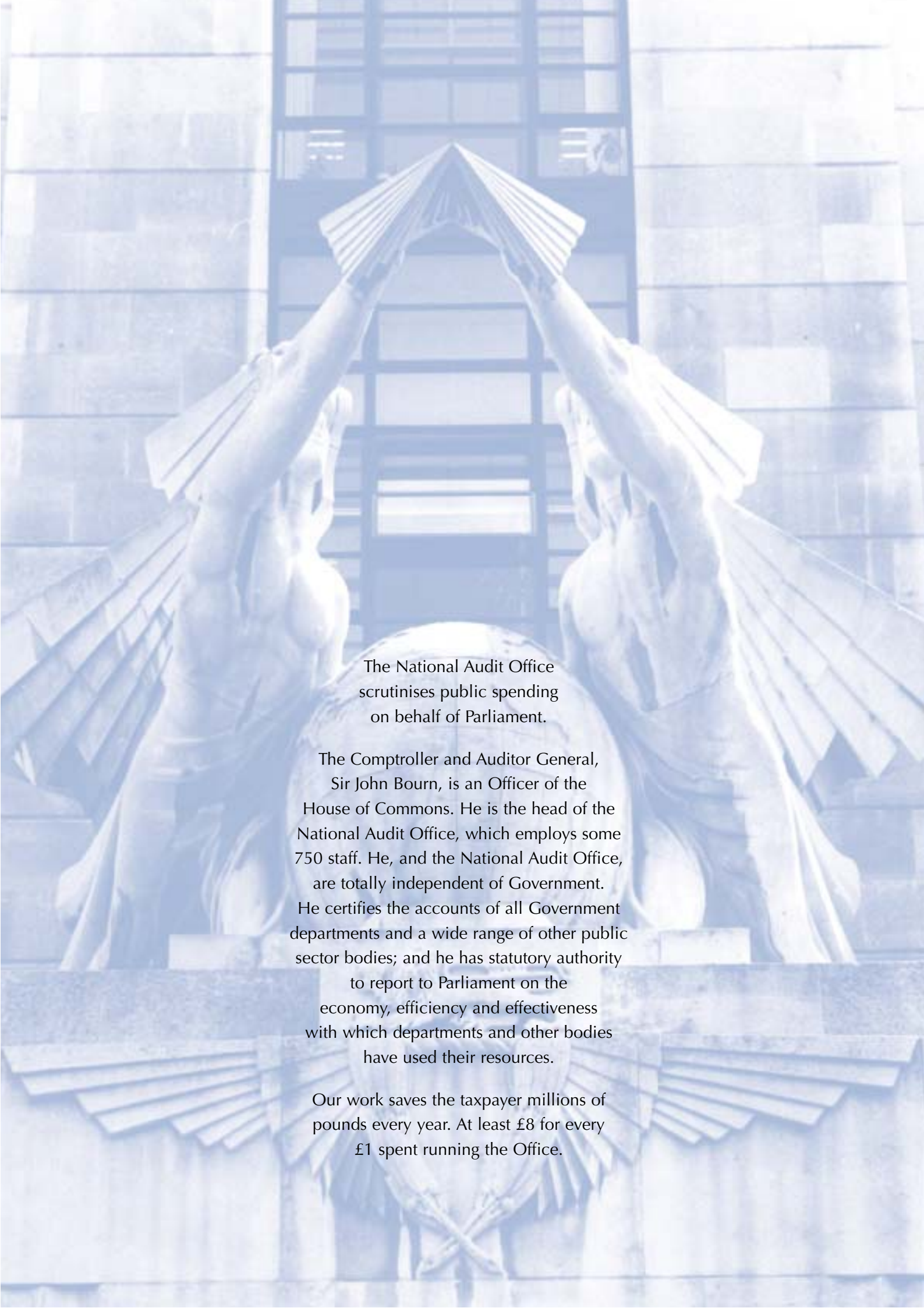


# Fisheries Enforcement in England

REPORT BY THE COMPTROLLER AND AUDITOR GENERAL  
HC 563 Session 2002-2003: 3 April 2003







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# Fisheries Enforcement in England



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HC 563 Session 2002-2003: 3 April 2003

This report has been prepared under Section 6 of the National Audit Act 1983 for presentation to the House of Commons in accordance with Section 9 of the Act.

*John Bourn*  
Comptroller and Auditor General

National Audit Office  
1 April 2003

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# executive summary

## Introduction

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- 1 Fish stocks around the United Kingdom and in European waters are under increasing pressure with some under threat of total collapse. **The European Union's Common Fisheries Policy** is the main determinant of fisheries regulations within the waters of the United Kingdom. These regulations seek to sustain fish stocks by controls such as quota limits on the amounts of particular stocks which may be fished in defined areas; and technical measures which restrict fishing methods and types of gear in order to reduce catches of undersized and immature fish. Restrictions on access to fishing areas, either permanently or by season, may also be imposed. **Member States** are required to enforce and monitor compliance with all these regulations.
- 2 In December 2002, European Union Ministers agreed reforms to the Common Fisheries Policy to improve conservation of fish stocks by tightening controls. These will include increased emphasis on penalising Member States that do not implement adequate enforcement measures.

Beach launched fishing fleet, Hastings



- 3 This report examines the role of **the Department for Environment, Food and Rural Affairs (the Department)** in enforcing fisheries regulations on vessels fishing in the waters around the English coast and in respect of fish landed at English ports<sup>1</sup>. The report examines the effectiveness of the Department's methods in detecting, dealing with and deterring infringements of regulations; and the management of its enforcement activity. A European Commission report<sup>2</sup> on the adequacy of Members' enforcement systems, based on reports submitted by each Member State, showed that the United Kingdom compared favourably against many other Member States. Areas identified as requiring improvement were resources for land based operations, systematic cross checking of catch information, and effective penalties. We consider these areas in this report.

<sup>1</sup> Fish caught in English waters may be landed in other countries and so enforcement will be dependent on robust checks elsewhere.

<sup>2</sup> COM (2001) 526 final - Report on the monitoring of the Implementation of the Common Fisheries Policy - Fisheries Control in Member States.



- 4 The Department provides statistics and reports on implementation throughout the United Kingdom, to the Commission; and negotiates on behalf of the United Kingdom with the Commission. The Department spends around £11 million a year on fisheries enforcement in England. The Sea Fisheries Inspectorate co-ordinates and directs inspections and surveillance at sea, and aerial and satellite surveillance; and carries out land based inspections of landings of fish and vessel documentation of catches. **Fishermen** have to complete and submit accurate records of the fish they land to ensure that the uptake of stocks can be monitored, along with information on the areas fished and the gear deployed.
- 5 The total value of fish landed in the United Kingdom by the United Kingdom fishing fleet in 2001 was £424 million of which £148 million was landed into England and Wales. Sustainable fish stocks are essential for economic survival. For regulations to be fully effective they need to be regarded as fair and sensible. Regulations that lead to action considered by many fishermen to be inconsistent with conservation objectives may encourage non-compliance. For example, fish - many of which are dead - may be discarded, that is returned to the sea (known as discards), to avoid exceeding quota or to make best use of quota by landing only the better quality fish.

## The level of compliance

- 6 In both 2000 and 2001 the Department recorded some 250 infringements of regulations. Half related to inaccuracies in recording catches, the remainder mainly to breaches of technical measures such as net sizes or of licensing and registration requirements. However, scientific estimates of misreporting of landings, academic research and our own discussion with fishermen suggest that the number of infringements recorded does not give the full picture of compliance.
- 7 The Department has a difficult task in enforcing regulations on a mobile industry in a geographical area which is large both in terms of size of coastal waters and number of potential landing sites. Since the number of undetected infringements is impossible to determine, the effectiveness of enforcement activity is difficult to measure in absolute terms. But it is possible to calculate the probability of inspection, and to compare the penalties imposed with the gains from non-compliance as likely means of deterring infringements.

## 8 We found that:

- i. There is a very low probability (less than one per cent chance) that on any day of fishing a vessel will be subject to a physical inspection at sea and around six per cent chance of being inspected on land;
- ii. There is a much higher probability (60 - 70 per cent) that submitted documents will be cross checked against each other, fish available on the market and other information such as sightings at sea or satellite information;
- iii. Some infringements can be very sophisticated, and involve both falsifying documents and collusion with other parties such as those purchasing the fish. They will be difficult to detect through inspections, but may be uncovered as the result of surveillance or tip-offs;
- iv. When detected, infringements are most likely to result in a written warning. 49 per cent of cases were dealt with in this way in 2000, and 52 per cent of cases started in 2001;
- v. 122 of the 124 cases taken to court in 2000 and 2001 led to fines. An analysis of a sample of fines shows that typically a fine will be about 1.7 times the value of the infringement, but the low probability of detection and prosecution in the first place means that potentially the economic benefits of infringement may outweigh the risks in the view of some fishermen.

## The effectiveness of enforcement

- 9 The current methods of enforcement used by the Department are satisfactory in that they comply with European requirements. However, some factors such as the current size of fishing fleets operating in European waters and resources available to the Department impact on the extent or effectiveness of checking. For example:
  - i. It is not possible to physically inspect enough vessels to ensure that all landings are accurately recorded;
  - ii. In isolation documentation checks are unlikely to uncover offences such as misdeclaration of the location, type or quantity of fish caught. However in combination with other sources of information, such as satellite surveillance, they can be a useful enforcement tool;





- iii. The Department lacks flexibility in the way it can deploy resources and people. This is impacting on its ability to reach its targets for land inspections. For example expenditure controls would prevent it from reducing inspections at sea (which count as scheme expenditure) and using the money saved to increase land inspections (which count as running costs), if this were deemed more effective in particular circumstances;
- iv. Departmental rules on staff mobility restrict the flexibility with which it may move staff between areas of greatest need. Currently, the Department's deployment of inspectors does not reflect the distribution of landings by volume. For example, whilst ten inspectors cover landings of 13,000 tonnes in the South of England, there are only 15 inspectors covering landings of 47,000 tonnes in the South West. However the deployment of inspectors also needs to take into account an assessment of risk including the number of vessels, the number and value of landings, quota restrictions or number of landing sites which may change and are reasons for the need for flexibility.

**10** We found that other countries face similar problems and have used a number of techniques to improve the effectiveness of enforcement activities, some of which have been adopted in whole or in part by the Department and others which are not directly applicable because of the structure of the United Kingdom fishing industry or legal system:

- i. Placing restrictions on where fish may be sold. The Netherlands, for example, has a reduced number of fish auction sites which makes it easier to focus inspection activity. The Department is currently consulting with industry to determine whether a system of registered buyers and sellers of fish should be introduced;
- ii. Use of observers on vessels. The United States of America, Canada, Norway and New Zealand use observers on vessels to collect scientific data but also to note infringements. Since fishermen appear to be sceptical about the scientific data, having scientists on board might bring better buy-in to conservation data, although success is dependent on the independence of the observers being maintained. The Centre for Environment, Fisheries and Aquaculture Science operates a scientific programme to monitor the level of discarded fish and there are plans to extend the programme to a limited extent. Its purpose, however, is not to identify and report infringements. The Department believes that significant observer coverage of the larger vessels in the fleet would be extremely expensive;
- iii. Adopting Individual Transferable Quotas which in effect give property rights to individual fishermen to catch and sell specific quantities of fish. New Zealand and Iceland have adopted such quotas, and have noted an increase in the number of fishermen willing to comply with regulations and inform on known offenders. The Department considers that the system here, while different, achieves a similar effect;
- iv. Increasing the involvement of the industry in enforcement activity. In the United Kingdom, Producer Organisations determine what fines, if any, will be imposed on their members for exceeding quota limits. However, in the Netherlands fisheries inspectors and fishermen's groups work together more closely. For example, inspectors report infringements to the fishermen's groups who manage quotas, and who impose pre-determined sanctions aimed at removing economic benefit;





- v. Allowing landings of over quota fish but using the profits to help fund enforcement or scientific research, which may encourage more widespread compliance for example. However, this would conflict with current European Union Legislation and is not therefore an option available to the United Kingdom.

**11** The Department has improved enforcement by:

- i. Satellite technology which significantly aids the monitoring of fishing vessel movements. The number of vessels to be covered by the system will approximately double by 2005, as the length of vessels required to carry position monitoring equipment is reduced;
- ii. Relaying surveillance data from headquarters to Royal Navy Fishery Protection Vessels and port offices every 2 hours, 24 hours a day, seven days a week;
- iii. Introducing new requirements such as the Designated Port Scheme (which requires larger vessels to land catches at specified ports<sup>3</sup>) to make it easier to target landing inspections of larger vessels;
- iv. Working with other fisheries authorities through joint operations, sharing information and ensuring that infringements are prosecuted in home ports;
- v. Co-ordinating available resources such as patrol vessels, satellite surveillance and aerial surveillance to allow inspection of United Kingdom registered vessels that seek to avoid inspection by rarely, if ever, entering British Fishing Limits. Such vessels have been targeted and inspected in international waters;
- vi. Maximising the element of surprise, by boarding vessels at short notice, or at night, whilst working within safety limits determined by the inspectors; and
- vii. Hiring boats from other inspection authorities such as Sea Fisheries Committees and using the Department's inspectors on board to carry out inspection and surveillance.

**12** The Department is considering two other proposals which we believe would help to strengthen the existing system:

- Introduction of a system whereby only agents authorised by the Department can buy and sell fish, with such agents having to provide documentation for the purpose of cross checking between landings and sales;
- The introduction of administrative penalties such as temporary suspension of fishing vessel licences.



<sup>3</sup> Within certain hours or for four hours notice to be given if landing outside designated hours or at a non designated port.



# Conclusions Recomm

**13** Sea Fishing is one of the most highly regulated industries in the United Kingdom and fisheries regulations are becoming increasingly complex. The Better Regulation Task Force<sup>4</sup> has stated that good regulations and their enforcement should meet the five principles of: transparency; accountability; proportionality; consistency; and targeting. The Department has done much to ensure that it abides by these principles. Our recommendations take account of further opportunities for the Department to apply the principles of Better Regulation, where appropriate in partnership with the devolved fishing administrations in the United Kingdom.

1. The Department should record infringements detected at district level on a consistent basis. This would provide a basis for better analysis and understanding of the level of non-compliance; help target enforcement activity; and give assurance that all cases are being dealt with appropriately.
2. Other enforcement agencies such as Her Majesty's Customs and Excise use a wide range of data to make estimates of the level of non-compliance with regulations and to help assess the effectiveness of its enforcement activity. The Department should consider whether it could obtain information from other bodies such as the Sea Fish Industry Authority to use for this purpose.
3. Effective enforcement may be improved by co-operation with other fishing authorities. The Department has made efforts to develop relations with other countries and maintains close contacts with the Scottish Fisheries Protection Agency (the Agency) and the Northern Ireland Fisheries Inspectorate. In the case of the Agency, there may be scope for sharing and developing performance measurement techniques to assess effectiveness.
4. To improve the effectiveness of enforcement activity, the Department should look at increasing the use of landing patterns and surveillance information to target individual vessels that are suspected of breaching regulations.
5. The Department should use the Regional Advisory Councils to be established at European Union level to help inform development of enforcement practice and draw on some of the practices used in other countries to encourage more widespread support from the industry for effective management and enforcement of fisheries regulations. For example, the Department could explore whether there is scope to work

<sup>4</sup> An independent body that advises Government on regulatory issues including how to improve the effectiveness and credibility of government regulation.



# & endations

more closely with United Kingdom Producer Organisations in undertaking its inspection activities along the lines of the Netherlands' approach. In The Netherlands infringements identified by inspection activities are reported to fishermen's groups, who impose pre-determined sanctions aimed at removing economic benefit.

6. The Department should continue to look at the value of Individual Transferable Quota systems where fishermen own rights to catch and sell a specific quantity of fish, giving them a personal interest in conserving stocks and reporting infringements as the quota becomes their individual property rather than a collective one, taking account also of the European Commission's current work in this area.
7. As discarded over quota fish is often already dead or dying when thrown back into the sea, the Department should consider whether there would be benefit in seeking change in current European Union enforcement legislation to allow landing of such fish but with proceeds being used to fund research or greater enforcement activity.
8. Currently prosecution through the Courts takes a long time and the penalties imposed may not reflect the economic gain of non-compliance, particularly when the low probability of detection is taken into account. The Department should increase the options for pursuing and penalising infringements, for example through its current consideration of administrative penalties.
9. The Department has sought to contain the costs of enforcement at sea by contracting the Royal Navy to carry out this work. Its present contract with the Royal Navy runs until March 2008 but should be subject to a market test before expiry to ensure that the Royal Navy continues to offer a cost-effective solution.
10. The Department should review the role of the Sea Fisheries Inspectorate and the range of tasks it performs, along with the enforcement and related activities of other agencies including the Sea Fisheries Committees and the Environment Agency. It should also consider its current deployment of local Inspectorate staff to confirm that deployment maximises the likelihood of detecting illegal landings of fish, and is soundly based on an evaluation of relative risks across all areas.





# Part 1

## Introduction

This part of the report gives an overview of:

- why fisheries regulations are required to conserve stocks and thereby support the industry;
- responsibilities for determining and enforcing regulations in English waters;
- the nature and the operation of the United Kingdom fishing industry; and
- the quota system and technical conservation measures.

### Why are fisheries regulations necessary?

- 1.1 The Department for Environment, Food and Rural Affairs enforces fisheries regulations in English waters in compliance with European requirements, and in support of its objectives relating to economic prosperity through sustainable fishing and to promote sustainable management and prudent use of natural resources.
- 1.2 The collapse of herring stocks in the North Sea in the 1970's (**Figure 1**) illustrates that unregulated fishing activity can have long term effects on fish stocks and on the economic life of coastal communities. Since then, fisheries regulations seek to protect stocks by setting limits on the amount of fish which can be caught and by preventing the capture of under sized fish to enable fish to reach maturity and breed, thus allowing stocks to be self-sustaining. Even so, cod stocks, for example, continue to decline. In December 2002 the Agriculture and Fisheries Council decided to limit fishing time in the North Sea and West of Scotland in an effort to help the recovery of cod stocks which are at or near their lowest recorded levels, being so depleted that they are at risk of collapse.

### 1 Collapse of herring stocks and the impact on industry

The North Sea herring fishery used to support a large fishing and fish processing industry on the East Coast of England, particularly at ports such as Lowestoft, but twice in recent history herring stocks have fallen to dangerous levels.

In 1978 herring stocks in the North Sea collapsed, following years of heavy fishing to meet market demand. At this time only market forces influenced fishing activity, and scientists have concluded that over fishing in the 1950's and 1960's meant fewer fish reached maturity and were able to spawn to replenish stocks. Between 1977 and 1980 fishing for herring in the North Sea was suspended as a conservation measure and measures were introduced to close areas of sea during the spawning season, which are still currently in place. Stock levels were monitored and by 1981 they had recovered sufficiently for the fishery to be reopened.

However, following the re-opening of the fishery, catch limits were set at a level higher than scientific advice and by 1996 herring stocks were in danger again. In July 1996 emergency measures were introduced to reduce the level of catches and special measure continue to apply.

The nature of the Lowestoft fishing fleet was changing before the herring stocks collapsed. However, the collapse had long term economic consequences for East Coast herring fishermen and processors. It led to the closure of herring processors resulting in no market for herring when the stocks recovered and few processors still in business. Herring are still caught in the North Sea but tend to be landed abroad where a better market exists for the fish.

*Source: National Audit Office analysis of Centre for Environment, Fisheries and Aquaculture Science 'Saving North Sea Herring'*

### Who is responsible for fisheries regulations?

- 1.3 The European Union's Common Fisheries Policy is the main determinant of fisheries regulations, although some national regulations are necessary to implement detailed technical conservation measures. The Common Fisheries Policy also encourages other measures such as the decommissioning of fishing boats to reduce the fleet size.



## 10



- 1.4 The United Kingdom is responsible for monitoring the fisheries within British Fishery Limits, which extend out up to 200 miles from the coast or to median lines with other Member States. **Figure 2** shows the fishery areas in which the United Kingdom has an interest. In most cases fisheries areas will cross national boundaries. For example, regulations in Area VIIa, are enforced by the Irish and English fisheries authorities in their respective waters. In that area the Total Allowable Catch for cod in 2001, was shared between the United Kingdom (44 per cent of the quota), Ireland (40 per cent), Belgium (12 per cent) and France (4 per cent).
- 1.5 The Department represents the United Kingdom at meetings of the Council of Ministers and the Commission that deal with the Common Fisheries Policy, and is responsible for implementing the Common Fisheries Policy in England. Enforcement of regulations in England (and in Wales on behalf of the Welsh Assembly), is carried out by the Sea Fisheries Inspectorate (Appendix 1) and Sea Fisheries Committees. In Scotland, the Scottish Fisheries Protection Agency is responsible for enforcement, while in Northern Ireland the Department of Agriculture and Rural Development undertakes this role. The Department also provides statistics and reports to the Commission on implementation throughout the United Kingdom. The Fisheries Departments in the United Kingdom spend a total of about £24 million on fisheries enforcement (and related work) each year. Approximately £11 million is spent on enforcement in England. In addition, local authorities<sup>5</sup> through local Sea Fisheries Committees spend a further £4.4 million<sup>6</sup> on enforcement of local by-laws and some European Union regulations and national regulations within six miles of the English coast.

## The United Kingdom fishing industry

- 1.6 There are many different stocks of fish in the seas around the United Kingdom. Commercially important species include cod, plaice, sole, haddock, whiting, nephrops, monks/anglers, herring and mackerel **in the North Sea**; mackerel, sole, monks/anglers, cod and plaice **in the English Channel**; with cod, dogfish, haddock, nephrops such as Dublin Bay prawns or langoustines, sole, skates and rays commercially important **in the Irish Sea**. There is also a lucrative shellfish industry targeting crabs, lobsters and scallops. Given the variety of fish in United Kingdom waters it is often difficult to catch just one species of fish. Non target species are referred to as 'by-catch'. Sometimes a limited amount of by-catch is allowed by the regulations. Otherwise fishermen must throw back fish for which they have no quota, known as 'discarding'. Fishermen must also discard fish below the regulated minimum landing size.
- 1.7 Small inshore vessels tend to fish on a daily basis whereas larger vessels, targeting fish stocks further offshore, will spend a proportion of a trip travelling to and from the fishing ground, and some may stay at sea for a week or more. The industry adapts its operations and fishing gear with improvements in technology, availability of fish stocks and the restrictions of the Common Fisheries Policy, sometimes leading fishermen to invest significant sums to re-equip their vessels to target different species.

*Fishing Vessels at Newlyn - an example of a 10m and 17m vessel*



<sup>5</sup> Local Authorities have Statutory responsibilities under the Sea Fisheries Regulation Act 1966.

<sup>6</sup> Source: Association of Sea Fisheries Committees.



### 3 Landings into the United Kingdom by the United Kingdom fleet in 2001

Volume	Proportion of United Kingdom Total	Value	Proportion of United Kingdom Total
<b>England and Wales</b>			
146,000 tonnes	32 per cent	£148 million	35 per cent
<b>Scotland</b>			
290,000 tonnes	63 per cent	£257 million	61 per cent
<b>Northern Ireland</b>			
23,000 tonnes	5 per cent	£19 million	4 per cent

Source: Department for Environment, Food and Rural Affairs

1.8 Fishermen may decide to land catches in the United Kingdom (Figure 3 shows the volume and value of landings in 2001) or abroad, (in 2001 landings abroad were some 280,000 tonnes worth £160 million.) Vessels will generally plan their trip according to how they intend to sell their subsequent catch:

- Some fish caught by United Kingdom vessels may have a more profitable market on the continent, for example hake;
- Those landing to sell at a fish market will work to coincide with the days and times which their local market operates. Fish for a market will generally be landed overnight or in the early hours of the morning;
- Some areas of the United Kingdom have a particularly active fish processing industry: Hull and Grimsby, for example receive significant volumes of fish by road, originally landed elsewhere, often in Scotland. Vessels that sell direct to processors will have to meet their specific requirements.

1.9 Vessels from other Member States and some Third Countries may also fish within British Fishery Limits up to the seaward limit of United Kingdom Territorial Waters and some foreign vessels have historical rights to fish for certain species within territorial waters between 6 and 12 miles. Some British registered vessels are foreign owned, such as those referred to as the 'Anglo-Spanish' fleet<sup>7</sup>. These vessels land the majority of their catches abroad.

## How are quota and technical measures implemented and enforced?

### Quota Measures

1.10 The European Union sets annual Total Allowable Catches for the main fish stocks caught in Community waters, based on scientific recommendations and after negotiation with Member States. Each Member State has a fixed percentage share. European regulations<sup>8</sup> require vessels of 10 metres and over in length to keep a logbook which details quantities of all stocks caught and retained on board, and where and when these were caught. Inshore vessels under 10 metres are not obliged to carry logbooks but Member States are obliged to monitor their landings. Apart from these requirements Member States are free to decide how to allocate quotas and how to regulate quota uptake within their own country.

### Quota Management: the role of Producer Organisations

1.11 The day to day management of 95 per cent of the United Kingdom quota allocation has been delegated by the Department to 20 Producer Organisations, which have a total membership of 1300 vessels and are subject to supervision by the Fisheries Departments in the United Kingdom. The Departments directly manage the remainder on behalf of the under 10 metre fleet and over 10 metre vessels that are not in Producer Organisation membership. Apart from delegation of this quota management aspect, the Department is responsible for enforcement of all other technical measures and fisheries regulations. All vessels are therefore subject to inspection and documentation cross checks by the Department.

<sup>7</sup> Anglo-Spanish: Fishing Vessels registered mainly by United Kingdom companies that are partially or wholly owned by Spanish Interests.

<sup>8</sup> Control regulation 2847/93.

1.12 The quota available to Producer Organisations is based on fixed allocation shares of the national quota held by individual members. Thus Producer Organisations are managing pools of quota contributed by their memberships. It is for Producer Organisations to decide how to allocate quota amongst their members. Some Producer Organisations operate pool systems with monthly limits which individual members can top up by purchasing or leasing in additional quota. Others may issue annual allocations to their members at company or vessel level.

1.13 Monitoring of quota uptake and management of fisheries is dependent on accurate completion of logbooks and landing declarations by vessels. Vessels, whether or not they are members of Producer Organisations, must submit landing declarations to the Department within 48 hours of landing a catch. This data is collated to provide weekly information on the extent to which the quota for the United Kingdom has been used. This is then reported to the European Commission on a regular basis. Once a quota is exhausted that fishery area will be closed. The Department, via its Sea Fisheries Inspectors, aims to inspect eight per cent of quota landings and to cross check documentation with other data as a check on accuracy. In 2001, it achieved a physical inspection level of about 6 per cent and cross-checked some 70 per cent of landing documents.

*Fisheries Officers inspecting nets on board a vessel at sea*



1.14 Producer Organisations monitor quota uptake by comparing a member's recorded landings as compiled by the Department against their quota allocation. Producer Organisations do not physically inspect the fish landed to ensure it agrees with landing documents as they see this as the role of the Inspectorate. The Department does not audit the quota uptake of individual vessels but checks that declarations are accurate through inspections and monitors the amount of quota that a Producer Organisation as a whole declares has been used. Producer Organisations and their members may also swap quota between themselves during the quota year which can complicate the Department's monitoring role. However details of any monthly limits and annual quotas are passed to the Fisheries Departments. Once a Producer Organisation has taken its allocation of quota, vessels are prohibited from making further landings of the stock in question. Producer Organisations that exceed their allocation will have an equivalent amount of fish deducted by the Department from their quota for the following year.

1.15 All vessels can be prosecuted for making inaccurate or false landing declarations. Vessels which are not members of a Producer Organisation may also be prosecuted for exceeding monthly catch limits set by the Fisheries Departments, although such prosecutions are now infrequent following the contraction of the Non Producer Organisation sector. Vessels that exceed Producer Organisation catch limits are dealt with by internal disciplinary procedures, usually in the form of quota deductions. The Department is rarely informed when and against which of its members action has been taken by a Producer Organisation. Some industry observers have seen this as effectively operating different standards of control.

## Technical measures

1.16 The main technical measures required by the European Union include measures aimed at avoiding or limiting the capture of immature or unwanted fish. These measures include restrictions on mesh size range, the design and deployment of fishing gear, closed areas and seasons, limits on incidental catches, (referred to as 'by-catches') and minimum landing sizes.

1.17 Enforcement of technical measures is the responsibility of Member States. This is carried out primarily through checks on the gear used during inspections at sea. The Fisheries Departments are responsible for enforcement of these measures on the entire fleet including members of Producer Organisations. Sea Fisheries Inspectorate staff in England also check for undersized fish as part of their physical inspection of landings. Since January 2000 satellite monitoring systems fitted to vessels over 24 metres have improved surveillance of fishing activities.



## Why did we do this study?

1.18 A European Commission review in 2001<sup>9</sup> of the control and monitoring regimes in place in each Member State concluded that there was scope to improve enforcement in all countries. The Commission published its proposals for reform of the Common Fisheries Policy last year with the view that the Policy has failed to conserve fish stocks sufficiently and that more emphasis on effective control and enforcement was required. Against this background it seemed timely for a National Audit Office study to examine the effectiveness of current enforcement methods in England in detecting, dealing with and deterring infringements. In December 2002, the European Union agreed reforms to the policy including increased emphasis on Member States adequately enforcing controls.

## What was our methodology?

1.19 Our methodology consisted of:

- consultation with the fishing industry and other stakeholders by inviting written comments and through interviews ([Appendix 2](#));
- reviewing academic literature on compliance and deterrence to identify the core requirements and characteristics proven successful in enforcement of regulations;
- identifying lessons from the approaches of enforcement agencies outside the fisheries sector;
- evaluating the Department's approach to enforcement against the principles established by the Better Regulation Task Force;
- analysing data held by the Department on enforcement activity;
- interviewing those involved in enforcement at the Sea Fisheries Inspectorate, the Fishery Protection Squadron of the Royal Navy and Directflight Limited; and
- drawing on information in published reports, websites and from interviews on the enforcement activities of other fisheries enforcement agencies. ([Appendix 3](#))

<sup>9</sup> European Commission: COM (2001) 526 - Final Report on the Monitoring of the Implementation of the Common Fisheries Policy.

Brixham Fish Market



# Part 2

## Are enforcement activities effective in detecting, dealing with and deterring infringements?

Increasing emphasis is being placed in Europe on the responsibility of Member States for the quality of enforcement activity which contributes to fish conservation efforts. This part of the report examines:

- the quality of enforcement in England, as reflected by the level of infringements;
- the effectiveness of inspection, co-operation or lessons learned from other agencies and stakeholders; and
- sanctions applied for infringements.

We focus on the over 10 metre fishing fleet as this is the most regulated sector and accounts for over 80<sup>10</sup> per cent of the fishing activity in England.

### It is difficult to measure the effectiveness of enforcement

- 2.1 Measuring the effectiveness of enforcement is problematic primarily because the level of actual as opposed to detected infringements is unknown. Some enforcement agencies use different sources of information to make estimates and track these in the long term to assess the effectiveness of enforcement (Figure 4). A model to estimate the level of fisheries infringements which go undetected would be complex, and have to account for both the number of different quota stocks (over 100) and the impact of fish processing on the quantity of fish consumed compared to that landed legally, as well as imports and exports.
- 2.2 Successful implementation of any regulation requires largely voluntary compliance, and peoples' willingness to comply often depends on whether they see benefit from the regulations for themselves or society. Enforcement activities can also deter if there is a high probability that breaches will be detected and that the resulting penalty is greater than the potential gain.

### The probability of a physical inspection, whether at sea or on landing, is low

- 2.3 The European Commission does not set the number of inspections it requires but leaves this to the discretion of Member States. By comparing the level of inspections against the level of fishing activity, it is possible to make a crude estimate of the probability of being inspected. Across the board there is less than one per cent chance that, on any day of fishing, a vessel will be inspected at sea and around a six per cent chance of being inspected on landing. The likelihood of inspection will vary according to area, the season and the type of fishing activity on which a vessel is engaged. However the Sea Fisheries Inspectorate concentrates surveillance and inspections in areas of risk, for example where quotas are limited, stocks are of high value or fisheries are seasonal. The Inspectorate also considers that the presence of inspectors and patrol vessels has an important deterrent value whether or not inspections are carried out.

#### 4 Her Majesty's Customs and Excise: Estimating compliance

Her Majesty's Customs and Excise has developed a model of tobacco smuggling which enables it to estimate the current and the future growth of the problem and allows it to predict the levels of activity needed to reverse this trend and achieve its Public Service Agreement target. Consumption figures are drawn from the General Household Survey and supplemented by data from the monthly Omnibus Survey. These figures are compared against data for legal supplies of tobacco, made up of United Kingdom duty paid supplies taken from Customs' own statistics and the level of cross-border shopping, derived from the annual International Passenger Survey. Customs recognise that no model will be completely reliable but they believe that their forecasts are "reasonably sensible."

10 Estimate calculated on the basis of vessel tonnage.



- 2.4 The probability of documentary checks being carried out is higher, amounting to some 60 - 70 per cent. Checking logbook sheets and landing declarations against other information such as sales notes and sightings recorded by aerial surveillance can uncover inconsistencies in information. For example, it may highlight that a vessel has declared landing less fish than that shown as sold by the vessel or documentary checks may highlight that a vessel has misdeclared the location of a catch in log sheets if it has been sighted fishing in a particular area. Document checks alone are, however, unlikely to uncover misdeclarations of the type of fish caught, or landing of undersized fish or inaccuracies in the quantity landed. Paperwork might appear consistent, for example as a result of fraudulent sales information.

## Of those vessels and landings which are inspected, few infringements warranting further action are found

### What sorts of infringements occur?

- 2.5 The infringements which have most impact on quota management are mis-declaring the stock or amount of fish landed on forms submitted to the Sea Fisheries Inspectorate, or landing fish clandestinely without submitting any records at all (**Figure 5**). Clandestine landings are difficult to detect because of the large number of potential landing sites and because the fish does not generally pass through markets but goes directly to purchasers.
- 2.6 We analysed the Department's records on infringements detected at sea by the Fishery Protection Vessels of the Royal Navy and in English ports by the Sea Fisheries Inspectorate in 2000 and 2001 (**Figure 6**). A higher percentage (10 - 13 per cent) of sea inspections than of land inspections (2-4 per cent) resulted in the recording of an infringement. There are reasons for this. Technical inspections of fishing gear are mainly carried out at sea while gear is in use. Minor transgressions identified shore-side by the Sea Fisheries Inspectorate have not generally been recorded, whereas all infringements at sea are reported to the Department by the Royal Navy.

*Fishery Protection Vessel*



## 5 Detecting illegally landed fish

Illegal landings of fish can take place when inspectors are known or thought not to be present. Typically offences of this nature usually occur during the night or at weekends. For example, fishery inspectors engaged in routine enforcement duties observed, from a distance, activity around a vessel that was berthed alongside a quay. Boxes of fish were being discharged from the vessel. The inspectors approached the quay and unlocked the Designated Port post box where copies of logsheets have to be deposited prior to vessels commencing discharge. No such logsheet from the vessel was found. The inspectors boarded the vessel. The master of the vessel denied having landed any fish and produced his logsheet. When the inspectors told him that his vessel had been observed landing for sometime the master and some of the crew became abusive and violent. The inspectors withdrew and called for police assistance. Subsequently, when interviewed the master admitted landing 50 boxes (1.8 tonnes) of dover sole. This was valued at over £13,000. Penalties, including costs, totalling £23,236 were eventually imposed following prosecution.

- Over half of the infringements relate primarily to inaccuracies or misdeclarations of reported landings. Such offences can undermine scientists' efforts to make accurate stock assessments and impact on the sustainability of fisheries.
- In 2000, the Commission asked Member States for the first time to report the number of serious breaches of the Common Fisheries Policy regulations. The Department considered that 47 of all infringements detected were serious, the majority concerned providing falsified information. The number of cases of serious infringements reported by other Member States varied from Finland, which reported one case, to Italy, which reported 1,077 (the main category of these (436) concerned unauthorised fishing). However there are limits as to how useful this information is for the purposes of comparison as in the first year of reporting Member States may have placed different interpretations on what constitutes a serious infringement.
- Over a quarter of infringements contravene regulations on technical conservation. For example, because of the nature of the fishing areas around England a haul of fish will often be comprised of a number of different species, known as the catch composition. Regulations exist to ensure the size of the mesh making up the net matches the composition of the catch. Illegal attachments, known as 'blinders', may, however, be added to the net in an attempt to maximise catches of fish, many of which may as a result be below the regulated minimum size to be landed.
- About 5 per cent of infringements relate to licence and registration requirements. All vessels engaged in commercial fishing are required to have a licence. The licence records the characteristics of the vessel and stipulates the sea area which may be fished, the gear that may be used, the fish that may be caught

## 6 Total inspections and recorded infringements in 2000 and 2001 by nature of offence

	Detected at sea by fishery protection vessels		Detected on land by the Sea Fisheries Inspectorate		Proportion of total offences
	2000	2001	2000	2001	
<b>Number of Inspections</b>	1,644	1,463	2,193	2,359	
<b>Number of recorded Infringements</b>					
1. Infringements which undermine the accuracy of records on catches	82	88	63	29	52%
2. Infringements which undermine regulations to prevent the capture of juvenile fish or to conserve particular stocks	53	62	10	18	28%
3. Infringements of licence and registration requirements	10	6	17	6	5%
4. Other Infringements	26	41	5	3	15%
<b>Total</b>	<b>171</b>	<b>197</b>	<b>86</b>	<b>52</b>	<b>100%</b>
% of inspections which result in a recorded infringement	10%	13%	4%	2%	

Source: National Audit Office analysis of data supplied by The Department for Environment, Food and Rural Affairs

and the amounts that may be landed. Infringements may involve fishing commercially without a licence or failure to meet a licence condition.

- Other infringements include failure to co-operate with an inspection, for example by not producing a boarding ladder to allow fishery protection vessel personnel to board a fishing boat at sea.

## The level of compliance may not be as high as the level of infringements suggests

- 2.7 The International Council for the Exploration of the Sea makes annual assessments of the level of fish stocks, based on recorded levels of landings, adjusted where feasible for estimates of fish caught but not declared. The International Committee for the Exploration of the Sea also makes separate estimates for discards for some stocks. Fish - many of which are dead - may be discarded for legitimate reasons such as its inferior size or quality, because it was not the stock desired or because a vessel was over quota. In their nature estimates of discards are difficult to obtain. They may not be precise and they may vary from year to year depending on the severity of the restrictions on fishing as well as the abundance of the stocks.















Measuring Lobsters to ensure that they meet minimum size requirements



2.8 **Figure 7** shows the variance between the declared landings of catches for a number of stocks in fisheries where the United Kingdom has partial responsibility for enforcement of regulations and where United Kingdom and fleets from other countries have quota. The percentages indicate the degree of discrepancy which can be under or over recording. It is not usually possible to attribute the inaccuracies solely to infringements of regulations, for example by misdeclaring the area of capture or the stock caught. Nor is it possible to attribute inaccurate reporting to any particular nation's fleet or enforcement regime given that these waters are fished and policed by several Member States.

2.9 Evidence for inaccurate reporting of landings for a number of stocks is also supported by academic surveys which have questioned fishermen on the degree of compliance (**Figure 8**), and by our own discussions with fishermen and industry commentators. For example, one study<sup>11</sup> surveyed 69 fishermen about quota restrictions, pressures to comply with regulations and attitudes towards infringements. When asked whether they had exceeded quota restrictions in the previous year 30 fishermen (43.5 per cent) estimated that their landings had been over quota by less than 10 per cent while 20 (29 per cent) said their landings had been over quota by 25 per cent or more. 84 per cent of the fishermen considered that quotas were ineffective in conserving fish stocks with one third believing that most fishermen did not comply with them and nearly 70 per cent considering that their peers regarded violation of quotas as "basically wrong but an economic necessity".

### Fish Species

White Fish	Flat Fish	Oil Fish	Shellfish
Cod 	Plaice 	Herring 	Brown Crab 
Haddock 	Lemon Sole 	Mackerel 	Lobster 
Hake 	Stakes and Rays 		Scallop 
Monkfish (Anglerfish) 	Sole 		
Whiting 			

### Why might regulations be infringed?

2.10 Fishermen may infringe regulations because they can make better economic returns than by complying with the law and they may view it as a victimless crime. Specific factors which may lead to non-compliance with fisheries regulations include:

- the need to make an economic return on the capital investment in vessels;

## 7 Analysis of stock assessments 2000

Area IV (North Sea)
Includes sub divisions Areas IVa; Area IVb and Area IVc
Difference between recorded landings and landings used by the International Committee for the Exploration of the Sea for stock assessments
Herring (24%)
Monks/Anglers (17%)

Area VI (West of Scotland)
Area VIa
Whiting (29%)
Cod (13%)
Sole (9%)

Area VII (Irish Sea, Celtic Sea, South West Approaches and English Channel)	
Area VIIa	Area VIId
Cod (127%)	Plaice (8%)
Haddock (22%)	
Plaice (35%)	
Sole (18%)	

Source: National Audit Office analysis of International Council for the Exploration of the Sea stock assessments (data for the year 2000, taken from the Report of the International Committee for the Exploration of the Sea Advisory Committee on Fishery Management for 2001)

- the fish subject to the strictest quotas are often those most commonly fished and commercially valuable; and
- regulations may lead fishermen to act in ways which they regard as unnatural, for example, having to throw fish back into the sea to preserve their quota by only landing the best quality fish or to avoid exceeding quota.

2.11 Fishermen we consulted were generally supportive of regulations promoting conservation. They felt, however, that discarding fish caught over quota was pointless and did not aid conservation as the fish were already dead. One industry representative told us that where opportunities to mis-report arose, the fisherman would often decide to take the risk rather than discard. Fishermen considered that the scientists' judgement of the status of stocks may be out of date, generally a year behind fishermen's experience at sea. Fishermen therefore found it difficult to comply with catch restrictions as they felt that stocks were healthier than reported by scientists.

2.12 The Department believes that the fishing industry may use these factors to justify illegal activity but the Department does not do so. Overall it appears that fisheries regulations are infringed for mainly economic reasons and therefore both incentives to comply with regulations and deterrents against breaching regulations, which remove the economic benefits, are required to increase the effectiveness of regulation and conservation measures.

## 8 Comments from fishermen

In another study research showed that the reported levels of compliance by English fishermen were relatively high. Their comments on non-compliance however, included:

- There are so many ways of boxing illegal fish to avoid detection, that inspectors cannot possibly inspect every box and look at every fish.
- There are numerous places to conceal illegal catches of which inspectors are unaware.
- Even with increased inspections, the number of extra vessels inspected would still only be a small proportion compared to the number of times vessels unloaded especially as fishermen only accurately recorded catches when they knew that they are going to be inspected. Hence landings are under-reported thereby saving quotas until such time as they are inspected.

*Source: Cost benefit comparisons of different control strategies. Oceanic Development, Richard Banks Ltd Megasesca Ldn 2001*

## The Department works with other authorities on enforcement

2.13 In most fishery areas enforcement is the responsibility of more than one Member State. For example Area VIIa, the Irish Sea, covers both United Kingdom and Irish waters. Six Member States have partial responsibility (the United Kingdom, Denmark, the Netherlands, Belgium, France and Germany) for enforcement in Area IV, the North Sea. Further, not all fish caught in waters patrolled by the Royal Navy will be landed in England, where it can be inspected by the Sea Fisheries Inspectorate. Indeed the majority of United Kingdom landings are made in Scotland, where responsibility for enforcement rests with the Scottish authorities.

2.14 The Sea Fisheries Inspectorate has established working relationships with other fisheries enforcement agencies in the United Kingdom and neighbouring Member States. The Inspectorate meets regularly with the Scottish Fisheries Protection Agency and the Northern Ireland Fisheries Inspectorate to discuss the detail of European Union and national regulations and the consistency of their application, to consider enforcement issues and to share intelligence.

2.15 The Inspectorate has been successful in undertaking joint operations with other Member States. One such operation involves fishery protection vessels from the Royal Navy, the Netherlands and Belgium patrolling either side of the median line dividing Member States' fishing waters in the North Sea. Any vessels trying to avoid inspection by one nation by slipping across the median line should therefore be intercepted by the other Member State's fishery protection vessels. The Sea Fisheries Inspectorate also works with other fisheries authorities to ensure that alleged infringements are investigated by the appropriate Member State.

## The Sea Fisheries Inspectorate has sought to increase the effectiveness of inspections

2.16 Factors contributing to the low probability of a physical inspection include the extent of the fishing areas to be patrolled and the large number of possible landing sites in England. Depending on the fishing vessel's size and complexity, and whether an infringement is discovered, it may take between three to five hours to carry out a thorough inspection whether at sea or on landing, and as such is resource intensive.



2.17 The Department seeks to target inspections in areas of particular risk of infringement. For example, aerial surveillance enables the development of an overview of seasonal fishing patterns so that the Sea Fisheries Inspectorate can direct Fishery Protection Vessels to busy fishing areas. Local intelligence on perceptions of the abundance of fish and its value, as well as information about which stocks are subject to the most restrictive quotas also help to target activity on land. For example, during the cod season in early Spring off the North Cornish coast, the Inspectorate targets inspections at those ports where landings are most likely to be made to ensure accurate landing declarations. The Department perceives that the risk and significance of illegal activity increases with the size of vessel. To help the targeting of inspections, the Department requires all vessels over 20 metres to make landings at a Designated Port within certain hours and if landings are to be made outside of designated hours or at a non designated port to give at least 4 hours notice of landing.

2.18 The Department and Royal Navy seek to undertake enforcement activity in a fair and even-handed manner targeting particular fisheries and types of activity, rather than targeting individual vessels. A particular vessel will be inspected, however, if there is suspicion that an offence has been committed. As with other United Kingdom enforcement authorities the Inspectorate has to operate within the boundaries of the law regarding rules of evidence and investigation such as: the Police and Criminal Evidence Act 1984 and the Regulation of Investigatory Powers Act 2000, which means for example that vessels cannot be subjected to covert surveillance without good grounds for suspicion.

*Data recording station within an aerial surveillance aircraft*



## Some infringements are unlikely to be detected by inspection

2.19 While the illegal landing of quota stocks, sometimes referred to as 'blackfish', may be an offence involving only one or two individuals, there have been cases involving widespread falsification of documents such as sales notes and other computer records, and the collusion of many different parties including fishermen, agents and processors (Figure 9). Inspection alone may not be sufficient to identify such offences. Although the Department does not operate a whistle blowing telephone line, information can come to light in various ways including tip-offs. The in-depth investigation and forensic analysis required to uncover such offences begins once the Department has reason to believe that a serious infringement has occurred.

*Aerial Surveillance aircraft*



## 9 The Department's prosecution of a company and fishing vessels involved in landing over quota fish

An investigation by the Department led to a court case where 15 defendants faced 256 charges. Fish agents were accused of handling over-quota 'black fish' that had been landed illegally and falsifying sales documents. Valuable sole were passed through the market for sale but recorded as another stock so that catches would not be deducted from the restricted sole quotas. Inspection had not uncovered the practice as the individual quantities involved were relatively small although very valuable when aggregated.

The Department's Investigation Branch led the investigation, which lasted 15 months because of the complexity and extent of the accusations. The Department estimated that some £180,000 of illegal fish had been sold through the market during 2000 and the resulting court case led to the agents being fined £45,000 having pleaded guilty. Nine skippers and five vessel owners were also fined with the total of fines related to the case coming to more than £125,000 for some 256 offences.

We spoke to some of those involved who explained that the primary reason behind the offence was economic survival as vessels can no longer manage on the restricted quotas they are given. They thought the Department must realise this and therefore expected the industry to cheat. It was pointed out that all the illegal fish had been accounted for in terms of industry levies and tax so, in their view they were not acting dishonestly. It was also suggested that incentives were needed to make vessels comply with regulations and combat the countrywide illegal activity.

The Department's view is that it has made decommissioning grants available over the years to facilitate the reduction of the over-capacity of the fleet and therefore the Department does not regard cheating as an acceptable response to economic pressure.

2.20 While the parties involved in the above case falsified landing and sales records, they did not attempt to falsify payments of levy to the Sea Fish Industry Authority (or tax to Inland Revenue). There may be scope therefore for the Department to obtain information from other bodies such as the Sea Fish Industry Authority to enhance the effectiveness of planning enforcement activity. The Department has been deterred from this course in the past by legal advice (**Figure 10**) but recent changes in legislation governing the release and exchange of data may make this easier in future.

## 10 The Sea Fish Industry Authority

Remit to "exercise its powers to promote the efficiency of the sea fish industry and serve the best interests of that industry and the consumers of sea fish and sea fish products".

The Sea Fish Industry Authority is funded by a levy on the first sale of fish, the levels of which it audits. In 2001 the total industry levy came to nearly £8 million<sup>12</sup>. These figures could be compared with those derived by the Department from landing declarations to provide an estimate of non-compliance. Both the Department and the Authority referred us to the Fisheries Act 1981 which established the Sea Fish Industry Authority, and includes the following restriction:

"No information with respect to any particular undertaking which has been obtained by or on behalf of the Authority under this Act shall, without the consent of the person carrying out the undertaking, be disclosed otherwise for the purpose of the discharge of the Authority's functions".

However, the Act goes on to state that this:

"shall not preclude the disclosure of information by or on behalf of the Authority -

- a) to the Ministers or any of them for the purposes of any of their functions relating to the sea fish industry or to the regulation of sea fishing; or
- b) for the purposes of any legal proceedings or any report of such proceedings."

The Department sought legal advice but was told that it still could not use this information.



However the Sea Fish Industry Authority is concerned that the accuracy of the information it receives from industry may be affected if confidentiality is not preserved. The Authority's information is subject to the Data Protection Act 1998 and would require levy payers to be informed that the information may be passed to the Department for enforcement purposes. However, subject to overcoming these difficulties and to the Authority's agreement to provide data, it is possible that aggregated information on levels of fish sales could be used to establish trends in compliance to aid planning and measure the effectiveness of enforcement activities.



**11 Deterring offences and reducing opportunities - the approach taken by other countries**

Country	Deterring offences and Reducing Opportunities	Improving detection
<b>Australia</b> Adopted Individual Transferable Quotas for some fisheries.	Fish receivers must be registered and must also complete documentation declaring species and accurate weights.	Vessel Monitoring System has been introduced in Australia and approximately 400 boats were equipped in 2002.
<b>Canada</b> Adopted a more conservation-orientated approach since the major collapse of Atlantic fish stocks during the 1990s.	Canada's fishery officers also rely on observers both on shore and at sea. Observers monitor compliance and can report infringements.	Deploy enforcement resources using analysis of surveillance data.
<b>Iceland</b> Adopted Individual Transferable Quotas which give property rights to individual fishermen to catch and sell fish.	All catch landed must be weighed on certified scales by licenced operators employed by the Port Authorities.	Inspect vessels but also fish processing facilities and on board inspectors monitor catch composition. Individual Transferable Quota have increased compliance.
<b>Netherlands</b> Producer Organisations have a particularly important role in fisheries management.	All landings must take place in designated ports. In almost all cases, fish must be sold via a limited number of (private) auction houses.	A reduced number of fish auction sites means inspection activity can be focused. Easier to follow the documentation trail.
<b>New Zealand</b> Adopted Individual Transferable Quotas.	Surveillance carried out but physical monitoring of catches on landing considered too expensive due to length of the coastline and number of commercial landings sites (450 approximately).	Since Individual Transferable Quotas were adopted fishermen are more likely to inform on known offenders as they view infringements as theft of their quota.
<b>Norway</b> Fisheries regulations aimed at limiting the capture rather than the landing of fish.	Control from net to plate. Fish sold through authorised organisations with legal obligations to report landings and violations. Use of onboard observers, primarily in international waters.	Emphasis on detection at sea.
<b>United States of America</b> Overfishing is seen as a problem.	Increasing use of observers mainly to collect scientific data but evidence can be used in prosecutions.	Use forensic fisheries auditors to target dealers caught in illegal activities.

## Other countries are using a variety of approaches to deter and reduce the opportunity for offences

2.21 Other countries have attempted to improve compliance with fisheries regulations by reducing opportunities to commit infringements and improving the chances of detection. **(Figure 11)** New Zealand, for example, has concluded that physical monitoring of catches at the point of landing is too expensive due to the length of its coastline (which is a similar size to that of the United Kingdom) and the number of commercial landing sites (also over 450). New Zealand is now concentrating on making checks after catches are landed, using surveillance of merchants' premises and investigation of the documentation trail from catch records through to the receiver and dealer. The Department has considered, and in many instances applies, similar techniques to

those noted in Figure 11. There will, of course, be differing structural, legal and other circumstances which may affect the approach adopted in any particular case.

2.22 Techniques used by others and considered by the Department include:

- increasing the role of the industry in regulation through greater consultation with enforcement authorities and greater responsibility for self-regulation. Within the United Kingdom Producer Organisations are responsible for administering the quotas of their members (accounting for 95 per cent of all United Kingdom quota) and can impose penalties in the case of infringements. However, there is no joint working between Producer Organisations and fisheries inspectors as in the Netherlands;

- using observers on board fishing vessels in a data collecting capacity with no enforcement powers, but in some cases with powers to report infringements. The Department is not currently considering widespread use of observers, particularly because of the high cost in relation to the relatively small vessels which form much of the United Kingdom fleet;
- registering buyers and sellers of fish and, in some cases, making them responsible for reporting landings and any landing violations. The Department is consulting the Industry on a proposal for a similar system, which should make the trail of official documentation easier to audit;
- enforcing "downstream" through the inspection of fish following initial landing, during transport by lorry, or at merchants' and processors' premises. The Department undertakes some activity of this kind but currently considers that inspection at the point of landing is a more effective use of resource;
- use of forensic auditors to identify infringements from documentation. The Department already uses forensic auditors to assist in detecting offences in certain investigations; and
- allocating Individual Transferable Quotas to fishermen who then own their rights to catch and sell a specific quantity of fish. Such quotas give fishermen a personal interest in conserving stocks and reporting infringements as the quota becomes their individual property. The Department considers the delegation of quota management to Producer Organisations and the introduction of Fixed Quota Allocations in 1999 have the same practical effect, although it might be argued that this is diluted as fishermen's rights to these quotas are not legally recognised and they are often pooled within a Producer Organisation and so become a collective rather than a personal responsibility. The Department has recently reviewed its fish quota management arrangements and announced that fixed quota allocations would continue until 2006.

2.23 Other non fisheries enforcement agencies in the United Kingdom use a variety of methods to help the detection of offences. For example, Her Majesty's Customs and Excise has enhanced the detection of drug smuggling activity through the use of intelligence-based risk assessments to focus detection and investigation activity towards known or suspected smugglers or organisations. Whilst the Sea Fisheries Inspectorate also engages in these activities the Inspectorate's staff do not specialise as the nature of its tasks and the scale of its manpower (some 60 inspectors compared to Customs's 3,700<sup>13</sup>) means this is not practicable in its view.

## There is a need to engage stakeholders

2.24 The Commission and the Department recognise that the lack of involvement of stakeholders may reduce compliance. The Better Regulation Task Force emphasise the need for proper consultation before implementing regulations and to ensure that those regulated understand their responsibility for their actions. The Department has a number of mechanisms to consult the industry regularly. In May 2002, the Department published "Safeguarding Our Seas - A Strategy for the Conservation and Sustainable Development of our Marine Environment" which sets out an intention to involve all stakeholders in the decision making process, base policy on robust science and work for integrated management. There is now European Union legislation, agreed in December 2002, which will provide for Regional Advisory Councils as a forum to engage with stakeholders from groups of Member States.



2.25 Other countries have sought to engage fishermen more actively in regulating their fishing activity, for example in the collation of scientific data on stocks. Some of the fishermen we consulted suggested that more scientific observers should go to sea with fishermen, as they do in New Zealand. In Canada the fishing industry took the initiative to develop a "Code of Conduct for Responsible Fishing Operations", which is believed to have contributed to changing fishermen's attitudes and behaviour, primarily because of the level of involvement of industry in the creation of the Code and the increased responsibility for the sustainability of fisheries the industry assumed as a result. And in the Falklands Islands voluntary restraint agreements are an important feature of fisheries management and have proved moderately successful at controlling fleet activity. Other countries such as Iceland may allow landings of over-quota fish, but require the profits to be used to help fund enforcement or scientific research.

<sup>13</sup> Average number of whole-time equivalent persons employed (including senior management) during 2001-2002 - to reduce crime and drug dependency by detecting and deterring the smuggling of illegal drugs and other prohibited and restricted goods = 3,748 Source: Her Majesty's Customs and Excise Annual Report and Accounts 2001-2002.

*Fisheries Officer stamping a vessel's logbook following an inspection at sea*



2.26 The United Kingdom enforcement bodies do not currently pass any of the costs of fisheries management, such as administration, enforcement or research, on to the fishing industry. In other countries such as Australia and New Zealand industry attributable management costs of commercial fisheries are recovered from the fishing industry. This practice has increased industry involvement in fisheries management, for example in determining management plans and monitoring management costs for value for money. Within the European Union, enforcement of fisheries regulations tends to be financed from the public purse, although the Netherlands has started to collect annual fees for licences and fishing rights which start at approximately £500 per vessel.<sup>14</sup> The report "Charging the United Kingdom Fishing Industry"<sup>15</sup>, prepared for the Department by the Centre for the Economics and Management of Aquatic Resources, explored the rationale and possible mechanisms for recovering management costs from the United Kingdom fishing industry. The report did not make a specific recommendation but highlighted that any cost recovery should be considered Europe wide since unilateral introduction of cost recovery may put the domestic fishing fleet at a competitive disadvantage. The Department believes there is little support from the United Kingdom fishing industry for cost recovery at the present time whether for management, enforcement or science.

## Infringements are most likely to result in a written warning

2.27 Infringements detected can be dealt with by the Department by one of three options, verbal admonition or written re-brief, issue of a written warning, or prosecution through the Courts. Coastal District Inspectors have discretion to give verbal warnings and send off written re-briefs for minor transgressions of the regulations. All offences detected at sea by the Royal Navy's Fishery Protection Squadron are referred to the Sea Fisheries Inspectorate headquarters for a decision on further action and are recorded. Not all verbal admonitions given by coastal offices are recorded, as noted at paragraph 2.7. Although the verbal response is intended to be used for minor transgressions, nonetheless it remains the case that the Department is unable to monitor whether each district is dealing with all infringements appropriately and fairly; nor does it have a complete picture of the nature or frequency of infringements, which might better inform targeting of enforcement activity. Alleged offences which are considered to be more serious are investigated and referred to the Sea Fisheries Inspectorate headquarters

<sup>14</sup> Ministry of Agriculture, Nature and Fisheries, The Hague.

<sup>15</sup> Hatcher, A and Pascoe, S. (1998) *Charging The United Kingdom Fishing Industry A Report to the Ministry of Agriculture, Fisheries and Food. Report No 49, University of Portsmouth Centre for the Economics and Management of Aquatic Resources.*



## 12 Outcome of infringements detected in 2000 and 2001

Detected by:	Court	Official warning	Case dropped	Action pending
Royal Navy	■	■	■	■
Sea Fisheries Inspectorate	■	■	■	■

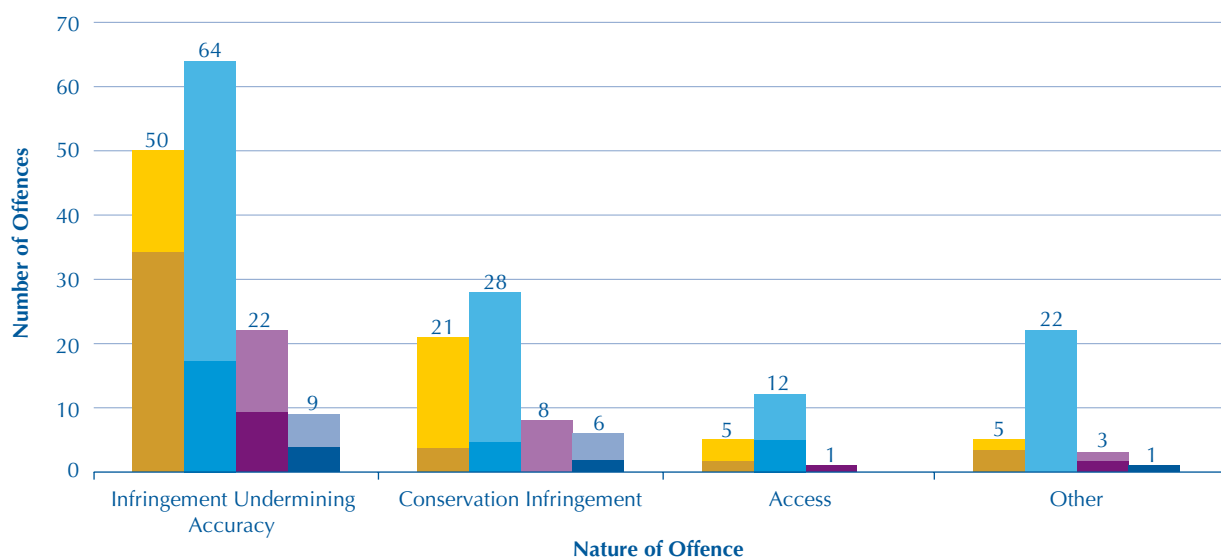
### Outcome of all offences detected in 2000 by nature of offence and method of detection

#### 2000

Total offences = 257

Pending May 2002 = 16

Total resolved by May 2002 = 241



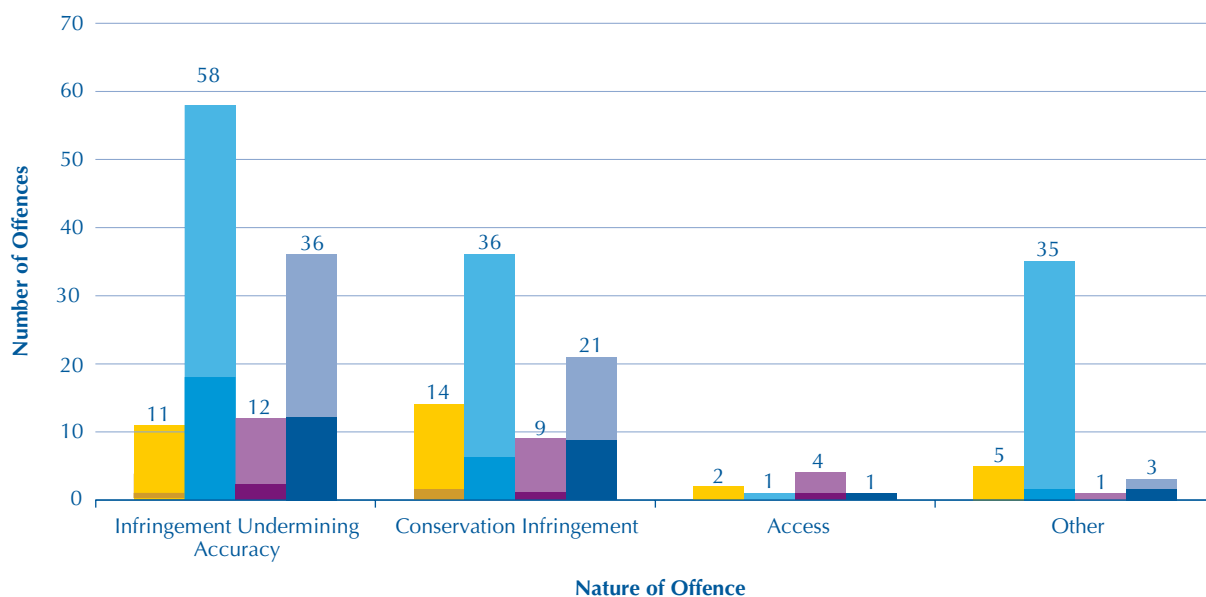
### Outcome of all offences detected in 2001 by nature of offence and method of detection

#### 2001

Total offences = 249

Pending May 2002 = 61

Total resolved by May 2002 = 188



by way of a 'case' file. These case files are subject to quality review by headquarters staff on the basis that they might ultimately result in prosecution. Cases for which senior Inspectorate staff or the Department's legal division consider there to be insufficient evidence are dropped. Those cases considered not to be in the public interest or de-minimis to pursue, are usually dealt with by a written warning from the Chief Inspector. Such 'written warnings' are viewed seriously by the Department and will only be issued if it is considered that the same evidence would be likely to stand scrutiny successfully if it were presented to a court. Written warnings remain on file and may be presented to the court before sentencing if the same offence is detected a second time and successfully prosecuted, for example where the case was defended on the basis that the vessel master or owner claimed to be unaware of the rules.

- 2.28 **Figure 12 on page 25** shows the outcome of all recorded infringements in 2000 and 2001 at the time of our fieldwork, excluding verbal admonitions. Some caution must be used in drawing conclusions from the data as many of the 2001 cases are still in the process of being investigated (shown as action pending cases). Alleged infringements are most commonly dealt with by the issue of a written warning, particularly cases detected by the Royal Navy (in 2000 100 cases). In 2000 34 infringements (80 per cent) relating to the accuracy of catch and landing records investigated by the Sea Fisheries Inspectorate led to prosecution. Only one such case has been prosecuted by the Inspectorate so far for 2001, with 16 (55 per cent) receiving a written warning but there are another 11 cases where action is pending.

## There are delays in progressing cases

- 2.29 As at May 2002, 16 cases first initiated in 2000 (6 per cent) were still awaiting a conclusion as were 61 cases (24 per cent) from 2001. **Figure 13** shows the length of time from an offence first being detected to its being resolved at court. The Sea Fisheries Inspectorate attributed the length of time to delays caused by the defendant, (for example availability for interview), the need to gather evidence robust enough for a successful prosecution and the need for liaison with different parties as well as pressures on the Department's own legal officials who have to fit fisheries cases in with other priorities.

- 2.30 There is a risk that the length of time taken to prosecute may result in cases having to be dropped or a lesser sanction being applied. There is also the potential that additional offences could be committed before sanctions or penalties are applied to deter future offending. In two cases during 2000 the vessels committed additional offences. In one case offences were committed on four additional occasions before the original offence was finally brought to court.

### 13 Cases prosecuted in court<sup>16</sup>

Time taken	2000	%	2001	%
<b>Within 3 days or less</b>	18	22%	24	73%
<b>Less than 3 months</b>	6	7%	4	12%
<b>Between 3 and 6 months</b>	11	14%	5	15%
<b>Between 6 and 12 months</b>	23	28%	-	-
<b>More than 12 months</b>	16	20%	-	-
<b>Unknown<sup>17</sup></b>	7	9%	-	-
<b>TOTAL</b>	81	100%	33	100%

### 14 Administrative penalties

**The Danish Directorate for Fisheries** has a range of escalating penalties to impose on fishermen depending on the offence. It does not use oral warnings and makes limited use of written warnings. Fisheries inspectors can impose standard on the spot fines in cases where logbooks are submitted late. Fishermen can refuse to pay the fine and ask for the case to be taken to a criminal court, but this is rare as the cost and lost fishing time necessitated by a court appearance does not make this an attractive option. The most serious offences, such as breaches of technical conservation measures or licence conditions, are referred to the Fisheries Directorate headquarters for consideration and can result in suspension of fishing licences for the particular fishery in which the offence was committed for up to one month. This is considered a harsh penalty because of the loss in income, although boats can still fish in other fisheries for which they have licences. In extreme cases, the Directorate can prosecute through the criminal courts. Defendants are given the option to admit guilt and pay a fine, and if they do so the case ends. Penalties follow strict criteria introduced in 1995. The system is transparent and fishermen are well aware of the legal process and penalties. For example, for breaches of technical conservation measures or licence conditions, where the master of the vessel is the owner or part owner, he will be fined the equivalent of one third of the value of the illegal catch and the illegal catch will be confiscated. Where an offence has been committed but the fishermen has declared it in his logbook and reported it to the Directorate, the fine will be equivalent to one tenth of the illegal catch.

Source: Analysis of the Costs and Benefits of Compliance with Regulations in Northern European Fisheries - Nautilus Consultants European Commission Study Contract 96/080

<sup>16</sup> Less cases were apparently taken to court in 2001 compared to 2000 because many cases detected in 2001 were still pending at the time of our review.

<sup>17</sup> The date on which these court cases were concluded was not recorded in the information supplied by the Department.



*Fisheries Officer inspecting fish in the fish room of a vessel at sea*



2.31 Cases involving non-British registered vessels, which the Department may detain to a British port for further investigation if it suspects an offence has been committed, may be processed more quickly as the United Nations Convention on the Law of the Sea 1982 dictates that such vessels cannot be detained for long periods. Such cases are generally processed in less than three days, by devoting resources immediately from both the Royal Navy and Sea Fisheries Inspectorate to investigate the offence. In the Department's view similar speed for cases involving United Kingdom vessels would be expensive and deplete inspection resources, particularly at sea if the fishery protection vessel had to remain in port to provide witness statements and evidence in court.

## The Department is successful in achieving guilty verdicts in cases it prosecutes but penalties may not act as a sufficient deterrent

2.32 The Department has a good record of successful prosecutions with only two cases out of 114 in the last two years resulting in 'Not Guilty' verdicts. The Department will prosecute the owner of a vessel as well as the master, if it considers that the infringement has benefited the owner.

2.33 In England fines imposed by Magistrate's Courts can be up to £50,000 for certain offences with other offences limited to a maximum of £5,000. Additional fines to the value of the catch can be applied and fishing gear confiscated. The courts may also suspend a fishing licence if there has been a breach of licence conditions but have done so only in four cases. To secure payment of fines the Department freezes the licence so that it cannot be sold or transferred until the fine has been paid. This does not, however, prevent a vessel from continuing to fish.

2.34 Fines awarded by the courts may not recognise the significance of the offence in conservation or economic terms. Fines resulting from a recent case, (Figure 9 on page 21) totalled £125,000. The Department estimated that in just one year some £180,000 of illegal fish had been involved. The potential exists to make significant financial gains from infringing regulations even when penalties are imposed.

2.35 We examined a sample of court cases from 2000 and 2001 where a value had been placed on the benefit of the infringement, for example the value of a catch which had not been declared. Our analysis shows that while

### 15 Sanctions applied for fisheries offences in other countries outside the European Union

Country	Sanctions
<b>Australia</b>	Heavy fines - forfeiture of boat, gear and catch, permanent withdrawal of quota entitlement and exceptionally custody in jail.
<b>Canada</b>	A fishery officer's discretion is used to determine the penalty depending on the seriousness of offence, from a warning to prosecution. As in England, penalties on conviction are determined by the court.
<b>Iceland</b>	Administrative penalties of licence suspension and fines (mainly for excess catches). Serious offences may be prosecuted by the police and one case resulted in a prison sentence.
<b>Norway</b>	Sanctions escalate according to the nature of the offence from a warning to fines determined by legal guidelines.
<b>New Zealand</b>	Very heavy penalties available to the courts - seldom imposed because of the impact on livelihoods.
<b>United States of America</b>	Summary penalties- those who deal in illegal fish can be put out of business and persistent offenders are forced to leave the fisheries.

the total fines imposed varies (including fines to the master, owner and to the value of the catch but excluding costs), on average the penalty was 1.7 times the value of the infringement. The low probability of being detected, however, and the low probability of being prosecuted, may nevertheless encourage fishermen to conclude that the potential economic benefit outweighs the remote chance that the infringement will be penalised.

2.36 In its report on control and enforcement in the United Kingdom, the Commission stated that in common with other Member States "the majority of penalties levied would not appear to be sufficiently deterrent." The Commission favours the use of administrative sanctions, which are used by fisheries departments in some other Member States. (Figure 14 on page 26).

2.37 Other fisheries' authorities have developed a range of penalties (Figure 15). However, their severity and the willingness of courts to impose them varies. For example, in New Zealand heavy penalties are available but are seldom applied, because of the impact it would have on fishermen's livelihoods.

## 16 Fisheries control in Member States

	UK	Ireland	France	Denmark	Netherlands	Belgium	Spain	Portugal	Germany	Sweden	Finland	Italy	Denmark
Control system meets European requirements	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✓	✗
Sufficient resources for sea operations	✓	✓	✓	✓	✗	✗	✓	✓	✓	✓	✗	✓	✓
Sufficient resources for land operations	✗	✗	✗	✓	✗ <sup>4</sup>	✓ <sup>6</sup>	✗	✓	✓	✓ <sup>7</sup>	✗	✓ <sup>7</sup>	✗
Implementation of satellite monitoring	✓	✓	✓ <sup>2</sup>	✓	✓ <sup>5</sup>	✓	✓	✓	✓	✓ <sup>7</sup>	✓	✗ <sup>7</sup>	✗
Implemented monitoring requirements for catches and fishing effort	✓	✗	✗	✓	✓	✓	✓ <sup>3</sup>	✓	✓	✓	✓	✗	✗
Systematic cross-checking of catch information	✓	✗	✗	✓	✓	✗	✗	✗	✓	✓	✗	✗	✗
Measures in place to control fleet development	✓ <sup>1</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	?	✓
Penalties effective as deterrent	✗	✗	✗	✓	✗	?	✗	✗	✓	✗	✗	✗	✗

### NOTES

? Insufficient information existed to allow the Commission to make an assessment

1. Cross-checking done on an ad hoc basis
2. Inspections at point of discharge are not given priority instead inspections focus on catches sold at auction
3. Satellite monitoring not used to assist authorities to carry out fisheries surveillance/inspections
4. Not sufficient at time of report
5. Insufficient in terms of landings from foreign vessels
6. Technical limitation of patrol vessels prevent efficient inspection at sea
7. Inspection need to be better trained in order to enable them to perform their role more efficiently

Source: National Audit Office Analysis of COM (2001) 526 final - Report on the monitoring of the Implementation of the Common Fisheries Policy - Fisheries Control in Member States

## The Department has met European requirements

2.38 The European Commission and Directorate General for Fisheries monitor Member States' implementation of enforcement systems. In 2001, the Commission published a report on the adequacy of such systems, based on reports submitted by each Member State. The assessment for the United Kingdom compared favourably against many other Member States (Figure 16). Areas identified as requiring improvement were resources for land based operations, systematic cross-checking of catch information, and effective penalties. Doubts about the effectiveness of penalties was a problem identified for almost all Member States and it was agreed by the Council in December 2002 that this needed to be addressed at European Union level.

2.39 Fisheries regulations are intended to control the amount of fish caught to encourage more sustainable fishing and to conserve stocks. Enforcement of fishing is only one of the instruments available to the Department to achieve these objectives. Figure 17 outlines other measures.

2.40 In 2001 the Commission issued a Green Paper to discuss future options for reforming the Common Fisheries policy from 2002 (Figure 18).

## 17 Other policy instruments which contribute to the achievement of fisheries objectives

Objectives	Impacts
<p><i>Restricting fishing capacity and effort</i></p> <p>Controlled in the United Kingdom by licensing systems.</p> <p>No additional licence capacity issued since 1993.</p> <p>Penalties imposed to reduce size and power of vessels when licences are transferred or aggregated.</p> <p>Multi Annual Guidance Programmes set targets for reduction of fleet which can be achieved by decommissioning or restricting time spent at sea.</p>	<p><i>Reduction of the fishing fleet</i></p> <p>Fishing fleet has decreased from 11,000 vessels in 1991 to 7,200 in 2000. Both the total tonnage and the total power of the fishing fleet has declined, however average tonnage and power of vessels remaining in the fleet has risen reflecting a shift in its structure with relatively more smaller vessels leaving. Vessels in the remaining fleet are likely to be more efficient at catching fish. There are also increased economic pressures on their owners to fish.</p> <p>The United Kingdom has used decommissioning schemes, the latest of which was in 2001 where £6 million was spent in England to decommission 30 boats.</p>
<p><i>Use of structural funds to increase profitability of the industry</i></p> <p>Financial Instrument for Fisheries Guidance (2000 -2006) supports projects which enhance sustainability and help add value.</p>	<p>To date 153 projects have been approved for England, involving investment of £17 million.</p>
<p><i>Conservation</i></p> <p>Quota system sets Total Allowable Catches for certain stocks in each fishery.</p> <p>Technical measures restrict fishing methods and equipment types.</p> <p>Restricted access to fishing areas permanently or by season to protect stocks; also restrictions by vessel size, fishing methods or target species.</p>	<p><i>Fish stocks</i></p> <p>These still give cause for concern;</p> <p>Some 100 stocks in English waters are currently subject to quotas; 758,000 tonnes were landed in 1999 compared to 892,000 tonnes in 1996.</p> <p>For example, fishermen in the northern North Sea must use a minimum mesh size of 120mm when targeting species such as cod.</p> <p>For example vessels with an engine power over 221 kilowatts are prohibited from beam trawling inside the 12 mile limit of the United Kingdom.</p>
<p><i>Enforcement</i></p> <p>Department enforces conservation and licensing regulations through inspections, surveillance, prosecution and data gathering.</p>	<p>In 2000, 1460 inspections at sea and 1591 inspections on landing of over 10 m vessels, with 31,915 checks of documentation resulting in 81 prosecutions and 126 written warnings.</p>

Source: National Audit Office Analysis

Fishing vessel at sea





## 18 Proposals for the reform of the Common Fisheries Policy

	Problem	Solution
Better conservation of fish stocks	Quotas are currently being set higher than scientific recommendations and fish stocks are declining as a result.	There will be multi-annual recovery plans for stocks outside safe biological limits and multi-annual management plans for other stocks.
Tackling over-capacity of the European fleet	The fleet is larger than fish stocks can sustain.	Grant aid to modernise the fleet will cease (except in terms of safety improvements and to improve selectivity of fishing gear and product quality for example). Instead funds will be put to decommissioning and finding alternative employment for fishermen.
Tighter and more effective controls	The Common Fisheries Policy is currently undermined by ineffective controls, and enforcement across Member States varies in its effectiveness.	Extension of satellite monitoring to smaller vessels. Registration of buyers of first sale fish. Improved arrangements for co-operation between Member States. Commission powers to take preventative measures if there is evidence that rules on conservation, control inspection or enforcement under the Common Fisheries Policy are not complied with.
Severe and uniform sanctions for infringing regulations	Fishermen across the Community face varying penalties for the same infringement.	Introduction of recommended sanctions for infringements.
Better involvement in the Common Fisheries Policy	Lack of involvement of stakeholders reduces compliance with regulations.	Creation of Regional Advisory Councils to ensure stakeholder involvement. Councils to report suggestions for fisheries management and Common Fisheries Policy implementation to the Commission and Member States.





# Part 3

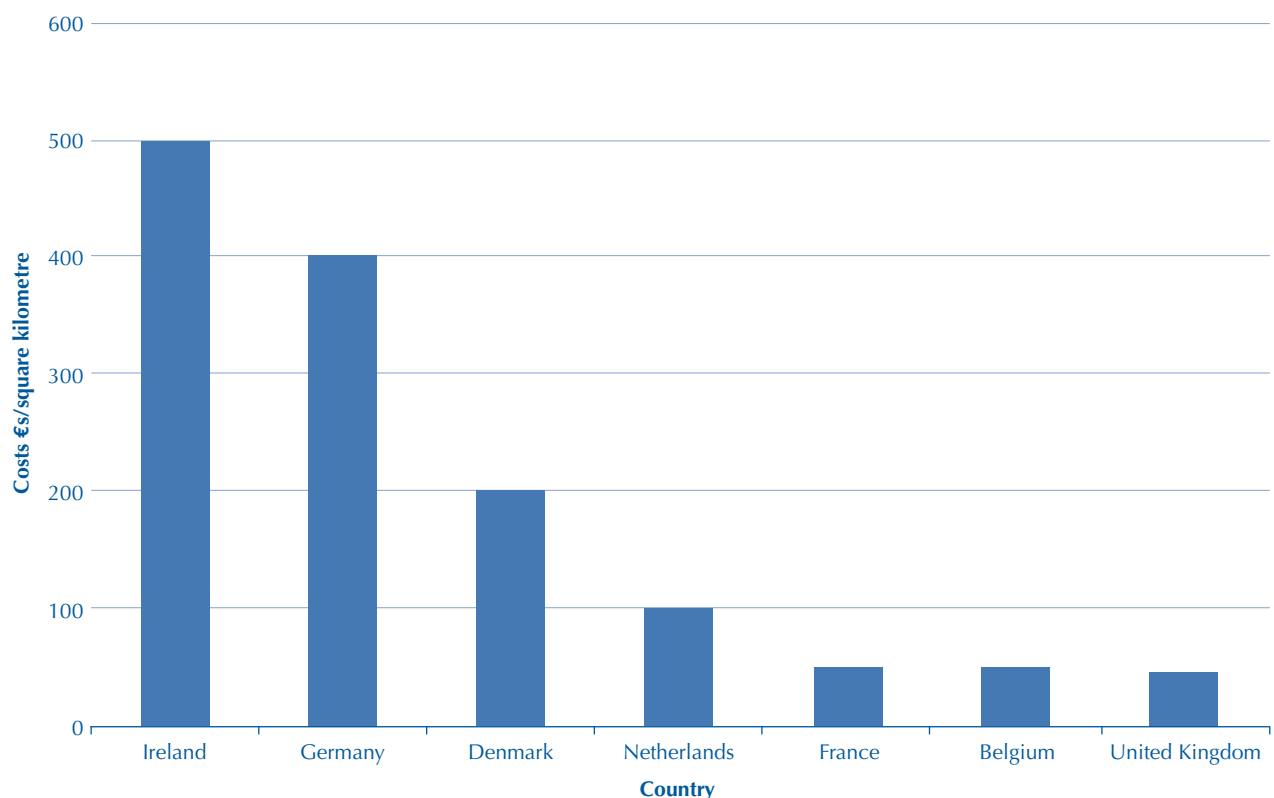
## Could the Department manage its enforcement activity better?

It is possible to comply with regulations yet fail to manage the activities and resources engaged to best effect. This part of the report considers whether there are opportunities to:

- reduce costs;
- increase the flexibility with which the Department deploys its resources; and
- improve the Department's performance management system.

3.1 The Department spends around £11 million a year on enforcement in England. The largest proportion (£6 million) is spent on surveillance at sea. The Department has sought to contain costs by using the services of the Royal Navy Fishery Protection Squadron. Belgium, Italy and Ireland, also use their Navy, Iceland uses its Coastguard and Germany uses Customs vessels. While Denmark and the Netherlands use a combination of vessels, including Navy vessels, for fisheries enforcement work. **Figure 19** compares the amount spent on enforcement in the United Kingdom with that spent in other countries with coastal waters bordering those of the United Kingdom. The United Kingdom spends the least relative to the size of its coastal waters, but this is only a crude indicator of relative cost.

**19** Enforcement costs per square kilometre of coastal waters



Source: National Audit Office Analysis of European Commission Data



3.2 The Department has contributed towards the cost of employing Royal Navy vessels since the mid-1980s. The charge, based on a daily rate for employing private sector vessels, has been uprated ever since by indices for pay, fuel and other costs. It also encompasses a rebate on the capital charge reflecting a contribution that the Department made towards the cost of constructing two new vessels in the early 1980s. The service has not been subject to a formal market test. In 2001 Ministers agreed that the Department should continue to use the Royal Navy for fisheries protection work until March 2008. Under the present contract the Royal Navy will provide the Department with between 700 and 950 patrol days a year. For 2002-03 it is providing 950 days at a cost of some £6 million. The Royal Navy meets the remainder of its costs, some further £10 million a year, on the basis of the training opportunities provided and co-ordination with other tasks.

## Satellite surveillance could bring further opportunities to reduce costs

3.3 The Department spends £2.9 million<sup>18</sup> a year on aerial surveillance provided by Directflight Limited. This involves a mix of routine surveillance to update data on fishing patterns and targeted patrols in support of the Royal Navy. In January 2000 it became a Common Fisheries Policy requirement for fishing vessels over 24 metres to have satellite monitoring equipment on board, with potential to reduce the need for aerial surveillance and hence its cost. Satellite surveillance will be further enhanced as part of the package of measures adopted under the reform of the Common Fisheries Policy. Satellite monitoring will apply to vessels over 18 metres from 1 January 2004 and to vessels over 15 metres from 1 January 2005. The Commission has not, so far, established standard specifications for tamper-proof on board equipment, potentially reducing the effectiveness of satellite monitoring. From 1 January 2002, if equipment is disabled, vessels are required to make manual reports every two hours and once they are in port to remain while tests are conducted on the equipment. Satellite monitoring does not remove the need to have systems in place to detect vessels which are deploying fishing gear, or which are not required to carry satellite monitoring equipment, or whose equipment is not functioning. Thus there is likely to be some need for aerial surveillance in future even if the scale can be reduced.

3.4 The Department has also been concerned to establish the reliability of satellite evidence, particularly in the context of court proceedings. In July 2002, the first case to rely entirely on satellite evidence was successfully prosecuted (Figure 20).

### 20 Prosecution case that relied entirely on satellite evidence

In July 2002 the Department prosecuted a vessel for misreporting its position. The infringement was detected because the fishing vessel's logbook records did not agree with the Department's satellite surveillance of the vessel's activities. Two experts gave evidence on behalf of the Department, the author of the satellite system software and the research and development manager from the company that produced the satellite equipment on the vessel. They demonstrated that position information sent from vessels to the satellite surveillance system could not be corrupted and therefore it was not possible to transmit a false position. The Magistrates found that the satellite system was shown to have a proven track record with a high standard of accuracy and therefore concluded that the vessel logbook records must be incorrect.

## There might be opportunities to reduce costs by working with Sea Fisheries Committees

3.5 In addition to the Department's spending, Local Authorities in England, through Sea Fisheries Committees, spend some £4.4 million each year on enforcement of local by-laws, national legislation and regulations, and some European Union Regulations within the 6 mile limit around the coast. The Committees, established under The Sea Fisheries Regulation Act 1888<sup>19</sup>, determine local by-laws to manage particular local conservation problems and employ their own fisheries inspectors to carry out inspections on land and at sea, operating independently of the Sea Fisheries Inspectorate. Sea Fisheries Committees' resources vary, depending on the importance and scale of the inshore fisheries and fishing industry in the area and the importance which local authorities attach to their activity. Our discussions with fishermen suggest that there may be some confusion within the industry about the roles of the Committees and the Inspectorate, and they perceive that some duplication of inspections may occur, leading to complaints of over administration.

<sup>18</sup> Sea Fisheries Inspectorate Annual Report 2001.

<sup>19</sup> The Sea Fisheries Regulation Act 1966.

- 3.6 The degree of co-operation and information sharing between the Department and the Committees varies between different districts. In some districts the Inspectorate has hired a patrol vessel from the local Sea Fisheries Committee to carry out inshore inspections and surveillance. More joint inspection activity could help to reduce the operating costs of both the Committees and the Department or enable better coverage, for example, in districts with many small remote landing sites.

### There are constraints on the flexibility with which the Department's resources can be used

- 3.7 Enforcement activity requires flexibility to deploy resources where they will have most effect. The Sea Fisheries Inspectorate cannot switch funds between scheme expenditure which covers the cost of sea and aerial surveillance, and the Department's running costs, which cover the costs of land inspection. When funds are constrained the flexibility to use savings on scheme expenditure, arising from the more effective use of resources, to increase the number of fisheries inspectors would be helpful, to the extent that an increase in shore based staff were felt justified. At present the lack of flexibility hinders the Inspectorate's ability to change the balance between sea and land inspections even where it would be more effective to do so. The Department is actively considering whether to transfer the budget for the Sea Fisheries Inspectorate to programme expenditure, in agreement with Her Majesty's Treasury, in order to provide greater flexibility in managing the resources allocated for fisheries enforcement.

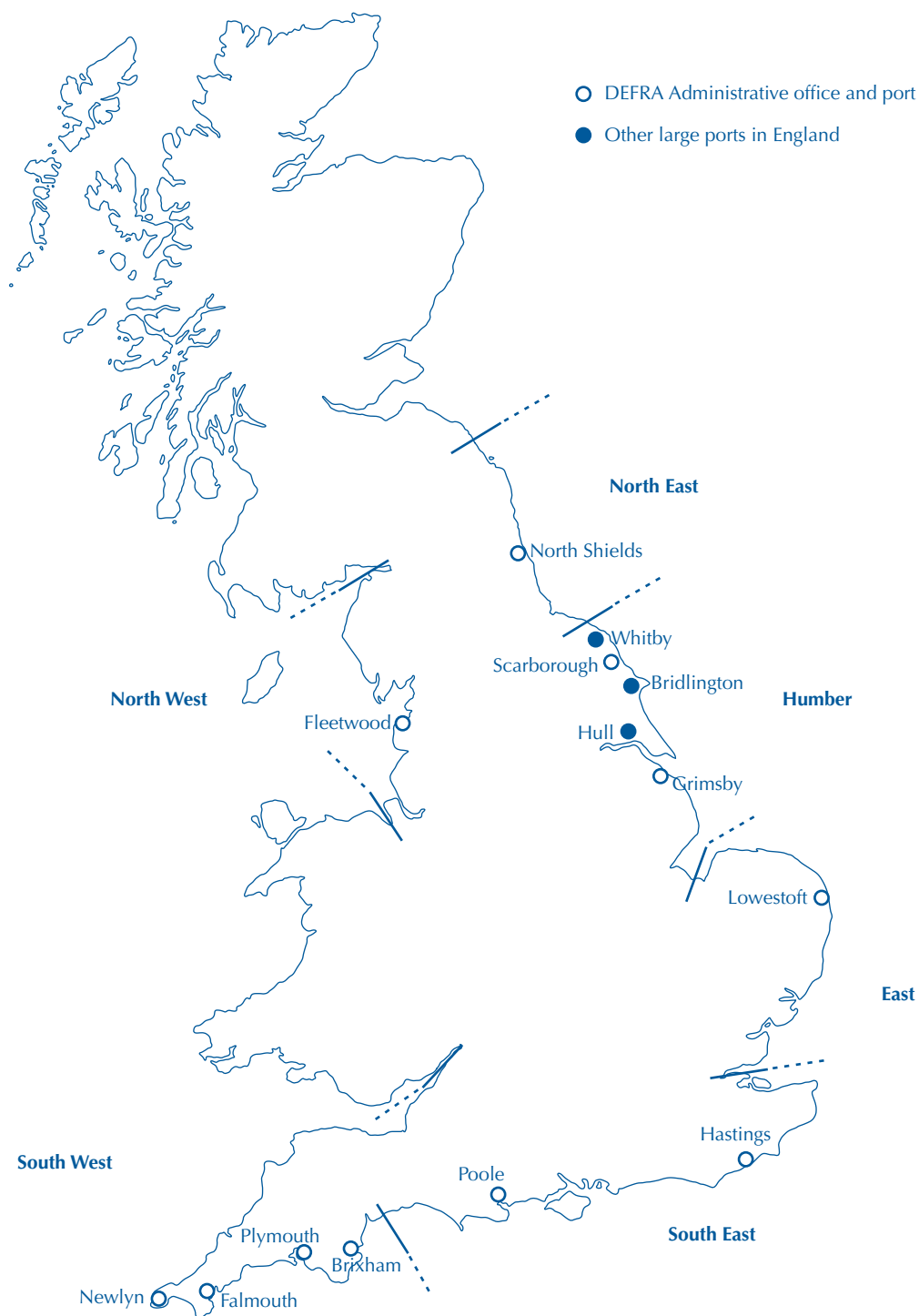
### Restrictions on staff mobility make it difficult to respond to changing requirements

- 3.8 The environment in which fisheries enforcement work is carried out is continually evolving. For example, the balance of the industry has shifted from the East Coast to the South West, the industry is contracting, with fewer vessels over 10 metres, and risks to fish stocks fluctuate from year to year and between areas. Priorities for enforcement also change as new regulations are introduced.



*Sussex Sea Fishery Committee Patrol Vessel*

## 21 Sea Fisheries Inspectorate resources by district in 2001



District	Number of vessels under 10m	Number of vessels over 10m	Quantity of landings (in tonnes)	Value of landings £million	Number of fisheries inspectors per district
North East	238	73	7,114	£10.8	8
Humber	201	122	23,539	£23.7	8
East	385	103	24,280	£13.3	6
South East	908	83	13,000	£17.3	10
South West	734	308	47,000	£57.0	15
North West	153	45	8,667	£5.4	4
Total	2,619	734	123,600	£127.5	51

Source: Sea Fisheries Inspectorate Annual Report 2001



3.9 These changes have implications for the location of resources. While fishery protection vessels and aerial surveillance aircraft can be directed to areas of greatest risk, this is more difficult for land based staff at the Sea Fisheries Inspectorate. **Figure 21** shows the current deployment of inspectors. Ten inspectors cover landings of 13,000 tonnes in the South East, but there are only 15 inspectors covering landings of 47,000 tonnes in the South West and eight inspectors covering landings of 23,500 tonnes in the Humber region. On the basis of landings, resources are most stretched in the South West but other factors have to be taken into account in judging the adequacy of staffing including the length of coastline and the number of landing sites together with other duties that have to be undertaken (**Appendix 1**). The Inspectorate can move staff on a temporary basis for specific operations or short periods, but the compulsory transfer of staff is no longer a part of the Department's Human Resources Policy.

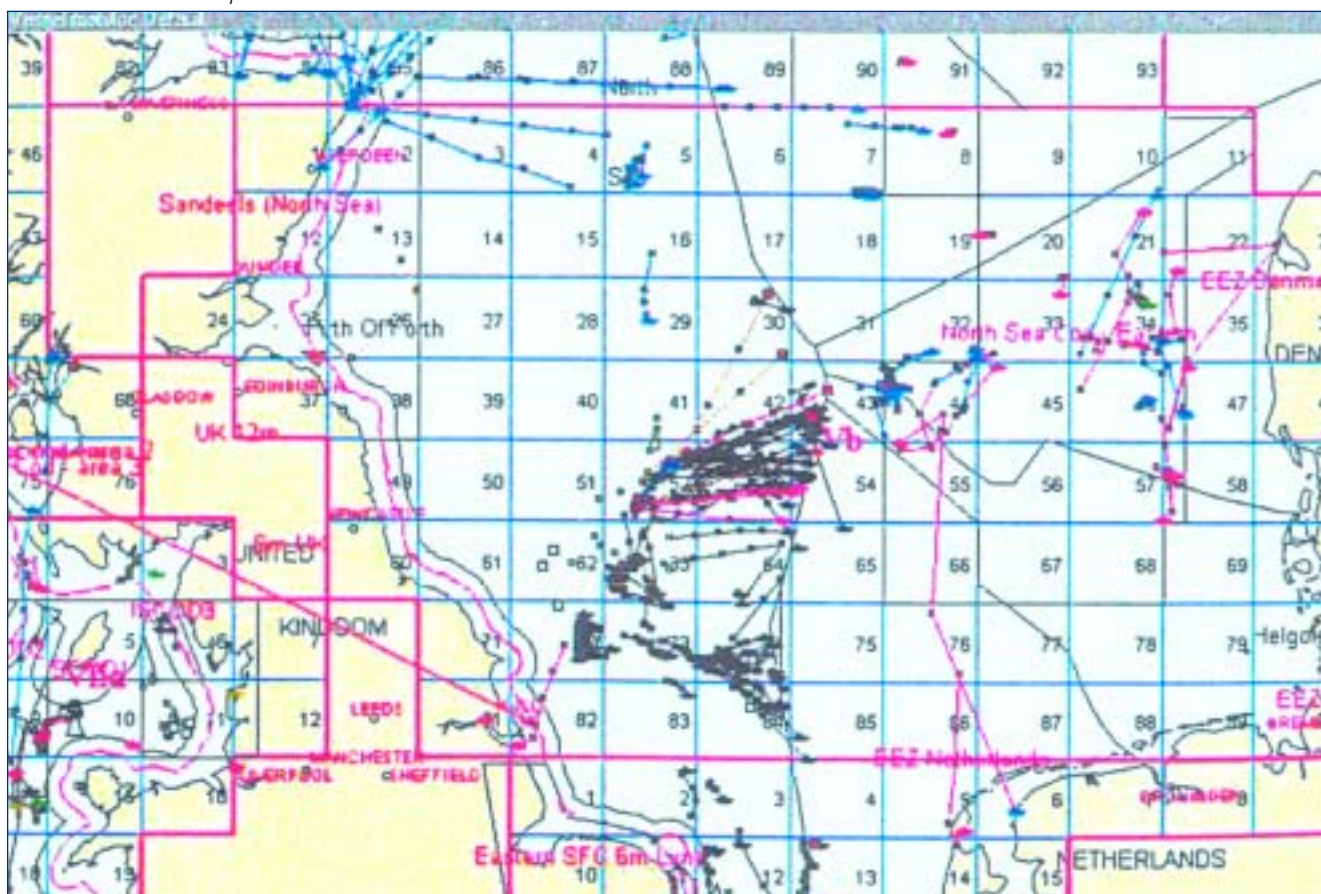
3.10 Information technology is also playing an increasing role in fisheries enforcement through the use of satellites to monitor the movements of fishing vessels. There is a 'live' system installed in the Sea Fisheries Inspectorate headquarters operations room which is programmed to update automatically fishery protection vessels of fishing activity within a set radius of their position.

Port offices have access to satellite data via a general fisheries surveillance data system which is automatically up-dated every hour.

3.11 In comparison, the Scottish Fisheries Protection Agency, an Executive Agency within the Scottish Executive Environment and Rural Affairs Department, has more flexibility in how it uses its resources. As shown in **Figure 22 overleaf**, it is responsible for both a larger sea area and a greater number of over 10 metre fishing vessels. Its running costs of £11 million are similar to those for England. Unlike the Sea Fisheries Inspectorate, the Agency:

- can vary terms and conditions to introduce more flexibility in working practices. For example core hours for inspectors are between 7am to 10pm. It has introduced shift working with inspectors working 12 hour shifts and 24 hour cover is provided in the main ports of Fraserburgh and Peterhead;
- opens its Operations Room from 7am to 10pm;
- has a policy of moving inspection staff every two years to ensure their objectivity in dealing with the industry; and
- owns its own protection vessels and surveillance aircraft which it believes has enabled it to achieve better value for money.

Satellite Surveillance - example of vessel movements in the North Sea



**22 Comparison of Scottish Fisheries Protection Agency and Sea Fisheries Inspectorate**

	Scottish Fisheries Protection Agency <sup>1,4</sup>	Sea Fisheries Inspectorate (England) <sup>2,3</sup>
Size of British Fishery Limits	127,000 miles	60,000 miles
Number of registered fishing vessels in 2000 over 10m <sup>1</sup>	947	748
Landings by United Kingdom vessels into Scottish / English ports 2000	308,000 tonnes	118,000 tonnes
Annual Expenditure on aerial surveillance	£1.5 million	£2.9 million
Annual Expenditure on Marine surveillance	£6.5 million <sup>5</sup>	£6 million (approximately)
Annual Expenditure on Coastal surveillance	£3 million (approximately)	£2.1 million (approximately)
Aerial surveillance (hours of patrol)	1,637	1,678
Days of sea patrol	1826 <sup>6</sup>	957 contract days.
Number of boardings (average per day at sea)	1,634 (0.89)	1,460 (1.6)
Number of offences detected		
At sea	150	171
On land	1,361	86
Number of prosecutions	74	81
Written warnings	1428	126
Cases dropped	6	34
Pending	3	16

**NOTES**

1. Information for Scottish Fisheries Protection Agency is for the financial year 2000-2001
2. Information for Sea Fisheries Inspectorate is for the 12 months in 2000
3. Source: United Kingdom Sea Fisheries Statistics 1999 and 2000
4. Source: Scottish Fisheries Protection Agency Annual Report and Accounts 2000 - 01
5. The Scottish Fisheries Protection Agency owns its own patrol vessels and surveillance aircraft
6. The Scottish Fisheries Protection Agency patrol days include patrols of inshore waters, which in England are covered by Sea Fisheries Committees

Source: United Kingdom Sea Fisheries Statistics 1999 and 2000

Biological Sampling



3.12 In making comparisons the following issues should also be considered:

- The Sea Fisheries Inspectorate performs other tasks, such as biological sampling, which in Scotland is undertaken by fisheries scientists;
- In Scotland inshore waters are patrolled by the Scottish Fisheries Protection Agency, whereas in England this is primarily undertaken by Sea Fisheries Committees;
- The Department has an automated system for communicating satellite data to Royal Naval vessels which it believes reduces potential value of shift working in the Sea Fisheries Inspectorate Operations Room;
- The Department recently introduced new contracts of employment for fishery officers, which extend the possible range of work hours from 06.00 to 20.00 and up to 10 per cent of a fishery officer's hours may be worked at night between 20.00 and 06.00;

- Landings into England and Wales comprise a greater variety of species and stocks; and
- The Royal Navy will board vessels at any time day or night and achieve a higher rate of boardings per contract day whereas the Scottish Fisheries Protection Vessels normally only board vessels during daylight hours.

## The performance management system does not help to set clear priorities

3.13 The Sea Fisheries Inspectorate's objectives and targets set the parameters for the amount of enforcement activity which takes place. For example they set targets for the number of patrol days, boarding flying hours and percentage of landings inspected. They do not specify the outputs which are desired from that activity either in terms of efficiency or effectiveness. The Department has considered more output based measures but is concerned that they could encourage undesirable behaviour, for example setting targets for the number of infringements to be detected might be met by inspectors recording more minor infringements which are easy to detect rather than seeking to pursue more covert activity that has a greater effect on stocks. Measuring the number of offences detected and how they are dealt with would also be a measure more of efficiency rather than effectiveness. A monetary or volume target for the amount of undeclared or misreported fish detected through inspection activity could be considered. Other enforcement agencies such as Her Majesty's Customs and Excise have similar problems but have developed measures and targets which provide greater clarity to staff on the performance to be achieved and where priorities lie, as in **Figure 23**. The Department could develop a similar approach and focus on particular stocks where an enforcement problem is perceived, for example by setting targets for, and measuring the value of, illegal landings intercepted.

### 23 Her Majesty's Customs and Excise approach to performance management

Her Majesty's Customs and Excise has specific objectives and targets for enforcement which show how the activity will impact on overall targets. It measures performance both against key outcomes and lower level operational targets, with the latter used as indicators to see if they are on track to deliver key outcomes.

For example in relation to drugs smuggling:

#### Objective

"To reduce crime and drug dependency by detecting and deterring the smuggling of illegal drugs and other prohibited and restricted goods"

#### Public Service Agreement Target 2001-02 to 2003

Reduce the availability of Class A drugs by 25 per cent by 2005 and by 50 per cent by 2008.

#### Performance Indicators

As a measure of success in deterring smuggling, Her Majesty's Customs and Excise measure the assets confiscated from drug traffickers, for example in 2002 £8.88 million was confiscated against a target of £8.58 million.

*Source: Her Majesty's Customs and Excise: Spring Report 2002*

3.14 The probability of an inspection being carried out and of receiving a penalty which outweighs any benefit gained, can be used as indicators of the effectiveness of enforcement activity. This information could be used to develop performance measures for the Inspectorate which would help to target priorities and provide greater clarity to staff. The Scottish Fisheries Protection Agency faces similar issues about developing performance measures for effectiveness, as shown in the 1995 National Audit Office report on "The Protection of Scottish Fisheries"<sup>20</sup>. It may be of benefit to both organisations to work together to develop common performance measures.



# Appendix 1

## Overview of the Sea Fisheries Inspectorate

The Sea Fisheries Inspectorate, co-ordinates and directs enforcement in England:

- Inspection and surveillance at sea, carried out by the Royal Navy;
- Aerial and satellite surveillance, assisted by a civilian aircraft company, Directflight Limited;
- A Central Operations Room in London;
- Fisheries Officers working across 21 port offices based in most of the major ports in England (and two in Wales).

### Operations Room



The Inspectorate's Operations Room is staffed by four experienced fisheries officers and five support staff who instruct the activities of the Royal Navy Fishery Protection Vessels and Directflight Limited. The Inspectorate is the only civilian body which instructs the activities of one of Her Majesty's Forces.

A database of fishing patterns has been collated from satellite, aerial and sea surveillance information over a number of years and is continually updated to allow the Inspectorate to target its enforcement activities. The Operations Room directs aircraft and naval vessels according to fishing activity and priorities. Aircraft and Naval vessels may be tasked to work together when a particular risk or problem is identified. Planned patrols may need to be modified at short notice because of short term emergency conservation measures or particular enforcement problems. The Inspectorate also carries out joint operations with the enforcement bodies of other Member States and the Operations Room liaises to exchange information and intelligence. Coastal resources are deployed by each District according to their specific requirements but information from the Operations Room may also assist in planning.

### The role of a Sea Fisheries Officer



British Sea Fisheries Officers are trained by experienced personnel from the Sea Fisheries Inspectorate and may be either Royal Navy personnel appointed to the Fisheries Protection Squadron, who patrol at sea, or

individuals with relevant experience who will be based at ports. The training ensures that officers have a consistent and co-ordinated approach to enforcement. Fisheries Officers have a challenging dual role as they both enforce fisheries regulations and provide advice to the Industry as new regulations are proposed and issued. Officers are trained to carry out inspections with regard for all current European and National fisheries legislation, which is extremely complex and may change at short notice when emergency measures are introduced to protect particular stocks. Officers must also be familiar with other relevant legislation such as the Police and Criminal Evidence Act 1984 for conducting interviews and gathering evidence. Employees of Directflight Limited who are involved in aerial surveillance, both operations staff and aircrew, also attend the British Sea Fisheries Officers course.

### Royal Navy Fisheries Officers

Royal Navy Commissioned Officers act as British Sea Fisheries Officers when boarding fishing vessels. They utilise small craft that are embarked from a Royal Naval Fishery Protection Vessel when they are assigned to Fishery Protection Duties. These boardings take place in sometimes difficult conditions, including during bad weather, at night and to what can sometimes be a hostile reception from a vessel's crew. Officers must also be able to communicate with non-English speaking vessel crews during their inspections. Inspections can take over five hours to complete due to the number and complexity of regulations being enforced, including checks on a vessel's records of fishing activity, the catch on board and the fishing gear being used.

### Shore based Fisheries Officers

As well as operational responsibilities covering enforcement of fisheries legislation, particularly in regard to fish stock conservation and the surveillance of fishing activity coastal staff have an important role in maintaining liaison with the fishing industry, the Fishery Protection Squadron of the Royal Navy and other government departments, as well as Local Authorities, Harbour Boards and other statutory bodies.

The Inspectorate provides the Department's Fisheries Directorate with technical and commercial advice on all matters concerning fishing operations; fish distribution

and processing; structure of the fishing industry including decommissioning schemes and effort limitation; the use of sea areas as they affect fishing, including extraction and dumping at sea and all other maritime matters concerning the fishing industry.

The Sea Fisheries Inspectorate is also responsible for the collection of fisheries statistics at the ports, obtaining scientific data for Fisheries Laboratories and the local administration for licensing, quota management and fish grading schemes.

## Main duties of a shore based Fishery Officer:

- Enforcement of United Kingdom and European Commission fisheries legislation, principally through the inspection of fishing vessels' catches on their arrival in port;
- Collection and input of catch statistics to a database, evaluation of fish catching and landing statistics for enforcement, quota monitoring, marketing and general policy purposes;
- Cross checking of statutory documentation against other records such as satellite and aerial surveillance data;
- Attendance at fish markets for monitoring of industry compliance with European Union marketing control, such as grading fish by size and quality, and technical conservation regulations. Measurement and biological sampling of fish on behalf of the Centre for Environment, Fisheries and Aquaculture Science;
- Monitoring of landings transported directly to processors which have not been sold through a market. Inspections of the lorries transporting the fish;
- Local liaison with the fishing industry, primarily to encourage compliance with legislation and to ensure provision of statistical data, and, secondly, to promote the Department's interests in general;
- The Inspectorate also acts as an independent body in assisting to minimise interference with fishing operations by other marine industries such as oil and gas, wind farms, submarine telephone cables, marine aggregate extraction and Ministry of Defence exercise areas;
- Supervision of industry and Producer Organisation compliance with statutory obligations under European Commission Fish Marketing Regulations, including certification of European Agricultural Guidance and Guarantee Fund compensation claims;
- Monitoring and enforcement of provisions of the Food and Environmental Protection Act 1985 in respect of deposits of material into the marine environment;
- Providing comments on technical aspects of applications for grant under the Financial Instrument for Fisheries Guidance, and physical inspections of successful projects to ensure compliance with conditions for grant;
- Local administration of fishing vessel decommissioning schemes;
- In accordance with the Department for Environment, Food And Rural Affairs' responsibilities under the National Contingency Plan for Maritime Pollution from Shipping and Offshore Installations, the Sea Fisheries Inspectorate works closely with other government organisations in contingency planning and response. In the event of an incident, the district concerned will represent the Department on the Environment Group set up to provide best environmental advice to salvors and others undertaking clean up operations; and
- Administration of fishing vessel licensing and provision of a counter-service on behalf of the Registrar General of Shipping and Seamen for the registration of fishing vessels.

The job is physically and mentally demanding whether at sea or on land. It requires a sound knowledge of fisheries regulations relating to over 100 quota stocks. Inspectors on land may work alone over extended and remote locations and live within the coastal communities where they are enforcing regulations. The nature of the industry varies by district in terms of the size of vessels operated and the types of fish targeted and some regulations can be area specific with local enforcement difficulties. This means each officer develops a significant knowledge of local fishing practices and the legislation that is particularly relevant. Since fishing can be a 24-hour operation, often with vessels landing into port at night in time for the morning fish market, officers must work flexibly and are regularly required to work unsociable hours. With the implementation of the Working Time Directive, these factors have been addressed through the introduction, in 1999, of new terms and conditions of employment which require Fishery Officers to work a percentage of their conditioned hours at night, and to undertake additional night time working on overtime.

# Appendix 2

## Organisations and individuals we consulted

### Fish Producers' organisations

The Fish Producers' Organisation  
 Cornish Fish Producers' Organisation  
 South Western Fish Producers' Organisation  
 Grimsby Fish Producers' Organisation Limited  
 Scottish Fishermen's Organisation Limited  
 Fleetwood Fish Producers' Organisation  
 FROM-BRETAGNE

### Fishermen's organisations

National Federation of Fishermen's Organisations  
 South Devon and Channel Shell Fishermen Limited  
 Looe Fishermen's Protection Association  
 Bridlington & Flamborough Fishermen's Society  
 Plymouth Fishermen's Association

### Academics and Consultants

Aaron Hatcher<sup>21</sup>, Centre for the Economics and Management of Aquatic Resources, University of Portsmouth  
 Richard Banks<sup>22</sup>, Poseidon ARM Limited  
 Professor John Beddington<sup>23</sup>, Imperial College, University of London  
 Marine Conservation Society

### Fishermen, Fishing Companies and Auctioneers

Brixham Trawler Agents  
 Plymouth Trawlers Agents Limited  
 Bridlington Trawlers Limited  
 W Stevenson & Sons  
 Boyd Line  
 J Marr  
 Trelawney Fish

### Sea Fisheries Committees

Association of Sea Fisheries Committees  
 Sussex Sea Fisheries Committee  
 North Eastern Sea Fisheries Committee

### Other organisations

European Commission  
 Royal Navy Fishery Protection Squadron  
 Directflight Limited  
 The Scottish Fisheries Protection Agency  
 Fisheries Research Services, Aberdeen  
 Office for National Statistics  
 Sea Fish Industry Authority  
 Tim Oliver, Fishing News  
 Andrew Oliver and Rob Penrose (Andrew M Jackson)  
 Gordon Madden, Asda  
 Fishgate, Hull Fish Auction Limited  
 United Kingdom Association of Frozen Fish Producers  
 Office of the Auditor General Canada  
 The National Audit Office of Denmark  
 Australian National Audit Office  
 Office of the Auditor General, New Zealand  
 Riksrevisjonen, Norway  
 United States General Accounting Office  
 Algemene Rekenkamer, The Netherlands  
 The Icelandic National Audit Office  
 The Ministry of Fisheries, Iceland  
 The Fisheries Directorate, Iceland  
 The Icelandic Coastguard  
 The Marine Research Institute, Iceland

<sup>21</sup> Aaron Hatcher: research fellow at Portsmouth University who has undertaken a significant amount of research into United Kingdom fisheries including the economic effects that influence compliance with regulations.

<sup>22</sup> Richard Banks: consultant who has done work both in the United Kingdom and internationally including a report for the European Commission on the costs and benefits of different enforcement strategies.

<sup>23</sup> Professor John Beddington: of Imperial College carried out work on the previous National Audit Office study of the Scottish Fisheries Protection Agency and is currently actively engaged in managing the fisheries of the Falkland Islands.



# Appendix 3

## International Comparisons: Approaches taken by other countries to enforcement of fisheries regulations

Australia	Deterrence			
	Compliance	Reducing Opportunities	Improving detection	Effective sanctions
<p><b>Description</b></p> <p>The Australian fishing zone is the world's third largest at 8.94 million square kilometres.</p> <p>Coastline is 37,000 kilometres.</p> <p>Approximately 9000 commercial vessels fishing in these waters.</p> <p>Individual Transferable Quotas have been adopted for some fisheries.</p> <p><b>Regulations</b></p> <p>The Australian Fisheries Management Authority has introduced a risk-based approach for compliance, monitoring and enforcement responsibilities for the eight major fisheries. Compliance priorities are determined annually following risk assessments.</p> <p>Australia recovers 25-100 per cent of management costs from the industry.</p>	<p>Level of compliance claimed to be high due to:</p> <ul style="list-style-type: none"> <li>■ Reduced vessel numbers</li> <li>■ Better training and awareness for fishermen</li> <li>■ Peer pressure</li> <li>■ Progressive enforcement regime</li> <li>■ More professional attitude of fishermen</li> <li>■ High fines</li> </ul>	<p>Compliance programs include:</p> <ul style="list-style-type: none"> <li>■ Satellite surveillance</li> <li>■ Prior to landing reports</li> <li>■ Catch disposal records</li> <li>■ Fish receiver records</li> <li>■ Auditing of paper trails</li> </ul> <p>Prior to landing boats must notify the port of landing and quantity of fish on board this allow fisheries officers to work efficiently to target specific landings.</p> <p>Catch landings are monitored at the wharf and through auditing of records held by fish receivers.</p> <p>Catch disposal records must be completed within 50 metres of landing.</p> <p>Fish receivers must be registered and must also complete documentation declaring species and accurate weights.</p>	<p>Satellite surveillance is required on a fishery by fishery basis.</p> <p>Approximately 400 boats were equipped in 2002. Observers are used primarily to gather more accurate catch composition information</p>	<p>Heavy fines.</p> <p>Forfeiture of boat, gear and catch.</p> <p>Permanent withdrawal of all quota entitlement and exceptionally custody in jail.</p>

Canada	Deterrence			
	Compliance	Reducing Opportunities	Improving detection	Effective sanctions
<p><b>Description</b></p> <p>Canada has the world's longest coastline at 243,792 kilometres and largest offshore economic zone at 3.7 million square kilometres. In 1999 there were 24,200 commercial fishing vessels.</p> <p>The decline in fish stocks has caused an increase in illegal activities increasing enforcement requirements.</p> <p>Major collapse of Atlantic stocks in the 1990s</p> <p><b>Regulations</b></p> <p>A licence system controls access to fisheries and sets conditions for example on the amount of fish to be caught.</p>	<p>Canada, has developed its own Code of Conduct for Responsible Fishing Operations' in collaboration with the fishing industry which has received wide support and contributed significantly to changing fishermen's attitudes and behaviour.</p>	<p>Canada's fishery officers rely on observers both on shore and at sea. Observers monitor compliance and can report infringements.</p>	<p>Increasing use of technology, able to undertake aerial surveillance at night and take photographs.</p> <p>Deploy enforcement resources using analysis of surveillance data.</p>	<p>A fishery officer's discretion is used to determine what action should be taken once an offence is detected depending on the seriousness of offence - from a warning to prosecution. As in England, penalties on conviction are determined by the court.</p>

Iceland	Deterrence			
	Compliance	Reducing Opportunities	Improving detection	Effective sanctions
<p><b>Description</b></p> <p>Economic Exclusion Zone of 758,000 square kilometres. Fishing is crucial to the Icelandic economy (exports forming 70 per cent of Gross Domestic Product). Landings 1,539 vessels engaged in fishing in 2000. 30 quota stocks. 1.98 million tonnes.</p> <p><b>Regulations</b></p> <p>Fisheries regulations have been developed over the last 25 years. A system of individual transferable quotas is now the primary control and has proved successful. Scientists now estimate that there is less than one per cent chance of fish stock collapse. Fishing areas may be closed temporarily (seven days) at the discretion of the Marine Research Institute and longer in consultation with the Ministry of Fisheries.</p> <p>Discarding is banned. Over- quota fish is sold on landing with the majority of the money going to the Marine Research Institute to fund further research. Small quantities of undersize fish may be landed without them being offset against quota to further discourage discarding.</p>	<p>Industry and Government work closely together and Total Allowable Catches are set with both scientific and economic factors in mind.</p> <p>Scientific advice is well respected and transparent and there is generally broad support for following scientific advice.</p> <p>The Industry is economically efficient and does not receive subsidies from Government. Fishermen invest in quota and tend to take a longer-term view of fisheries management.</p>	<p>Iceland operates a strict control system over monitoring catches and all landings must be weighed on certified scales by licensed operators employed by the Port Authorities.</p> <p>Quota uptake by each vessel is monitored on a daily basis and fishermen are given only a few days warning to purchase or rent additional quota before the licence is suspended.</p>	<p>Inspectors may be put on board vessels to monitor catches - particularly the composition of the catch for juvenile or undersize fish, but also inspect processing facilities.</p>	<p>Administrative penalties include licence suspension with the period depending on the seriousness of the offence, from two weeks to a year. Where quota has been exceeded licences are suspended indefinitely until additional quota is acquired.</p> <p>Breaching regulations on closed areas or using illegal fishing gear results in fines proportional to the size of the vessel, the offence and the number of previous offences with possible confiscation of the catch and equipment. The fine for a first offence is between Euro 4,700 to 47,000 to a maximum of Euro 94,000 for repeat offences. (£56,000).</p> <p>Particularly complex or serious cases are passed to the police and in one case a prison sentence was awarded.</p>



New Zealand	Deterrence			
	Compliance	Reducing Opportunities	Improving detection	Effective sanctions
<p><b>Description</b></p> <p>Economic Exclusion Zone of 1.2 million square nautical miles. A single agency is responsible for management and enforcement of fisheries regulations. Non commercial fishing is also both legally and politically important because of traditional fishing rights.</p> <p><b>Regulations</b></p> <p>Most fisheries use licensing and effort controls, however a system of Individual Transferable quotas has been adopted, which is the greatest change in recent years.</p>	<p>New Zealand operates a system of observers, however they do not have powers as enforcement officers so any offence committed in front of them cannot be prosecuted. Observers can report to the enforcement authorities who could take action if they found evidence of an offence on inspection.</p>	<p>Surveillance of vessels, landings and merchants premises carried out- however physical monitoring of catches at the point of landing considered too expensive due to the length of the coastline and the number of commercial landings sites (450 approximately).</p> <p>First point of sale must be licenced.</p>	<p>Fishermen view cheating as theft against other quota holders - more likely to inform on known offenders.</p> <p>Moved from focusing on physical surveillance to documentation - can lead to specialist investigations - an expensive but effective approach</p>	<p>Complexity of regulations tend to lead to costly court cases so only the most serious offences tend to be prosecuted.</p> <p>Very heavy penalties are available to the courts however they are seldom imposed because of the impact on livelihoods.</p> <p>Collusion or systematic offences may result in forfeiture of quota.</p>

Norway	Deterrence			
	Compliance	Reducing Opportunities	Improving detection	Effective sanctions
<p><b>Description</b></p> <p>Norway has four main fishing grounds extending for over 2 million square kilometres; 57,000 kilometres of coastline with over 800 landing sites. The fishing fleet of approximately 12,000 fishing vessels landed some 2.9 million tonnes of fish with a value of €1.5 billion in 1999.</p> <p><b>Regulations</b></p> <p>Regulations are aimed at limiting the capture rather than landing of fish and include licensing, quota restrictions and technical measures.</p>	<p>There is significant joint working between the industry and the regulators.</p> <p>Fishermen are generally supportive of the 'no discards rule'.</p>	<p>Control from net to plate. Fish sales are only allowed through authorised organisations that have legal obligations to report landings and any violations. Use of onboard observers, primarily in international waters.</p>	<p>Emphasis on detection at sea. Increased use of technology including satellite monitoring. Until recently had a hot line for reporting offences</p>	<p>Sanctions escalate according to the nature of the offence. Minor offences dealt with by a warning.</p> <p>The level of fine is determined by legal guidelines. Average quota or illegal catches are landed but the value of the sale is forfeited.</p>

United States of America	Deterrence			
	Compliance	Reducing Opportunities	Improving detection	Effective sanctions
<p><b>Description</b></p> <p>Four major Economic Exclusion Zones - Atlantic States, West Coast, Alaska and the Pacific Islands. Over 110,000 commercial fishing vessels.</p> <p><b>Problem areas</b></p> <p>Overfishing is a problem.</p> <p><b>Regulations</b></p> <p>Controls cap harvests and require fishery management plans to rebuild fisheries.</p>	<p>Eight regional councils develop fishery - specific management plans which are an integrated solution to a specific fishery - a negotiated compromise settlement of stakeholder positions where losers may receive financial compensation.</p>	<p>The emphasis of enforcement has moved from observing landings to observers at sea - mainly to collect scientific data but evidence can be used in prosecutions.</p> <p>Landing checks are increasingly automated.</p> <p>Satellite surveillance increases compliance with closed areas.</p> <p>Individual fishing quota programs operating in some fisheries have introduced registered or permitted buyers of fish.</p>	<p>Coastguard draw on intelligence from different sources to identify high risk areas and concentrate resources on these.</p>	<p>There are summary penalties with persistent offenders forced to leave the fisheries.</p> <p>Those who deal in illegal fish can be put out of business.</p>