

**Report of the Review of Inshore Fisheries
Management in Northern Ireland from the
Northern Ireland Inshore Fisheries
Stakeholders Advisory Group**

Foreword.....	7
1.Executive Summary.....	8
2.Background.....	10
2.1..... National context	10
2.2..... Need for a review of inshore fisheries management in Northern Ireland	10
2.3..... Government Policy	11
2.4..... Objectives of the review	14
2.5..... Approach to the review	14
2.6..... Scope of the review	14
3.Overview of Northern Ireland inshore fisheries sector..	16
3.1..... Catching Sector	16
3.2..... Mariculture	17
3.3..... Processing	19
3.4..... Data collection	19
4.Securing a sustainable inshore fishery	22
4.1..... Introduction	22
4.2..... Definitions of sustainability	22
4.3..... Evaluating sustainability	23
4.4..... Environmental Integration	23
4.5..... Social integration	25

4.6	Economic Integration	25
4.7	Ecosystem-based Approach	26
5.Bivalve molluscs.....		29
5.1	Background	29
5.2	Sustainability and profitability	29
5.3	Enforcement	30
5.4	Water quality	30
5.5	Human health and fish health	31
5.6	Government consultation	32
6.Intertidal fisheries		33
6.1	Background	33
6.2	Data	33
6.3	Regulation and rights	34
6.4	Licensing	35
7.Mariculture		37
7.1	Background	37
7.2	Sustainability, profitability and development	37
7.3	Representation	38
7.4	Fish health, human health and water quality	38
8.Pot fisheries		40

8.1	Background	
.....		40
8.2	Sustainability	
.....		40
8.3	Legislation	
.....		41
9. Sea angling.....		43
9.1	Background	
.....		43
9.2	Recognition of the value of sea angling	
.....		43
9.3	Stocks	
.....		44
10. Management structures		46
10.1 Introduction.....		46
10.2 Inshore Fisheries Development & Management Group.....		46
11. Conclusions and Implementation		49
11.1 Overview.....		49
11.2 Knowledge.....		49
11.3 Ecosystem-based approach		50
11.4 Management		50
11.5 Legislation		50
11.6 Resources		50
11.7 Communication.....		51
Annex A		52
Stakeholder Advisory Group Representation		52
Annex B		53
Recommendations from the Review of Inshore Fisheries.....		53
Annex C		58
Glossary.....		58

Foreword

“The requirements for strengthened inshore management in Northern Ireland should also be reviewed”

The above is a quote from the Prime Minister’s Strategy Unit Report ***Net Benefits***. It highlights the need for a renewed focus on the management of inshore fisheries in Northern Ireland. In response to this requirement, the Department of Agriculture and Rural Development launched its Review of Inshore Fisheries, bringing together the Stakeholder Advisory Group which has produced this document. This report sets out a vision of a well regulated and profitable inshore fishery which is environmentally, economically and socially sustainable.

It is a feature of the report that those involved in its development represent a diverse range of interests. The fishing industry, environmentalists, central and local government and other inshore stakeholders have formulated a common vision and deserve praise for showing the foresight to do so. Such continued partnership can only benefit the Northern Ireland inshore sector.

What follows is a summary of the issues facing each major inshore fishery and recommendations on how best to ensure its sustainable development. However no vision can take shape without the appropriate management structures and the report places particular emphasis on the need for strengthened management for Northern Ireland’s inshore fisheries.

I would like to thank all those who were involved in the development of this report for their hard work and also for their ability to co-operate and compromise. I have no hesitation in commending this report and its recommendations to the Minister for Agriculture and Rural Development and hope that it will receive a positive response.

Signed:



Dr Niall McDonough

Chairman – Stakeholder Advisory Group to the Review of Inshore Fisheries

1. Executive Summary

- 1.1.1 The Department of Agriculture and Rural Development (DARD) launched the Review of Inshore Fisheries in Northern Ireland in September 2005, bringing together the Northern Ireland Inshore Fisheries Stakeholder Advisory Group (SAG). The group included representatives of the fishing industry, the mariculture and angling sectors, environmental NGOs, local government, government departments, scientists and other interested parties. The role of this SAG was to advise, and make recommendations to, the DARD Minister on strategies for the future development and management of inshore fisheries. Details of representation on the SAG are attached at Annex A.
- 1.1.2 A working group was established to consider the sustainability¹ implications of the recommendations for each fishery and to propose, where appropriate, additional overarching and fishery specific recommendations aimed at ensuring the sustainability of inshore fisheries.
- 1.1.3 SAG members also formed working groups, identified concerns and made recommendations for the following fishery sectors:
- Bivalve molluscs;
 - Intertidal fisheries;
 - Mariculture;
 - Pot fisheries;
 - Sea angling.
- 1.1.4 In addition, a working group was established to consider the most appropriate management structure for delivering the recommendations identified by the sectoral groups.
- 1.1.5 On the basis of plenary discussion and consideration of working group reports, the SAG identified the following overarching objectives for the inshore sector:
- **Knowledge:** Improved data collection and information for fisheries management and planning, e.g. on habitat, stocks and fishing effort

¹ Throughout this report any reference to 'sustainability' refers to 'economic, environmental and social sustainability'.

- **Ecosystem-based Approach:** The adoption of an ecosystem-based approach to the management of inshore fisheries as a framework for making ecologically sound and sustainable decisions
- **Management:** The establishment of appropriate management structures to underpin future sustainable development of inshore fisheries
- **Legislation:** The need for a review of all current legislation relating to the inshore fishery
- **Resources:** Appropriate resources to be made available to ensure achievement of the recommendations from the Review of Inshore Fisheries
- **Communication:** Improved communications between Government departments, industry and other marine stakeholders

1.1.6 The SAG recommended that the delivery of these objectives for the sustainable development of inshore fisheries in Northern Ireland would be best achieved by:

- The development and implementation of a Sustainable Development Strategy for inshore fisheries;
- The establishment of an inshore Development and Management Group encompassing inshore stakeholders.

2. Background

2.1 National context

- 2.1.1 In March 2004 the Cabinet Office Strategy Unit published “**Net Benefits**”¹, its report on the fishing industry in the UK. This report made 33 recommendations on how the UK fishing industry and fisheries management should change and develop to meet the challenges of the future.
- 2.1.2 “**Securing the Benefits**”², published in 2005, was the joint UK Government response to most of the issues raised in Net Benefits, but the recommendations relating to inshore fisheries reform were to be taken forward by each devolved administration.
- 2.1.3 DARD published a Northern Ireland response to Net Benefits in 2005 which gave an undertaking to commence a review of inshore fisheries management. This review commenced in September 2005.

2.2 Need for a review of inshore fisheries management in Northern Ireland

- 2.2.1 Net Benefits identified significant opportunities for the economic development of inshore fisheries and cited growth in recreational sea angling in England and Wales as an example of how non-traditional fishing activity could contribute to the economies of coastal communities.
- 2.2.2 Crucially, Net Benefits made specific reference to Northern Ireland, stating that; “the requirements for strengthened inshore management in Northern Ireland should also be reviewed”. However some obstacles to development were identified. Fisheries data can be limited and its accuracy is often difficult to verify, thereby hindering fisheries managers in their task to develop areas of potential growth. A lack of focus on the inshore sector was also identified and this could lead to significant growth opportunities being overlooked.
- 2.2.3 Overall the report recommended that the inshore sector should be developed in a sustainable way and strategies for its future development

¹ www.defra.gov.uk/fish/sea/sfp/index.htm

² www.defra.gov.uk/fish/sea/sfp/index.htm

should consider the needs of other users of the coastal zone and marine environment.

2.2.4 The inshore sector is coming under increasing pressure from greater levels of human activity and environmental changes. The challenge for government and stakeholders is to balance the future development of fisheries and other commercial and recreational activities with the maintenance and enhancement of an ecologically diverse and healthy marine environment.

2.2.5 This review of inshore fisheries is one of several initiatives and policies that affect the coastal environment and coastal communities in Northern Ireland. It cannot, therefore, sit in isolation but must compliment these other policies. These include policies on Integrated Coastal Zone Management (ICZM)¹, the Northern Ireland Biodiversity Strategy (NIBS)², marine nature conservation policy (incorporating the protection of marine Special Areas of Conservation), and new measures to be taken under a UK Marine Bill.

2.3 Government Policy

2.3.1 DARD is responsible for the sustainable development and management of sea fisheries and aquaculture in Northern Ireland and since 2004 has been involved in the UK review of sea fisheries. The Review of Inshore Fisheries has been undertaken as a result of this process and DARD is also working closely with the other Fisheries Administrations to deliver improved management of fisheries and the marine environment through the forthcoming Marine Bill.

2.3.2 DARD is also involved with several UK-wide initiatives aimed at improving fisheries management within the Common Fisheries Policy (CFP)³. These include:

- A Quota Management Change Programme to improve the operation of the UK fish quota system;
- A simplification programme in the UK and with the EU to improve the clarity of, and compliance with, UK and EU fisheries regulations;

¹ www.ehsni.gov.uk/biodiversity/hap_uk/coast/icm.htm

² www.ehsni.gov.uk/biodiversity/issues/biostrat.htm

³ www.ec.europa.eu/fisheries

- Supporting Regional Advisory Councils in their efforts to develop sustainable fisheries policies that have greater support from stakeholders.
- 2.3.3 DARD is also responsible for administering EU fisheries funding programmes and will be working closely with Northern Ireland stakeholders to develop the Northern Ireland section of the UK Operational Plan of the new European Fisheries Fund¹ which will run from 2007 – 2013.
- 2.3.4 The South Down Taskforce, appointed to examine the socio-economic implications of European fisheries policy for the Northern Ireland fishing community, has secured funding of £6.3 million from the Integrated Development Fund. This will deliver a multi-annual plan of targeted actions for fishing communities which has been agreed with industry and local community representatives.
- 2.3.5 Protection of the marine environment requires cross government co-operation involving DARD, DOE, EHS and also Defra on measures to protect the local marine environment and to deliver UK fisheries marine environmental policy. In particular, DARD, DOE and EHS are jointly progressing a restoration plan for the horse mussel (*Modiolus modiolus*) communities in Strangford Lough.
- 2.3.6 Defra are currently preparing a UK Marine Bill which should result in an improved system for delivering sustainable development of the marine and coastal environment. This will address both the use and protection of our marine resources. The aim is to introduce a better system for managing marine resources, so that the process by which developers get consents becomes simpler, while ensuring that potential conflicts between users of the sea are managed effectively and sustainability objectives met.
- 2.3.7 DARD has stated that it is committed to taking any appropriate enabling powers under the Marine Bill which are relevant to the Northern Ireland inshore area. The absence of Sea Fisheries Committees in Northern Ireland means that parts of the Bill are not applicable. However, it may be appropriate to transfer necessary powers at a later date if structures similar to Sea Fisheries Committees are established in Northern Ireland.
- 2.3.8 In support of the sustainable development of aquaculture, DARD has commissioned the development of a carrying capacity model (SMILE) for Northern Ireland's five sea loughs (Foyle, Larne, Belfast, Strangford and

¹ Council Regulation (EC) No 1198/2006

Carlingford). This model will be used to predict the carrying capacity of each lough and thereby assist the Department to predict and manage the quantity of farmed shellfish that may be produced without a negative impact on lough ecosystems. Work on the development of the models is due for completion in February 2007. In the meantime updates can be found on www.ecowin.org/smile/

2.3.9 The Foyle, Carlingford and Irish Lights Commission (FCILC) is a North/South Implementation Body set up under The North/South Co-operation (Implementation Bodies) (Northern Ireland) Order 1999. DARD is the sponsoring Department for the FCILC in Northern Ireland and the Department of Communications, Marine and Natural Resources (DCMNR) is the sponsoring Department in Ireland. The Loughs Agency is an agency of the FCILC, responsible for exercising the functions of the FCILC in the Foyle and Carlingford areas. These functions are:

- Promotion of the development of Lough Foyle and Carlingford Lough for commercial and recreational purposes;
- Inland fisheries conservation, protection, management and development of the salmon and inland fisheries of the Foyle and Carlingford Areas;
- Development and licensing of aquaculture (DARD is currently drafting legislation which, on enactment, will provide the FCILC with the necessary powers to exercise this function);
- Development of marine tourism.

2.3.10 The Co-ordinated Local Aquaculture Management Systems (CLAMS)¹ process assists in the management and development of aquaculture in Northern Ireland's sea loughs and inshore waters at a local or single bay level integrating relevant government policies and the interests of other users and stakeholders. The Environmental Code of Conduct for Aquaculture Companies and Traders (ECOPACT)² process also promotes an ecosystem-based approach to the sustainable development of safe and healthy food products in a viable and efficient manner. This process encourages the optimisation of farm husbandry and maintenance, with consideration to the impact of interactions of the farm related activities with the surrounding environment.

¹ copies from DARD Fisheries Division

² copies from DARD Fisheries Division

2.4 Objectives of the review

2.4.1 The Review of Inshore Fisheries was established to identify, evaluate and recommend options for the development and management of the inshore fisheries sector with a view to:

- Securing a sustainable future for the fishing industry in Northern Ireland;
- Improving stakeholder engagement in developing and managing inshore fisheries;
- Improving communications between managers, regulators, enforcement agencies and stakeholders;
- Improving co-operation between key stakeholders.

2.5 Approach to the review

2.5.1 A Stakeholder Advisory Group (SAG), comprising representation from the fishing industry, the mariculture and angling sectors, environmental NGOs, local government and government departments, scientists and interested parties was established to advise the DARD Minister on this review and to develop proposals for a strategy for inshore fisheries management in Northern Ireland. The SAG met 6 times between December 2005 and November 2006.

2.6 Scope of the review

2.6.1 Initially there was considerable debate about the scope of the review with divided opinions on which fisheries should be included and the definition of inshore fisheries. However, the SAG agreed that the best way to progress this review was to consider management by each inshore fishery. The review would consider fishing activity in the area appropriate to manage the specific fishery effectively. An open list of fishery sectors was agreed and working groups established as follows:

- Bivalve molluscs;
- Intertidal fisheries;
- Mariculture;
- Pot fisheries;
- Sea angling.

2.6.2 The SAG agreed it would be necessary to retain the capacity to address new fisheries as they emerge. In addition to working groups for each fishery, a working group was established to consider the most appropriate

management structure for delivering the goals identified by the sectoral groups.

- 2.6.3 A working group was also established to consider the sustainability implications of the recommendations for each fishery and to propose, where appropriate, additional overarching and fishery-specific recommendations aimed at ensuring that inshore fisheries are sustainable in economic, environmental and social terms.

3. Overview of Northern Ireland inshore fisheries sector

3.1 Catching Sector

3.1.1 Northern Ireland has devolved responsibility for fisheries within the Northern Ireland zone. Most of the zone is within the 12 mile territorial limit and could, therefore, be termed inshore waters. Over 59% of the NI fishing fleet is comprised of small vessels of 10m and under in length. As such vessels tend to operate on daily trips, a significant proportion of Northern Ireland fisheries effort occurs within the inshore area.

3.1.2 The table below shows that the size of the Northern Ireland fleet of 10 metre and under fishing vessels has grown by almost 25% since 1995 and now stands at 196 vessels. This highlights the growing importance of inshore fisheries and the need to ensure sustainable development.

Change in composition of the registered and licensed NI fishing fleet by location and vessel length¹

	Dec 95	Dec 05	Dec 95	Dec 05
	U10 metre*	U10 metre*	Over 10 metre	Over 10 metre
KILKEEL	34	71	105	63
ARDGLASS	9	24	23	21
PORTAVOGIE	4	39	61	38
OTHERS	114	62	17	13
TOTAL	161	196	206	135

* Includes vessels of exactly 10 metres length

3.1.3 Northern Ireland's inshore fisheries are diverse with vessels fishing for crabs, lobsters, nephrops, oysters, mussels, as well as mariculture for mussels, oysters and farmed salmon.

¹ Source DARD

3.2 Mariculture

- 3.2.1 There is a well-developed mariculture sector within the 12-mile limit that includes around 68 licensed shellfish sites, of which 34 are licensed for the bottom cultivation of mussels. The sector also includes one salmon company with 2 licensed marine sites. In its entirety, the sector produces annual sales totalling a value of approximately £5 million each year.
- 3.2.2 A Northern Ireland Aquaculture Strategy is being progressed by DARD in consultation with relevant stakeholders. An ecosystem-based approach to the sustainable development of aquaculture is encouraged through a number of initiatives like the CLAMS management process, ECOPACT and the Carrying Capacity Model (see paragraphs 2.3.8 and 2.3.10).

3.2.3 Production by commercial shellfish farms in Northern Ireland¹

Year	Pacific Oysters		Native Oysters	
	Volume (Tonnes)	Estimated Value (£)	Volume (Tonnes)	Estimated Value (£)
1998	314.76	610,494	43.70	185,755
1999	352.99	649,929	77.67	294,697
2000	292.33	624,821	56.55	214,890
2001	321.68	655,539	19.89	87,577
2002	317.36	648,723	25.04	102,800
2003	335.32	685,477	5.25	25,284
2004	278.00	615,000	4.00	19,000
2005	279.69	638,585	0.46	2,250

Year	Manila Clams		Bottom Grown Mussels	
	Volume (Tonnes)	Estimated Value (£)	Volume (Tonnes)	Estimated Value (£)
1998	3.30	13,191	133.40	132,948
1999	2.10	8,483	120.40	131,970
2000	0.00	0	1086.00	378,800
2001	0.84	4,052	964.60	813,056
2002	6.82	40,960	728.00	590,900
2003	14.73	88,166	5249.00	2,426,155
2004	10.74	62,286	6594.00	2,225,165
2005	10.51	60,877	7158.00	3,585,450

Year	Rope grown Mussels		Scallops	
	Volume (Tonnes)	Estimated Value (£)	Volume (Tonnes)	Estimated Value (£)
1998	6.24	6,000	0.35	4,000
1999	6.00	5,961	0.40	4,690
2000	38.70	37,527	11.35	26,614
2001	12.00	11,996	11.80	29,712
2002	10.86	10,946	7.04	17,911
2003	10.42	10,686	4.20	10,689
2004	27.00	34,000	0.00	0
2005	47.20	74,500	0.00	0

¹ Source DARD

3.3 Processing

- 3.3.1 In 2002 there were 32 businesses engaged in sea fish processing in Northern Ireland. The processing industry employs over 700 staff and is based mainly in the South Down fishing ports of Kilkeel, Ardglass and Portavogie.¹ Ten of these businesses were engaged solely in primary processing (gutting, filleting and skinning) while 22 were involved in a mixture of primary and secondary processing (further cooking or processing). The processing industry has a gross turnover worth in excess of £90 million to the Northern Ireland economy.
- 3.3.2 Employment within the processing sector is dominated by female employees, especially within the part-time sector. There are few young people employed in the industry with the majority of employees falling into the 31-50 age group.
- 3.3.3 In 2002 just over half (51%) of the total value of purchases of fish made by Northern Ireland producers were made in Northern Ireland with 4% of purchases coming from other parts of the UK. The remaining 45% of fish purchases were imports from other EU countries, particularly the Republic of Ireland. In 2004 the gross turnover of the fish processing industry in Northern Ireland was £74.8 million.²

3.4 Data collection

- 3.4.1 Data on the species caught by under 10m vessels is limited as, until recently, such vessels have not been statutorily required to submit landings data. In the past, the lighter burden of regulation for under-10m vessels, when compared to that for over-10m vessels, may have encouraged expansion in the inshore sector.
- 3.4.2 Whilst data collection on the inshore sector in NI is by no means comprehensive, DARD has for a number of years collected (on a voluntary basis) data from under-10m vessels and fish farmers. This information could, where appropriate, be used to inform decisions on development and management of inshore fisheries.
- 3.4.3 Data currently held includes:
- TAC and Quota figures – *by species and area* ;

¹ source Northern Ireland Seafood

² Report from the Taskforce for South Down, copies from DARD Fisheries Division

- Liveweight and estimated value of recorded landings of fish into NI – *by species*;
- Liveweight and estimated value of all recorded landings by NI vessels – *into NI, Scotland, England and Wales, the Isle of Man, the Republic of Ireland and other EU Countries*;
- Liveweight and estimated value of all recorded landings into NI ports – *Ardglass, Kilkeel, Portavogie and other*;
- Vessels over 10 metres overall length classified according to overall length and home port;
- Vessels over 10 metres overall length classified according to age;
- State of NI licensed fleet – *number, gross tonnage, power – by port and length*;
- Employment in NI fishing industry – *catching, processing and marketing, and others – by port*.

From 1 January 2006 it is also compulsory to report to DARD all shellfish landings by under-10m vessels in Northern Ireland. This will assist in the compilation of accurate data and appropriate management for this sector.

Recorded Shellfish Landings by Northern Ireland vessels into Northern Ireland, January - October 2006 (Provisional as of 11 / 1 / 2007)¹

SPECIES	Live Weight (Tonnes)	Value (£)
Velvet Crab	185.0443	419,414
Brown Crab	604.988	382,319
Green Crab	5.361	3,333
Lobster	42.381	384,404
Mussels	167.51	50,253
Pot Caught Nephrops*	11.957	97,221
Scallops	187.898	258,575
Queen Scallops	396.950	181,168
Whelks	135.724	93,180

* These figures do not include the trawled Nephrops fishery.

¹ Source DARD

4. Securing a sustainable inshore fishery

Vision: A profitable inshore fishery which is fully aware of, and compliant with, its environmental responsibilities and contributes to viable and thriving communities by providing employment, economic success and a sense of cultural identity.

4.1 Introduction

- 4.1.1 The inshore sea area is subject to the continuing influence of a broad range of human activities as well as natural environmental changes. The challenge for government and stakeholders is to ensure the sustainable development of the inshore fishing industry. Sustainable development is “development which meets the needs of the present without compromising the ability of future generations to meet their own needs.”¹ This will involve safeguarding both the ecological diversity and health of marine ecosystems while facilitating the development of commercial and recreational activities.
- 4.1.2 It is critical that the current and future sustainability of inshore habitats and stocks is addressed to ensure vibrant and profitable inshore fisheries within Northern Ireland. While current inshore fisheries operations in Northern Ireland may not be as intense as in other UK regions, it is still important that local inshore fisheries are managed and developed in a fully sustainable manner, taking account not only of commercial species but also of non-commercial species and their associated habitats.
- 4.1.3 The sea bed resource is finite and is subject to the impacts of human activity such as aggregate dredging, mineral extraction and offshore renewable energy generation. These activities must be undertaken with due care for the marine environment upon which all marine activities depend.

4.2 Definitions of sustainability

- 4.2.1 Sustainability encompasses the three strands of environmental, social and economic sustainability. The following definitions relating to sustainability have all been taken from the Department of Environment’s (DOE) 2006 Publication “*First Steps towards sustainability – a sustainable*

¹ *Our Common Future* (The Brundtland Report) Report of the 1967 World Commission on Environment and Development

*development strategy for Northern Ireland*¹. For inshore fisheries management purposes -

- **Environmental sustainability** is defined as “respecting the limits of the earth’s environment, resources and biodiversity, to improve our environment and ensure that the natural resources needed for life are unimpaired and remain so for future generations.”
- **Social sustainability** is defined as “meeting the diverse needs of all people in existing and future communities, promoting personal well-being, social cohesion and inclusion, and creating equal opportunity for all.”
- **Economic sustainability** is defined as “Building a strong, stable and sustainable economy that provides prosperity and opportunities for all, and in which environmental and social costs fall on those who infringe them (polluter pays) and efficient resource use is incentivised.”

4.3 Evaluating sustainability

- 4.3.1 It is vital that the inshore fishing sector is able to maintain long-term sustainability and profitability. To ensure this, sufficient knowledge of the sustainability of fish stocks must be gathered before increased levels of fishing or other activities take place.
- 4.3.2 Data on many aspects of the marine ecosystem (eg fish species, spawning areas, habitats, biodiversity etc) is limited. Some stakeholders are reluctant to share data they hold, fearing the information may be used to the detriment of their interests.
- 4.3.3 Improved information on inshore fisheries stocks, habitats and populations is vital in securing a profitable and sustainable future. Research is a necessary tool in aiding development and management decisions, such as the feasibility of stock enhancement schemes.

4.4 Environmental Integration

- 4.4.1 Compliance with environmental standards is vital in ensuring the continued existence of the inshore fishery. There is a need to improve our understanding of essential structures and functions of marine ecosystems and to expand our knowledge of the life-cycle, behaviour and interactions of key species. However, where possible, environmental considerations need to be related to economic and social factors. Environmental schemes can be both voluntary and compulsory and it is to the credit of

¹ <http://www.ofmdfmi.gov.uk/sustain-develop.pdf>

the sector where it helps to implement voluntary environmental schemes. However new schemes can restrict or reduce earnings for fishermen and this is a situation which must be addressed.

- 4.4.2 Those managing inshore fisheries in Northern Ireland should always be aware of obligations to protect and enhance biodiversity. Responsibilities regarding Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) must always be adhered to. In addition to legal obligations to protect the habitats and species for which sites were designated, the Northern Ireland administration has, through the NI Biodiversity Strategy, given commitments to take action to protect priority habitats and species wherever they occur. Inshore fisheries management should aim to avoid damage to these and, where possible, contribute to their positive management and restoration.
- 4.4.3 New fisheries may include fisheries and mariculture involving new species, new methods and technology and/or new locations. There needs to be a system whereby applicants for new fisheries must demonstrate, as far as possible, that there will be no risk of environmental damage. Environmental Impact Assessments (EIAs) are an important means of predicting potential environmental effects of proposals for new fisheries or fishing methods. The completion of an EIA ensures that risks to the environment are fully considered and measures of mitigation are put in place, where necessary. Those responsible for damaging the environment may be able to take steps to mitigate the harm caused. However, in the more serious cases, financial sanctions should be imposed. The adoption of a requirement to produce an EIA for each new fishery is being considered by the UK fisheries administrations as part of their commitments under 'Securing the Benefits.'
- 4.4.4 It is critical to the success of the industry that standards of water quality are high. There is an ongoing threat to this status which can result in a loss of markets for fish and fish products. Government must ensure maintenance of a high standard of water quality and seek full compliance with EU and international directives and conventions. There is a need to ensure compliance with the Shellfish Waters Directive¹ which aims to protect and improve the quality of coastal and brackish water bodies in which shellfish live in order to contribute to the quality of edible shellfish products.
- 4.4.5 Enforcement and regulation are important issues which should not be ignored. Regulation needs to be as consistent as possible across sectors

¹ SR 489/97

while avoiding unnecessary complexity. Good communication is vital for effective regulation. Enforcement is equally important. A consistent and visible approach to enforcement is necessary. Penalties imposed for breaches of regulations should be sufficient to deter future offending.

4.5 Social integration

- 4.5.1 Important social benefits are often provided by the fishing industry. These positive aspects justify a high level of attention from government to fisheries administration. It may not always be possible to measure the social contribution of the inshore fishing industry, but its fundamental importance to the communities which depend on it cannot be overstated. With Northern Ireland's primary inshore fishery areas noted for relatively high levels of inhabitants with no qualifications¹, the social challenges facing the sector should not be understated.
- 4.5.2 Northern Ireland's seagoing communities are proud of the wealth of tradition, cultural identity and heritage associated with inshore fishing practices. These communities rely heavily on the socio-economic benefits accruing to the rural economy from fishing.
- 4.5.3 It is especially important that such communities are not overlooked with regards to social and recreational infrastructure, as well as the availability of appropriate training resources.

4.6 Economic Integration

- 4.6.1 The reality facing Northern Ireland's inshore sector is that the fleet must retain its economic profitability. In the inshore sector, increased profitability does not necessarily have to mean increased landings of fish as quality stocks producing "added value" can also contribute to economic prosperity. Future economic success will depend on the inshore sector making the most of the opportunities which currently exist whilst exploiting any new opportunities which may arise.
- 4.6.2 Such economic success will require the co-operation of both administrators and industry stakeholders within local management institutions with the aim of ensuring a long-term, self-sustainable and compliant inshore industry.
- 4.6.3 Northern Ireland fisheries enjoy high fish health status. It is essential to maintain freedom from fish diseases and to minimise potential risks

¹ Report from the Taskforce for South Down, copies from DARD Fisheries Division

caused by delays in threat notification or illegal fish movements or imports. This will ensure that fisheries remain open and valuable export markets are secured.

4.6.4 The future development of any market, whether at home or abroad, will have to take into account three major issues:

- sustainability of supply;
- how the proposed development interacts with the rest of the industry;
- how it will address the environmental arguments and reputation management.

4.6.5 There is a need to ensure that sensitive supply chain management is a priority. Research tells us that future purchasing decisions taken by consumers will rely heavily on product provenance, something which is a feature of the Northern Ireland industry. We have one of the shortest routes to consumers in the UK. The issue of reputation management requires a structure that all interested parties can endorse. Unless a coherent Public Relations strategy reflecting all views can be developed, maintaining the valuable socio-economic argument will be difficult.

4.7 Ecosystem-based Approach

4.7.1 The ecosystem-based approach was endorsed by the World Summit on Sustainable Development (2002)¹, the Northern Ireland Biodiversity Strategy (2002) and the Integrated Coastal Zone Management Strategy for Northern Ireland (2006-2026), all of which have relevance for the management of inshore fisheries.

4.7.2 In the context of fisheries management, the key elements of the ecosystem-based approach relate to:-

- Societal choice – involving all relevant sections of society, including both the scientific and the fishing communities;
- Human resource use – considering the economic context and striking a balance between conservation and use;
- Spatial scales – decentralizing management to the lowest appropriate scale and considering long-term effects;

¹ www.org.un.org/events/wssd/

- Ecosystem limits – managing ecosystems within the limits of their natural thresholds;
 - Adaptive management – recognizing that change is inevitable in dynamic ecosystems and that in the absence of a full understanding of their functioning, an adaptive ‘learning by doing’ approach is needed.
- 4.7.3 The key mechanism for bringing about progress towards sustainability in fisheries management and development is the ecosystem-based approach. This approach is a strategy for integrating the management of land, water and living resources and involving communities and stakeholders closely in decisions affecting their conservation and sustainable use. It is not a formula for managing ecosystems but rather a framework for making ecologically sound decisions, recognising that human and economic interests also need to be considered when managing natural ecosystems.
- 4.7.4 Such an approach will demand close liaison within government; between the fishing industry and conservation and environmental organisations and between administrators and stakeholders. Effective consultation on relevant issues and the ability to gain the full support of stakeholders will ensure the success of this approach.

Recommendations

- Government should urgently produce a strategy for inshore fisheries which would adopt an ecosystem-based approach. This should be developed and implemented with the fullest involvement of all stakeholders.
- Any future inshore strategy must pro-actively promote and market the seafood produce of NI inshore waters, with the objective of improving quality, adding value to, and improving the profitability and sustainability of the sector.
- Government should ensure that adequate resources are made available to implement the strategy effectively. This will include use of its own resources and finance obtained under the EU’s European Fisheries Fund (EFF).
- There should be an audit of data and research to identify gaps in our knowledge of inshore fisheries. DARD, together with marine scientists, should develop and implement a programme designed to address gaps in the knowledge base. Stakeholders should be involved as part of the data collection process.
- This data stream should inform future management activities which may include stock enhancement and provide for sustainable harvesting plans.

- There should be an audit of inshore fisheries legislation and a review of management practices should be undertaken in relation to compliance and the level of regulation and enforcement.
- Full involvement of stakeholders in the development of local management plans (rolling over a 3-5 year cycle) to implement a strategy for inshore fisheries in Northern Ireland which should include clear and quantifiable objectives for development and sustainability.

5. Bivalve molluscs

Vision: A sustainable, profitable and growing shellfish sector supplying high quality shellfish to premium UK and export markets, from shellfish waters of the highest water quality standard.

5.1 Background

- 5.1.1 The wild bivalve fisheries sector in Northern Ireland includes mussels, oysters and scallops. These are mainly caught by dredging in inshore waters.
- 5.1.2 There have been no recorded landings of oysters into Northern Ireland since the requirement to submit figures was introduced on 1 January 2006. The estimated value of landings for mussels and scallops from January until October 2006 was £489,996.

5.2 Sustainability and profitability

- 5.2.1 Until now, returns from the bivalve mollusc sector have been good and high prices have been achieved. However, these high returns may encourage new entrants and unregulated expansion could result in oversupply and reduced profitability. Another serious consequence of unregulated expansion is over-fishing and stock collapse.
- 5.2.2 Provided that shellfish stocks and their habitats are maintained at biologically sustainable levels there are good opportunities to increase the profitability of the harvested product through targeting higher value markets. The safety of Northern Ireland produce in the food chain can be used to target premium and niche markets. The value of the Northern Ireland bivalve industry can only be maximised if appropriate funding is allocated to assist with the effective marketing of the produce.

Recommendations

- Sustainable growth should be encouraged and appropriate stock enhancement schemes should be introduced to increase shellfish stock and create new fishing opportunities. The sector should work closely with the competent authorities to agree suitable fishing areas and the management measures required to develop these opportunities to their full potential.
- The potential for new fisheries should be investigated and assistance should be provided through available fisheries funding mechanisms to carry out surveys, environmental assessments and pilot fishery projects.

- Fisheries policy makers should take account of the effects of wider fisheries policy in encouraging displacement of fishing activity into the shellfish mollusc sector and causing market distortion and over exploitation. Wider fisheries policy should not result, directly or indirectly, in unsustainable development in the inshore bivalve sector.
- Assistance should be made available, through appropriate funding mechanisms, to effectively market Northern Ireland produce in high value, premium markets.

5.3 Enforcement

- 5.3.1 Good enforcement that is fairly and evenly applied is essential to good governance and orderly fishing activity.
- 5.3.2 There have been instances of vessels based outside Northern Ireland infringing local shellfish regulations (e.g. landing of undersized shellfish) and this activity is a threat to the sustainability of fish stocks. Although such infringements have been subject to enforcement action and prosecution, it is perceived that enforcement against such vessels could be improved.
- 5.3.3 The process of taking cases to court in Northern Ireland can be slow and this reduces the effectiveness of any deterrent applied. Although it is not always within DARD's remit, faster application of penalties should result in fewer repeat offences and ultimately this will safeguard fish stocks.

Recommendations

- The DARD fisheries inspectorate should work with local industry to develop intelligence that will enable action against illegal fishing activity to be targeted more effectively. The enforcement presence should be more active and visible in order to deter offenders and reassure local industry that action is being taken.
- Whilst acknowledging progress towards a UK-wide system of administrative penalties, compliance with shellfish regulations should be improved through direct stakeholder involvement in inshore fisheries management and governance.

5.4 Water quality

- 5.4.1 There is a constant threat to the inshore bivalve sector should water quality deteriorate. The Shellfish Waters Directive aims to deal effectively with this issue and compliance with the terms of this directive must be ensured. Environment and Heritage Service (EHS) is responsible for implementing the Directive.

- 5.4.2 Maintaining high water quality standards is largely outside the control of the sector and lies with government and its agencies. Despite improvements in areas such as Belfast Lough, government has to date failed to maintain water quality in many areas and urgent action is needed to address this problem. Downgrading of water quality has serious economic consequences for the sector as shellfish produced from lower quality waters may be unmarketable or of low value.
- 5.4.3 The Shellfish Waters Directive is one of several pieces of earlier community legislation relating to water that will be integrated within the Water Framework Directive 2000/60/EC (WFD). As the WFD imposes a range of requirements wider than simple chemical quality standards, EHS will retain flexibility until the nature of the WFD obligations in respect of shellfish waters has been fully established. In addition, steps will be taken to ensure that the new environmental objectives set out under the WFD guarantee at least the same level of protection as existing legislation.

Recommendation

- All competent authorities must ensure that standards of water quality are maintained. Improvement of water quality should be a high priority.

5.5 Human health and fish health

- 5.5.1 It should be acknowledged that human health and fish health are separate issues and that issues relating to human health will have a higher impact on the marketability of seafood. Fish health is also a serious issue which should receive separate consideration.
- 5.5.2 The Food Standards Agency is responsible for the protection of public health and periodically monitors shellfish production and relaying areas to check for their microbiological status, the possible presence of toxin-producing organisms in the water and biotoxins in shellfish flesh. Closure of fisheries as a result of biotoxin contaminations can have serious economic consequences and result in the loss of export markets. It is important that producers and fishermen are given early notification of the presence of biotoxins in shellfish.
- 5.5.3 Fish disease is an ever present threat. With the globalisation of seafood markets and greater travelling distances for seafood products, the risk of disease for Northern Ireland stocks is rising.

Recommendation

- The procedure for communicating toxin test results to the fishing industry should be reviewed to ensure that information is quickly distributed to the

supply chain. Toxin test results must be made available in sufficient time to prevent shellfish being sold to consumers.

5.6 Government consultation

- 5.6.1 Most government marine policy decisions in some way affect inshore bivalve fisheries but the sector feels that it is often inadequately consulted. Consultation should take place sufficiently early to influence decision-making and stakeholder views must be taken into account.
- 5.6.2 Stakeholders have valuable opinions and implementation of marine policy will be more effective if their concerns can be addressed and accommodated. Many marine projects could have benefits for fisheries incorporated within the project proposals or be adapted to limit the impact on fisheries. Marine environmental protection will be much more effective if fishermen are consulted at an early stage, involved in the process and if the reasons for, and potential benefits of, protection are adequately explained.
- 5.6.3 The Food Environment Protection Act (FEPA)¹ regulations for disposal of shellfish waste appear very onerous for small businesses to operate and are, therefore, hindering development in this sector.

Recommendations

- Consultation procedures for involving shellfish producers must be reviewed by government departments (especially the DOE and DARD) in order to ensure that producers are consulted at a sufficiently early stage in the process for their concerns to be adequately addressed.
- FEPA regulations for disposal of shellfish waste should be reviewed to explore the possibility of a simpler regime that is proportionate to the size of the business involved.

¹ 1985 c.48

6. Intertidal fisheries

Vision: A harvest of intertidal marine species that maximises contribution to the local and national economy within the context of sound resource husbandry, and the maintenance of a high quality intertidal environment

6.1 Background

- 6.1.1 Northern Ireland has about 650km of coastline, a significant proportion of which has fisheries and seaweed harvesting in the intertidal zone, or shore. Fisheries vary from extremely small scale (private consumption) to larger activities on a commercial basis, and it is the latter under consideration here. Currently these are believed to include manila and razor clams, mussels, cockles, oysters, lug worms, shore crabs and winkles (known locally as ‘whelks’), and dulse at extreme low water levels. There is also the possibility of other species being exploited in the future. Harvesting is most frequently achieved by land-based access, but boats may be used for access and transport of harvest during high water. It is believed that some of these fisheries may be of considerable commercial significance, and may already represent an important contribution to the local economy, and might contribute more.
- 6.1.2 The Intertidal Fisheries working group discussed the issues in some depth, with the objective of identifying measures (proportionate to the scale and impact of each fishery when known) that would maximise the benefits from these fisheries to the Northern Ireland and local economies. All future developments must be compatible with relevant legislation. Sustainability, particularly in relation to viability of the target species, also needs to be ensured. There should be minimal adverse impact on other species and habitats, and compliance with conservation designations and their objectives. The recently published ICZM (NI) Strategy and future UK Marine Bill will also be relevant.
- 6.1.3 Issues such as human health, fish health and water quality are as relevant to intertidal fisheries as they are to bivalve molluscs and the points discussed in the previous chapter on these issues are applicable to intertidal fisheries also.

6.2 Data

- 6.2.1 Currently there is no quantified information on the scale of activities, the quantities of each species taken, the economic turn-over, the biological sustainability of the harvesting, impact on non-target species and habitats, compliance with health and safety and other employment requirements, compliance with food standards, or indeed the location and timing of the

operations. Some research has suggested that the biological impacts may be considerable in some areas. As a result of this lack of data, there is inadequate understanding of the impact of any of these activities on fishery sustainability. The environmental impacts on both designated and undesignated sites are also largely unknown and it is unclear whether the economic value to Northern Ireland of these activities is being maximised.

Recommendations

- Data should be collected to ascertain the extent of the existing fisheries.
- Research should be carried out to improve understanding of the sustainability of individual fisheries.
- An evaluation of the individual fisheries in terms of possible impacts on designations should take place.

6.3 Regulation and rights

- 6.3.1 In addition to the lack of information and data, the intertidal fisheries are subject only to health and hygiene regulations, a situation that is unusual in the UK context. There is a lack of awareness of rights and responsibilities and a lack of knowledge regarding the protection of public property, rights and interests. These problems lead to unregulated activity.
- 6.3.2 Many of the most productive areas for this type of harvesting are in the major sea loughs which themselves are subject to a range of management issues. National and international nature conservation designations, water quality issues, recreational activities, intertidal mariculture operations and other rights and responsibilities may all be affected. A similar, but possibly smaller situation may apply to open coasts.
- 6.3.3 The introduction of regulations that would restrict the public right to fish could face legal challenge. A legal precedent exists on the right to gather shellfish.¹ However it should be acknowledged that such precedents are subject to all relevant EU legislation such as the Habitats Directive², the Water Framework Directive³ and the Birds Directive.¹

¹ Thomas Adair v The National Trust for Places of Historic Interest or Natural Beauty and The Crown Estate Commissioners 1995 No. 1114

² Council Directive 92/43/EEC

³ Council Directive 2000/60/EC

- 6.3.4 Many areas of substantial intertidal fisheries have environmental designations. Fisheries need to be conducted in keeping with these designations. Government must decide whether any particular activity is damaging or not, at what level the fishery is sustainable, and the impact on habitats.
- 6.3.5 The lack of effective legislation has meant that many intertidal fisheries have not been properly managed. As a result of this, large-scale fisheries, such as cockle extraction from Strangford Lough, may not be sustainable and commercial and protected species, such as lugworm (*Arenicola marina*) and eelgrass (*Zostera* spp.), can be co-located. There is also a need for timely introduction of regulation for emerging fisheries such as seaweed harvesting. Regulation is also required specifically for Strangford Lough as there are currently no minimum landing size regulations for oysters and there is no regulation of winkle and cockle hand gathering fisheries.

Recommendations

- Develop a clear, shared understanding of existing rights.
- Regulate all fisheries for the benefit of sustainability.
- Introduce appropriate regulations in proportion to the extent of each fishery.
- Any coastal authority formed under, for example ICZM, should address the needs of intertidal fisheries.
- Evaluate the environmental impact of the key intertidal fisheries.

6.4 Licensing

- 6.4.1 Consideration should be given to several fishery rights for intertidal fishing to encourage good husbandry. However, this should be subject to wider environmental and crop sustainability concerns and would require some form of licensing system to regulate intertidal fisheries. Attention would have to be paid to the division of rights and licences. Any licensing authority should take ecosystem management considerations fully into account. There are also other fishery issues involved such as linkages to a mariculture strategy and licences issued for Loughs Foyle and Carlingford by the Loughs Agency.

¹ Council Directive 79/409/EC

Recommendation

- Develop a licensing system to regulate intertidal fisheries.

7. Mariculture

Vision: A well represented, cohesive and stable mariculture sector with a world renowned reputation for producing high quality products using sustainable methods.

7.1 Background

- 7.1.1 The mariculture (marine aquaculture) sector in Northern Ireland includes bottom cultured and rope grown mussels, Pacific and native oysters, king scallops and salmon.
- 7.1.2 The sector is well developed, with around 68 licensed shellfish sites. However there is no representative body for the mariculture sector. For the purposes of this review, the Cross Border Aquaculture Initiative Team (CBAIT) representative on the SAG liaised with mariculture interests and reflected their views in the report.

7.2 Sustainability, profitability and development

- 7.2.1 Mariculture can make a significant contribution to the seafood production and be of benefit to the economy as a whole. Mariculture delivers food safety through initiatives such as quality schemes, shellfish depuration and organic production. Not all licensed mariculture sites are being fully utilised which suggests that the sector may not be realising its full potential.
- 7.2.2 Significant increases in mariculture production in the short term, and long term, can be made. However further expansion may be affected by a number of factors including the carrying capacity of sea loughs (see paragraph 2.3.8), the availability of suitable sites and pressures from other marine users. There are also concerns that further regulation and competition for inshore resources could preclude expansion into potentially new mariculture sites. New product development and investigation of premium value markets must, therefore, be prioritised. Diversification of mariculture effort would involve the sustainable exploitation of a wide range of species and natural resources. This could include produce such as seaweed, shellfish, on-shore hatcheries and off-shore mariculture operations.
- 7.2.3 The annual fishery for wild mussel seed (concentrated in an area west of Skullmartin Rock off the Ards Peninsula) which supplies the expanding bottom mussel sector may not be sustainable in the long-term. Issues that need to be addressed include fishing times (when to open the fishery), seed transportation and seed stocking densities on relay sites.

Recommendations

- The Strategy for Aquaculture in Northern Ireland should be completed to underpin future development and provide a framework for investment from public, private and EU sources.
- Support should be given to assist the sector to maximise returns and add value through quality initiatives and traceability schemes and to target high value markets and products.
- There should be promotion of developments in technology and diversification into new species, in particular development of the range of species and natural resources the coast has to offer (eg seaweed, shellfish (eg urchins, periwinkles etc), on-shore hatcheries and off-shore aquaculture operations.
- The efficiency and productivity of the finite mussel seed resource should be maximised through appropriate fishing, seed transportation and on-growing practices.

7.3 Representation

- 7.3.1 To date efforts by DARD and CBAIT aimed at encouraging local producers to participate in an appropriate representative organisation for the various mariculture sectors in Northern Ireland have proved unsuccessful. Consequently there is no formal representative organisation to lobby or put forward views on the development of policy on behalf of the mariculture industry.

Recommendation

- Government should actively encourage and facilitate the sector to participate in a representative group, so that the views of the mariculture sector can better influence government policy.
- There should be effective promotion of the mariculture industry and products to government and the public, ensuring recognition of the value of the sector in producing high quality, safe and wholesome seafood products.

7.4 Fish health, human health and water quality

- 7.4.1 There is a continuing risk to fish health from illegal fish movements and imports. Globalisation of the trade in seafood products has increased the risk of disease introduction, the consequences of which can be devastating (e.g. closed fisheries and loss of export markets). The EU Shellfish Waters Directive has been enacted through national legislation to protect and improve the quality of coastal and brackish water bodies in

which shellfish live in order to contribute to the quality of edible shellfish products.

- 7.4.2 Food safety is the responsibility of the Food Standards Agency (FSA) which periodically monitors shellfish production and relaying areas to check for microbiological status, the possible presence of toxin producing phytoplankton in the water and biotoxins in shellfish flesh. Serious economic consequences can result from the closure of fisheries due to the presence of biotoxins. It is vital, therefore, that producers and fisherman are given early notification of the presence of biotoxins in shellfish.

Recommendations

- Enforcement of fish health regulations must continue to be given high priority and measures regularly reviewed.
- The risks and consequences of disease, and regulations to protect against spread of disease, should be well publicised to those in the sector.

8. Pot fisheries

Vision: A profitable and vibrant sector, with comprehensive and properly enforced regulation, which is realising its own potential and is willing to take the lead on voluntary conservation schemes with the appropriate aids from the public sector.

8.1 Background

8.1.1 Potting is an effective, and largely environmentally benign, method of fishing for shellfish, particularly brown crab, lobsters, whelks and some pot-caught *Nephrops*. The majority of pots used in Northern Ireland are of traditional creel pot design, with pots strung together in a line which is then anchored to the seabed and left until the owner returns to check them. These fisheries are mostly prosecuted by the smaller under-10m vessels and fishing takes place on all Northern Ireland coasts. The first-sale value of this sector from January until October 2006 was estimated at £1,104,486.

8.2 Sustainability

8.2.1 The pot fisheries sector operates a v-notching scheme for lobsters to ensure conservation and sustainability of stocks. This has been a significant investment and has been very successful in enhancing the Northern Ireland lobster stock. There is, as yet, no government commitment for ongoing funding for conservation schemes and it is imperative that funding must continue for the v-notching scheme. Support should be provided through the new European Fisheries Fund (EFF), which will operate from 2007-2013.

8.2.2 In the past, there has been a lack of information on stocks and landings which has hindered appropriate management and sustainable development for pot fisheries. However, this situation has been addressed by the requirement, from 1 January 2006, for under-10m vessels to report all shellfish landings. DARD, with cooperation from the sector, are also investigating the possibility of plotting data onto a GIS (Geographical Information System) which will assist in identifying areas fished, spawning grounds etc. These are positive steps towards providing essential information for future management of pot fisheries.

8.2.3 There are occasional instances where trawling and potting activity come into conflict. This can be resolved through better communication. A code of practice developed and agreed by trawlermen and pot fishermen could be useful in avoiding gear conflicts in the future.

Recommendations

- Government should include support for ongoing funding for the v-notching scheme within the new European Fisheries Fund.
- There should be government-funded research and monitoring schemes on crab and lobster fisheries to provide information and knowledge to assist with appropriate development of the sector (e.g. plotting of information on GIS to include areas fished, gear used and spawning grounds).
- A voluntary code should be developed to define potting areas and improve communications with trawlers and scallop boats.
- The Inshore Development and Management Group proposed in this report should consider the adoption of a relevant Code of Practice with certain other marine users to deal with issues which affect fish stocks (e.g. proposals for windfarms).

8.3 Legislation

- 8.3.1 It is believed that current legislation and enforcement powers do not act as a sufficient deterrent to certain illegal fishing activities. Pot fisheries can be damaged by, for example, the landing of under sized lobsters and excessive 'toe-ing' (removal of crab claws and return of damaged crab to the sea). Limited legislation exists in this area which allows 1% by weight of catch, when potting, and a maximum of 75 kg of crab claws per catch when fishing by other methods. This is intended to allow for injuries to crabs in the pots. It is felt, however, that this legislation is not effectively enforced and the practice of 'toeing' crabs is increasing. There is a need for more effective regulation to protect the stocks and ensure the sustainable development of pot fisheries. Also, the drafting and implementation of new legislation by government should be expedited more quickly. Improved local management is necessary to ensure better regulation, monitoring and enforcement in the inshore area.
- 8.3.2 Environmental impacts arising from aggregate dredging and dumping on shellfish nursery sites also need to be minimised. There is a perceived lack of consultation on environmental issues and a belief that the industry's views are ignored on issues which may impact on fish stock.

Recommendations

- There should be faster processing of relevant legislation, including finalisation of the 'Unlicensed Fishing for Crabs and Lobsters Regulations (NI) 2007' and new legislation in respect of v-notching to protect both male and female lobsters and ensure sustainability of stocks.

- There is a need for more stringent enforcement to ensure quality and sustainability of stocks are maintained. New enforcement powers may be required.
- Improved consultation with the potting sector is needed on environmental issues and other issues which affect fish stocks.

9. Sea angling

Vision: A sea angling sector which is fully recognised and supported, that is contributing to local economies, and can promote itself as both sustainable and fully accessible to all.

9.1 Background

- 9.1.1 The Net Benefits report specifically referred to sea angling stating that “Fisheries Departments should reform inshore fisheries management and give a focus on developing the sector, including explicit management of recreational sea angling interests.”
- 9.1.2 Sea angling includes charter boat angling, inshore fishing from small boats and shore angling from the beach or coastline. Many anglers are very aware of the necessity of conserving fish stocks and local anglers participate in the Republic of Ireland Central Fisheries Board’s ‘Marine Sport Tagging Programme’ whereby species such as blue shark, tope, monkfish, common skate and ray are tagged and released.
- 9.1.3 The factors that can have an adverse effect on sea angling include inshore trawling, illegal fishing, pollution, indiscriminate dumping of dredging waste, a decline in species at the lower end of the food chain, increases in the populations of species of predatory mammals and birds, climate change and insufficient protection for valuable sea angling sites. The importance of the benthic communities to recreational sea angling should be recognised.

9.2 Recognition of the value of sea angling

- 9.2.1 The social and economic contribution of sea angling to Northern Ireland is not known and, as a result, there is a lack of government support and investment in this sector. There is also a scarcity of general data on sea angling in Northern Ireland.
- 9.2.2 According to Net Benefits, around 2 million people in England and Wales took part in sea angling in 2002. The Drew Report¹ published by Defra in 2004 suggests that value of sea angling to the economies of England and Wales may be between £600 and £1,300 million. A Nautilus Report²

¹ <http://statistics.defra.gov.uk/esg/reports/SeaAngling/default.asp>

² <http://www.nautilus-consultants.co.uk/pdfs/wales.pdf>

prepared for the Welsh Assembly in 2000, suggested that the value of recreational sea angling to the Welsh economy was £28.7 million. These figures provide an insight into the potential for recreational sea angling in Northern Ireland, provided that effective management and promotion strategies are developed and supported.

- 9.2.3 A contributing factor to the problems facing angling may be the lack of representation for the sector. This makes communication and consultation difficult and ineffective, resulting in the sport losing out on opportunities to develop and be made more accessible to all.

Recommendations

- A study should be commissioned to investigate the value of sea angling to the Northern Ireland economy.
- Government and private sector support should be encouraged to ensure suitable investment and promotion of sea angling that reflects its value to the NI economy.
- Effective representation of sea angling in the development of government and local authority marine and coastal policies is recommended.
- Government and private sector investment is needed to provide good access and infrastructure along the coast and at ports and harbours for shore, sea-based and disabled sea angling.

9.3 Stocks

- 9.3.1 There has been a decline in the quantity and biodiversity of fish stocks of interest to sea anglers, resulting in poor development of the sport and a loss of tourism opportunities. Nursery and breeding areas for important fish stocks should be identified and protected. To ensure fish stocks are protected and that sea angling maintains its good environmental profile, the development of a code of practice would be useful. Anglers should require consent from the Environmental Heritage Service (EHS) when operating within an Area of Special Scientific Interest (ASSI), a Special Area of Conservation (SAC) or a Special Protection Area (SPA).

Recommendations

- Consideration must be given to the interests of sea angling in coastal and marine developments, to improve access and create an angling infrastructure.
- There should be protection and management of specific areas for angling activity and nursery grounds, to improve the abundance and diversity of fish stocks.

- Responsible angling practices should be encouraged through the promotion of a suitable Code of Practice which would provide guidance on stock conservation and the safeguarding of the environment.
- Sea angling opportunities should be considered when developing multi-purpose Marine Protected Areas (MPAs).

10. Management structures

Vision – A Development and Management Group which has both the commitment and the necessary resources to deliver on the recommendations of the Review of Inshore Fisheries and meet future challenges for the betterment of the entire inshore area.

10.1 Introduction

10.1.1 The Net Benefits report of 2004 recommended that greater focus be placed on inshore fisheries. In Northern Ireland there is currently no management structure to specifically address inshore issues.

10.1.2 Inshore fisheries management is essentially a local issue and decision-making should be devolved to responsible organisations located as close as possible to the level at which the decisions apply. Local fishermen are best placed to identify fisheries management problems and design solutions at a local scale. However, these need to be set in the broader context of development at the regional scale and the policy framework established by a national strategy.

10.1.3 This issue was central to the review and a working group was established to develop proposals for consideration by the SAG. A number of proposals for potential structures for inshore fisheries management groups were identified for consideration. These included the establishment of a local government committee to manage the inshore fishery or, alternatively, nominating a management group entirely independent of stakeholders and central government. There was also debate as to whether there should be two groups managing the Northern Ireland inshore fishery, one for Co. Down and one for the rest of Northern Ireland or whether one group in total would suffice. It was felt that a single group would be sufficient to effectively deal with the Northern Ireland inshore area and that this group should contain a broad membership representing all inshore stakeholders.

10.2 Inshore Fisheries Development & Management Group

10.2.1 A single Inshore Fisheries Development & Management Group should be established covering the Northern Ireland coast.

10.2.2 Membership of the group was suggested as follows:

- Secretariat (Inshore Development Manager);
- Local Councillors or Officials;

- Environment NGO representative;
- Recreational Sea Angling Interest(s);
- Aquaculture Representative;
- Fishing Industry.

10.2.3 Since the group will be advising central government, it was felt that it would not be appropriate for DARD to have full membership of the group but rather its status should be that of an “active observer”. Central government should fully participate in the discussions and activities of the group but would not involve itself in decision making.

10.2.4 It was suggested by the working group that since the primary function of this group will be to advise and work in partnership with government on the management of the inshore fishery sector, fishing interests should comprise at least 50% of the group’s membership. Co-option of certain interest groups onto the Development & Management Group may be necessary as specific issues arise and provision should be made for this. The group would also be able to form sub-groups to deal with specific issues of local interest. Consideration should be given to including a Loughs Agency representative to ensure that a consistent approach to inshore management is adopted throughout Northern Ireland.

10.2.5 The key functions of the group would be to:

- Advise government on issues affecting inshore fisheries in Northern Ireland to assist DARD in developing policies and strategies for the inshore fishery;
- Develop (a) regional management plan(s) (rolling over a 3-5 year cycle) to implement the regional strategy for inshore waters in Northern Ireland, setting clear objectives and measurable targets for management and environmental integration.

10.2.6 To be effective, the group should be supported by a full-time Development Manager with appropriate administrative support. These staff would provide a secretariat for the new group and represent the group on day-to-day development and management issues. Although DARD Fisheries should be responsible for providing financial support for the organisation, the group’s support staff should be independent of DARD and would be accountable to the Development and Management Group.

10.2.7 Key responsibilities of the Development Manager might include -

- Influencing and liaising with government on fisheries development and management;

- Implementing the proposals and recommendations of the Development and Management Group;
- Identifying and helping to resolve issues relating to the environment and other users of the inshore area;
- Reporting regularly to all stakeholders and providing better publicly accessible information on the inshore sector;
- Facilitating the operation of the Development and Management Group;
- Representing the group on a day-to-day basis and in other forums.

10.2.8 It was suggested that the post holder should possess technical knowledge of the industry and environmental matters, be aware of the relevant policy and regulatory context and have the trust of all parties.

10.2.9 The post-holder would be required to assist the group to develop and deliver their plan(s) for the development and management of inshore fisheries (under the instructions of the group) and to evaluate, appraise and monitor plans and proposals as they emerge and develop. The position should be supported by central government for a minimum of 5 years, subject to mid-term and 5 year review.

11. Conclusions and Implementation

11.1 Overview

11.1.1 The Northern Ireland inshore fisheries sector is vibrant and strong and can benefit both from its diversity and its potential for development and growth. This report has identified the existing strengths of the sector, as well as areas where improvement is needed. Discussions within the Stakeholder Advisory Group and Working Groups have identified six overarching themes which apply to all sectors of the inshore fishery.

11.1.2 The SAG considers that these six issues would represent the core components of a future strategy for inshore fisheries. The group views the production of this strategy as a priority.

11.1.3 The issues identified were:

- Knowledge;
- Ecosystem-based approach;
- Management;
- Legislation;
- Resources;
- Communication.

11.2 Knowledge

11.2.1 The improvement of data collection and focused research are crucial means by which a profitable and sustainable future can be secured for inshore fisheries. Research, data collection and monitoring studies can be vital for quantifying the extent of existing and potential fisheries and their relationship with the marine environment, as well as the possible scope for future development. Improved knowledge will also allow future developments to adhere to the principles of Marine Spatial Planning (MSP). Stakeholders must be involved in future research and data collection. Information provided by industry must, where appropriate, be treated confidentially to protect the rights of those who co-operate and to promote the confidence of industry in the competent authorities charged with regulating fisheries.

11.3 Ecosystem-based approach

11.3.1 An ecosystem-based approach is a framework for making ecologically sound decisions which recognises that human and economic interests must be considered collectively. Such an approach will demand close liaison within government, between the fishing industry and conservation and environmental organisations and between administrators and stakeholders. Effective consultation on relevant issues and the ability to gain the full support of stakeholders will ensure the success of this approach. Adoption of the ecosystem-based approach should be the key mechanism by which sustainability in inshore fisheries management is achieved.

11.4 Management

11.4.1 The future development of the inshore sector is dependent upon appropriate and effective management. A single Development and Management Group should be established to cover the entire Northern Ireland coast. This group would be supported by an Inshore Development Manager and should draw its membership from the fishing industry, environmental interests, sea angling representatives, the mariculture industry and local government. Central government should participate in the group as an “active observer.”

11.5 Legislation

11.5.1 A sustainable inshore fishery must be underpinned by effective regulation which clarifies the rights and responsibilities of all stakeholders and provides a framework to deter unsustainable practices. An audit of current legislation affecting inshore fisheries would identify where additional legislation is necessary and explore the possibility of simplifying current legislation.

11.6 Resources

11.6.1 Financial support will be essential to the achievement of these recommendations. Appropriate funding will be necessary to finance the establishment of the Development and Management group and to ensure that the recommendations of this report are implemented. The DARD strategy arising from this report will need to pay particular attention to the issue of funding and include an appraisal of costs for implementation of the strategy.

11.7 Communication

11.7.1 Effective communication, supported by a strategy, will ensure that all stakeholders are fully informed of, and properly consulted on, the issues affecting the Northern Ireland inshore fisheries. This will mean that policies, strategies, plans and regulations are developed with stakeholder involvement. This will ultimately lead to wider support, better implementation and improved compliance. Any future Development and Management Group will need to liaise fully with all relevant bodies with responsibility for the inshore zone.

Annex A

Stakeholder Advisory Group Representation

Anglo North Irish Fish Producer's Organisation (ANIFPO)
Agri-Food and Biosciences Institute (AFBI) - Aquatic Science
Centre for Marine Resources and Mariculture (C-Mar), Queen's University Belfast
Cross Border Aquaculture Initiative Team (CBAIT)
DARD - Fisheries Inspectorate
DARD - Aquaculture
DARD - Sea Fisheries
Department of Culture, Arts & Leisure (DCAL)
Department of the Environment (DOE)
Environment and Heritage Service (EHS)
Foyle Carlingford & Irish Lights Commission (FCILC) / Loughs Agency
Irish Federation of Sea Anglers (IFSA) – shore based
National Federation of Sea Anglers (NFSA) – off-shore
Marine Taskforce
North Coast Charter Boatmen's Association
North Coast Lobster Fishermen's Association
North East Coast Lobster Fishermen's Association
Northern Ireland Fishery Harbour Authority (NIFHA)
Northern Ireland Fish Producer's Organisation (NIFPO)
Northern Ireland Biodiversity Group/ Council for Nature Conservation & the Countryside (NIBG/CNCC)
Northern Ireland Local Government Association (NILGA) (local govt. officer)
Northern Ireland Local Government Association (NILGA)
Northern Ireland Scallop Fishermen's Association
Northern Ireland Seafood (NIS)
Northern Ireland Tourist Board (NITB)
Sea Fish Industry Authority (SFIA)
South Down Fishing Villages Taskforce
Strangford Lough Office (SLO)

Annex B

Recommendations from the Review of Inshore Fisheries

Securing a sustainable inshore fishery

- Government should urgently produce a strategy for inshore fisheries which would adopt an ecosystem-based approach. This should be developed and implemented with the fullest involvement of all stakeholders.
- Any future inshore strategy must pro-actively promote and market the seafood produce of NI inshore waters, with the objective of improving quality, adding value to, and improving the profitability and sustainability of the sector.
- Government should ensure that adequate resources are made available to implement the strategy effectively. This will include use of its own resources and finance obtained under the EU's European Fisheries Fund (EFF).
- There should be an audit of data and research to identify gaps in our knowledge of inshore fisheries. DARD, together with marine scientists, should develop and implement a programme designed to address gaps in the knowledge base. Stakeholders should be involved as part of the data collection process.
- This data stream should inform future management activities which may include stock enhancement and provide for sustainable harvesting plans.
- There should be an audit of inshore fisheries legislation and a review of management practices should be undertaken in relation to compliance and the level of regulation and enforcement.
- Full involvement of stakeholders in the development of local management plans (rolling over a 3-5 year cycle) to implement a strategy for inshore fisheries in Northern Ireland which should include clear and quantifiable objectives for development and sustainability.

Bivalve Molluscs

5.2 Sustainability and profitability

- Sustainable growth should be encouraged and appropriate stock enhancement schemes should be introduced to increase shellfish stock and create new fishing opportunities. The sector should work closely with the competent authorities to agree suitable fishing areas and the management measures required to develop these opportunities to their full potential.

- The potential for new fisheries should be investigated and assistance should be provided through available fisheries funding mechanisms to carry out surveys, environmental assessments and pilot fishery projects.
- Fisheries policy makers should take account of the effects of wider fisheries policy in encouraging displacement of fishing activity into the shellfish mollusc sector and causing market distortion and over exploitation. Wider fisheries policy should not result, directly or indirectly, in unsustainable development in the inshore bivalve sector.
- Assistance should be made available, through appropriate funding mechanisms, to effectively market Northern Ireland produce in high value, premium markets.

5.3 Enforcement

- The DARD fisheries inspectorate should work with local industry to develop intelligence that will enable action against illegal fishing activity to be targeted more effectively. The enforcement presence should be more active and visible in order to deter offenders and reassure local industry that action is being taken.
- Whilst acknowledging progress towards a UK-wide system of administrative penalties, compliance with shellfish regulations should be improved through direct stakeholder involvement in inshore fisheries management and governance.

5.4 Water quality

- All competent authorities must ensure that standards of water quality are maintained. Improvement of water quality should be a high priority.

5.5 Human health and fish health

- The procedure for communicating toxin test results to the fishing industry should be reviewed to ensure that information is quickly distributed to the supply chain. Toxin test results must be made available in sufficient time to prevent shellfish being sold to consumers.

5.6 Government consultation

- Consultation procedures for involving shellfish producers must be reviewed by government departments (especially the DOE and DARD) in order to ensure that producers are consulted at a sufficiently early stage in the process for their concerns to be adequately addressed.
- FEPA regulations for disposal of shellfish waste should be reviewed to explore the possibility of a simpler regime that is proportionate to the size of the business involved.

Intertidal Fisheries

6.2 Data

- Data should be collected to ascertain the extent of the existing fisheries.
- Research should be carried out to improve understanding of the sustainability of individual fisheries.
- An evaluation of the individual fisheries in terms of possible impacts on designations should take place.

6.3 Regulation and Rights

- Develop a clear, shared understanding of existing rights.
- Regulate all fisheries for the benefit of sustainability.
- Introduce appropriate regulations in proportion to the extent of each fishery.
- Any coastal authority formed under, for example ICZM, should address the needs of intertidal fisheries.
- Evaluate the environmental impact of the key intertidal fisheries.

6.4 Licensing

- Develop a licensing system to regulate intertidal fisheries.

Mariculture

7.2 Sustainability, profitability and development

- The Strategy for Aquaculture in Northern Ireland should be completed to underpin future development and provide a framework for investment from public, private and EU sources.
- Support should be given to assist the sector to maximise returns and add value through quality initiatives and traceability schemes and to target high value markets and products.
- There should be promotion of developments in technology and diversification into new species, in particular development of the range of species and natural resources the coast has to offer eg seaweed, shellfish (eg urchins, periwinkles etc), on-shore hatcheries and off-shore aquaculture operations.
- The efficiency and productivity of the finite mussel seed resource should be maximised through appropriate fishing, seed transportation and ongrowing practices.

7.3 Representation

- Government should actively encourage and facilitate the sector to participate in a representative group, so that the views of the mariculture sector can better influence government policy.
- There should be effective promotion of the mariculture industry and products to government and the public, ensuring recognition of the value of the sector in producing high quality, safe and wholesome seafood products.

7.4 Fish health, human health and water quality

- Enforcement of fish health regulations must continue to be given high priority and measures regularly reviewed.
- The risks and consequences of disease, and regulations to protect against spread of disease, should be well publicised to those in the sector.

Pot Fisheries

8.2 Sustainability

- Government should include support for ongoing funding for the v-notching scheme within the new European Fisheries Fund.
- There should be government-funded research and monitoring schemes on crab and lobster fisheries to provide information and knowledge to assist with appropriate development of the sector (e.g. plotting of information on GIS to include areas fished, gear used and spawning grounds).
- A voluntary code should be developed to define potting areas and improve communications with trawlers and scallop boats.
- The Inshore Development and Management Group proposed in this report should consider the adoption of a relevant Code of Practice with certain other marine users to deal with issues which affect fish stocks (e.g. proposals for windfarms).

8.3 Legislation

- There should be faster processing of relevant legislation, including finalisation of the 'Unlicensed Fishing for Crabs and Lobsters Regulations (NI) 2007' and new legislation in respect of v-notching to protect both male and female lobsters and ensure sustainability of stocks.
- There is a need for more stringent enforcement to ensure quality and sustainability of stocks are maintained. New enforcement powers may be required.
- Improved consultation with the potting sector is needed on environmental issues and other issues which affect fish stocks.

Sea Angling

9.2 Recognition of the value of sea angling

- A study should be commissioned to investigate the value of sea angling to the Northern Ireland economy.
- Government and private sector support should be encouraged to ensure suitable investment and promotion of sea angling that reflects its value to the NI economy.
- Effective representation of sea angling in the development of government and local authority marine and coastal policies is recommended.
- Government and private sector investment is needed to provide good access and infrastructure along the coast and at ports and harbours for shore, sea-based and disabled sea angling.

9.3 Stocks

- Consideration must be given to the interests of sea angling in coastal and marine developments, to improve access and create an angling infrastructure.
- There should be protection and management of specific areas for angling activity and nursery grounds, to improve the abundance and diversity of fish stocks.
- Responsible angling practices should be encouraged through the promotion of a suitable Code of Practice which would provide guidance on stock conservation and the safeguarding of the environment.
- Sea angling opportunities should be considered when developing multi-purpose Marine Protected Areas (MPAs).

Annex C

Glossary

Common Name	Scientific Name
Blue mussel or common mussel	<i>Mytilus edulis</i>
Horse mussel	<i>Modiolus modiolus</i>
Oyster (Native / European)	<i>Ostrea edulis</i>
Great scallop	<i>Pecten maximus</i>
Queen scallop	<i>Aequipecten operucularis</i>
Cockle	<i>Cerastoderma edule</i>
Lugworm	<i>Arenicola marina</i>
Eelgrass	<i>Zostera spp</i>
Shore Crabs	<i>Carcinus maenas</i>
Crabs Edible/ Brown	<i>Cancer pagurus</i>
Velvet/Swimming	<i>Necora puber</i>
Lobster	<i>Homarus gammarus</i>
Nephrops	<i>Nephrops norvegicus</i>
Farmed salmon	<i>Salmo salar</i>
Whelk	<i>Buccinum undatum</i>
Winkle (periwinkle)	<i>Littorina littorea</i>
Manila Clam	<i>Tapes philippinarum</i>
Palourde Clam	<i>Tapes decussatus</i>
Razor Clam	<i>Ensis spp.</i>

