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DGXIV (FISHERIES)**

**REGIONAL SOCIO-ECONOMIC STUDIES ON
EMPLOYMENT AND THE LEVEL OF
DEPENDENCY ON FISHING**

IRELAND (Lot 15)

**FINAL REPORT
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BY

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TABLE OF CONTENTS

ACRONYMS

1	INTRODUCTION.....	1
2	EXECUTIVE SUMMARY.....	2
2.1	METHODOLOGY.....	2
2.2	BRIEF ANALYSIS OF FISHING AND RELATED ACTIVITIES.....	2
2.2.1	<i>General.....</i>	2
2.2.2	<i>Ownership.....</i>	3
2.2.3	<i>Employment.....</i>	3
2.3	QUANTIFYING, DESCRIBING AND EXAMINING THE LEVEL OF DEPENDENCY.....	4
2.3.1	<i>Ratios.....</i>	4
2.3.2	<i>Case studies.....</i>	4
2.3.3	<i>Multipliers.....</i>	5
2.4	EXAMINATION OF THE DEVELOPMENT OF THE INDUSTRY.....	5
2.4.1	<i>Comparison.....</i>	5
2.4.2	<i>Development of the economy and industry.....</i>	5
2.5	EXAMINATION OF EU FUNDED MEASURES.....	6
2.5.1	<i>Actual impact of EU funded measures.....</i>	6
2.5.2	<i>Perceived impact of EU funded measures.....</i>	7
2.5.3	<i>Introduction of socio-economic measures.....</i>	8
2.5.4	<i>Populations at risk.....</i>	8
2.5.5	<i>Development and potential for job creation.....</i>	8
2.5.6	<i>Diversification out of fishing.....</i>	9
2.5.7	<i>Conclusions.....</i>	9

Figure 1 Map of Ireland showing NUTS 3 Regions, cities, main fishery harbours and case study areas

ACRONYMS

BIM	Bord Iascaigh Mhara (The Irish Sea Fisheries Board)
CFP	Common Fisheries Policy
CIP	Census of Industrial Production
CSO	Central Statistics Office
DOMNR	Department of Marine and Natural Resources
EAGGF	European Agricultural Guidance and Guarantee Fund
EPIRB	Emergency Position Indicating Radio Beacon
ERDF	European Regional Development Fund
ESF	European Social Fund
ESRI	Economic and Social Research Institute
FIFG	Financial Instrument for Fisheries Guidance
FTE	Full-Time Equivalent
GDP	Gross Domestic Product
GNP	Gross National Product
GRIT	Generation of Regional Input-Output Tables
GRT	Gross Registered Tonnage
ICES	International Council for the Exploration of the Seas
Kw	Kilowatts
LQ	Location quotient
MI	Marine Institute
MAGP	Multi-annual Guidance Programme
NUTS	Nomenclature des unités territoriales statistiques
OP	Operational Programme
TAC	Total Allowable Catch
WRFB	Western Regional Fisheries Board

1 INTRODUCTION

This report is presented by MacAlister Elliott & Partners in association with Galway Aqua Consulting Ltd. (Ireland) and the Centre for Agricultural Strategy, University of Reading (UK). The objectives of this study (Lot 15) for the European Commission DGXIV (Fisheries) are as follows:

- Quantify and describe the socio-economic importance of the fishing industry in Ireland
- Determine the level of dependency of these areas on fishing in terms of value-added, employment and quotas
- Compare the development of the industry since 1991
- Examine the extent to which the EU socio-economic measure have been implemented and have affected the industry

The study results will be used by the Commission to prepare future structural assistance programmes and assist in targeting supporting measures at the areas most dependent on the fishing industry.

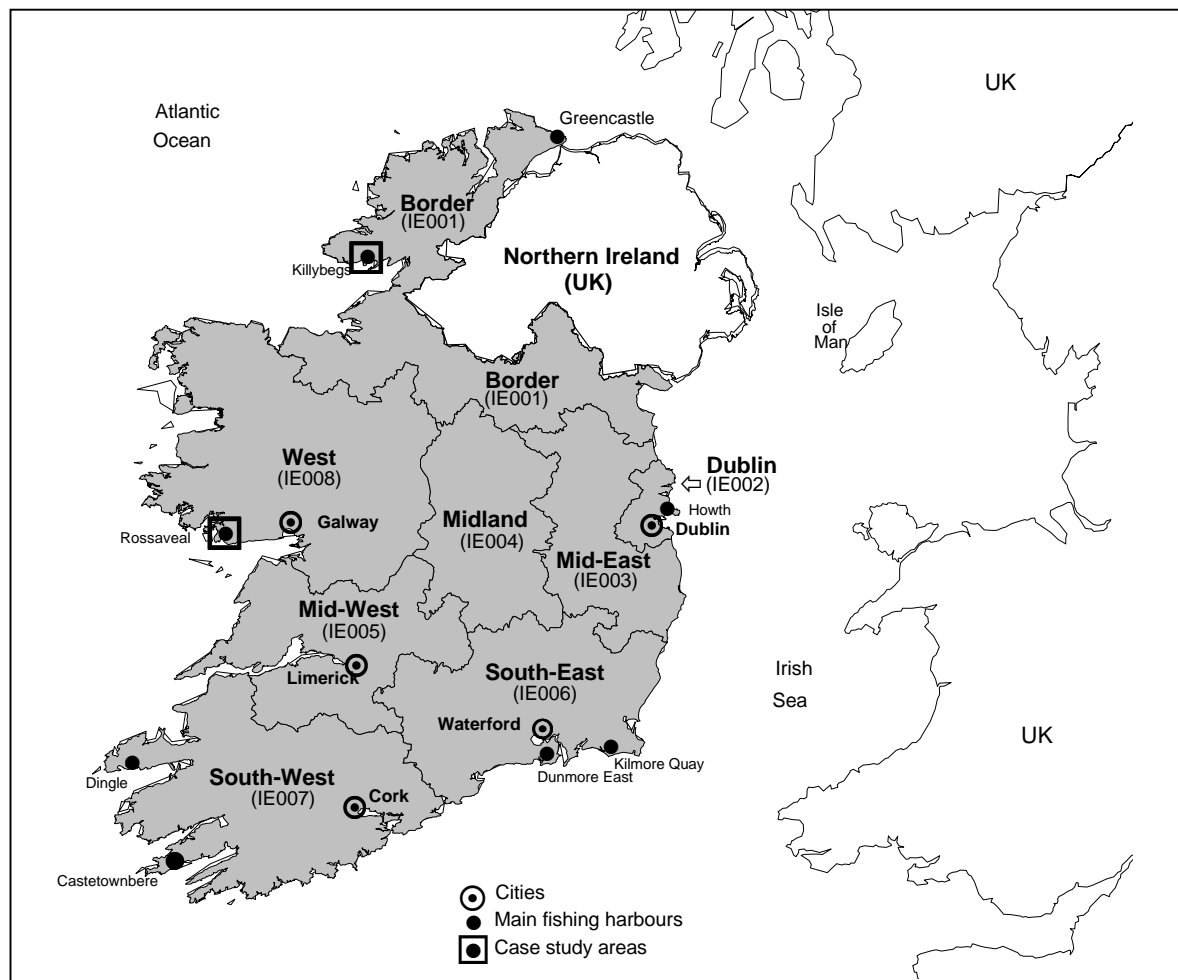


Figure 1 Map of Ireland showing NUTS 3 Regions, cities, main fishery harbours and case study areas

2 EXECUTIVE SUMMARY

2.1 METHODOLOGY

Data relating to the fishing fleet, aquaculture production and processing were collected from DOMNR and BIM. The CSO and ESRI were sources of general economic information on the economy. Data on employment in the fisheries processing and aquaculture sectors is available annually from BIM and the CSO however, employment data for the catching sector is not published annually and the results of recent studies and estimates produced by BIM were used in this study. Where possible, data and statistics were collected for the study reference year of 1997 although some data was only available for 1996. A full set of data tables is presented in Appendix 1 – Excel data tables.

Economic indicators of dependency on the fishing industry were calculated in the form of dependency ratios of gross value-added, employment and dependency on landings of species subject to quotas. Primary and secondary data collection was undertaken in the case study areas of Rossaveal and Killybegs (full text of case studies in Appendix 2 and dependency indicators in Appendix 3) and employment multipliers were estimated.

The development of the industry was evaluated and discussed by comparing current data sets with those presented in the previous 'Regional, Socio-economic Study in the Fisheries Sector' (Ireland)¹ and using time-series data where available (a summary of data definition used in this and the 1991 study is shown in Appendix 4).

The actual impact on the fishing industry and employment of EU FIFG funds, ERDF, ESF and the PESCA Initiative was reviewed. A survey of key industry representatives (see Appendix 5 for questionnaire) was undertaken to determine their perception of this impact and of EU funded measures, as well as perceived opportunities for employment growth, introduction of socio-economic measures and potential for diversification. Populations at risk were analysed and suggestions made for future funding measures.

2.2 BRIEF ANALYSIS OF FISHING AND RELATED ACTIVITIES

2.2.1 General

Ireland has a population of 3.52 million which is concentrated on the eastern seaboard around Dublin and Waterford and in the south and west coast cities of Cork, Limerick and Galway. The agriculture, forestry and fishing sector is still important in Ireland employing 10.8% of the working population in 1996. The industrial and service sectors have grown over the last decade yet unemployment still remains a problem due to the increase in working population. The most socially deprived areas of Ireland are located in the Border, West and South-west NUTS 3 Regions which also correspond to the country's main fishing areas.

Around 1,250 fishing vessels were registered in 1997, of which 31% are over 15 in length. It has been estimated by BIM that there are approximately 2,250 active fishing vessels in Ireland with a median age of nearly 30 years. Around 1,000 active vessels are waiting to register, the majority of which are small (less than 15m in length) and operating in the inshore sector.

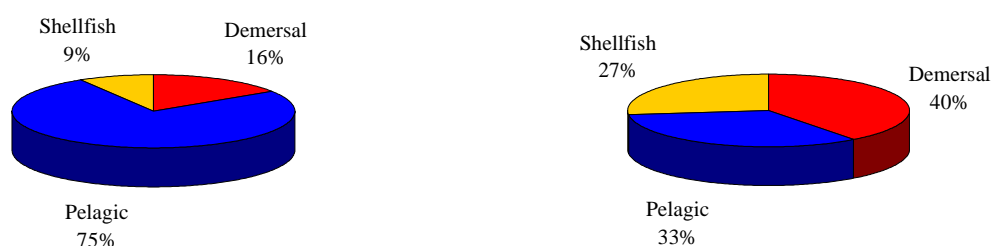
Summary of Irish fishing industry by main species and production volume and value (1997)

Sub-sector	Main species	Volume (tonnes'000)	Value (IR£ mil.)
Marine capture fishing	<i>Overleaf</i>	239.7	124.1
Mariculture	Salmon, oysters, mussels	31.1	49.5
Freshwater aquaculture	Rainbow trout, smolts	(7.5m smolts) 1.3	7.3
Inland capture	Salmon, eels	0.7	2.3
Processing	mostly pelagic	145.0	213.0

¹ Commission of the European Communities (CEC). Directorate General for Fisheries (DG XIV), 'Regional, Socio-Economic Study in the Fisheries Sector, Ireland' (1992)

Around 77% of landings volume by Irish vessels into Irish ports are of species restricted by EU quota; the industry is particularly dependent on mackerel, horse mackerel, herring and cod.

Irish fleet landings by fishery type, volume (tonnes) and value (IR£) respectively (1997, BIM)



The majority of fishing harbours, processing and aquaculture sites are located in the south and west of Ireland. Over half the pelagic species processors are located in the Border region. The mariculture industry in Ireland has grown more than 5-fold since 1980; production is predominantly based in the West, Border and South-west Regions.

Ireland is a net exporter of fish products with exports in 1997 valued at IR£228 million and imports in the same year of IR£72 million. Exports were predominantly of quota species mackerel and horse mackerel and salmon whilst the majority of imports were of meals, oils, fats, etc.

2.2.2 Ownership

There are no restrictions on ownership of vessels or companies established in the capture fishing sector and over 90% are owned by families or individuals. Most of the pelagic processing sector is in a mixture of family and corporate Irish ownership whilst demersal processing ownership is more mixed with other EU nationals having ownership or joint ventures with several Irish interests. Norwegian interests own a considerable portion of the salmon farming business in Ireland but shellfish farming businesses, mostly oysters and mussel production, is almost totally owned by family and Irish companies.

2.2.3 Employment

The fishing industry employs a total of 15,392 people of which approximately 6,300 are fishermen. Table 2 shows the breakdown of employment in all sub-sectors of the fishing industry.

Summary of employment in the Irish fisheries sector (1997)

Sub-sector	Full-time	Part-time	Total	Total (fte)
All fleet	4,790	1,484	6,274	5,494
- <i>Inshore</i>			3,700	2,700
Processing	2,111	2,809	4,920	3,262
Aquaculture	556	1,642	2,198	1,092
Ancillary	1,400	600	2,000	1,700
TOTAL	8,857	6,535	15,392	11,548

Source: BIM (1999), adapted with further detailed information from BIM

Approximately 76% of total fishermen employed in capture fisheries are full-time workers, whilst the remaining part-time workers are pluri-active, gaining supplementary income from agriculture and the growing tourism industry or claiming social benefits from the government. Around 67% of inshore fishermen surveyed felt that they have no form of alternative employment.

Regional employment in inshore fisheries correlates with areas of most social deprivation in Ireland. The majority of inshore fishing has a low profitability, partly due to declining stocks of shellfish owing to poor management. The median age of skippers in the inshore fleet is greater than that of skippers in the offshore fleet; nearly 5% of all fishermen are over 55 years old with 16% of inshore skippers and 3.5% of offshore skippers being over 55 years old.

Over half of the total 4,920 employed in the processing sector work part-time (57%) and County Donegal provides employment for 34% of the total. It is estimated that between 40-45% of workers are female. Pelagic processing is very seasonal and quota dependent whilst demersal processing employment is more continuous throughout the year.

The mariculture and freshwater aquaculture sectors employ 25% of all workers on a full time basis and it is estimated that approximately 30% of workers are female. Females are employed in processing and packaging of culture products but few are active in the aquaculture activities at sea. Employment in freshwater capture fishing is relatively small.

2.3 QUANTIFYING, DESCRIBING AND EXAMINING THE LEVEL OF DEPENDENCY

2.3.1 Ratios

A series of ratios were calculated for NUTS 3 Regions to highlight particular areas of dependency on fishing. Ratio 1 (share of value-added) was calculated using the value of fishing, processing and mariculture wages as a proportion of total wages in each region as a proxy for value-added; data specifically for fisheries is not available in Ireland. Ratio 2 (employment) examined the level of dependency on employment in capture fishing as a proportion of total employment in each region, whilst Ratio 3 (quotas) determined the proportion of catch value landed in an area that is subject to EU quota. A full set of the ratios and variations are displayed in Appendix 3.

The NUTS 3 regions of West (2.36%), Border (2.28%) and South-west (1.31%) each had a Ratio 1 value that was above the national average of 0.49% dependency indicating that fish sector wages are of above average importance in these Regions.

Capture fishing employment dependency (Ratio 2) was dominant in the west coast Counties of Ireland with the highest dependency being found in Donegal (2.64%), Kerry (1.90%) and Galway (1.54%). The Counties of Wexford, Mayo, Cork and Waterford also showed above national average dependency (0.49%). Processing employment dependency was recorded as above the national average of 0.38% in eight Counties of which Donegal (4.26%) is by far the most important.

Dependency on landings of species under quota was most important in Donegal (85%) followed by Waterford, Cork, Dublin, Galway and Kerry with the national average dependency being 62%.

2.3.2 Case studies

Case studies examining the level of dependency on fishing were carried out for the areas of Killybegs (County Donegal) and Rossaveal (County Galway). The issues raised by the case studies highlight major factors affecting Irish fisheries, particularly on the south and west coasts. For example, in Killybegs there is higher than average unemployment and dependence on the working population and below national average income. The high dependence on the agriculture, forestry and fishing sector in Killybegs reflects the fact that tourism is not well developed in this area being so peripheral to the rest of Ireland and lacking in natural resources, with the exception of fisheries.

The large fish primary processing industry is dependent on the Irish pelagic fleet, most of which operates out of Killybegs, and employs more than four-times the number of fishermen. There is also significant employment on-shore in linked industries upstream and downstream of fishing and processing. The greatest factor affecting landings, aside from pelagic and shellfish seasonality is EU quota allocations particularly of herring, mackerel and horse-mackerel. Future opportunities for capture and subsequent processing are also affected by allocations of new quota species, e.g. blue whiting. Aquaculture development has been very successful in the area with salmon production being 46% by value of the national total.

The fishing port of Rossaveal lies within the Gaeltacht, culturally distinct from the rest of Ireland with the majority of the population speaking Irish. The port was created primarily for the fishing industry and as a departure point to the Aran Islands; home to many local fishermen and a growing tourist industry. The population on the islands is reducing and the average income is just over half the national average.

There is a strong culture of young males being recruited to the capture sector but falling shellfish landings over the last five years have affected earnings and agriculture is also becoming less profitable. There is little aquaculture in the immediate Rossaveal area but there is a vibrant industry producing salmonids and shellfish within a radius of 50-60km.

2.3.3 Multipliers

Attempts were made to calculate employment multipliers for the NUTS 4 Counties of Donegal and Galway in Ireland, using regional and national employment data to adjust National Input-Output tables to better represent the case study areas (GRIT methodology), but national employment data was not sufficiently detailed in terms of the fishing industry causing linkages to be overestimated; results produced were felt to be too large and have not been shown. However, an estimate of fishing forward multipliers was made by comparing the numbers employed in fishing with those employed in processing (and other ancillary industries where the information is available).

Estimated fishing forward multipliers for Ireland

Area	Multiplier (f+p)/f	Multiplier (f+p+po)/f
Ireland	1.78	
Killybegs	5.51	6.01
Rossaveal	1.94	2.05

Key: employment in f = direct fishing, p = direct processing, po = indirect p

The fishing forward multipliers calculated using direct employment in fishing and processing only indicate that for every fisherman in Killybegs, there will be 4.51 other employees in related downstream jobs, and in Rossaveal and Ireland as a whole, 0.94 and 0.78 similar employees respectively. The inclusion of indirect processing employment increases the multipliers to 6.01 and 2.05 for Killybegs and Rossaveal respectively and highlight the dependence of results on available data. It is clear that Killybegs is particularly dependent on the fishing industry in terms of its associated downstream processing and related employment.

2.4 EXAMINATION OF THE DEVELOPMENT OF THE INDUSTRY

2.4.1 Comparison

The regions defined in the previous study do not accord with the NUTS 3 and 4 regions used for the purposes of this study. In the earlier study five main coastal zones were constructed based on proximity to the main Irish fishing ports and all areas that were not near the largest ports were amalgamated into a sixth zone therefore comparability can only be ensured at national level.

2.4.2 Development of the economy and industry

Ireland's population increased by 2.9% between 1991 and 1997 whilst employment increased over the same period by 13.8% from 1.15 million to 1.31 million employees. The general economic boom that has characterised Irish development in the 1990's is highlighted by the fact that GDP and GNP have also increased significantly over the same period, however these increases have been driven by economic growth predominantly in and around the Dublin area. Economic development along the western and southern seaboard has been much less prominent.

The size of the registered Irish fishing fleet fell from 1,400 in 1990 to 1,244 in 1997, however, there are still an estimated 1,000 unregistered vessels (mostly less than 10m in length). The total volume of

landings by the Irish fleet increased by nearly 50% between 1989 and 1997. The composition of landings did not change substantially during the period.

Estimates of fishing employment in 1991 were 3,400 full-time and 4,500 part-time fishermen whilst 1997 figures record that there were 4,790 full-time and 1,484 part-time fishermen.

The processing sector in 1990 consisted of 92 firms employing nearly 4,000 staff (1,800 full-time and 2,200 part-time). BIM recorded 140 processing factories in 1997, employing a total of 4,920 people (2,111 full-time and 2,809 part-time) and whilst volumes of product processed have fallen over the period, the value has increased, indicating that a lower volume of fish is being processed but with more value-added.

The aquaculture sector expanded rapidly in the period 1989-1997. The volume of output increased from 20,000 to 38,721 tonnes with value increasing from IR£ 30 million to IR£ 58 million. Employment in this sub-sector increased from a 1989 estimate of 915 full-time and 1102 part-time to a 1997 estimate of 556 full-time and 1642 part-time employees. The marginal increase in employment despite significant growth in production is thought to be a result of increased efficiency in the sector, particularly in salmon production.

Development of the fishing sector in terms of production and employment (1989-1997)

Fish sector production	1989	1997	change
Aquaculture (value mln IR£)	32	58	81%
Fleet landings (value mln IR£)	89	132	48%
Total production (value mln IR£)	121	191	58%
GDP (value mln IR£)	25,404	48,239	90%
Fish Production/GDP	0.48%	0.40%	-17%

Fish sector employment	1989	1997	change
Fleet employment (A=ft+pt)	7,800	6,274	-20%
Aquaculture employment (B=ft+pt)	2,017	2,198	9%
Production employment (C=A+B)	9,817	8,472	-14%
Fish processing employment (D=ft+pt)	4,000	4,920	23%
Production/Processing employment (C/D)	2.45	1.72	-30%

2.5 EXAMINATION OF EU FUNDED MEASURES

2.5.1 Actual impact of EU funded measures

In the 1994-99 round of EU measures Ireland's fishing industry was a beneficiary of FIFG, ERDG, ESF and PESCA Initiative funds. During the period the entire country had Objective 1 status.

Some minor initiatives also affecting the industry were made via the Ireland-Wales Maritime INTERREG II, North-South INTERREG and LEADER II programmes as well as the EU Special Support Programme for Peace and Reconciliation.

The FIFG decommissioning scheme withdrew mainly elderly vessels from the polyvalent fleet operating mainly in the whitefish sector (18 at time of mid-term review). There was a high level of application withdrawal from the scheme as private sector bidders essentially drove up the value of licences, so making the decommissioning less attractive as compared to selling existing tonnage to other parties in the industry. The impact on employment is not known; fleet employment data is not published or available regularly, however it is understood that some vessel owners who decommissioned surplus old vessels are still active in the fishing industry.

Vessel modernisation measures benefited mainly the whitefish sector (mostly polyvalent and beam trawl segments of fleet) and the shellfish sector improving safety standards and assisting the fleet in maintaining hygiene and efficiency and in late 1998 a new whitefish fleet renewal package was

announced supporting the introduction of 31 new vessels into the fleet; 30% of their annual catch is to be made up of non-quota species which means sharing non-quota stocks with Scottish, French and Spanish fleets already active in these fisheries.

The majority of fish farms in Ireland benefited from funds available for investments to increase aquaculture production and improve health, hygiene, environmental issues, quality and technical innovation. The estimated creation of 220 jobs per annum generating an overall increase in employment of 1,310 people has not occurred partly because of increased efficiency in the salmon production and also other teething difficulties in the industry.

There has been significant investment in harbour development and facility upgrading (particularly the ice plant network) benefiting fleets and aquaculture.

The majority of marketing and processing development funds (83%) were spent on assisting business in meeting EU hygiene requirements rather than improving processing capacities. These measures were originally forecast to create 140 new jobs per annum stimulating a creation of an additional 840 employees but these targets are now thought to be over-optimistic mainly because hygiene improvement programmes do not specifically increase output or employment.

There are relatively low levels of training throughout the sector however the training programme was mostly used by those in the retail and catering sector as opposed to the capture sector.

The PESCA Initiative was very successful in Ireland and has begun to impact on local diversification of fisheries activities and consolidate others e.g. ventures in marine tourism and the lobster conservation and management program with the V-notching scheme. Its success was stimulated by strong promotional campaigns at local and regional level and by working directly with fishing and community organisations.

2.5.2 Perceived impact of EU funded measures

A survey of key industry representatives was carried out to determine their perception of EU funded measure and future outlooks for job growth.

Overall the impact of FIFG programme on the capture industry was perceived as 'limited' to 'very significant'; vessel modernisation funds were thought satisfactory, although the point was made that they do not help stem the increasing age of the inshore fleets, and the substantial benefits of renewal funds available for the whitefish fleet were acknowledged.

The majority of aquaculture sector respondents felt that the impact of FIFG had been 'very significant' by allowing small to medium companies to become more competitive and efficient. Respondents from the processing sector also felt that the impact had been 'very significant' on the whole with the main benefit in allowing companies to upgrade hygiene practices and facilities.

ESF funds were thought to have had 'limited' to 'moderate' impact, as a result of under-utilisation, but despite this the general feeling was that workers would not have received the range of courses and facilities at all without ESF funds.

The ERDF fund impact was thought to have been 'moderate' to 'very significant' although it was noted that development of a smaller number of main harbours with high landings value would have a greater impact in economic and social terms, than if grants were spread more thinly around a number of harbours.

Most respondents felt that the PESCA Initiative had 'limited' to 'moderate' impact. An important perception of the scheme has been that it had created a climate for change and stimulated awareness of alternative opportunities outside the capture sector, particularly in the development of marine tourism projects, extensive shellfish culture and lobster conservation programmes although one major criticism of the Initiative was the amount of bureaucracy involved.

2.5.3 Introduction of socio-economic measures

Respondents were asked about the possible introduction of socio-economic measures. It was felt that the implementation of aid to encourage early retirement would have 'limited' to 'moderate' impact with concerns mostly dependent upon how the measure was structured. The salient point was made that the success of the scheme would be very dependent on how such a scheme compared to state pension schemes. It was felt that this measure would help encourage young people to enter the industry which would help change the currently ageing profile of fishermen.

There was no consensus of opinion on the perceived impact of introducing redundancy payments for fishermen losing jobs on vessels being decommissioned. Those in favour of the measure thought it would be useful until redundant fishermen had found alternative employment, whilst those unsure of its benefits felt that it would be extremely difficult to keep track of payments as the Irish fleet is highly mobile around the coastline and there are frequent crew changes.

2.5.4 Populations at risk

Ireland's previous Objective 1 status in all areas has been modified for the next round of funding (2000-06) and the mainly western coastal Counties keeping Objective 1 status include Donegal, Leitrim, Sligo, Mayo, Galway, Clare and Kerry, and the border region of Louth on the east coast. The coastal counties Objective 1 in Transition are Cork, Waterford, Wexford, Wicklow, Dublin and Meath on the east and south-east coasts.

An analysis of Ratios 1, 2 and 3 and also the proportion of old vessels in a County was performed to determine which NUTS 4 regions are most dependent on the capture fishing industry, and therefore potentially at risk from changes.

Donegal (Border) and Galway (West) were ranked using the above methodology as the counties most dependent on marine fishing in terms of employment and value-added (and quota dependency for Donegal), whilst being less dependent on elderly vessels. The other main dependencies were found in Kerry, Wexford, Mayo, Cork and Waterford (in rough order of decreasing risk). The dependencies are mainly driven by fishing employment dependency, which also accord with social deprivation in Ireland, dominant in Donegal, Mayo and Galway, and to a lesser extent in Kerry and parts of Cork and Clare.

2.5.5 Development and potential for job creation

Job growth in the inshore demersal and offshore pelagic sectors was thought by key industry respondents to be unlikely or limited in the future given current stock levels and quota management systems. However, it was felt that there was more potential for improving catches, and hence offshore and onshore employment, in the inshore shellfish and deepwater offshore sectors although a shortage of young, well trained labour was highlighted as an obstacle to such development. Catches may increase specifically through new deepwater species, better management of shellfish broodstocks and new techniques such as jigging, long-lining and shrimp trawling.

There is significant feeling that Ireland does not receive its fair share of quotas or access to waters under the CFP, and that potential job growth will be heavily influenced by the new CFP post-2000. An underlying complaint in the industry concerned the cost of compliance with regulations and their complexity.

The employment outlook in the processing industry mirrors that in the capture sector although there is potential for growth in secondary processing of whitefish and pelagics, and primary, secondary and tertiary processing of shellfish and farmed fish. Labour shortage was noted as a problem, as evidenced in the Donegal case study where workers are bused to a factory from over 50 miles each day.

The aquaculture industry expects that output will be significant in the next 10-15 years, though environmental concerns could limit this forecast, and that the industry has the potential for job growth, which could be of particular benefit in isolated coastal regions in the West.

Respondents felt that FIFG and PESCA-type programmes could continue to improve employment opportunities for females in both aquaculture and processing, but made the point that these types of funds, along with ESF funds, could be of equal benefit to both sexes.

2.5.6 Diversification out of fishing

The dependence on the fish sector, and low transferability of skills out of the sector, is a major concern for fishermen who become redundant from the capture industry. The recent study of inshore fisheries (1999) found that of those skippers surveyed, 67% did not know what alternative employment option they would follow if they could not fish, 13% thought that the construction industry could provide alternatives whilst the tourist industry accounted for 10% of answers.

Agriculture is on the decline in Ireland and could not therefore absorb fishermen who leave the industry, however as seen in the Rossaveal case study and projects funded by the PESCA Initiative, marine tourism is a potential growth area. Construction, manufacturing, food processing and inward investment were all thought to be sectors that could potentially provide employment opportunities for fishermen leaving the industry, as is the sector encompassing new technology which has seen tremendous growth in Ireland's economy over the last five years.

2.5.7 Conclusions

The DOMNR and BIM consider that continued support through EU Structural Funds will be an integral element in continuing to develop the Irish fishing industry and consider competitiveness, quality, reliability of supply and added-value as being the cornerstones of future industry growth.

The PESCA initiative has been an important socio-economic tool in rural coastal areas. If landings decrease and quota allocations become more restrictive there will be increased pressure for measures to offer alternative opportunities and initiatives to fishermen to diversify, further encouraging the need for continued PESCA-type support.

European infrastructure funding has been crucial in developing roads and harbours of benefit to the fishing industry and projects have been completed far more quickly than if EU funding were not available.

Current quota levels, and those for new species yet to come under quota, are extremely important to the pelagic and whitefish fleets operating out of the main fishing harbours; any reductions could have severe effects on communities and fishing industries such as Killybegs where there are many linkages between industry sub-sectors.

It has been suggested that value of output could be included as co-equal selection criteria for funding projects alongside employment creation. Instead of focusing only on increasing employment, developments should be funded which sustain employment and improve product quality. Future measures should keep bureaucratic procedures to a minimum consistent with accountability.

The following sector specific measures have been highlighted by this review as being of key importance to the industry in terms of future employment, diversification and development of fishing dependent areas:

- Measures should be introduced to ensure that younger fishermen enter the fishery; there is an indication that aid to encourage early retirement could help stimulate such a turnover of workers.
- Support for inshore fisheries management to help secure inshore fishing and related employment which is coming under increasing threat as stocks levels become overfished due to poor management.
- Funds could be used to achieve rationalisation and consolidation of the processing sub-sector and to help introduce new environmentally-friendly technology, and help improve working conditions to retain and attract labour.
- Pelagic landings are highly seasonal and processing of shellfish and whitefish should be developed to improve temporal consistency in the processing industry and related employment.

- Approximately 50% of landings are currently primary processed and only 15% are secondarily processed; development of value-added processing and post-harvest activities are required create more employment opportunities and capture further added-value before export.
- Developing aquaculture and associated exports could improve Ireland's market position and strength and in turn lead to increases in related upstream and downstream employment and outsourcing of skills.
- Development of shellfish culture and emerging fin-fish species aquaculture will create more direct employment opportunities per increased unit of production volume than salmon culture.
- Transferring small harbours to local control to allow for the development of marine leisure activities (sea angling, watersports) and associated tourism could provide alternative income sources for fishermen leaving the industry as well as generating other related employment opportunities (accommodation, services, etc.)