and finally adjusting these to take account of existing major administrative boundaries and the recently developed Regional Development Agencies (RDAs) as precursors of any future system of regional government for England.

The simple division of the coastal waters of England and Wales into 'natural fishing regions' is shown in Figure 9.2b (see also Box 9.1 for a shorthand description of each region) together with the ICES divisions. Although the Commission's Green Paper makes no attempt to define possible RACs, by following the example of the joint Federations analysis (SFF and NFFO, 2000), it seems likely that the coastal waters of England and Wales would form part of two, possibly three, RACs - though it is perhaps doubtful whether the Irish Sea would be deemed large enough to qualify as a separate RAC despite its distinctiveness as an ecosystem and fishing region.

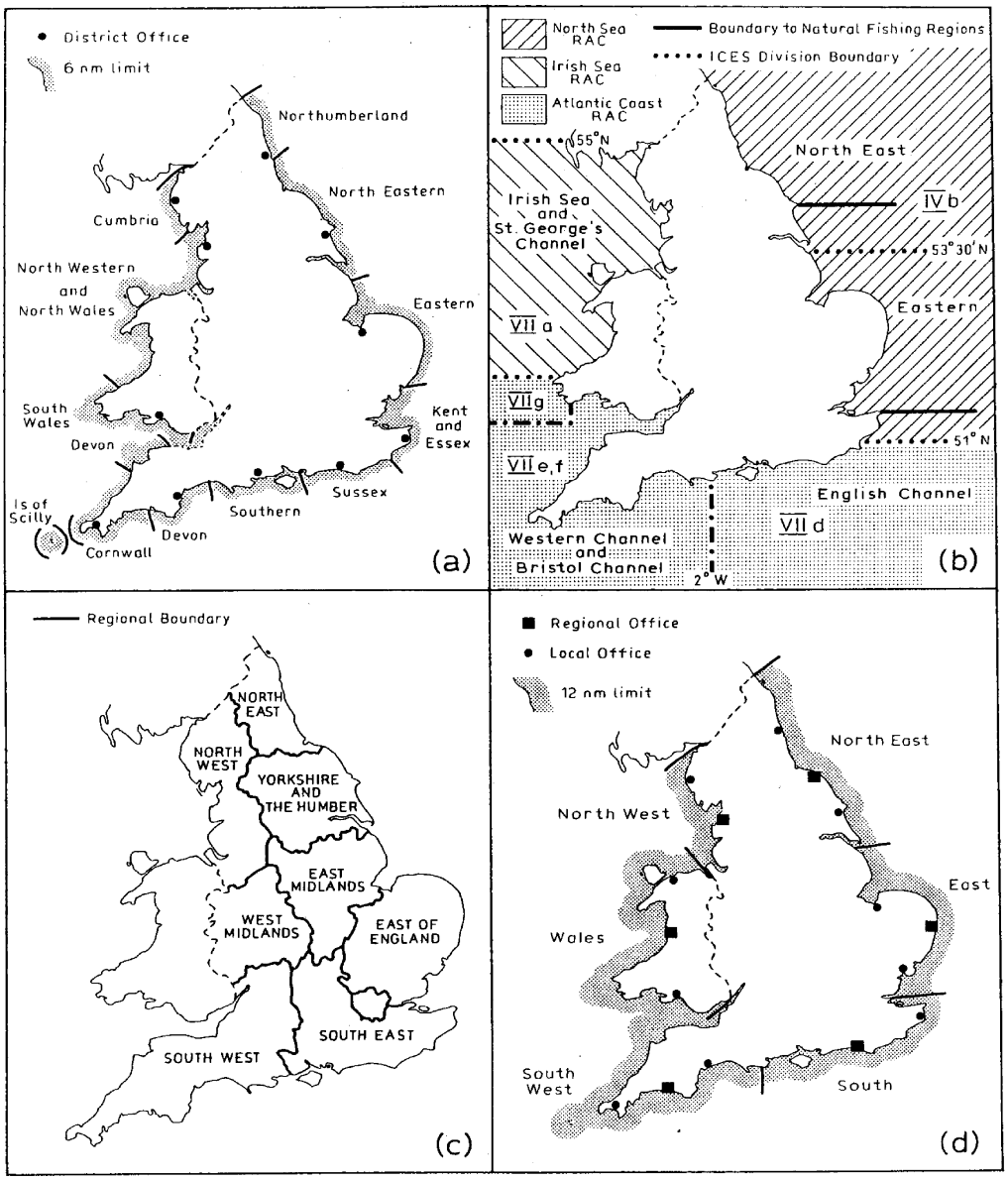

Figure 9.2 Redefining Sea Fisheries Districts : (a) SF Districts, 2001 (b) Natural fishing regions (c) Regional Development Agencies (d) SF Districts, post-2002

Box 9.1 Natural fisheries regions: summary of basic characteristics

Region	Morphology and Hydrography	Main commercial species	Fis
1 **North East** IVb (part)	- rocky coastline; steeply shelving seabed to 30 m; - bottom waters rarely exceed 12^{o} deg C, but with stratification in summer surface waters at 14^{o} deg C can be widespread; - cooler boreal conditions prevail	- cod, haddock, saithe, plaice, herring; - edible crab, lobster, *Nephrops* (Farne Deeps), with whelks & edible crab in outer part of the zone (6-12 nm)	-
2 **East** IVc	- soft, sedimentary coast (predominantly sand) sloping gently to <30 m; - well mixed water column throughout year with little variation in seabed and surface temperature	- cod (winter); plaice & sole (nursery grounds in Thames Estuary) with summer incursions of migrants (bass, mackerel, horse mackerel, mullets) from warmer southern waters; - locally important crustacea populations, significant cockle stocks (Wash, Thames) and widespread oyster cultivation	- - - - -
3 **English Channel** VIId	- high cliffed coasts and low shingle coasts with shingle banks offshore	- plaice, sole (all year); cod (winter); summer populations of bass, mackerel & mullet; - native & Pacific oysters in Solent, Southampton Water & Poole Harbour; feral stocks of Manila clam and natural mussel beds in Poole Harbour	- - - - -

Region	Morphology and Hydrography	Main commercial species	Fis
4 **Western Channel & Bristol Channel** VIIe, f	- rocky coastline with inshore reefs among areas of stone, sand & mud substrates; - waters deepen from east to west with 50 m isobath corresponding with 12 nm limit; - strong stratification in summer with associated frontal system off South Devon	- greater variety but relatively small populations, (plaice, sole, cod, herring, mackerel, pilchard, bass & red mullet); - significant crab stocks; lobster & crawfish; - molluscs incl. scallops, mussels (Exe estuary), cockles (Burry Inlet), oysters (S. Devon, Fal-Helford & Milford Haven)	- - - -
5 **St George's Channel & Irish Sea** VIIa	- two subdivision: a) St. George's Channel : rocky coastline with rock and cobble reefs; waters well mixed throughout the year b) Irish Sea: soft sediments (muds, sandy muds) in major embayments; waters stratified in summer with frontal features across North Channel & northern end of St George's Channel	- stocks of fish & shellfish are sparse but crustacea are widespread; summer incursions of bass, mackerel & mullet - cod, whiting, plaice, sole & *Nephrops* (offshore) with inshore waters as nursery areas for plaice & sole; - commercial cockle stocks in major estuaries; extensive natural & cultivated mussel beds; shrimp population in Ribble, Morecambe Bay & Solway	- - - - -

Some adjustment to these 'natural fishing regions' may need to be made for political reasons - in particular, the creation of an all-Wales District subject to control by the National Assembly for Wales. Thus, a Welsh District would comprise parts of ICES Divisions VIIf (Bristol Channel) and VIIa (Irish Sea). Otherwise there is a reasonably good match between the natural regions and existing local authority boundaries and, perhaps more significantly in the future, RDA boundaries (see Figure 9.2c). The result of this exercise yields six new Districts, (though there is nothing sacrosanct about the figure six): North East, East, South, South West, Wales and North West (see Figure 9.2d). In practice, these new Districts are not simple amalgamations of existing SFCs, except in the case of Northumberland and North Eastern. In all other cases, significant changes have been made including the separation of Kent and Essex, the division of the existing Southern SFC between the new South and South West Districts, the inclusion of Somerset (previously without any SFC affiliation) with the South West and, finally, the merger of Cumbria and the non-Welsh part of the North Western and North Wales SFC.

The new pattern does not resolve the problem of the unequal size of Districts: the smallest, North East, has a simple coastline of less than 200 miles in length whereas the two largest (South West and Wales) each have coastlines almost four times as long. Nonetheless, we believe the proposed geographical pattern does offer a more appropriate subdivision of the coastline for purposes of IFM; in particular, it reflects rather better the broad pattern of fishing activity and the emerging political realities.

9.6.3 The internal architecture

The new pattern of Sea Fisheries Districts represents no more than an empty shell. The potential strength of the proposed structure derives not so much from the revamped geographical boundaries but from the load bearing features of the internal architecture, the coordination of activity throughout the entire IFM system and reinforced foundations in terms of funding. Within each District we envisage a minimum establishment of 20 appropriately qualified staff (see Figure 9.3). Of these, six would form the basic management team, located in the regional office: a Chief Executive, who would assume the functions of the Clerk to the Committee; a Chief Fisheries Officer in charge of enforcement activities; a Marine Environment Officer; a Recreational Fisheries Liaison Officer, possibly appointed on a part time basis; a Research Officer responsible, *inter alia*, for the collation of statistical data; and an Administrative Officer, able to handle all financial matters; together with appropriate clerical assistance. Enforcement duties are likely to absorb the lion's share of the District's manpower and capital resources. Our enquiries were not sufficiently detailed to allow us to calculate with any precision the staffing requirement or the number and type of patrol boats needed. But we believe the full complement of FOs would need to be increased by up to a third in order to provide the additional manpower needed to extend patrolling duties out to 12 nm, with adequate cover for both seagoing and shore based enforcement staff in the event of emergencies. As a rough guide, therefore, we suggest a seagoing enforcement complement of at least eight FOs (Master, First Officer and six crew members) as a basis for maintaining one - and, exceptionally, two - main patrol boats at sea, with a second (or third) in reserve together with smaller boats (RIBs) for work close inshore. A minimum of four shore based FOs would complete the staffing requirements of the District.

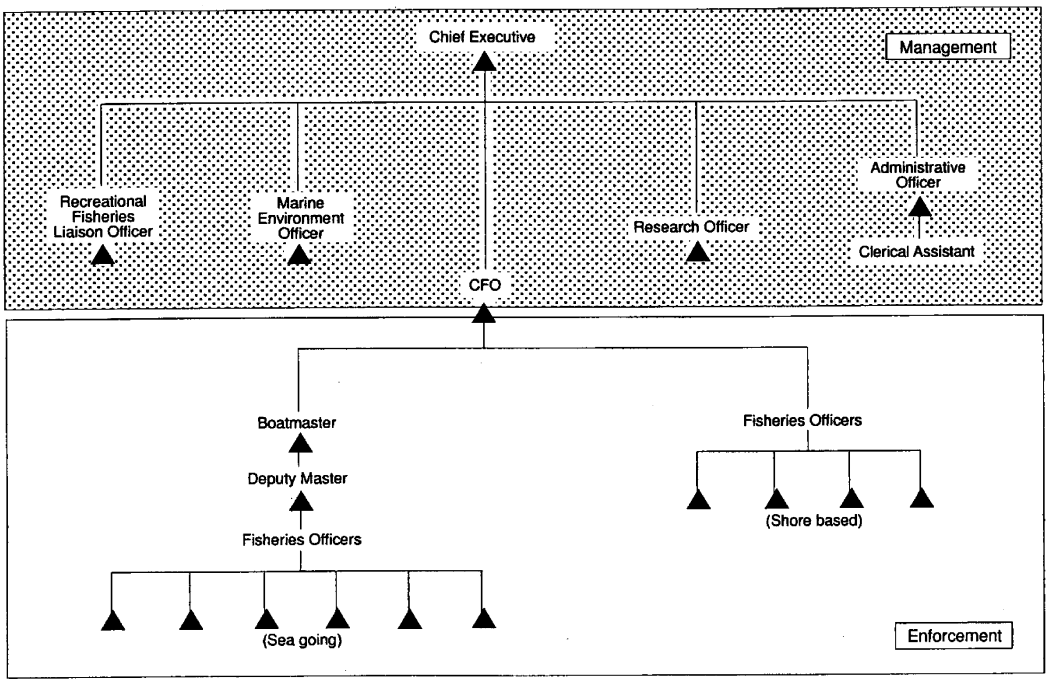

Figure 9.3 Proposed natural structure of redefined Sea Fisheries Districts

As it seems certain that a properly integrated approach to IFM will in future need to be based on a rapidly developing scientific understanding of local marine ecosystems, it will be important for the institutional structure to incorporate enhanced opportunities for scientific monitoring and research. However, well found research facilities are expensive to establish and maintain. At present only two SFCs have succeeded in developing even the most rudimentary facility for research into local fisheries and their ecosystems - as opposed to much simpler data collection exercises - and such facilities are probably not needed in all six Districts. They should be developed in perhaps three locations: at Lowestoft (East), Bangor (Wales) and Plymouth (South West). In all Districts, the new regional organisations should seek to build strong links with established research institutes in universities or national laboratories.

We can see no reason to make major changes to the existing committee structures. The regional committee, meeting quarterly and responsible for developing a coherent plan for the development of the District's sea fisheries, for initiating proposals for new regulations, for setting performance targets and overseeing the work of the District's officers, would normally comprise not more than 20 persons distributed according to the new formula (see 9.5.(v)). In view of the proposed extension of the Districts from 6 to 12 nm, it might be appropriate to include one representative from the appropriate NFFO regional committee to keep a watching brief over any proposals for new regulations which might affect offshore fishing interests. One crucial question is whether a regional management committee would be sufficient to retain a sense of local identity and 'local ownership' of the management process. Were regional committees to prove too remote from local issues and assume a dangerous degree of bureaucratic anonymity, then it might prove possible to cure this deficiency by creating two (or more) local committees meeting two or three times a year, to focus attention on local fishing issues and forward recommendations for consideration by the

regional committee. Overlapping membership of regional and local committees would help to ensure that local matters receive due attention from the regional committee. The local committee would also serve as 'platforms' for interaction with other local marine interests. Additionally, the work of the main committee would be reinforced by an executive committee comprising the Chief Executive, CFO, Chairmen and a further seven members of the full committee.

9.6.4 External relations

Implementing a national strategy for an integrated approach to IFM will rely as much on the creation of effective links between the relevant government departments and the regional organisations - something which appears to have been sadly lacking in the past - as it will on the internal strengths of the organisations themselves. Here, the crucial concern is first to build regular, reliable and supportive relationships between the government departments and the ASFC, and secondly to ensure the coordination of activities between the six regional organisations (see Figure 9.4). The latter problem is likely to be reduced in scale as a result of the reduction from twelve to six Districts, and the strengthening of management at the regional level will tend to make for fewer demands at the ASFC level. As a result the ASFC could probably suffice with a full time Chief Executive and an administrative assistant, together with an executive committee comprising six members (Chief Executives or Chairpersons) drawn from the six Districts, meeting two or three times a year. A CFOs' group could be retained and a Marine Environment Officers' group established to meet as necessary. The ASFC's executive committee would represent the District organisations on the standing IFM Liaison Committee, alongside representatives from DEFRA, NAWAD, the EA and country agencies (EN, CCW), meeting at least twice a year. Among its other duties, the Standing Committee would undertake responsibility for formulating - and eventually monitoring - the national strategy(ies) for IFM in England and Wales.

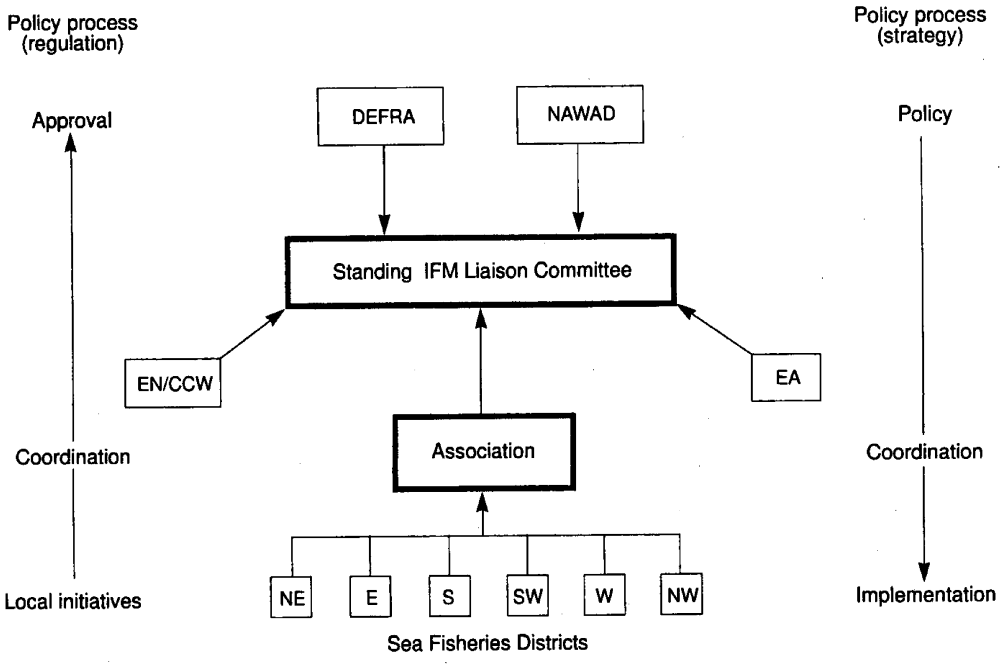

Figure 9.4 Revised institutional infrastructure for inshore fisheries management

9.6.5 The funding issue

Implicit in this more fundamental proposal for change is a significant overall increase in public investment in an integrated system of IFM. At present SFCs undertake their duties at a total cost of around £5 million a year drawn from local authority taxation revenues. This, we would argue, represents incredibly good value for money in comparison with the EA's c.£9m budget for salmon and freshwater fisheries management or the DEFRA SFI's c.£20m enforcement budget. If the jurisdiction of the regional organisations were to be extended from 6 to 12 nm and a stronger emphasis placed on integrated management throughout the 12 nm zone, then it would not seem unreasonable to suggest that, at current prices, a total annual investment of £8-10 million would be appropriate. In looking to develop a new funding formula, we would suggest that the burden is shared equally between the local authorities and central government and that the local inshore fishing industry might contribute up to 10% of the total budget through licence fees. It is vital that the revised funding formula not merely results in additional resourcing of IFM but also secures the funding basis over the medium term (8-10 years) and comes with very few strings attached, so that the autonomy of regional management is preserved.

9.6.6 The balance of opportunities and threats

We believe that the above model offers the best opportunity for carrying forward the concept of integrated management for inshore fisheries into the 21st century. The advantages of scaling up the management units have been stressed throughout – the concentration of human resources, the creation of a viable management team, a more effective deployment of assets and the anticipated ability to deliver a national strategy for IFM more effectively. On the other hand, there are some risks involved, principally concerned with the potential weakening of the local nature of IFM. The idea that the inshore industry can quite readily identify with SFCs and share a sense of co-responsibility for the sustainability of local fish stocks and the ecosystems in which they thrive could possibly be undermined. As a result, the new system could be perceived as retreating from the principle of co-management towards a more bureaucratic form of imposed management. These are real concerns. Face to face contact with the local fishing sector on a day to day basis remains essential and, where possible, the continuity of personnel on the ground should help to dissuade the industry from adopting negative perceptions.

A further problem of logistics in terms of maintaining good communications and inter-personal relations between the management team and the frontline enforcement officers could arise as a consequence of the scaling up approach and more specialised job specifications. Finally, the new management system will need to work hard to keep the local authorities fully engaged in the management process so as to ensure that their involvement is not diminished. The concept of democratic accountability inevitably becomes more stretched as the management units become larger. None of these potential threats are, in our view, insuperable given the will to make the system work in the first place.

9.7 Integrated coastal zone management: a radical agenda for change

Lurking in the shadows is another as yet ill defined approach to the management of coastal waters. The notion of integrated coastal zone management (ICZM) has been with us for some time but has so far struggled to progress beyond the conceptual stage. The theory is

laudable: it proposes an integrated strategy for the planning and management of coastal resources and coastal space which would bring together those responsible for policy development across a range of coastal activities at different scales to jointly tackle a variety of overlapping challenges relating to urbanisation, tourism, extraction of non-renewable resources, fishing, pollution, erosion, habitat destruction…. (Commission, 2001d). It would provide a structured alternative to the undisciplined array of sectoral policies, an antidote to the confused, potentially conflictive and highly fragmented approach to the management of coastal waters and a resolution of the multiplicity of plans for areas like the Wash developed by different agencies to satisfy different objectives. In practice, however, the tasks of creating the appropriate administrative infrastructure and developing a balanced strategy for ICZM have so far proved unachievable except, in some instances, at local level.

In the 1990s, the UK government rejected proposals from a House of Commons Select Committee (1992) for a more structured, statutory approach to coastal zone management, reasserting instead the principle of a voluntary approach and closing out any suggestions of further intervention on the part of the state. Practically speaking, coastal zone management already occurs informally and in a somewhat haphazard way. It is to this end that CFOs are currently required to spend so much time in making written comments or attending meetings on matters which have little or no direct bearing on fisheries management. Today, in addition to their statutory responsibilities for marine environmental protection, SFCs *inter alia* have become non-statutory consultees on waste disposal, marine aggregate and capital dredging, oil and gas exploration, construction work and, most recently, offshore wind farms.

There has been a renewed thrust from the European Commission anxious to develop a coordinated policy for ICZM throughout the coastal margins of the Community (COM (2000)547). The problem as far as IFM is concerned is how this might work out in practice. Clear benefits have accrued from the voluntary approach where SFCs have been able to promote the interests of inshore fisheries. As one of the few 'relevant and competent authorities' operating in coastal waters, SFCs have held something of an advantage – though on occasions they have been upstaged in 'set piece' meetings by the presence of much larger and better resourced private sector organisations. Attempts to formalise and institutionalise ICZM could prove a considerable threat to IFM, at least in its present state. It would take the focus away from inshore fisheries and risk deflecting resources from IFM. Both from the point of view of the declining value of inshore fisheries to the regional economy in terms of employment and revenue and the vulnerability of IFM's organisational structures, it is likely that inshore fishing interests would be still further marginalised. It is our belief that IFM needs to rebuild its own structures on a more solid foundation – as outlined in 9.6 above – before it is drawn into the unmapped territory of ICZM.

10. Conclusions and recommendations

Those who have followed the preceding analysis closely will not be surprised by our conclusions. We believe that the importance of inshore waters is rather too easily overlooked and that issues relating to their management tend to suffer neglect at the hands of central government. Moreover, the relative invisibility of the marine ecosystem, except for a few charismatic species, means that it is more difficult for conservation groups to mobilise public opinion in support of pressure for action.

Although we have found it difficult to arrive at any precise statement of the economic value of inshore fisheries for reasons of inadequate statistical data, a conservative estimate would suggest that *circa* 25% of the total value of sea fisheries in England and Wales (roughly £35 million pa) derive from the inshore sector, much of this from the burgeoning shellfisheries. But the economic significance of the inshore waters goes well beyond their contributions to the revenue or employment generated by commercial landings. Inshore waters commonly include the spawning and nursery grounds of important demersal and pelagic species whose adult phase distribution extends far beyond the 6 or 12 nm limits. The fact that inshore waters off the coasts of England and Wales are also used by upwards of a million sea anglers, with an estimated expenditure of not less than £140 million a year, adds greatly to their economic and social importance. Indeed, on these figures, the recreational value of inshore fishing waters would seem to equal the commercial sea fisheries of England and Wales as a whole. Nor should one forget the important contribution made by artisanal inshore fisheries to the cultural landscapes and heritage which form part of the overall visitor appeal for coastal areas.

It would be difficult, too, to overestimate the value of neritic and coastal waters to the marine ecosystems of the seas surrounding England and Wales. But inshore ecosystems are also recognised as being more delicately balanced and more vulnerable to disturbance by natural and anthropogenic factors than those offshore - and thus in need of more careful management.

While there is much to commend the present system of IFM operating throughout England and Wales - and especially its emphasis on devolved management - in some important aspects it has failed to keep pace with developments surrounding fisheries management in general. Its salient feature of shared responsibility between representatives of the local administrations and the fishing industry for framing the regulations which govern fishing activity within the 0-6 nm zone puts it at the forefront of co-management systems throughout Europe. It successfully combines the three key coordinates of good governance - subsidiarity, user participation and democratic accountability with little bureaucratic interference from the centre. Indeed, the degree of local autonomy granted to the individual SFCs is quite remarkable. In part, however, this may simply reflect the central government's indifference towards the inshore sector.

Where there are weaknesses in IFM, they are not necessarily the fault of the system *per se*. Rather, they are the consequences of years of neglect by central government and its unwillingness, for whatever reasons, to assist the modernisation of the system. As a consequence, funding arrangements have not kept up with the expanding responsibilities of the SFCs; paradoxically, in the past MAFF has been content to add to their range of duties but persistently argued that funding is a matter for the local authorities alone. The legal

instruments under which IFM is conducted have become progressively outmoded and attempts to graft onto the primary legislation from the 1960s new legal obligations has left a framework which is confused, cumbersome and no longer consonant with the basic principles of sound management. These deficiencies can only be remedied by a fundamental reform of the system - its legislative framework, its funding arrangements and its basic structures. At the same time, SFCs will need to take a long, hard look at their own procedures to see where they can improve the effectiveness of their operations.

At the time SFCs were created over a hundred years ago, the emphasis was clearly placed on the protection of local assets for the benefit of a local industry. There was then little or no sense of a deep seated fisheries crisis and, therefore, little need for national or trans-national fisheries policies. Clearly, this is no longer the case but whereas the European Community has assumed responsibility for fisheries management throughout the 'common pond', it has left exposed a vital hole in respect of inshore waters which Member States have been slow to infill. As a result, there is in many European countries a policy vacuum in respect of inshore fisheries. In England and Wales the situation is rather different. What we have here is a potentially effective but seriously outmoded organisational framework for IFM; what we lack is a strategy by which IFM can be taken forward to help shape a sustainable future for the inshore industry. To an extent, therefore, IFM languishes in a state of policy inertia. In part this is a reflection of the sometimes parochial, introverted view of individual SFCs, in part a commentary on the weak level of inter-SFC coordination that the ASFC is able to promote and in part a lack of interest on the part of central government. It sometimes seems that the reluctance of central government to strengthen the system of IFM is based on an unfounded fear of creating a countervailing source of political influence and power in domestic fisheries. At the same time, the national fishermen's organisation (NFFO) has been preoccupied with fighting the common enemy - the European Commission - and has thus largely ignored the issues of IFM. It, too, has reservations about extending the influence of SFCs.

SFCs are also well placed to make an important contribution to the development of marine nature conservation in England and Wales. For this contribution to be fully realised, however, it is first necessary to define much more clearly the direction that marine nature conservation should take in general and the role that SFCs might play in particular. Whether the strategic view will emerge from the current review of marine nature conservation is uncertain. Meanwhile, a halt should be called to the tendency to try and move both IFM and marine nature conservation forward, in fits and starts, by means of *ad hoc* amendments to what is basically deficient and defective framework legislation *viz* the *Sea Fisheries (Regulation) Act 1966* and the *Wildlife and Countryside Act, 1981*. For those who deal with the management of inshore waters, new basic legislation must furnish clear, logical and well defined terms of reference.

The next few years will provide a crucial window of opportunity for the reform of IFM which would present inshore fisheries with a much more robust framework of management able to cope, not only with pressures already building within the fishing industry, but also with demands for a more purposeful collaboration with marine nature conservation interests. And, in so doing, it would help to guarantee the maintenance of biodiversity, productivity and integrity of marine ecosystems. We stress that the opportunity is both imminent and likely to be short-lived. We therefore urge that, not later than June 2003, a committee of enquiry into IFM in England and Wales be established and charged with making formal recommendations for the legislative, financial and structural reform of the current system. The committee should report directly to the relevant Ministers in England and Wales within a 12 month

period. Parliament, in consultation with the National Assembly for Wales, should then be prepared to enact the necessary legislation within the following eighteen months. If this timetable were to be followed, a substantially revised system of IFM could be in place within 5 years.

Careful consideration will need to be given to the composition of the committee of enquiry. In view of the broad remit of the enquiry and the wide spectrum of interested parties, the committee should include within its membership those who can reflect the experience, interests and opinions of the inshore and offshore commercial fishing sectors, recreational fisheries, marine nature conservation, fisheries science, marine ecology, local authorities, national fisheries administration and, of course, the SFCs themselves.

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Appendix 1

List of Consultees

The following organisations (and individuals) responded to our requests for interviews (I) and/or written documentation (W).

Association of Sea Fisheries Committees	Russell Bradley, Chief Executive	I
Bass Fishermen's Society	Bob Cox	I
Cornish Fish Producers' Organisation	Nathan de Rozarieux, Chief Executive	I
Cornwall Sea Fisheries Committee	Eddie Derriman, Chief Fisheries Officer David Muirhead, Chairman	I W
Countryside Council for Wales	Clare Eno, Senior Maritime Officer (Policy)	I W
Cumbria Sea Fisheries Committee	David Dobson, Chief Fisheries Officer	I W
Devon Sea Fisheries Committee	Neil Downes, Chief Fisheries Officer Keith Bower, Deputy Chief Fisheries Officer	I W
Eastern Joint Sea Fisheries Committee	Chris Amos, Chief Fisheries Officer Robin Gay, Deputy Chief Fisheries Officer	I W
English Nature	Paul Knapman, Fisheries Liaison Officer	I W
Environment Agency	David Clarke, Head of Fisheries	I
Isles of Scilly Sea Fisheries Committee	Steve Watt, Marine Officer	I
Kent and Essex Sea Fisheries Committee	Joss Wiggins, Joint Chief Fisheries Officer Ken Green, Chairman	I W
Marine Conservation Society	Bernadette Clarke, Marine Officer	I W
Ministry of Agriculture, Fisheries and Food	Peter Winterbottom (Sea Fisheries Conservation)	I
	Simon Waterfield (Sea Fisheries Conservation)	I W
	Gareth Baynham Hughes (Sea Fisheries Conservation)	
	George Ellson, Chief Inspector of Sea Fisheries	I
National Assembly for Wales Agriculture Dept	Glyn Perryman	I
National Federation of Fishermen's Organisation	Barrie Deas, Chief Executive	I
National Federation of Sea Anglers	Malcolm Gilbert, Fisheries Liaison Representative	I
North Eastern Sea Fisheries Committee	Paul Smith, Chief Fisheries Officer	I W
Northumberland Sea Fisheries Committee	Sir Derek Bradbeer, Clerk to the SFC	
	Albert Cox, Chief Fisheries Officer	I W
North Western and North Wales SFC	Jim Andrews, Chief Executive	I W
	John Fish, Chairman	

Royal Society for the Protection of Birds	-	W
Shellfish Association of Great Britain	Peter Hunt, Chief Executive	I W
Southern Sea Fisheries Committee	Mark Whitley, Chief Fisheries Officer	I W
	Ken Lynham, Chairman	
South Wales Sea Fisheries Committee	Phil Coates, Director	I W
	Mark Stafford	
	Chairs and Vice-chairs of the Committee	
Sussex Sea Fisheries Committee	Tim Dapling, Chief Fisheries Officer	I W
Welsh Federation of Sea Anglers	Rowland Sharp, Environment Officer	I
Wildlife Trust	-	W
WWF-UK	Sian Pullan	I W

At the outset of the enquiry, a pilot survey of twelve inshore skippers was undertaken by Dr S J Lockwood in North Wales and in Weymouth over a period of four working days. Although the results were both interesting and informative - and were used to develop lines of enquiry in subsequent interviews with SFCs and others - it was decided not to extend the survey for reasons of cost. We wish to record our gratitude to those individuals for their time and contribution to the project:

Trevor Brooker	-	Weymouth
Edward Davies	-	Pwllheli
Peter Eggleton	-	Weymouth
Andrew Hunt	-	Conwy
John Jones	-	Porth Penrhyn
Michael Jones	-	Nefyn
Trevor Jones	-	Conwy
Graham Noble	-	Weymouth
Martin Parry	-	Conwy
Bernhard Roberts	-	Pwllheli
Gareth Roberts	-	Pwllheli
Maurice Stringer	-	Porth Dinllaen

Appendix 2

Abbreviations

ASFC	Association of Sea Fisheries Committees
BAP	Biodiversity Action Plan
BSFO	British Sea Fishery Officer
CEO	Chief Executive Officer
CFO	Chief Fisheries Officer (Sea Fisheries Committee)
CFP	Common Fisheries Policy
CCW	Countryside Council for Wales
DEFRA	Department of Environment, Food and Rural Areas Affairs (previously MAFF)
DI	District Inspector (Sea Fisheries Inspectorate)
EA	Environment Agency
EC	European Community
EN	English Nature
ESSFiN	European Social Science Fisheries Network
FIFG	Financial Instrument for Fisheries Guidance
FO	Fisheries Officer (Sea Fisheries Committee)
ha	hectare
ICZM	Integrated coastal zone management
IFM	Inshore fisheries management
JNCC	Joint Nature Conservation Committee
k	thousand
km	kilometres
m	metres
MAFF	Ministry of Agriculture, Fisheries and Food (now DEFRA)
MLS	Minimum landing size
MNR	Marine Nature Reserve
NASCO	North Atlantic Salmon Conservation Organisation
NAWAD	National Assembly for Wales Agriculture Department
NFFO	National Federation of Fishermen's Organisations
NGO	Non-governmental organisation
nm	nautical mile
RAC	Regional Advisory Committee
RDA	Regional Development Agencies
RFERAC	Regional Fisheries, Ecology and Recreation Advisory Committee (EA)
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SEERAD	Scottish Executive Environment and Rural Affairs Department
SFC	Sea Fisheries Committee
SFF	Scottish Fishermen's Federation
SFI	Sea Fisheries Inspectorate
SNH	Scottish Natural Heritage
SOAEFD	Scottish Office Agriculture, Environment and Fisheries Department
SPA	Special Protection Area
SWOT	Strengths, weaknesses, opportunities and threats
TAC	total allowable catch
TTWA	travel to work area
WWF	World Wide Fund (for Nature)