

Final report of the study for the
Committee on Fisheries of the European Parliament

THE IMPACT OF THE INCREASE OF THE OIL PRICE IN EUROPEAN FISHERIES

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ABBREVIATIONS

AER	Annual Economic Report on 'Economic performance of selected European fishing fleets' editions 2002-2004
CFP	Common Fisheries Policy
GVA	Gross value added
VL	Value of landings

Abbreviations of country names:

Be	Belgium
Cy	Cyprus
Dk	Denmark
Ee	Estonia
Fi	Finland
Fr	France
De	Germany
Gr	Greece
Ie	Ireland
It	Italy
Lv	Latvia
Lt	Lithuania
Mt	Malta
Nl	Netherlands
Pl	Poland
Pt	Portugal
Si	Slovenia
Es	Spain
Se	Sweden
UK	United Kingdom

INTRODUCTION

The economic performance of many European fishing fleets has been depressed over the recent years due to poor state of the fish stocks and heavy international competition, causing downward pressure on fish prices. The situation has been further worsened by rapid increase in fuel prices since the beginning of 2005. By the end of 2005 the fuel price in many countries was substantially higher than in January. Considering that fuel costs represent an important component of the total operational costs of the fishing industry, such increase has serious consequences on the profitability of the fishing enterprises as well as on the earning of the members of the crew, as fuel costs are often part of the calculation of the crew share. The value of the landings of EU fishing fleets amounted in 2004 to 7.1 bln Euro. The aggregate fuel costs in 2004 can be estimated at approximately 1 bln Euro. At the price levels of March-April 2006 the annual fuel costs would increase by more than 700 mln Euro compared to 2002.

The purpose of this study is to provide an analysis of the impact of the increase of the oil prices in European fisheries for the main fishing methods in each Member State. Such analysis should enable the Committee on Fisheries to consider adequate policy solutions.

The Terms of reference of this study were formulated as follows:

1. *Price of fuel for fisheries in each Member State.*
2. *The study should quantify the use of fuel in the fishing industry of each Member State, analyzing its distribution and cost in each Member State relating to the structure of its fleet and main fishing methods.*
3. *Price of fuel and measures adopted in the most important third countries relating to fisheries.*
4. *The study should analyse the share of fuel in the costs of the main fishing methods in each Member State, under different hypothesis of prices of oil, starting from the level of the average prices in 2002 up to the currently higher prospects.*
5. *The study should determine the thresholds of profitability for the main fishing methods in each Member State, taking into account the structure of the market of its most important products.*
6. *The study should analyse the tax structure applied to the fuels in the fisheries and the support measures for the fishing industry in each Member State.*
7. *The study should analyse the social and economic impact of the increase in the fuel price in the fishing industry.*
8. *Impact of activities and market regulations of the CFP.*
9. *The study should analyse the effects of the increase in the fuel price on the stocks recovery plans and the possible options to manage the crisis in this framework.*
10. *The results of the evaluation must be summarised, and analysed with a view to formulate viable recommendations economically and legally to cushion the impact of the increase in the oil price in European fisheries.*

Data and approach

The presented analysis is based on two main sources of data:

1. Costs and earning of fishing fleets as published in the annual reports 'Economic performance of selected European fishing fleets' (AER);
2. Contributions of the partners of the consortium regarding specific national issues.

The technical details of the estimations are presented in appendix A.

Important note:

Results of estimations carried out exclusively for the purposes of this study are printed in italics.

EXECUTIVE SUMMARY - EU OVERVIEW

General

In 2006 EU fleet is composed of about 90,000 registered vessels, with an aggregate engine power of 7.9 mln kW. In 2002 some 74,000 vessels were active and produced about 7.3 bln Euro worth of fish. There were about 203,000 people employed on board fishing vessels. Their average income (crew share) amounts to about 13,000 Euro/year, this relatively low value is due to the small scale nature of large parts of the EU fishing fleets.

About 56% of the value was produced in Spain, Italy and France. About 60% of all fishermen resided in Spain, Greece and Italy. It is also these three countries where fleets show a certain level of profits (although this is partly consequence of low crew share per man). In most other countries the level of profit is close to zero. The relatively weak economic performance already in 2002 and the subsequent years is evidently of major importance when facing the consequences of the fuel price increase.

In the years 2002 the EU fleet had used 4.3 bln litres of fuel. The total fuel costs amounted to about 1 bln Euro, which represents about 15% of the value of landings. Considering that the EU-25 fleet lands about 5.5-6 mln tonnes of fish, on average one kg of fish requires about 0.7 litre of fuel. Evidently there are large differences between passive and active gears.

Table 1.1 Characteristics of fishing fleets by country, average 2002 (values in mln Euro)

	Value of landings	Fuel costs	Gross value added	Employment on board	Number of active vessels	Fuel use (1000 t)
Belgium	92.0	19.1	45.2	700	130	76
Cyprus	10.9	1.7	6.6	922	482	6
Denmark	501.9	43.7	313.9	4,056	1,388	140
Estonia	25.6	5.7	13.3	1,955	577	19
Finland	24.0	2.7	13.0	583	357	12
France	1,148.7	143.2	702.8	12,597	2,696	609
Germany	196.7	21.0	112.7	2,364	2,085	88
Greece	239.9	18.7	183.5	31,092	17,567	80
Ireland	199.5	44.7	23.7	5,162	1,379	193
Italy	1,385.3	204.8	906.5	38,360	15,915	661
Latvia	50.3	13.0	21.2	3,476	957	43
Lithuania	83.0	24.4	36.0	2,216	146	81
Malta	12.7	1.7	8.1	1,271	706	6
Netherlands	380.3	78.6	169.5	2,330	410	383
Poland	54.7	17.4	21.0	4,127	1,241	67
Portugal	322.4	56.1	146.5	22,256	9,326	185
Slovenia	3.2	0.7	1.7	142	82	2
Spain	1,598.7	215.3	934.4	56,576	13,658	1,020
Sweden	111.4	14.5	56.4	1,596	717	67
United Kingdom	865.7	136.9	368.0	12,205	3,958	526
EU Total	7,306.8	1,063.9	4,084.2	203,985	73,777	4,266

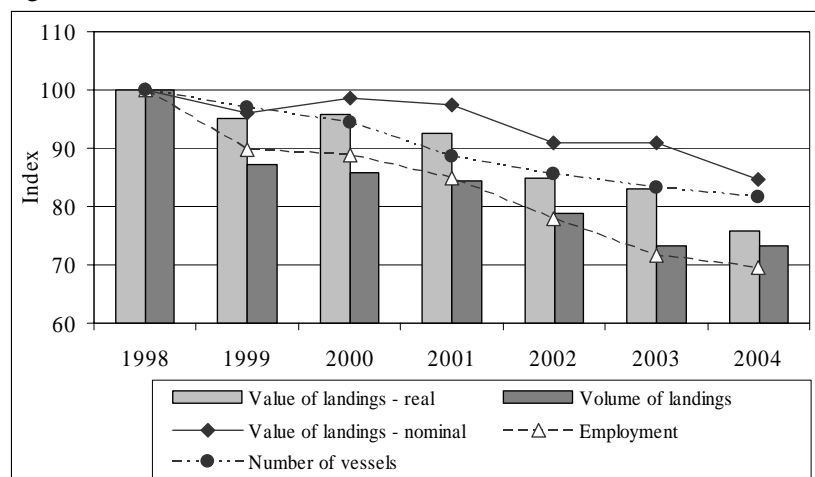
Almost 75% of the vessels (with 29% of the engine power) are smaller than 12 m. This coastal fleet employs about 95,000 people.

Table 1.2 Composition of the EU fleet by gear and size (values in mln Euro)

Gear	Size class	Value of landings	Fuel costs	Gross value added	Employment on board	Number of active vessels	Fuel use (1000 t)
Beam trawlers	<12m	1.4	0.4	0.3	164	82	1
	12m–24m	143.9	18.9	80.4	1,681	607	84
	24m–40m	343.2	89.5	133.0	2,161	320	399
	>40m	16.4	4.4	3.1	325	13	17
Demersal and pelagic trawlers and seiners	<12m	160.8	23.2	85.6	3,523	1,505	95
	12m–24m	1,999.4	299.5	1,154.7	32,756	7,608	1,106
	24m–40m	1,079.0	171.1	570.6	14,143	1,700	721
Passive gears	>40m	1,125.3	187.2	587.1	10,201	317	771
	<12m	1,257.2	128.7	794.2	111,234	54,590	496
	12m–24m	631.4	72.6	377.8	17,722	4,669	281
Dredges	24m–40m	230.0	33.0	109.0	4,289	411	149
	>40m	41.2	5.9	20.8	770	34	27
	<12m	35.7	3.7	17.5	1,141	597	15
Dredges	12m–24m	206.0	19.5	140.1	3,387	1,259	77
	24m–40m	36.1	6.3	10.0	489	66	27
	>40m	0.0	0.0	0.0	0	0	0
Beam trawl		504.8	113.3	216.7	4,331	1,022	502
Trawlers / seiners		4,364.4	681.0	2,398.1	60,623	11,129	2,692
Passive gears		2,159.7	240.2	1,301.8	134,015	59,704	953
Dredge		277.9	29.5	167.6	5,017	1,922	119
<12m		1,455.1	155.9	897.6	116,062	56,773	608
12m–24m		2,980.7	410.5	1,752.9	55,546	14,143	1,547
24m–40m		1,688.2	300.0	822.7	21,081	2,497	1,296
>40m		1,182.8	197.5	611.0	11,296	364	815
Total		7,306.8	1,063.9	4,084.2	203,985	73,777	4,266

To assess the trends of EU the fisheries it is necessary to look at the EU-15, as there is not sufficient data for the new Member States. Since 1998 (and even before) there has been a continuous decline of all major parameters.

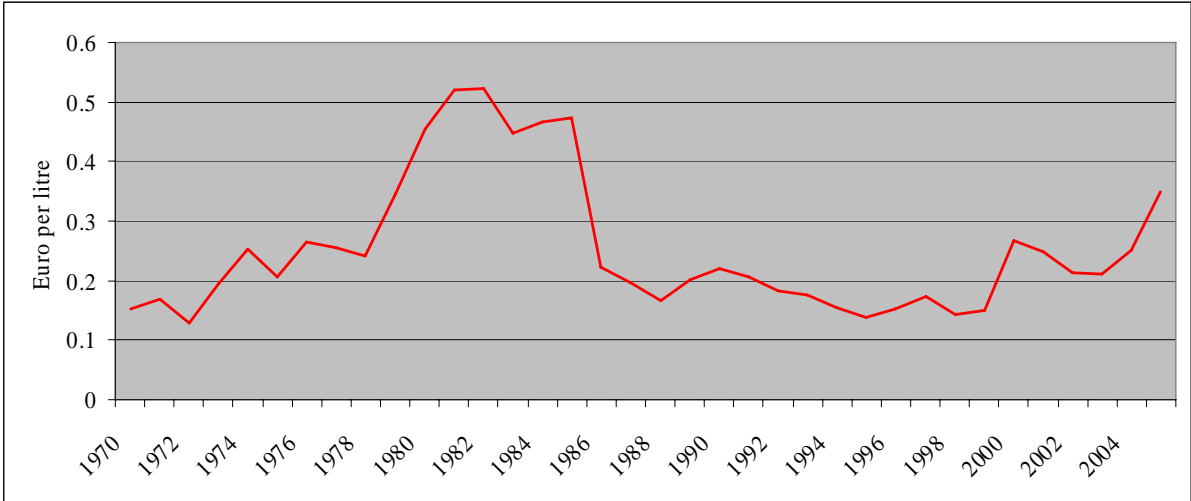
Figure 1.1 Trends in the fisheries of EU-15 (1998=100)



Source: AER 2005

It should be noted that in the long term perspective, the 2005-2006 fuel price level is still lower than the prices experienced in the first half of 1980ies (see fig. 2.1). However, it is impossible to make any sensible statement about the outlook for the fuel price in the future. It depends on large number economic, political as well as psychological factors and occurrence of natural or human disasters. It is not only a question of production capacity, supply and demand. It is certain that demand for energy will grow rapidly in the coming decade as a consequence of the growth of economies of China and India, which represent together one third of the world population.

Figure 1.2 Long term fuel price (Euro/litre, deflated, price index 2005=100)

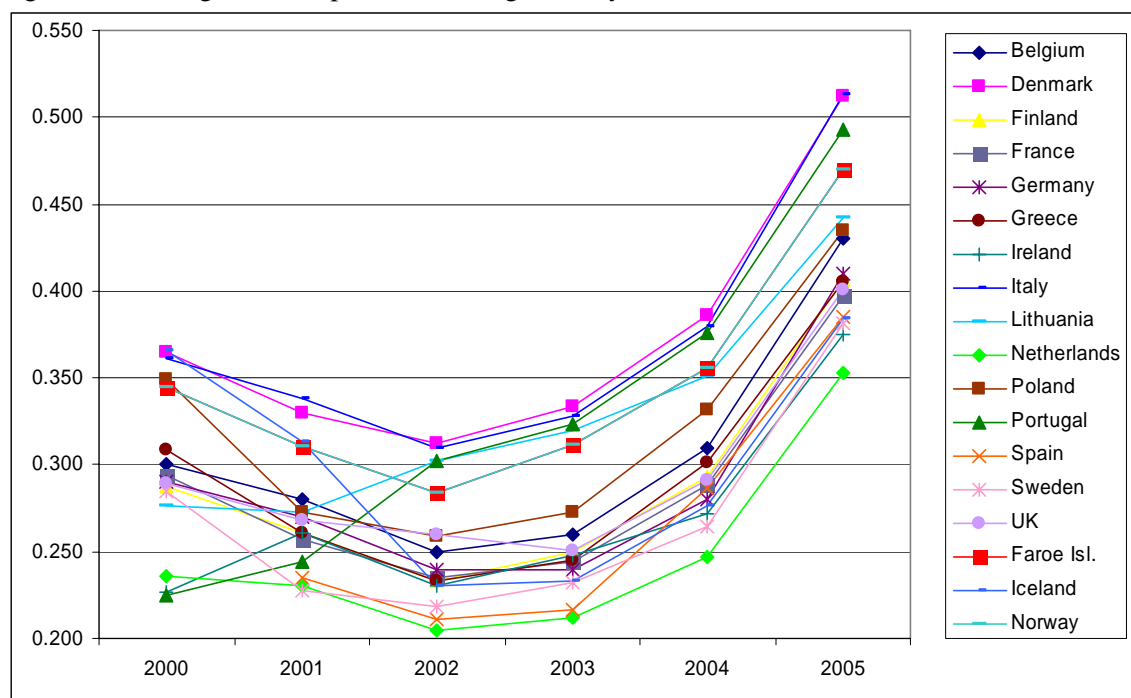


Source: LEI

Price of fuel and taxes

The price of fuel has increased consistently in most reviewed countries by 65-75% between 2002 and 2005. Further increase has occurred in the beginning of 2006. There is a rather constant price difference of approximately 45% between the cheapest country (Netherlands) and the most expensive countries (Denmark and Italy). This difference must be due to differences in market structure, competitiveness of suppliers and organization level of the fishing industry. It is interesting to note that the lowest fuel prices are achieved in a country with the most energy intensive fishery in the EU.

Figure 1.3 Average net fuel prices to fishing industry, 2000-2005, Euro / litre



Fishing fleets in all reviewed countries are entitled to bunkering arrangements which also apply to merchant navy. This means that no special non-refundable taxes are in force. Only in some countries the usual VAT is applied, which can be reclaimed.

Use of fuel in the fishing industry

The large differences in fuel use by different types of vessels are illustrated in table 1.3. Passive gears use less fuel than active gears. Small vessels use less fuel than large vessels. Particularly beam trawling is very energy intensive.

The two main gear groups are the demersal and pelagic trawlers / seiners on one hand and the vessels using passive gears. These two groups represent 55% and 35% respectively of the total production value. For the trawlers / seiners group the fuel costs represent 15-17% of their revenues, while for the passive gears this amounts 10-14%. Therefore for some groups the difference is not very significant.

Table 1.3 Fuel costs by gear and size of vessel, 2002

		Fuel costs as % of value of landings	Fuel costs / vessel / year (1000 Euro)	Fuel costs / kW / year (Euro) ¹
Beam trawl	<12 m	27%	4.6	21
	12m – 24m	13%	31.2	169
	24m – 40m	26%	279.8	210
	> 40m	27%	339.3	245
Demersal and pelagic trawlers and seiners	<12 m	14%	15.4	72
	12m – 24m	15%	39.4	184
	24m – 40m	16%	100.6	156
	> 40m	17%	590.8	151
Passive gears	<12 m	10%	2.4	66
	12m – 24m	11%	15.5	153

¹ Based on average 2002-2004.

	24m – 40m	14%	80.4	148
	> 40m	14%	172.6	103
Dredges ²		na	na	Na
All gears	<12 m	11%	2.7	66
	12m – 24m	14%	29.0	172
	24m – 40m	18%	120.1	183
	> 40m	17%	542.7	124
Total		15%	14.4	134

Effect of fuel price on fish prices

Evidence from all countries shows unambiguously that fish prices are not related to fuel prices in any way. This is a consequence of the competition on the EU market, which depends for more than 50% on imports, which are composed of wild caught as well as farmed fish. Fish prices are determined by supply and demand on the fish market.

In theory, increase in production costs would lead to closing down the least efficient producers, which in its turn may lead to lower supply on the market and higher prices, if demand remains constant. However, in practice of the EU fish market, the production from EU waters has been declining for many years without any affect on the price level. Loss of EU output and increasing demand were met by increasing imports from third countries. In view of the rapid increase in fish farming, it is very unlikely that fish prices would structurally increase in short or medium term. Long time series of FAO show that prices of primary commodities are structurally declining. Fish products have been one of exceptions maintaining a relatively constant real price level since approximately 1960³.

Effect of fuel prices on stock recovery plans

As of the beginning of 2006, when this report was prepared, it is still too early to allow an assessment of the consequences of the fuel price increase on recovery of stocks. Data regarding levels and spatial distribution of fishing effort and mortality are not yet available.

There are some indications that at least some vessel owners are adjusting their fishing pattern to the high energy costs. Some countries report that vessels prefer to remain on fishing grounds closer to their home port, instead of undertaking long steaming trips to distant grounds. Occasionally vessels are even stopped, awaiting better chance of satisfactory catches. It is uncertain what the extent is of such changes in fishing pattern and how they affect the state of stocks.

The adjustments do not only depend on the price of fuel, but also on the extent to which the crew shares in the costs of fuel. Evidently, on vessels where crew bears a part of these costs, because they are included in the calculation of crew share, the vessel owner are not confronted with the total burden of extra fuel costs. On the other hand he may have greater difficulty to retain the crew with decreasing level of its remuneration.

National measures to mitigate high fuel price

As stated earlier, in many countries the performance of the fisheries sector was already weak before the fuel price rise. Improving conditions for creation of a more efficient fisheries sector is on the agenda of many Member States, independently of the fuel price rise. Various Member States have made use of measures within the FIG, particularly decommissioning, to allow the weakest companies to leave the business and to increase average catching opportunities for those who stay.

² Data for dredgers is too fragmentary to allow calculation of the indicators.

³ FAO, Agricultural commodities report, Rome 2004

None of the reviewed Member States has introduced any measures to deal specifically with the high fuel price, with the exception of France and Spain. In France a special fund of 60 mln Euro has been created to compensate fuel costs when the fuel price exceeds a certain threshold. In principle the compensation is in the form of loan, which should be refunded by the sector in the future. The EU competition rules do not allow support of operational costs. The legality of the French measure is being reviewed by the legal experts of the European Commission (situation in April 2006). Spain has set up a fund of 200 mln Euro to provide transitory loans at 0% interest.

Measures taken by third countries

Situation was reviewed in Iceland, Norway and Faroe Islands. None of these countries has introduced any measures to alleviate the consequences of the high fuel price for their fishing industry.

Relation of CFP and market policy

There is a general consensus that the CFP has only limited means to address the consequences of a major macro-economic development like the price of fuel. Application of measures under market policy is considered untenable in longer run:

- Higher withdrawal prices may require large funds, while the relevance of the species to which it would apply is marginal in the totality of the EU production. As stated above, the EU fleet faces in 2006 additional fuel costs of about 700 mln Euro compared to 2002. To compensate these costs, the general first sale price level would have to be increased by 10% and maintained at this level.
- Some industry representatives propose restriction on imports of fish, but at the same time they are aware that such measures are unlikely to succeed within the WTO/GATT arrangements.

Measures which could be taken within FIFG or EFF are:

- Promotion of technological development towards better energy efficiency;
- Support for investment in energy efficient engines;
- Support to shift to new fishing techniques, which are less energy intensive.

Similar propositions have been recently launched by the European Commission⁴.

Clearly these measures can be expected to produce results only in the long run.

Social and economic consequences

The report elaborates one basic scenario assuming a structural fuel price rise of 100% over the price of 2002. In this case the EU fishing fleet will be faced with additional costs of some 1 bln Euro, which represent 10% of the level of revenues in recent years. In view of the downward trend it seems even unlikely that this level of revenues will be maintained in the short and medium term. Considering that the total EU gross value added from fisheries can be estimated at about 4 bln Euro, fuel price increase would lead to a reduction of the gross value added by 25%.

Tables 1.4 and 1.5 presents the summary of the estimated social and economic consequences by country in the short and long run. Increase of the fuel price by 100% from 2002 level would in the short run reduce gross value added by 25%. Belgium and the Netherlands would be affected most heavily.

In the long term, it can be expected that the size of the fleets will adjust to the new conditions and consequently jobs will be lost. Restructuring the fleet to the break-even level under the conditions of 2002 would already lead to a loss of about 12-13,000 jobs. The baseline scenario shows that an additional 18,000 jobs may be lost if the fuel price remains 100% above the 2002 level.

⁴ Communication of European Commission to the Council and the European Parliament on improving the economic situation in the fishing industry, COM(2006) 103 Final, Brussels 9.3.2006

According to the available data, Irish fishing fleet is in serious problems, showing a negative gross cash flow, so that break-even performance cannot be achieved. In terms of loss of gross value added, the relatively small fisheries of the Baltic republics would be rather heavily affected, because their fisheries are already rather depressed. Belgium and the Netherlands are also relatively heavily affected as main part of their fisheries is the energy intensive beam trawling. Consequently gross value added per man will decrease in these two countries much more than in the rest of the Union.

In terms of absolute numbers, highest employment losses can be expected in Portugal, Spain and Ireland, which account together for 70% of the total employment loss under the baseline scenario. On the other hand Italy, France and Greece do not seem to be seriously affected. This is a consequence of the specific (often small scale) structure of their fleets.

In countries, where fishing remains (marginally) profitable, higher fuel price will depress earnings of fishermen. As in many countries these earnings are already substantially below national average wages, the attractiveness of the profession will certainly deteriorate and shortage of crews will further intensify.

The results for individual segments are presented in the national chapters.

Table 1.4 Short term and long term social and economic consequences of fuel price increase by 100% from 2002 level

Member State	Short term effect*		Long term effect*			
	GVA (%)	GVA / man (1000 Euro)	Los of jobs	Loss of jobs (%)	GVA (%)	GVA/man (1000 Euro)
Belgium	-42%	-27	-310	-44%	-34%	12
Cyprus	-25%	-2	-41	-4%	-23%	-1
Denmark	-14%	-11	-924	-23%	-9%	13
Estonia	-43%	-3	-98	-5%	-41%	-3
Finland	-21%	-5	0	0%	-21%	-5
France	-20%	-11	0	0%	-20%	-11
Germany	-19%	-9	-807	-34%	-13%	15
Greece	-10%	-1	-81	0%	-10%	-1
Ireland	-100%	-9	-5,162	100%	100%	-9
Italy	-23%	-5	0	0%	-23%	-5
Latvia	-61%	-4	-311	-9%	-49%	-3
Lithuania	-68%	-11	-121	-5%	-67%	-11
Malta	-21%	-1	-34	-3%	-20%	-1
Netherlands	-46%	-34	-1,121	-48%	-31%	24
Poland	-83%	-4	-2,356	-57%	62%	14
Portugal	-38%	-3	-8,262	-37%	-20%	2
Slovenia	-40%	-5	-28	-20%	-34%	-2
Spain	-23%	-4	-7,977	-14%	-20%	-1
Sweden	-26%	-9	0	0%	-26%	-9
United Kingdom	-37%	-11	-3,068	-25%	-16%	4
EU total	-25%		-30,703	-15%	-15%	

*Change in relation to the 2002 situation.

Table 1.5 Loss of employment by country under different scenarios of fuel price increase, compared to 2002

	Break-even					
	2002	50%	75%	100%	125%	150%
Belgium	-26	-154	-232	-310	-389	-467
Cyprus	0	-4	-19	-41	-65	-88
Denmark	-620	-733	-829	-924	-1,020	-1,115
Estonia	-60	-65	-73	-98	-140	-242
Finland	0	0	0	0	0	0
France	0	0	0	0	0	-260
Germany	-583	-690	-748	-807	-866	-925
Greece	0	-5	-23	-81	-141	-201
Ireland	-5,162	-5,162	-5,162	-5,162	-5,162	-5,162
Italy	0	0	0	0	0	0
Latvia	-123	-217	-264	-311	-390	-586
Lithuania	0	-7	-53	-121	-286	-790
Malta	0	-3	-15	-34	-54	-74
Netherlands	-229	-673	-896	-1,121	-1,347	-1,573
Poland	-1,517	-1,883	-2,088	-2,356	-2,643	-2,994
Portugal	-2,697	-5,437	-6,827	-8,262	-9,753	-11,244
Slovenia	0	-3	-15	-28	-42	-55
Spain'	-1,071	-1,536	-3,725	-7,977	-12,229	-16,480
Sweden	0	0	0	0	0	0
United Kingdom	-702	-1,857	-2,451	-3,068	-3,685	-4,302
EU total	-12,790	-18,429	-23,420	-30,701	-38,212	-46,558

EP and EC hearings on fuel costs on fisheries

The European Parliament and the European Commission have held hearings regarding the consequences of increased fuel price on fisheries⁵.

It was generally agreed that present problems of EU fisheries form part of a long term crisis. High fuel prices boost existing problems with e.g. inefficient fleets, increased regulation and overexploited stocks. Speakers of the fishing industry reported 100% increase of fuel prices over the last 3 or 4 years and erosion of earning capacity of many fleets. It was stressed that the fisheries crisis may affect the economy of EU coastal areas. Also sustainability of market chains for fish from Community waters is in danger. Some speakers asked for reassessment of European Fisheries Fund (EFF) and introduction of emergency actions to ensure that and networks of knowledge for production and processing of EU fish will be rescued. It was suggested to facilitate dignified resignation (retraining and decommissioning programs) for those fishermen who are willing to withdraw.

It was considered that future fishermen and fishing fleets will be different in structure and management. Given the reasons for fuel price rises – sustained and increasing demand from the big developing countries – a return to price levels of the past cannot be expected. For the European fisheries to survive, they must be sustainable, efficient and profitable. Speakers stressed the need for aid for research, development and investment into fuel effective technologies (propulsion, gear, etc.). Some speakers mentioned reinforcement of market chains.

In some Member States more efficient engines configurations are studied now. Improvements are expected from reduction of fuel consumption, e.g. by introduction of energy control systems and

⁵ European Parliament: Hearing on energy efficiency in fisheries, 3 May 2006; European Commission: Conference on Energy Efficiency in Fisheries, 11-12 May 2006.

engines on natural gas or heavy fuel. Some speakers doubted whether change to fleet segments having smaller engines would be the best solution of the problem.

The present study demonstrates that it is most unlikely that fuel saving technologies would contribute more than marginally to the solution of the existing problems. Such technologies may save 10-20% of fuel costs in some fleets, while these costs were in 2006 about 70% higher than in 2002. Fleet reductions on one hand and major productivity increase of the remaining fleet on the other hand seem the only way to create a profitable fishing industry.

Conclusions and recommendations

1. Fishing fleets in many (particularly north European) countries were already facing difficult economic situation in 2002 due to poor stocks and falling revenues.
2. Fuel price increase cannot be alleviated by special policy measures, as that would go against market forces and may become excessively costly.
3. Policy should be aimed at restructuring of the fishing fleets into a modern, dynamic and profitable industry which will be capable of supporting adverse economic development including upward trend in energy prices.
4. Productivity level needs to be increased.
5. Research into fuel effective technologies (propulsion, gear, etc.) needs to be promoted as the fishing sector may be too small to support such research itself.

1. BELGIUM

The most important target species in terms of landing volume are flatfish (plaice, sole and lemon sole), cod and crustaceans, mainly caught in the North Sea, but other fishing grounds (the Irish Sea, the eastern English Channel and the Celtic Sea) are also important. Belgian vessels caught about 23,600 tonnes of fish in 2002, similar to the 2003 total. Around 12% of the catch is landed in foreign, mainly Dutch ports. Most vessels use beam trawls.

Economic performance in 2002

Belgian fleet is composed of 130 active vessels, which employed in 2002 700 fishermen and produced a total value of 92 mln Euro. Economic performance of the Belgian fleet deteriorated considerably in 2002. Value of landings decreased by 5%; given the stable landing volume overall prices went down compared to 2001. The fleet showed a slight net loss.

The fleet used about 76,000 tonnes of fuel, about 80% of which most was used by larger beam trawlers. Fuel costs represented about 21% of the total revenues and 41% of the total operational costs.

Table 1.1 Belgium, Performance of main fleet segments in 2002, (value in mln Euro)

Gear	Size class	Value of landings	Fuel costs	GVA	Employment on board	Number of active vessels	Fuel use (1000 t)
Total		92.0	19.1	45.2	700	130	76
Beam trawlers	12m–24m	20.1	3.5	10.1	200	59	14
	24m–40m	68.8	15.1	33.8	450	60	60

Consequences of fuel price rise by 100%

In 2002 average fuel price amounted to 0.250 Euro/litre. Fuel price rise by 100% implies additional costs of 19 mln Euro. Consequently, in the short term the gross value added would be reduced by 42% or 27,000 Euro/man. In the long run a reduction of employment by 44% can be expected. About 310 jobs would disappear. After restructuring, the gross value added / man may increase by 12,000 Euro. However, part of this reduction is due to the losses faced by the larger beam trawlers already in the years 2002.

Table 1.2 Belgium, Economic and social consequences of an average increase of fuel price by 100% (change compared to the situation in 2002)

Gear type	Size class	Short term effect		Long term effect		GVA (%)	GVA/man (1000 Euro)
		GVA (%)	GVA / man (1000 Euro)	Los of jobs (number)	Loss of jobs (%)		
Total		-42%	-27	-310	-44%	-34%	12
Beam trawlers	12m–24m	-35%	-18	-51	-26%	-29%	-2
	24m–40m	-45%	-34	-233	-52%	-36%	24

In order to achieve a new break-even situation the average value of landings per vessel will have to increase by 66% to 1,178,000 Euro. Assuming constant productivity (value of catch per unit of effort), fishing effort per vessel would also have to increase by the required improvement of the value of landings per vessel, which must be considered unfeasible.

Table 1.3 Belgium, Performance in 2002 and assessment of break-even performance after fuel price rise by 100%

Gear type	Size class	Value of landings per vessel in 2002 (1000 Euro)	Assessment of 2002 performance	Threshold fuel price (Euro / ton)	Break-even VL/vessel after fuel price rise by 100% (1000 Euro)	Feasibility of increase of effort per vessel
Total		708		loss in 2002	1,317	
Beam trawl	12m–24m	341	Strong	307	459	Uncertain
	24m–40m	1,147	Reasonable	loss in 2002	2,382	Unfeasible

Table 1.4 Belgium, Employment by segment in 2002 and loss of jobs under different scenarios of fuel price (change compared to 2002, number of jobs)

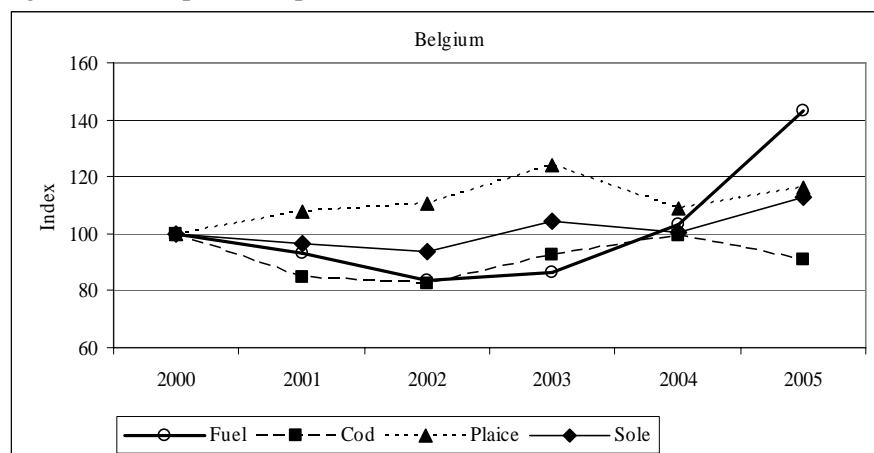
	Size class	Employment in 2002	Break - even	Fuel price 50% up	Fuel price 100% up	Fuel price 150% up
Total		700	-26	-154	-310	-467
Beam trawl	12m–24m	200	0	-11	-51	-92
	24m–40m	450	-16	-125	-233	-342

Policy measures

Belgian authorities have not undertaken any special measures to cushion the consequences of the fuel price rise. Neither VAT nor other taxes are applicable to the fishing fleet.

There is no relation between prices of fish and fuel.

Fig. 1.1 Development of prices of fuel and fish, 2000-2005



There is no information available regarding changes in fishing effort in terms of level and regional distribution. Effects on stocks cannot be determined.

2. DENMARK

In 2002 the commercially active fleet was defined as fishing vessels with total revenue from fishery over EUR 30,000. These vessels produced 98% of the total revenue in the Danish fishery. The major components of the Danish fishing fleet are trawlers of small to medium size, purse seiners, Danish seiners and gillnetters. Fleet segments of relatively little importance are multipurpose vessels, beam trawlers, shrimp trawlers, mussel dredgers and vessels using fixed gear.

Economic performance in 2002

Danish fleet was composed of about 1,400 active vessels, which employed in 2002 some 4.000 fishermen and produced a total value of 502 mln Euro. The overall result for the Danish fishery in 2002 improved compared to 2001 due to higher prices of industrial fish.. Fuel costs decreased by 13% and gross cash flow increased by 31% compared to 2001.

The fleet used about 140,000 tonnes of fuel, of which 50% was used by 178 trawlers and purse seiners over 24m. Fuel costs represented 9% of the total revenues and 23% of the total operational costs.

Table 2.1 Denmark, Performance of main fleet segments in 2002, (value in mln Euro)

Gear	Size class	Value of landings	Fuel costs	GVA	Employment on board	Number of active vessels	Fuel use (1000 t)
Total		501.9	43.7	313.9	4,056	1,388	140
Demersal and pelagic trawlers and seiners	12m–24m	138.7	13.2	83.3	1,492	534	42
	24m–40m	131.0	15.7	77.0	820	134	50
	>40m	106.0	8.7	70.6	353	44	28
Passive gears	<12m	56.4	2.7	36.7	861	435	9
	12m–24m	69.9	3.4	46.3	529	241	11

Consequences of fuel price rise by 100%

In 2002 average fuel price amounted to 0.313 Euro/litre. Fuel price rise by 100% implies additional costs of 44 mln Euro. Consequently, in the short term the gross value added will be reduced by 14% or 11,000 Euro/man. In the long run a reduction of employment by 23% can be expected. Over 900 jobs would disappear. Part of this reduction is due to the losses faced by various segments already in the years 2002. After restructuring, the gross value added / man may increase by 13,000 Euro.

Table 2.2 Denmark, Economic and social consequences of an average increase of fuel price by 100% (change compared to the situation in 2002)

Gear type	Size class	Short term effect		Long term effect		GVA (%)	GVA/man (1000 Euro)
		GVA (%)	GVA / man (1000 Euro)	Los of jobs (number)	Loss of jobs (%)		
Total		-14%	-11	-924	-23%	-9%	13
Demersal and pelagic trawlers and seiners	12m–24m	-16%	-9	-393	-26%	-8%	14
	24m–40m	-20%	-19	-80	-10%	-18%	-8
	>40m	-12%	-25	0	0%	-12%	-25
Passive gears	<12m	-7%	-3	-451	-52%	7%	53
	12m–24m	-7%	-7	0	0%	-7%	-7

In order to achieve a new break-even situation the average value of landings per vessel will have to increase by 38% to 499,000 Euro. Assuming constant productivity (value of catch per unit of effort), fishing effort per vessel would also have to increase by the required improvement of the value of landings per vessel. It is uncertain whether such increase could be realized. For some segments an

substantially higher percentage would be required. This illustrates the already poor performance before the fuel price rise.

Table 2.3 Denmark, Performance in 2002 and assessment of break-even performance after fuel price rise by 100%

Gear type	Size class	Value of landings per vessel in 2002 (1000 Euro)	Assessment of 2002 performance	Threshold fuel price (Euro / ton)	Break-even VL/vessel after fuel price rise by 100% (1000 Euro)	Feasibility of increase of effort per vessel
Total		362		448	374	
Demersal and pelagic trawlers and seiners	12m–24m	260	Weak	loss in 2002	352	Uncertain
	24m–40m	978	Reasonable	407	1,084	Feasible
	>40m	2,408	Strong	992	1,798	Feasible
Passive gears	<12m	130	Weak	loss in 2002	272	Unfeasible
	12m–24m	291	<i>Strong</i>	<i>1,454</i>	<i>192</i>	<i>Feasible</i>

Table 2.4 Denmark, Employment by segment in 2002 and loss of jobs under different scenarios of fuel price (change compared to 2002, number of jobs)

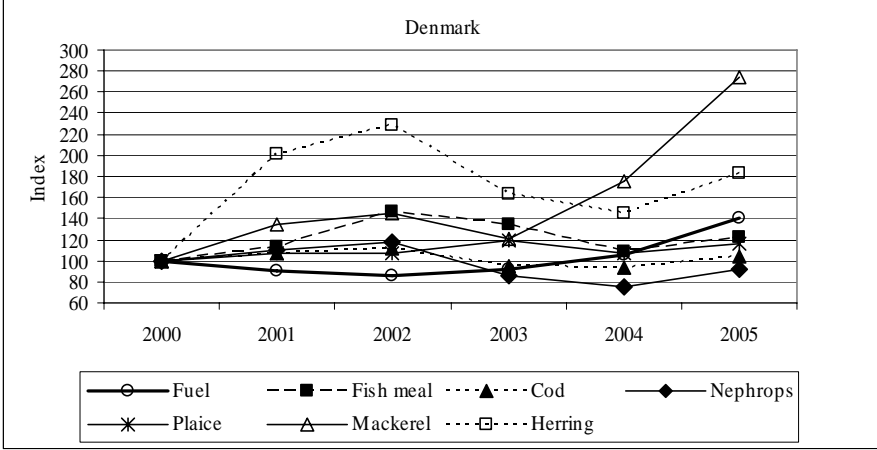
	Size class	Employment in 2002	Break - even	Fuel price 50% up	Fuel price 100% up	Fuel price 150% up
Total		4,056	-620	-733	-924	-1,115
Demersal and pelagic trawlers and seiners	12m–24m	1,492	-206	-299	-393	-486
	24m–40m	820	0	-1	-80	-160
	>40m	353	0	0	0	0
Passive gears	<12m	861	-414	-433	-451	-469
	12m–24m	529	0	0	0	0

Policy measures

Danish authorities have not undertaken any special measures to cushion the consequences of the fuel price rise. However, in order to improve the performance of the fleet in general a decommission scheme has been implemented and individual transferable quota will be introduced in 2007. Apart from refundable VAT, no further taxes are applicable to fuel price.

There is no relation between prices of fish and fuel.

Fig. 2.1 Development of prices of fuel and fish, 2000-2005



There is no information available regarding changes in fishing effort in terms of level and regional distribution. Effects on stocks cannot yet be determined.

3. ESTONIA

Estonian national fleet has five segments: Atlantic distant fisheries, Baltic trawlers < 24 m, Baltic trawlers > 24 m, Baltic cod gillnetters and Baltic coastal small-scale vessels. Trawlers target herring, sprat and cod. In coastal fisheries the most important by value is herring, followed by perch, pikeperch and flounder. The Atlantic distant fishery is not covered in the present report. In 2002 the distant fleet consisted of 11 vessels.

Economic performance in 2002

Estonian fleet was composed of 577 vessels, which employed in 2002 about 2,000 fishermen and produced a total value of 25.6 mln Euro. The Russian financial crisis in 1998 depressed the performance of the trawlers dramatically. In 1999-2001 the profitability was improving, and declining again in 2002. The size of the fleet has decreased permanently. Gross revenue of many vessels is below the break-even level. As the average age of vessels is high, the fishing enterprises may encounter problems in renewing their fleet in coming years. The profitability of the coastal fishery was very high after the fall of the Soviet Union due to the low costs and high fish prices for pikeperch and perch in the European market. However, as the fish prices have remained the same and costs have grown, the profitability has been deteriorating steadily. The number of fishermen has declined while the importance of income from other sources is increasing.

The fleet used about 19,000 tonnes of fuel, of which 75% was used by >40m trawlers. Fuel costs represented 22% of the total revenues and 46% of the total operational costs.

Table 3.1 Estonia, Performance of main fleet segments in 2002, (value in mln Euro)

Gear	Size class	Value of landings	Fuel costs	GVA	Employment on board	Number of active vessels	Fuel use (1000 t)
Total		25.6	5.7	13.3	1,955	577	19
Demersal and pelagic trawlers and seiners	12m–24m	0.6	0.1	0.4	150	60	0
	24m–40m	10.1	1.3	6.3	456	76	4
	>40m	13.7	4.1	5.9	303	6	14

Consequences of fuel price rise by 100%

In 2002 average fuel price amounted to 0.302 Euro/litre⁶. Fuel price rise by 100% implies additional costs of almost 6 mln Euro. Consequently, in the short term the gross value added will be reduced by 43% or 3,000 Euro/man. In the long run a reduction of employment by 5% can be expected. About 98 jobs would disappear. Particularly the smaller vessels would be seriously affected, due to their poor economic performance before the fuel price rise. Part of this reduction is due to the losses faced by the fleet trawlers already in the years 2002. After restructuring, the gross value added / man may decrease by 3,000 Euro.

⁶ It is assumed that the fuel price was at a comparable level to Lithuania. Data for Estonia is not available.

Table 3.2 Estonia, Economic and social consequences of an average increase of fuel price by 100% (change compared to the situation in 2002)

Gear type	Size class	Short term effect		Long term effect			
		GVA (%)	GVA / man (1000 Euro)	Los of jobs (number)	Loss of jobs (%)	GVA (%)	GVA/man (1000 Euro)
Total		-43%	-3	-98	-5%	-41%	-3
Demersal and pelagic trawlers and seiners	12m–24m	-13%	0	-70	-47%	-2%	2
	24m–40m	-21%	-3	-28	-6%	-19%	-2
	>40m	-69%	-14	0	0%	-69%	-14

In order to achieve a new break-even situation the average value of landings per vessel will have to increase slightly. However, major improvement is required for the 12-24m segments, which does not seem feasible. Assuming constant productivity (value of catch per unit of effort), fishing effort per vessel would also have to increase by the required improvement of the value of landings per vessel.

Table 3.3 Estonia, Performance in 2002 and assessment of break-even performance after fuel price rise by 100%

Gear type	Size class	Value of landings per vessel in 2002 (1000 Euro)	Assessment of 2002 performance	Threshold fuel price (Euro / ton)	Break-even VL/vessel after fuel price rise by 100% (1000 Euro)	Feasibility of increase of effort per vessel
Total		44		588	42	
Demersal and pelagic trawlers and seiners	12m–24m	11	Weak	loss in 2002	20	Unfeasible
	24m–40m	132	Strong	439	141	Feasible
	>40m	2,493	Strong	637	2,085	Feasible

Table 3.4 Estonia, Employment by segment in 2002 and loss of jobs under different scenarios of fuel price (change compared to 2002, number of jobs)

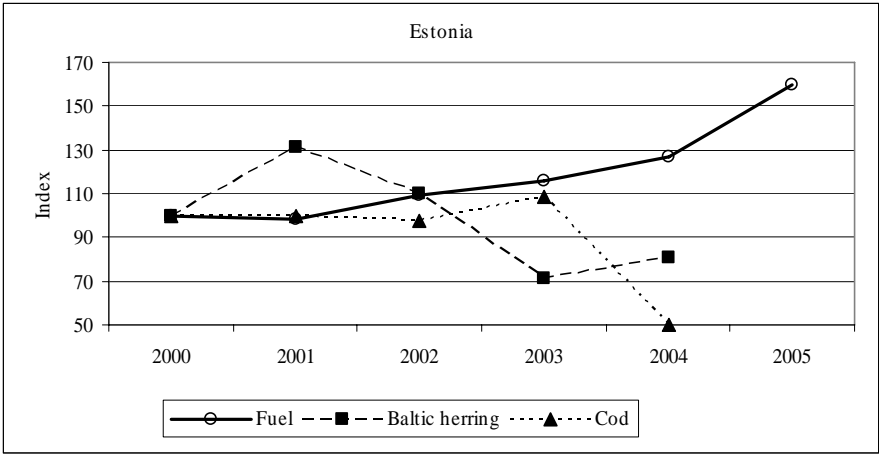
	Size class	Employment in 2002	Break - even	Fuel price 50% up	Fuel price 100% up	Fuel price 150% up
Total		1,955	-60	-65	-98	-242
Demersal and pelagic trawlers and seiners	12m–24m	150	-60	-65	-70	-75
	24m–40m	456	0	0	-28	-73
	>40m	303	0	0	0	-93
Passive gears	<12m	879	0	0	0	0

Policy measures

Information on special measures and taxes is not available.

There is no relation between prices of fish and fuel.

Fig. 3.1 Development of prices of fuel and fish, 2000-2005



There is no information available regarding changes in fishing effort in terms of level and regional distribution. Effects on stocks cannot yet be determined.

4. FINLAND

There were 3,700 registered vessels in Finnish fishing fleet, although not all of them were in active use. While there are many fishermen, only a part of them earned enough from fishing to be considered as commercial fishers in 2002. These fishers accounted for about 90% of the value and the volume of total landings. The fleet is divided into trawlers, gillnetters and coastal vessels. Trawlers dominate the fisheries in terms of volume and value, catching Baltic herring and sprat. Traditional offshore gillnet fishing is gradually disappearing due to the restrictive management decisions. Small-scale fisheries are a very important part of Finnish fisheries in socio-economic terms, even though their share of landings is limited. They catch various non-quota freshwater fish species along the Finnish coastline.

Economic performance in 2002

Finnish fleet is composed of about 357 active vessels, which employed in 2002 583 fishermen and produced a total value of almost 24 mln Euro. Landings were 5% below 2001 level. Economic performance improved for the total fleet due to lower costs. Gross value added improved from the previous year by 2%.

The fleet used about 12,000 tonnes of fuel, 50% of which most was used by 24-40m trawlers. Fuel costs represented on average 11% of the total revenues and 25% of the total operational costs.

Table 4.1 Finland, Performance of main fleet segments in 2002, (value in mln Euro)

Gear	Size class	Value of landings	Fuel costs	GVA	Employment on board	Number of active vessels	Fuel use (1000 t)
Total		24.0	2.7	13.0	583	357	12
Demersal and pelagic trawlers and seiners	12m–24m	5.9	0.6	3.4	108	65	3
	24m–40m	9.6	1.3	5.3	71	21	6
Passive gears	<12m	6.8	0.7	3.7	369	253	3
	12m–24m	1.7	0.1	0.6	34	18	0

Consequences of fuel price rise by 100%

In 2002 average fuel price amounted to 0.233 Euro/litre. Fuel price rise by 100% implies additional costs of 2.7 mln Euro. Consequently, in the short term the gross value added will be reduced by 21% or 5,000 Euro/man. In the long run no reduction of employment is expected due to sufficient level of profitability in 2002. The gross value added / man would decrease particularly in the 24-40m segment.

Table 4.2 Finland, Economic and social consequences of an average increase of fuel price by 100% (change compared to the situation in 2002)

Gear type	Size class	Short term effect		Long term effect		GVA (%)	GVA/man (1000 Euro)
		GVA (%)	GVA / man (1000 Euro)	Los of jobs (number)	Loss of jobs (%)		
Total		-21%	-5	0	0%	-21%	-5
Demersal and pelagic trawlers and seiners	12m–24m	-18%	-6	0	0%	-18%	-6
	24m–40m	-25%	-18	0	0%	-25%	-18
Passive gears	<12m	-19%	-2	0	0%	-19%	-2
	12m–24m	-17%	-3	0	0%	-17%	-3

All fleet segments could continue operating at the 2002 level.

Table 4.3 Finland, Performance in 2002 and assessment of break-even performance after fuel price rise by 100%

Gear type	Size class	Value of landings per vessel in 2002 (1000 Euro)	Assessment of 2002 performance	Threshold fuel price (Euro / ton)	Break-even VL/vessel after fuel price rise by 100% (1000 Euro)	Feasibility of increase of effort per vessel
Total		67		414	46	
Demersal and pelagic trawlers and seiners	12m–24m	91	Reasonable	loss in 2002	64	Feasible
Passive gears	24m–40m	457	Reasonable	loss in 2002	300	Feasible
	<12m	27	Strong	1,065	17	Feasible
	12m–24m	94	Reasonable	loss in 2002	82	Feasible

Table 4.4 Finland, Employment by segment in 2002 and loss of jobs under different scenarios of fuel price (change compared to 2002, number of jobs)

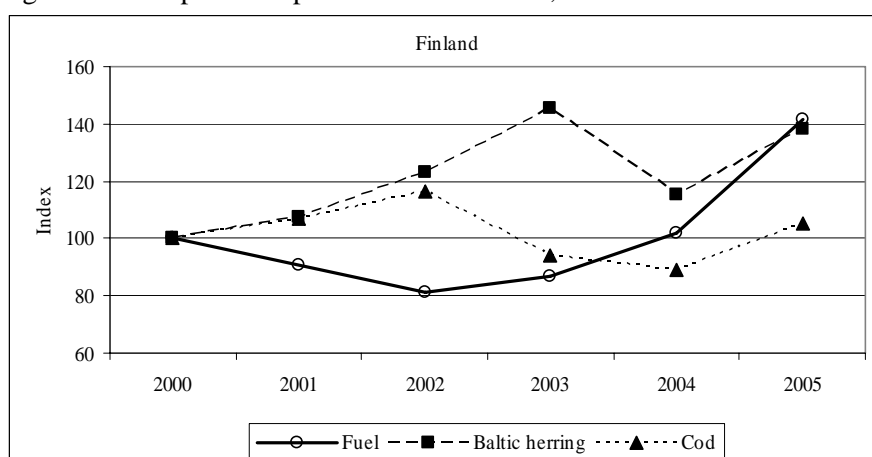
	Size class	Employment in 2002	Break - even	Fuel price 50% up	Fuel price 100% up	Fuel price 150% up
Total		583	0	0	0	0
Demersal and pelagic trawlers and seiners	12m–24m	108	0	0	0	0
Passive gears	24m–40m	71	0	0	0	0
	<12m	369	0	0	0	0
	12m–24m	34	0	0	0	0

Policy measures

Finnish authorities have not undertaken any special measures to cushion the consequences of the fuel price rise. Full time fishermen (i.e. those earning more than 30% of their income from fishing) are exempted from all taxes on fuel, except VAT, which is refundable.

There is no relation between prices of fish and fuel.

Fig. 4.1 Development of prices of fuel and fish, 2000-2005



There is no information available regarding changes in fishing effort in terms of level and regional distribution. Effects on stocks cannot yet be determined.

5. FRANCE

The French fleet (excluding overseas territories) was composed of 5,700 vessels with 911,000 kW. The average vessel is about 11 m long, has an engine power of 160 kW and an age of 22 years. The main target species are sole, anglerfish and scallop. About 85% of the production value is landed fresh. Frozen species are mainly tunas harvested by purse seiners in tropical areas.

It is estimated that the about 2,700 French vessels were commercially active. They employed in 2002 about 12,600 fishermen⁷. The value of production is estimated at about 1,150 mln Euro⁸.

The fleet used about 609,000 tonnes of fuel, 44% of which was used by 12-24m trawlers and seiners. Fuel costs represented on average 12% of the total revenues and 32% of the total operational costs.

Table 5.1 France, Performance of main fleet segments in 2002⁹, (value in mln Euro)

Gear	Size class	Value of landings	Fuel costs	GVA	Employment on board	Number of active vessels	Fuel use (1000 t)
Total		1,148.7	143.2	702.8	12,597	2,696	609
Demersal and pelagic trawlers and seiners	<12m	67.3	9.8	39.7	951	317	42
	12m-24m	434.4	63.5	256.3	3,742	720	270
	24m-40m	163.1	23.8	96.2	1,773	197	101
	>40m	172.1	25.2	101.6	1,785	51	107
Passive gears	<12m	44.2	2.0	32.1	744	370	9
	12m-24m	126.7	6.2	84.0	1,733	436	27
	24m-40m	11.8	0.6	7.8	176	22	2
	>40m	4.0	0.2	2.7	100	4	1
Dredges	<12m	18.6	1.8	12.3	265	176	8
	12m-24m	106.4	10.1	70.1	1,328	403	43

Consequences of fuel price rise by 100%

In 2002 average fuel price amounted to 0.235 Euro/litre. Fuel price rise by 100% implies additional costs of 143 mln Euro. Consequently, in the short term the gross value added will be reduced by 20% or 11,000 Euro/man. The gross value added in the trawler fleet would fall by 25%. In the long run no reduction of employment may occur. The available data indicates that all fleet segments were sufficiently profitable in 2002. While the level of profits would decrease, the increase of fuel costs would not bring the performance below the break-even level. Average gross value added / man may decrease by about 11,000 Euro. The conclusions need to be interpreted with care because data available covered about half of the French fleet.

On the basis of the available data it can be concluded that the French fleet could continue fishing at the present level of effort, without direct threat to employment.

⁷ There are about 21,000 registered fishermen. The presented figure is an estimation of full time equivalents.

⁸ In 2001 the value of production amounted to 1,078 mln Euro. This is the most recent figure available.

⁹ Costs and earnings data for 2002 is not available. It was assumed that 2002 results were equal to 2003.

Table 5.2 France, Economic and social consequences of an average increase of fuel price by 100% (change compared to the situation in 2002)

Gear type	Size class	Short term effect		Long term effect		GVA (%)	GVA/man (1000 Euro)
		GVA (%)	GVA / man (1000 Euro)	Los of jobs (number)	Loss of jobs (%)		
Total		-20%	-11	0	0%	-20%	-11
Demersal and pelagic trawlers and seiners	<12m	-25%	-10	0	0%	-25%	-10
	12m–24m	-25%	-17	0	0%	-25%	-17
	24m–40m	-25%	-13	0	0%	-25%	-13
	>40m	-25%	-14	0	0%	-25%	-14
Passive gears	<12m	-6%	-3	0	0%	-6%	-3
	12m–24m	-7%	-4	0	0%	-7%	-4
	24m–40m	-7%	-3	0	0%	-7%	-3
	>40m	-7%	-2	0	0%	-7%	-2
Dredges	<12m	-14%	-7	0	0%	-14%	-7
	12m–24m	-14%	-8	0	0%	-14%	-8

The following table shows that the average value of landings per vessel in 2002 was well above the break-even level required after the fuel price increase.

Table 5.3 France, Performance in 2002 and assessment of break-even performance after fuel price rise by 100%

Gear type	Size class	Value of landings per vessel in 2002 (1000 Euro)	Assessment of 2002 performance	Threshold fuel price (Euro / ton)	Break-even VL/vessel after fuel price rise by 100% (1000 Euro)	Feasibility of increase of effort per vessel
Demersal and pelagic trawlers and seiners	<12m	212	<i>Strong</i>	430	190	<i>Feasible</i>
	12m–24m	603	<i>Strong</i>	430	540	<i>Feasible</i>
	24m–40m	828	<i>Strong</i>	430	741	<i>Feasible</i>
	>40m	3,375	<i>Strong</i>	430	3,022	<i>Feasible</i>
Passive gears	<12m	120	<i>Strong</i>	1,242	64	<i>Feasible</i>
	12m–24m	291	<i>Strong</i>	1,091	192	<i>Feasible</i>
	24m–40m	538	<i>Strong</i>	1,091	356	<i>Feasible</i>
	>40m	1,002	<i>Strong</i>	1,091	662	<i>Feasible</i>
Dredges	<12m	106	<i>Strong</i>	630	76	<i>Feasible</i>
	12m–24m	264	<i>Strong</i>	630	190	<i>Feasible</i>

Table 5.4 France, Employment by segment in 2002 and loss of jobs under different scenarios of fuel price (change compared to 2002, number of jobs)

	Size class	Employment in 2002	Break - even	Fuel price		
				50% up	100% up	150% up
Total		12,597	0	0	0	-260
Demersal and pelagic trawlers and seiners	<12m	951	0	0	0	-30
	12m–24m	3,742	0	0	0	-118
	24m–40m	1,773	0	0	0	-56
	>40m	1,785	0	0	0	-56
Passive gears	<12m	744	0	0	0	0
	12m–24m	1,733	0	0	0	0
	24m–40m	176	0	0	0	0
	>40m	100	0	0	0	0
Dredges	<12m	265	0	0	0	0

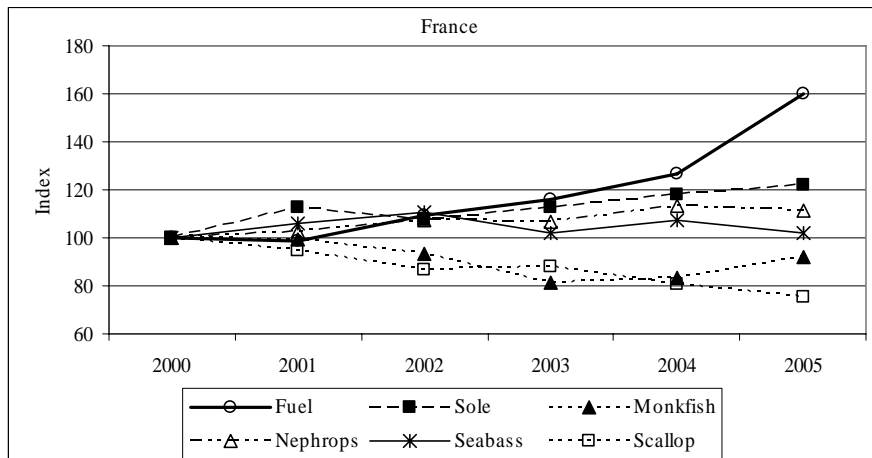
Policy measures

Neither VAT nor other taxes are applicable to the fishing fleet.

The French authorities have set up a fund of 60 mln Euro to compensate the fishing industry should the price of fuel rise above certain level. The legality of this measure is currently under scrutiny as the Treaty does not allow subsidies of operational costs.

There is no relation between prices of fish and fuel.

Fig. 5.1 Development of prices of fuel and fish, 2000-2005



There is no information available regarding changes in fishing effort in terms of level and regional distribution. Effects on stocks cannot yet be determined.

6. GERMANY

The German fishing fleet is very heterogeneous and consisted of some 2,200 vessels. About 1,800 of them are active in the Baltic, 400 in the North Sea, and 11 freezer trawler (3 pelagic and 8 demersal) in different EU- and non EU-waters. The main segments of the North Sea are the medium size shrimp beam trawlers and the larger beam and bottom trawlers mainly catching cod, saithe and flatfish. The Baltic fleet is composed of two segments: bottom trawlers and about 1,700 small coastal vessels. Both segments target cod and herring and the gillnetters some non-quota species. Most of the owners of the small-scale vessels are part time or hobby fishers. The average age of the total German fleet is 25 years.

Economic performance in 2002

The German fleet employed in 2002 about 2,400 fishermen and produced a total value of almost 200 mln Euro. The total volume and value of the catch decreased steadily. In 2002 some 185,000 tonnes were landed. The value of landings and prices were approximately at the level of 2001.

The fleet used about 88,000 tonnes of fuel, 35% of which was used by beam trawlers and 35% by trawlers over 12m. The fuel consumption of passive gear vessels (gillnetters) is very low. Fuel costs represented on average 11% of the total revenues and 25% of the total operational costs.

Table 6.1 Germany, Performance of main fleet segments in 2002, (value in mln Euro)

Gear	Size class	Value of landings	Fuel costs	GVA	Employment on board	Number of active vessels	Fuel use (1000 t)
Total		196.7	21.0	112.7	2,364	2,085	88
Beam trawlers	12m–24m	51.7	5.0	33.2	635	279	21
	24m–40m	10.2	2.4	4.8	60	9	10
Demersal and pelagic trawlers and seiners	12m–24m	17.9	2.1	9.2	300	114	9
	24m–40m	24.4	3.5	11.3	152	31	15
Passive gears	>40m	81.2	7.5	48.1	427	10	31
	<12m	11.3	0.5	6.1	790	1,642	2

Consequences of fuel price rise by 100%

In 2002 average fuel price amounted to 0.240 Euro/litre. Fuel price rise by 100% implies additional costs of 21 mln Euro. Consequently, in the short term the gross value added would be reduced by 19% or 9,000 Euro/man. In the long run a reduction of employment by 34% can be expected. About 800 jobs may disappear, especially in the small scale Baltic fishing. About 250 jobs may be lost on board trawlers. After restructuring, the gross value added / man may increase by 15,000 Euro. Part of the estimated changes is due to the losses faced by most segments already in 2002. This applies in particular to the small scale Baltic fleet, where fuel costs do not play a decisive role, but the general economic performance has been very poor.

Table 6.2 Germany, Economic and social consequences of an average increase of fuel price by 100% (change compared to the situation in 2002)

Gear type	Size class	Short term effect		Long term effect		GVA (%)	GVA/man (1000 Euro)
		GVA (%)	GVA / man (1000 Euro)	Los of jobs (number)	Loss of jobs (%)		
Total		-19%	-9	-807	-34%	-13%	15
Beam trawlers	12m–24m	-15%	-8	0	0%	-15%	-8
	24m–40m	-50%	-40	-35	-58%	-37%	41
Demersal and pelagic trawlers and seiners	12m–24m	-23%	-7	-135	-45%	-11%	19
	24m–40m	-31%	-23	-103	-68%	-12%	127
	>40m	-16%	-18	-55	-13%	-13%	0

In order to achieve a new break-even situation the average value of landings per vessel would have to double to 195,000 Euro. Major improvements in performance are needed in various segments. Assuming constant productivity (value of catch per unit of effort), fishing effort per vessel would also have to increase by the required improvement of the value of landings per vessel. It does not seem realistic that these improvements would be feasible.

Table 6.3 , Germany, Performance in 2002 and assessment of break-even performance after fuel price rise by 100%

Gear type	Size class	Value of landings per vessel in 2002 (1000 Euro)	Assessment of 2002 performance	Threshold fuel price (Euro / ton)	Break-even VL/vessel after fuel price rise by 100% (1000 Euro)	Feasibility of increase of effort per vessel
Total		94		loss in 2002	117	
Beam trawl	12m–24m	185	Strong	538	146	Feasible
	24m–40m	1,129	Weak	loss in 2002	2,684	Unfeasible
Demersal and pelagic trawlers and seiners	12m–24m	157	Weak	loss in 2002	286	Unfeasible
	24m–40m	788	Weak	loss in 2002	2,424	Unfeasible
	>40m	8,120	Reasonable	266	9,312	Feasible
Passive gears	<12m	7	Weak	loss in 2002	18	Unfeasible

Table 6.4 Germany, Employment by segment in 2002 and loss of jobs under different scenarios of fuel price (change compared to 2002, number of jobs)

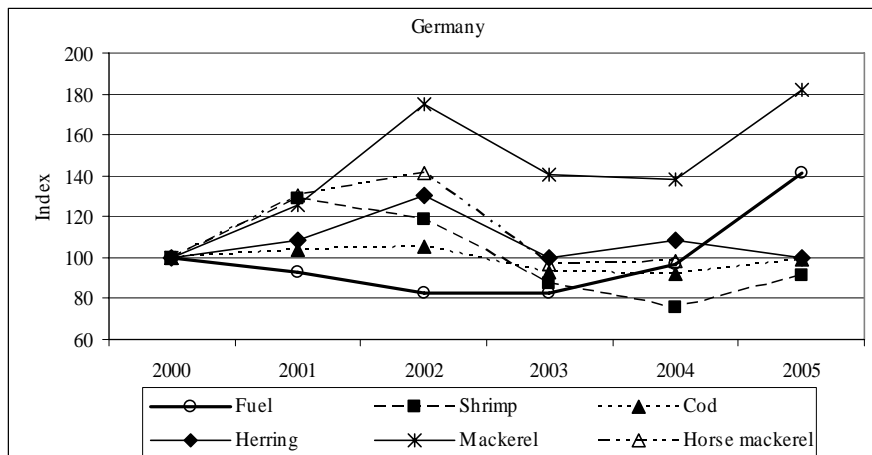
	Size class	Employment in 2002	Break - even	Fuel price 50% up	Fuel price 100% up	Fuel price 150% up
Total		2,364	-583	-690	-807	-925
Beam trawl	12m–24m	635	0	0	0	0
	24m–40m	60	-7	-21	-35	-48
Demersal and pelagic trawlers and seiners	12m–24m	300	-74	-104	-135	-166
	24m–40m	152	-68	-85	-103	-120
	>40m	427	0	-22	-55	-88
Passive gears	<12m	790	-435	-457	-480	-503

Policy measures

German authorities have not undertaken any special measures to cushion the consequences of the fuel price rise. Neither VAT nor other taxes are applicable to the fishing fleet.

There is no relation between prices of fish and fuel.

Fig. 6.1 Development of prices of fuel and fish, 2000-2005



There is no information available regarding changes in fishing effort in terms of level and regional distribution. Effects on stocks cannot yet be determined.

7. GREECE

The Greek fleet is characterised by a large number of small vessels using a variety of passive gears and exploiting many different species. The three most important species – anchovy, hake and striped mullet – represent only about 20% of the total value and volume of landings.

Economic performance in 2002

Greek fleet was composed of 18,000 vessels, which employed in 2002 over 31,000 fishermen and produced a total value of 240 mln Euro¹⁰. Landings at national level in 2002 were about 90,000 tonnes.

The fleet used about 80,000 tonnes of fuel, 75% of which was used by the small coastal fleet. Fuel costs represented on average 8% of the total revenues and 33% of the total operational costs.

Table 7.1 Greece, Performance of main fleet segments in 2002, (value in mln Euro)

Gear	Size class	Value of landings	Fuel costs	GVA	Employment on board	Number of active vessels	Fuel use (1000 t)
Total		239.9	18.7	183.5	31,092	17,567	80
Demersal and pelagic trawlers and seiners	<12m	0.7	0.2	0.3	35	14	1
	12m–24m	2.1	0.5	1.0	60	15	2
	24m–40m	9.6	1.9	5.0	234	39	8
	>40m	2.5	0.5	1.3	50	5	2
Passive gears	<12m	204.9	13.8	161.5	29,021	17,071	59
	12m–24m	20.1	1.8	14.4	1,692	423	8

Consequences of fuel price rise by 100%

In 2002 average fuel price amounted to 0.233 Euro/litre. Fuel price rise by 100% implies additional costs of 19 mln Euro. Consequently, in the short term the gross value added would be reduced by 10% or 11,000 Euro/man. It is not possible to assess reliably the long run effect of the fuel price increase due to lack of data. The table below illustrates that all segments would appear to be making profit in 2002 and even after the fuel price increase they would continue to do so. There would be no direct reason to reduce the size of the fleet and the employment could theoretically remain at the original level.

Table 7.2 Greece, Economic and social consequences of an average increase of fuel price by 100% (change compared to the situation in 2002)

Gear type	Size class	Short term effect		Long term effect		GVA (%)	GVA/man (1000 Euro)
		GVA (%)	GVA / man (1000 Euro)	Los of jobs (number)	Loss of jobs (%)		
Total		-10%	-1	-81	0%	-10%	-1
Demersal and pelagic trawlers and seiners	<12m	-54%	-5	-15	-44%	-44%	0
	12m–24m	-54%	-9	-26	-44%	-44%	0
	24m–40m	-38%	-8	-32	-14%	-36%	-5
	>40m	-38%	-10	-7	-14%	-36%	-7
Passive gears	<12m	-9%	0	0	0%	-9%	0
	12m–24m	-13%	-1	0	0%	-13%	-1

¹⁰ It must be stressed that economic data on the performance of Greek fisheries is very fragmentary. The original data used covered only 50-60 trawlers in 12-40m segments. The performance of the rest of the fleet was estimated by calibrating the Italian data on vessel performance to the Greek size and composition of the fleet and overall production.

The apparent resilience of the Greek fishing sector to higher fuel costs is a consequence of its small scale nature where operational costs are low and low incomes are acceptable. In 2002 the average gross value added per man amounted to 6,000 Euro, so that the average crew share probably did not exceed 4,000 Euro. This is less than 25% of the average gross annual earnings in industry and services which is 17,000 Euro¹¹. Further reduction of the gross value added, and consequently crew share, will undoubtedly affect the attractiveness of the profession.

The following table shows that the average value of landings per vessel in 2002 was well above the break-even level required after the fuel price increase.

Table 7.3 Greece, Performance in 2002 and assessment of break-even performance after fuel price rise by 100%

Gear type	Size class	Value of landings per vessel in 2002 (1000 Euro)	Assessment of 2002 performance	Threshold fuel price (Euro / ton)	Break-even VL/vessel after fuel price rise by 100% (1000 Euro)	Feasibility of increase of effort per vessel
Total		14		1,696	3	
Demersal and pelagic trawlers and seiners	<12m	53	<i>Strong</i>	293	94	<i>Unfeasible</i>
	12m–24m	139	<i>Strong</i>	293	249	<i>Unfeasible</i>
	24m–40m	246	<i>Strong</i>	339	285	<i>Feasible</i>
	>40m	501	<i>Strong</i>	339	581	<i>Feasible</i>
Passive gears	<12m	12	<i>Strong</i>	2,068	2	<i>Feasible</i>
	12m–24m	47	<i>Strong</i>	1,205	15	<i>Feasible</i>

Table 7.4 Greece, Employment by segment in 2002 and loss of jobs under different scenarios of fuel price (change compared to 2002, number of jobs)

	Size class	Employment in 2002	Break - even	Fuel price 50% up	Fuel price 100% up	Fuel price 150% up
Total		31,092	0	-5	-81	-201
Demersal and pelagic trawlers and seiners	<12m	35	0	-2	-15	-29
	12m–24m	60	0	-3	-26	-50
	24m–40m	234	0	0	-32	-101
	>40m	50	0	0	-7	-22
Passive gears	<12m	29,021	0	0	0	0
	12m–24m	1,692	0	0	0	0

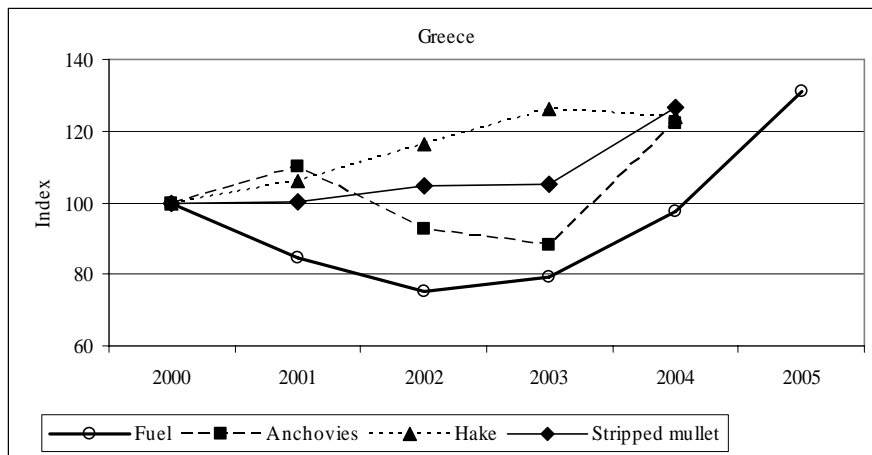
Policy measures

Greek authorities have not undertaken any special measures to cushion the consequences of the fuel price rise. Neither VAT nor other taxes are applicable to the fishing fleet.

There is no relation between prices of fish and fuel.

Fig. 7.1 Development of prices of fuel and fish, 2000-2005

¹¹ Eurostat, Full-time employees in enterprises with 10 or more employees.



There is no information available regarding changes in fishing effort in terms of level and regional distribution. Effects on stocks cannot yet be determined.

8. IRELAND

The national fleet can be divided into five segments: polyvalent, pelagic, beam trawlers, specific and aquaculture, of which only the first three are relevant to this analysis. The pelagic is the most intensive sector, with less than 2% of the national fleet (in numbers) accounting for over 25% of the value of landings in 2002. Over 85% of the fleet is classified as polyvalent. Of these, 80% are inshore boats with overall length <12m, with the remainder mainly demersal trawlers targeting whitefish species or nephrops.

Economic performance in 2002¹²

Irish fleet is composed of about 1,400 active vessels, which employed in 2002 some 5,100 fishermen and produced a total value of 200 mln Euro. As economic statistics are not available for the entire national fleet it is difficult to assess performance. The volume and value of landings in 2002 decreased compared to 2001.

The fleet used about 193,000 tonnes of fuel, 35% of which was used by large trawlers >40m. Fuel costs represented on average 22% of the total revenues and 25% of the total operational costs.

Table 8.1 Ireland, Performance of main fleet segments in 2002, (value in mln Euro)¹³

Gear	Size class	Value of landings	Fuel costs	GVA	Employment on board	Number of active vessels	Fuel use (1000 t)
Total		199.5	44.7	23.7	5,162	1,379	193
Demersal and pelagic trawlers and seiners	<12m	1.7	0.2	0.0	134	64	1
	12m–24m	30.5	7.0	-1.6	869	158	30
	24m–40m	28.8	6.9	-0.8	451	53	30
	>40m	63.9	15.7	26.9	735	21	68
Passive gears	<12m	15.6	2.0	-0.2	1,245	593	9
	12m–24m	10.1	2.3	-0.5	286	52	10
	24m–40m	9.2	2.2	-0.2	145	17	10
	>40m	2.9	0.7	1.2	45	2	3
Dredges	<12m	9.0	1.2	-0.1	718	342	5
	12m–24m	7.7	1.8	-0.4	220	40	8
	24m–40m	20.1	4.8	-0.5	315	37	21

Consequences of fuel price rise by 100%

In 2002 average fuel price amounted to 0.231 Euro/litre. Fuel price rise by 100% implies additional costs of 45 mln Euro. Consequently, in the short term the gross value added will be reduced to zero. Detailed short and long term effects cannot be calculated because of extremely poor economic performance reported in 2002.

Table 8.2 Ireland, Economic and social consequences of an average increase of fuel price by 100% (change compared to the situation in 2002)

Gear type	Size class	Short term effect		Long term effect		GVA (%)	GVA/man (1000 Euro)
		GVA (%)	GVA / man (1000 Euro)	Los of jobs (number)	Loss of jobs (%)		
Total							
Demersal and pelagic trawlers and seiners	<12m						
	12m–24m						

¹² Assessment of the 24-40m segments is based on 2004 data, as 2002 data is not available.

¹³ The data is based on segments which were defined as polyvalent, which cover active as well as passive gears. It was assumed that the same performance indicators would apply to both groups.

	24m–40m
	>40m
Passive gears	<12m
	12m–24m
	24m–40m
	>40m
Dredges	<12m
	12m–24m
	24m–40m

As the gross cash flow of most segments was negative in 2002, a new break-even situation does not exist as long as the assumption of constant value of landings per unit of fishing effort is maintained¹⁴. Short term and long term consequences cannot be calculated.

Table 8.3 Ireland, Performance in 2002 and assessment of break-even performance after fuel price rise by 100%

Gear type	Size class	Value of landings per vessel in 2002 (1000 Euro)	Assessment of 2002 performance	Threshold fuel price (Euro / ton)	Break-even VL/vessel after fuel price rise by 100% (1000 Euro)	Feasibility of increase of effort per vessel
Total		145		loss in 2002	na	
Demersal and pelagic trawlers and seiners	<12m	26	Weak	loss in 2002	na	Unfeasible
	12m–24m	193	Weak	loss in 2002	na	Unfeasible
	24m–40m	544	Weak	loss in 2002	Na	Unfeasible
	>40m	3,044	<i>Reasonable</i>	243	5,083	<i>Unfeasible</i>
Passive gears	<12m	26	Weak	loss in 2002	na	Unfeasible
	12m–24m	193	Weak	loss in 2002	na	Unfeasible
	24m–40m	544	Weak	loss in 2002	na	Unfeasible
	>40m	1,433	<i>Reasonable</i>	243	2,393	<i>Unfeasible</i>
Dredges	<12m	26	Weak	loss in 2002	na	Unfeasible
	12m–24m	193	Weak	loss in 2002	na	Unfeasible
	24m–40m	544	Weak	loss in 2002	na	Unfeasible

Table 8.4 Ireland, Employment by segment in 2002 and loss of jobs under different scenarios of fuel price (change compared to 2002, number of jobs)

	Size class	Employment in 2002	Break - even	Fuel price 50% up	Fuel price 100% up	Fuel price 150% up
Total		5,162	-5,162			
Demersal and pelagic trawlers and seiners	<12m	134	-134			
	12m–24m	869	-869			
	24m–40m	451	-451			
	>40m	735	-735			
Passive gears	<12m	1,245	-1,245			
	12m–24m	286	-286			
	24m–40m	145	-145			
	>40m	45	-45			
Dredges	<12m	718	-718			
	12m–24m	220	-220			
	24m–40m	315	-315			

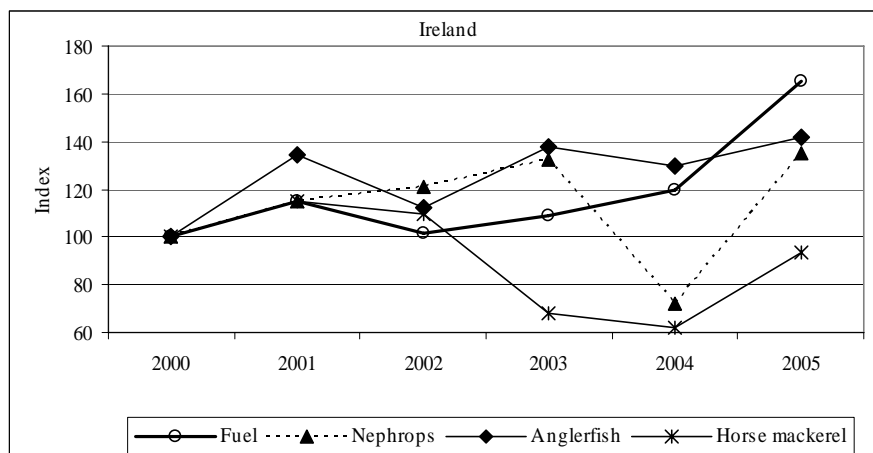
¹⁴ In this situation every increase of effort leads to higher losses because costs per unit of effort are higher than revenues.

Policy measures

Irish authorities have not undertaken any special measures to cushion the consequences of the fuel price rise. Apart from refundable VAT, no further taxes are applicable to fuel price.

There is no relation between prices of fish and fuel.

Fig. 8.1 Development of prices of fuel and fish, 2000-2005



There is no information available regarding changes in fishing effort in terms of level and regional distribution. Effects on stocks cannot yet be determined.

9. ITALY

The Italian fleet is composed of mainly small vessels <12m using passive gears and trawlers <24m. The fishing sector is highly fragmented in many regions and there are structural and technical differences in vessels from different geographical areas. Two fishing areas, Adriatic Sea and Sicily Channel, produce almost two thirds of all landings.

Economic performance in 2002

Italian fleet was composed of some 15,900 vessels, which employed in 2002 38,400 fishermen and produced a total value of 1,400 mln Euro.

In 2002, the negative trend of the national fishing industry continued. The value of landings and decreased by 6% compared to 2001.

The fleet used about 661,000 tonnes of fuel, 67% of which was used by the trawler segment. Fuel costs represented on average 15% of the total revenues and 43% of the total operational costs.

Table 9.1 Italy, Performance of main fleet segments in 2002, (value in mln Euro)

Gear	Size class	Value of landings	Fuel costs	GVA	Employment on board	Number of active vessels	Fuel use (1000 t)
Total		1,385.3	204.8	906.5	38,360	15,915	661
Demersal and pelagic trawlers and seiners	<24m	749.9	137.4	456.5	12,104	2,854	443
Passive gears	<12m	360.2	29.7	263.8	19,358	10,296	96
	12m–24m	210.2	32.6	133.6	5,395	2,051	105
Dredges	12m–24m	65.0	5.1	52.6	1,503	714	16

Consequences of fuel price rise by 100%

In 2002 average fuel price amounted to 0.310 Euro/litre, one of the highest prices in the EU. Fuel price rise by 100% implies additional costs of 205 mln Euro. Consequently, in the short term the gross value added would be reduced by 23% or 5,000 Euro/man. The fleet will remain profitable in the long run even at this higher level of fuel price. While the GVA would be reduced, there would not be a direct need for withdrawal of vessels and reduction of employment.

Table 9.2 Italy, Economic and social consequences of an average increase of fuel price by 100% (change compared to the situation in 2002)

Gear type	Size class	Short term effect		Long term effect		GVA (%)	GVA/man (1000 Euro)
		GVA (%)	GVA / man (1000 Euro)	Los of jobs (number)	Loss of jobs (%)		
Total		-23%	-5	0	0%	-23%	-5
Demersal and pelagic trawlers and seiners	<24m	-30%	-11	0	0%	-30%	-11
Passive gears	<12m	-11%	-2	0	0%	-11%	-2
	12m–24m	-24%	-6	0	0%	-24%	-6
Dredges	12m–24m	-10%	-3	0	0%	-10%	-3

The apparent resilience of the Italian fishing sector to higher fuel costs is a consequence of its small scale nature where operational costs are low and low incomes are acceptable. However, 2002 the average annual crew share per man amounted to approximately 12,000 Euro. This is already slightly less than 50% of the average national wage level. Further reduction of the gross value added, and consequently crew share, will undoubtedly affect the attractiveness of the profession.

The following table shows that the average value of landings per vessel in 2002 was well above the break-even level required after the fuel price increase.

Table 9.3 Italy, Performance in 2002 and assessment of break-even performance after fuel price rise by 100%

Gear type	Size class	Value of landings per vessel in 2002 (1000 Euro)	Assessment of 2002 performance	Threshold fuel price (Euro / ton)	Break-even VL/vessel after fuel price rise by 100% (1000 Euro)	Feasibility of increase of effort per vessel
Total		87		836	44	
Demersal and pelagic	12m–24m	263	Strong	654	167	Feasible
Passive gears	<12m	35	Strong	1,726	11	Feasible
	12m–24m	102	Strong	692	66	Feasible
Dredges	12m–24m	91	Strong	1,471	39	Feasible

Table 9.4 Italy, Employment by segment in 2002 and loss of jobs under different scenarios of fuel price (change compared to 2002, number of jobs)

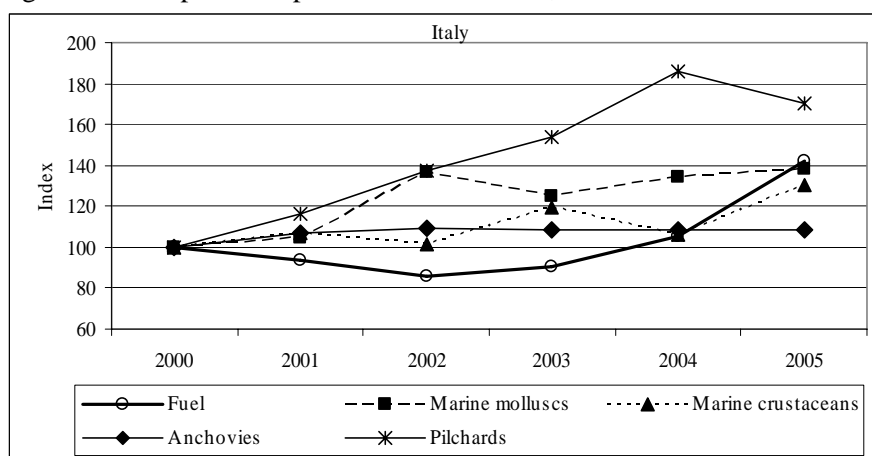
	Size class	Employment in 2002	Break - even	Fuel price 50% up	Fuel price 100% up	Fuel price 150% up
Total		38,360	0	0	0	0
Demersal and pelagic	12m–24m	12,104	0	0	0	0
Passive gears	<12m	19,358	0	0	0	0
	12m–24m	5,395	0	0	0	0
Dredges	12m–24m	1,503	0	0	0	0

Policy measures

Italian authorities have not undertaken any special measures to cushion the consequences of the fuel price rise. Neither VAT nor other taxes are applicable to the fishing fleet.

There is no relation between prices of fish and fuel.

Fig. 9.1 Development of prices of fuel and fish, 2000-2005



There is no information available regarding changes in fishing effort in terms of level and regional distribution. Effects on stocks cannot yet be determined.

10. LATVIA

Five main segments can be distinguished in the Latvian fishing fleet: coastal boats gillnetters fishing in Baltic Sea, trawlers <24 m mainly fishing in the Gulf of Riga, trawlers >24 m fishing in Baltic Sea and the Gulf of Riga and distant water fleet. The total volume of landings in Baltic Sea is about 80,000 tonnes. The target species in the Baltic are cod, sprat and herring. The average age of the Baltic vessels is 27 years.

Economic performance in 2002¹⁵

Latvian fleet is composed of about 950 active vessels, which employed in 2002 3,500 fishermen and produced a total value of about 50 mln Euro¹⁶.

Generally Latvian Baltic fleet shows stable economic performance.

The fleet used about 43,000 tonnes of fuel, 60% of which was used by distant water fleet. Fuel costs represented on average 26% of the total revenues and 45% of the total operational costs.

Table 10.1 Latvia, Performance of main fleet segments in 2002, (value in mln Euro)

Gear	Size class	Value of landings	Fuel costs	GVA	Employment on board	Number of active vessels	Fuel use (1000 t)
Total		50.3	13.0	21.2	3,476	957	43
Demersal and pelagic trawlers and seiners	12m–24m	2.5	0.6	-0.1	165	50	2
	24m–40m	12.3	3.2	5.5	476	81	11
	>40m	25.9	7.8	11.2	572	10	26
Passive gears	<12m	2.5	0.4	1.4	1,865	746	1
	12m–24m	0.7	0.1	0.4	61	10	0
Passive gears	24m–40m	6.4	0.9	2.8	337	60	3

Consequences of fuel price rise by 100%

In 2002 average fuel price amounted to about 0.302¹⁷ Euro/litre. Fuel price rise by 100% implies additional costs of 13 mln Euro. Consequently, in the short term the gross value added will be reduced by 61% or 4,000 Euro/man. In the long run the Baltic trawler fleet (12-40m) would have to be reduced by about 50%. . Over 300 jobs would disappear.

Table 10.2 Latvia, Economic and social consequences of an average increase of fuel price by 100% (change compared to the situation in 2002)

Gear type	Size class	Short term effect		Long term effect		GVA (%)	GVA/man (1000 Euro)
		GVA (%)	GVA / man (1000 Euro)	Los of jobs (number)	Loss of jobs (%)		
Total		-61%	-4	-311	-9%	-49%	-3
Demersal and pelagic trawlers and seiners	12m–24m	0%	-4	-111	-67%	0%	10
	24m–40m	-58%	-7	-200	-42%	-32%	2
	>40m	-69%	-14	0	0%	-69%	-14
Passive gears	<12m	-30%	0	0	0%	-30%	0
	12m–24m +	-36%	-2	0	0%	-36%	-2
Passive gears	24m–40m +	-32%	-3	0	0%	-32%	-3

¹⁵ Estimated segments are based on characteristics of comparable Lithuanian segments.

¹⁶ This value is significantly influenced by the correctness of the estimation of the value of landings by distant water fleet (see appendix A). Official data is not available.

¹⁷ Latvian price is assumed equal to Lithuanian price.

In order to achieve a new break-even situation the average value of landings per vessel of Baltic trawlers of 12-24m and 24-40m will have to increase by 200% and 72% respectively, which must be considered as unfeasible. Value of landings per vessel in other segments was in 2002 above the required break-even level after the fuel price increase and consequently capacity adjustment would not be required.

Table 10.3 Latvia, Performance in 2002 and assessment of break-even performance after fuel price rise by 100%

Gear type	Size class	Value of landings per vessel in 2002 (1000 Euro)	Assessment of 2002 performance	Threshold fuel price (Euro / ton)	Break-even VL/vessel after fuel price rise by 100% (1000 Euro)	Feasibility of increase of effort per vessel
Total		53		508	60	
Demersal and pelagic trawlers and seiners	12m–24m	50	Weak	loss in 2002	152	Unfeasible
	24m–40m	152	Reasonable	loss in 2002	262	Unfeasible
	>40m	2,493	Strong	637	2,085	Feasible
Passive gears	<12m	3	Strong	886	1	Feasible
	12m–24m	74	Strong	604	55	Feasible
Passive gears	24m–40m	107	Strong	671	95	Feasible

Table 10.4 Latvia, Employment by segment in 2002 and loss of jobs under different scenarios of fuel price (change compared to 2002, number of jobs)

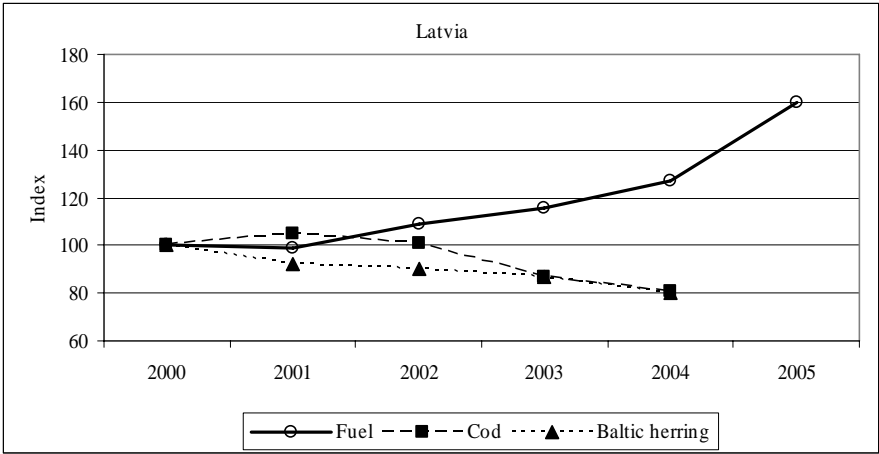
	Size class	Employment in 2002	Break - even	Fuel price 50% up	Fuel price 100% up	Fuel price 150% up
Total		3,476	-123	-217	-311	-586
Demersal and pelagic trawlers and seiners	12m–24m	165	-79	-95	-111	-126
	24m–40m	476	-44	-122	-200	-278
	>40m	572	0	0	0	-176
Passive gears	<12m	1,865	0	0	0	0
	12m–24m	61	0	0	0	-5
Passive gears	24m–40m	337	0	0	0	0

Policy measures

Latvian authorities have not undertaken any special measures to cushion the consequences of the fuel price rise. Apart from refundable VAT, no further taxes are applicable to fuel price.

There is no relation between prices of fish and fuel.

Fig. 10.1 Development of prices of fuel and fish, 2000-2005



There is no information available regarding changes in fishing effort in terms of level and regional distribution. Effects on stocks cannot yet be determined.

11. LITHUANIA

The national fleet consists of coastal and off-shore vessels fishing in Baltic Sea and of trawlers operating in Atlantic Ocean. In 2002 total catches amounted 148,000 tonnes, mainly sprat, cod, Baltic herring and plaice. Total catches of the Atlantic fishing fleet amounted to 140,000 tonnes, mainly horse mackerel, sardinella, anchovy, mackerel, redfish and shrimps.

Economic performance in 2002

Lithuanian fleet was composed of about 150 active vessels, which employed in 2002 about 2,200 fishermen and produced a total value of 83 mln Euro. In 2002 the total value of landings of the Baltic fishing fleet decreased about 22% compared to 2001. The volume of landings of Atlantic fishing fleet was almost stable. There were some changes in composition of landings.

The fleet used about 81,000 tonnes of fuel, 95% of which was used by large trawlers. Fuel costs represented on average 24% of the total revenues and 45% of the total operational costs.

Table 11.1 Lithuania, Performance of main fleet segments in 2002, (value in mln Euro)

Gear	Size class	Value of landings	Fuel costs	GVA	Employment on board	Number of active vessels	Fuel use (1000 t)
Total		83.0	24.4	36.0	2,216	146	81
Demersal and pelagic trawlers and seiners	24m–40m	3.8	0.9	1.8	240	40	3
	>40m	77.1	23.1	33.3	1,730	17	77
Passive gears	<12m	0.4	0.1	0.2	111	67	0
	12m–24m	1.0	0.2	0.4	96	15	1

Consequences of fuel price rise by 100%

In 2002 average fuel price amounted to 0.302 Euro/litre. Fuel price rise by 100% implies additional costs of 24 mln Euro. Consequently, in the short term the gross value added would be reduced by 68% or 11,000 Euro/man. Performance improvements required to achieve the break-even level of production for trawlers of 24-40m and passive gear vessels of 12-24m must be considered unfeasible.

Table 11.2 Lithuania, Economic and social consequences of an average increase of fuel price by 100% (change compared to the situation in 2002)

Gear type	Size class	Short term effect		Long term effect		GVA (%)	GVA/man (1000 Euro)
		GVA (%)	GVA / man (1000 Euro)	Los of jobs (number)	Loss of jobs (%)		
Total		-68%	-11	-121	-5%	-67%	-11
Demersal and pelagic trawlers and seiners	24m–40m	-53%	-4	-79	-33%	-49%	-2
	>40m	-69%	-13	0	0%	-69%	-13
Passive gears	<12m	-32%	-1	0	0%	-32%	-1
	12m–24m	-53%	-2	-42	-44%	-42%	0

Table 11.3 Lithuania, Performance in 2002 and assessment of break-even performance after fuel price rise by 100%

Gear type	Size class	Value of landings per vessel in 2002 (1000 Euro)	Assessment of 2002 performance	Threshold fuel price (Euro / ton)	Break-even VL/vessel after fuel price rise by 100% (1000 Euro)	Feasibility of increase of effort per vessel
Total		568		629	485	
Demersal and pelagic trawlers and seiners	24m–40m	96	Strong	443	143	Unfeasible
	>40m	4,533	Strong	637	3,791	Feasible
Passive gears	<12m	5	Strong	949	1	Feasible
	12m–24m	67	Strong	393	119	Unfeasible

Table 11.4 Lithuania, Employment by segment in 2002 and loss of jobs under different scenarios of fuel price (change compared to 2002, number of jobs)

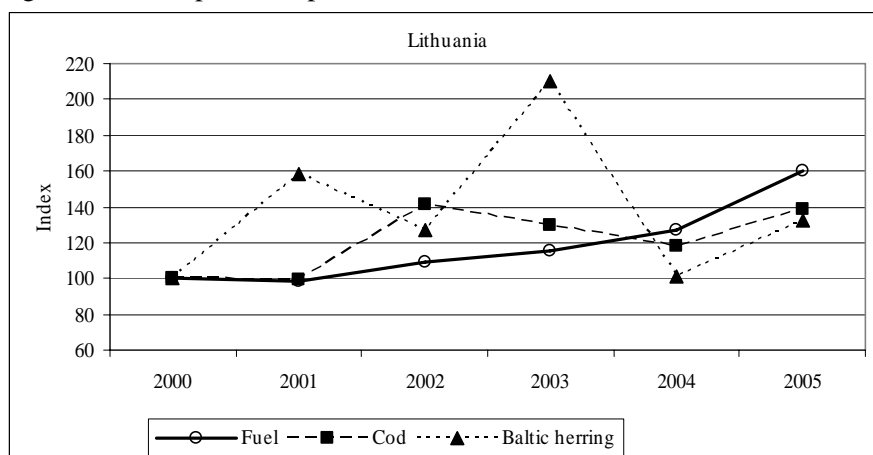
	Size class	Employment in 2002	Break - even	Fuel price 50% up	Fuel price 100% up	Fuel price 150% up
Total		2,216	0	-7	-121	-790
Demersal and pelagic trawlers and seiners	24m–40m	240	0	0	-79	-179
	>40m	1,730	0	0	0	-533
Passive gears	<12m	111	0	0	0	0
	12m–24m	96	0	-7	-42	-77
	24m–40m	39	0	0	0	0

Policy measures

Lithuanian authorities have not undertaken any special measures to cushion the consequences of the fuel price rise. VAT (18%) and excise tax (30%) are applied. Excise tax is refundable to all fishermen. VAT is only refundable to VAT payers. Companies with a turn-over below 100,000 Lt (approx. 32,000 Euro) are not VAT payers. Most coastal fishermen belong to the last group, so that they cannot get the VAT refunded.

There is no relation between prices of fish and fuel.

Fig. 11.1 Development of prices of fuel and fish, 2000-2005



There is no information available regarding changes in fishing effort in terms of level and regional distribution. Effects on stocks cannot yet be determined.

12. NETHERLANDS

The Dutch fishing fleet consists mostly of beam trawlers and freezer trawlers. The most important target species for the larger beam trawlers are sole, plaice and other flatfish. The small vessels target shrimp. All these species are mainly caught in the North Sea and in the coastal zone. The fish is landed fresh. For the 17 freezer trawlers herring, sardinella, horse mackerel, blue whiting and mackerel are the most important species. The freezer trawlers fish in the EU and in West African waters and all catches are landed frozen.

Economic performance in 2002

Dutch fleet was composed of 410 active vessels, which employed in 2002 about 2,300 fishermen and produced a total value of 380 mln Euro¹⁸. Total value of landings of the Dutch fleet in 2002 decreased by 11% compared to 2001. Total volume of landings decreased by 12%. Most segments faced a loss in 2002 except the trawlers 24-40m. Total number of vessels, capacity and employment remained constant.¹⁹

The fleet used about 383,000 tonnes of fuel, 64% of which was used by larger beam trawlers and 24% by the 17 freezer trawlers. Fuel costs represented on average 21% of the total revenues and 37% of the total operational costs.

Table 12.1 Netherlands, Performance of main fleet segments in 2002, (value in mln Euro)

Gear	Size class	Value of landings	Fuel costs	GVA	Employment on board	Number of active vessels	Fuel use (1000 t)
Total		380.3	78.6	169.5	2,330	410	383
Beam trawlers	12m–24m	66.0	8.8	36.0	703	235	43
	>24m	182.4	50.0	79.1	991	141	244
Demersal and pelagic trawlers and seiners	24m–40m	5.8	0.7	3.2	50	17	3
	>40m	126.1	19.1	51.2	586	17	93

Consequences of fuel price rise by 100%

In 2002 average fuel price amounted to 0.205 Euro/litre. This was the lowest price in the EU. Fuel price rise by 100% implies additional costs of 79 mln Euro. Consequently, in the short term the gross value added would be reduced by 46% or 34,000 Euro/man. In the long run a reduction of employment by 48% can be expected. Part of this reduction is due to the losses faced by the larger beam trawlers already in the year 2002. About 1,100 jobs may disappear. After restructuring, the gross value added / man may increase by 24,000 Euro.

Table 12.2 Netherlands, Economic and social consequences of an average increase of fuel price by 100%

		(change compared to the situation in 2002)					
Gear type	Size class	Short term effect		Long term effect		GVA (%)	GVA/man (1000 Euro)
		GVA (%)	GVA / man (1000 Euro)	Los of jobs (number)	Loss of jobs (%)		
Total		-46%	-34	-1,121	-48%	-31%	24
Beam trawlers	12m–24m	-24%	-13	-230	-33%	-17%	12
	>24m	-63%	-50	-609	-61%	-46%	32
Demersal and pelagic trawlers and seiners	24m–40m	-22%	-14	-4	-7%	-20%	-9
	>40m	-37%	-33	-279	-48%	-18%	50

¹⁸ These figures do not include the production of mussels.

¹⁹ About 30 vessels were decommissioned in the beginning of 2005.

In order to achieve a new break-even situation the average value of landings per vessel will have to increase by 72% to 1,600,000 Euro. Assuming constant productivity (value of catch per unit of effort), fishing effort per vessel would also have to increase by the required improvement of the value of landings per vessel. The required improvement in performance must be considered as unfeasible for most segments.

Table 12.3 Netherlands, Performance in 2002 and assessment of break-even performance after fuel price rise by 100%

Gear type	Size class	Value of landings per vessel in 2002 (1000 Euro)	Assessment of 2002 performance	Threshold fuel price (Euro / ton)	Break-even VL/vessel after fuel price rise by 100% (1000 Euro)	Feasibility of increase of effort per vessel
Total		928		loss in 2002	1,882	
Beam trawl	12m–24m	281	Reasonable	loss in 2002	417	Unfeasible
	24m–40m	1,294	Reasonable	loss in 2002	3,354	Unfeasible
Demersal and pelagic trawlers and seiners	24m–40m	341	Strong	293	367	Feasible
	>40m	7,418	Weak	loss in 2002	14,179	Unfeasible

Table 12.4 Netherlands, Employment by segment in 2002 and loss of jobs under different scenarios of fuel price (change compared to 2002, number of jobs)

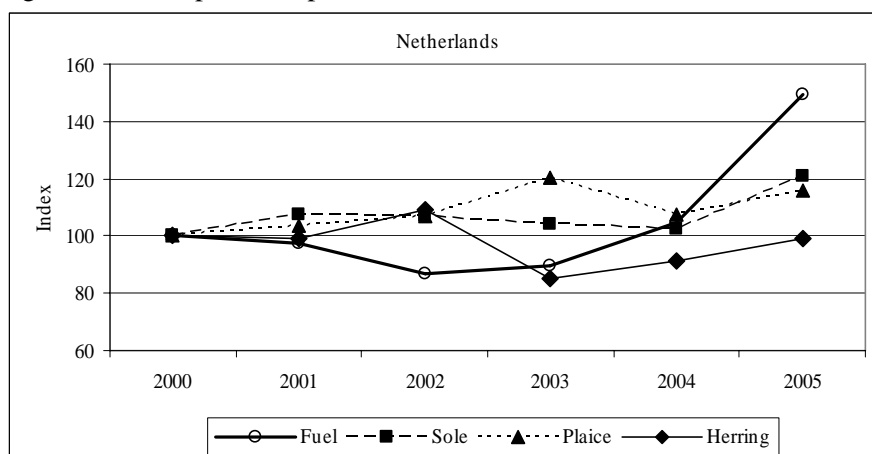
	Size class	Employment in 2002	Break - even	Fuel price 50% up	Fuel price 100% up	Fuel price 150% up
Total		2,330	-229	-673	-1,121	-1,573
Beam trawl	12m–24m	703	-67	-148	-230	-311
	24m–40m	991	-38	-323	-609	-894
Demersal and pelagic trawlers and seiners	24m–40m	50	0	0	-4	-11
	>40m	586	-124	-202	-279	-357

Policy measures

Dutch authorities have not undertaken any special measures to cushion the consequences of the fuel price rise. A decommissioning scheme was implemented in the beginning 2005. Neither VAT nor other taxes are applicable to the fishing fleet.

There is no relation between prices of fish and fuel.

Fig. 12.1 Development of prices of fuel and fish, 2000-2005



There is no information available regarding changes in fishing effort in terms of level and regional distribution. Effects on stocks cannot yet be determined.

13. POLAND

The Polish fleet consists mainly of trawlers and passive gear vessels operating in the Baltic Sea. The most important segments are trawlers 24-40m and coastal vessels <12m. These two segments employed 66% of the total number of fishermen. Average age of the fleet is 26 years. The main landed species are cod, sprat and herring

Economic performance in 2002²⁰

Polish fleet is composed of some 1,200 active vessels, which employed in 2002 4,100 fishermen and produced a total value of 55 mln Euro. Most segments probably faced losses in 2002.

The fleet used about 67,000 tonnes of fuel, 46% of which was used by 24-40m trawlers. Fuel costs represented on average 32% of the total revenues and 52% of the total operational costs.

Table 13.1 Poland, Performance of main fleet segments in 2002, (value in mln Euro)

Gear	Size class	Value of landings	Fuel costs	GVA	Employment on board	Number of active vessels	Fuel use (1000 t)
Total		54.7	17.4	21.0	4,127	1,241	67
Demersal and pelagic trawlers and seiners	<12m	0.2	0.0	0.1	40	13	0
	12m-24m	4.9	2.2	1.4	536	141	8
	24m-40m	19.2	8.1	4.3	946	154	31
Passive gears	<12m	10.2	1.4	6.7	1,562	776	5
	12m-24m	4.5	1.0	1.7	593	131	4
	24m-40m	0.7	0.2	0.3	120	20	1

Consequences of fuel price rise by 100%

In 2002 average fuel price amounted to 0.259 Euro/litre. Fuel price rise by 100% implies additional costs of 17 mln Euro. Consequently, in the short term the gross value added will be reduced by 83% or 4,000 Euro/man. In the long run a reduction of employment by up to 57% can be expected. About 2,400 jobs may disappear. Major part of this reduction is due to the losses faced by the fleet already in 2002. After restructuring, the average gross value added / man may increase by 14,000 Euro.

²⁰ Data on costs and earnings is available only for 2002. It was assumed that in 2002 and 2003 the performance was comparable.

Table 13.2 Poland, Economic and social consequences of an average increase of fuel price by 100% (change compared to the situation in 2002)

Gear type	Size class	Short term effect		Long term effect			
		GVA (%)	GVA / man (1000 Euro)	Los of jobs (number)	Loss of jobs (%)	GVA (%)	GVA/man (1000 Euro)
Total		-83%	-4	-2,356	-57%	62%	14
Demersal and pelagic trawlers and seiners	<12m	-12%	0	-15	-37%	-8%	1
	12m–24m	-100%	-4	-536	-100%	-100%	-100%
	24m–40m	-100%	-9	-946	-100%	-100%	-100%
Passive gears	<12m	-21%	-1	-107	-7%	-100%	-100%
	12m–24m	-61%	-2	-484	-82%	-22%	9
	24m–40m	-95%	-2	-120	-100%	-100%	-2

Most fleet segments were already facing losses in 2002. Increase of fuel price by 100% may force a major part of the Polish fishing fleet out of business.

Table 13.3 Poland, Performance in 2002 and assessment of break-even performance after fuel price rise by 100%

Gear type	Size class	Value of landings per vessel in 2002 (1000 Euro)	Assessment of 2002 performance	Threshold fuel price (Euro / ton)	Break-even VL/vessel after fuel price rise by 100% (1000 Euro)	Feasibility of increase of effort per vessel
Total		44		loss in 2002	na	
Demersal and pelagic trawlers and seiners	<12m	12	Weak	loss in 2002	19	Unfeasible
	12m–24m	35	Weak	loss in 2002	na	Unfeasible
	24m–40m	125	Weak	loss in 2002	na	Unfeasible
Passive gears	<12m	13	Strong	408	2,085	Unfeasible
	12m–24m	34	Weak	loss in 2002	14	Unfeasible
	24m–40m	36	Weak	loss in 2002	188	Unfeasible

Table 13.4 Poland, Employment by segment in 2002 and loss of jobs under different scenarios of fuel price (change compared to 2002, number of jobs)

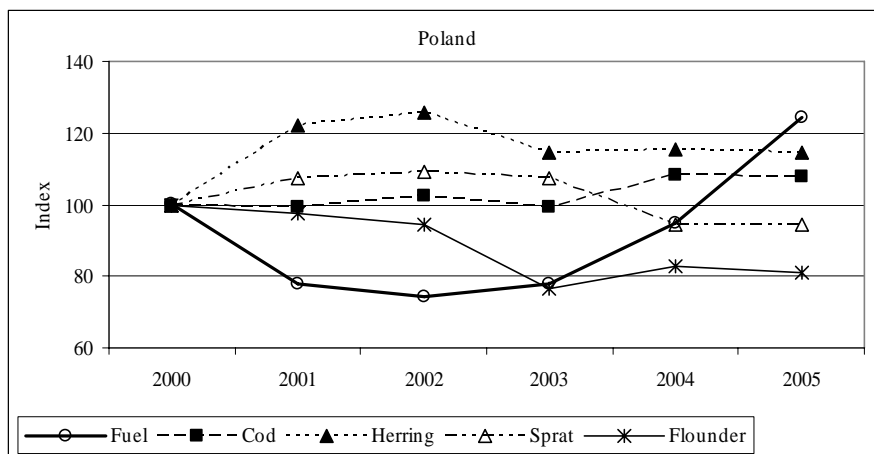
	Size class	Employment in 2002	Break - even	Fuel price 50% up	Fuel price 100% up	Fuel price 150% up
Total		4,127	-1,517	-1,883	-2,356	-2,994
Demersal and pelagic trawlers and seiners	<12m	40	-12	-13	-15	-16
	12m–24m	536	-398	-500	-536	-536
	24m–40m	946	-642	-832	-946	-946
Passive gears	<12m	1,562	0	0	-107	-278
	12m–24m	593	-362	-423	-484	-546
	24m–40m	120	-105	-116	-120	-120

Policy measures

Polish authorities have not undertaken any special measures to cushion the consequences of the fuel price rise. Neither VAT nor other taxes are applicable to the fishing fleet.

There is no relation between prices of fish and fuel.

Fig. 13.1 Development of prices of fuel and fish, 2000-2005



There is no information available regarding changes in fishing effort in terms of level and regional distribution. Effects on stocks cannot yet be determined.

14. PORTUGAL

The Portuguese fishing fleet is largely composed of small coastal multipurpose vessels. In economic terms medium sized trawlers, seiners and passive gear vessels as also important. A small number of distant water trawlers operates in the NAFO area. Main species are miscellaneous high value demersals, sardine, octopus, horse mackerel, black scabbard fish (on Madera and Mainland), hake, common sole and tunas (on Madera and Azores).

Economic performance in 2002²¹

Portuguese fleet was composed of about 9,300 active vessels, which employed in 2002 about 22,000 fishermen and produced a total value of 320 mln Euro.

The fleet used about 185,000 tonnes of fuel, 60% of which was used by large number of passive gear vessels <12m. Fuel costs represented on average 17% of the total revenues and 32% of the total operational costs.

Table 14.1 Portugal, Performance of main fleet segments in 2002, (value in mln Euro)

Gear	Size class	Value of landings	Fuel costs	GVA	Employment on board	Number of active vessels	Fuel use (1000 t)
Total		322,444	56,108	146,533	22,256	9,326	185
Demersal and pelagic trawlers and seiners	<12m	2.9	0.2	1.8	250	125	1
	12m–24m	43.9	3.7	26.3	2,667	160	12
	24m–40m	44.5	8.8	19.5	1,230	111	29
	>40m	27.6	6.8	11.6	490	14	22
Passive gears	<12m	186.7	34.1	80.6	16,845	8,866	112
	12m–24m	4.2	0.8	1.8	358	24	3
	24m–40m	12.6	1.7	4.9	416	26	6

Consequences of fuel price rise by 100%

In 2002 average fuel price amounted to 0.303 Euro/litre. Fuel price rise by 100% implies additional costs of 56 mln Euro. Consequently, in the short term the gross value added will be reduced by 38% or 3,000 Euro/man. In the long run a reduction of employment by 20% can be expected. More than 8,000 jobs would disappear. Part of this reduction is due to the losses faced by some segments already in the years 2002. After restructuring, the gross value added / man may increase by 2,000 Euro.

Table 14.2 Portugal, Economic and social consequences of an average increase of fuel price by 100% (change compared to the situation in 2002)

Gear type	Size class	Short term effect		Long term effect		GVA (%)	GVA/man (1000 Euro)
		GVA (%)	GVA / man (1000 Euro)	Los of jobs (number)	Loss of jobs (%)		
Total		-38%	-3	-8,262	-37%	-20%	2
Demersal and pelagic trawlers and seiners	<12m	-14%	-1	-4	-2%	-14%	-1
	12m–24m	-14%	-1	-41	-2%	-14%	-1
	24m–40m	-45%	-7	-405	-33%	-29%	1
	>40m	-58%	-14	-197	-40%	-36%	2
Passive gears	<12m	-42%	-2	-7,315	-43%	-19%	2
	12m–24m	-42%	-2	-156	-43%	-19%	2
	24m–40m	-35%	-4	-144	-35%	-12%	4

²¹ Available costs and earnings data covers only 25-35% of the fleet.

In order to achieve a new break-even situation the average value of landings per vessel will have to increase by 68% to 79,000 Euro. Assuming constant productivity (value of catch per unit of effort), fishing effort per vessel would also have to increase by the required improvement of the value of landings per vessel. For large parts of Portuguese fleet the required improvement of performance will be unfeasible.

Table 14.3 Portugal, Performance in 2002 and assessment of break-even performance after fuel price rise by 100%

Gear type	Size class	Value of landings per vessel in 2002 (1000 Euro)	Assessment of 2002 performance	Threshold fuel price (Euro / ton)	Break-even VL/vessel after fuel price rise by 100% (1000 Euro)	Feasibility of increase of effort per vessel
Total		47		loss in 2002	54	
Demersal and pelagic trawlers and seiners	<12m	24	Strong	428	24	Feasible
	12m–24m	275	Strong	428	279	Feasible
	24m–40m	401	Reasonable	313	598	Unfeasible
	>40m	1,972	Reasonable	318	3,292	Unfeasible
Passive gears	<12m	21	Weak	loss in 2002	37	Unfeasible
	12m–24m	173	Weak	loss in 2002	306	Unfeasible
	24m–40m	485	Weak	loss in 2002	743	Unfeasible

Table 14.4 Portugal, Employment by segment in 2002 and loss of jobs under different scenarios of fuel price (change compared to 2002, number of jobs)

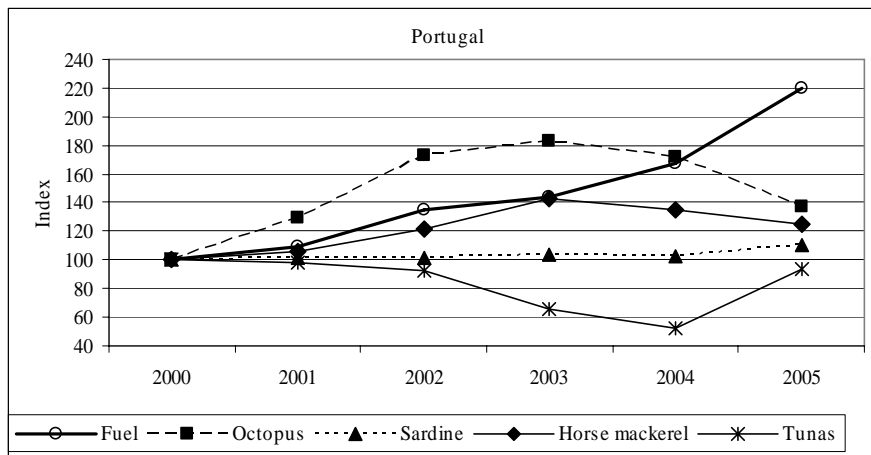
	Size class	Employment in 2002	Break - even	Fuel price 50% up	Fuel price 100% up	Fuel price 150% up
Total		22,231	-2,697	-5,437	-8,262	-11,241
Demersal and pelagic trawlers and seiners	<12m	225	0	0	-3	-19
	12m–24m	2,667	0	0	-41	-226
	24m–40m	1,230	0	-192	-405	-618
	>40m	490	0	-89	-197	-305
Passive gears	<12m	16,845	-2,592	-4,954	-7,315	-9,677
	12m–24m	358	-55	-105	-156	-206
	24m–40m	416	-51	-97	-144	-191

Policy measures

Portuguese authorities have not undertaken any special measures to cushion the consequences of the fuel price rise. Neither VAT nor other taxes are applicable to the fishing fleet.

There is no relation between prices of fish and fuel.

Fig. 14.1 Development of prices of fuel and fish, 2000-2005



There is no information available regarding changes in fishing effort in terms of level and regional distribution. Effects on stocks cannot yet be determined.

15. SPAIN

Spain has the largest fisheries sector in the EU in terms of fleet, employment and value of landings. About 95% of the vessels operate in the coastal and EU waters. Others segments operate in international waters or waters belonging to third countries often under bilateral EU agreements. Most important landed species are tunas and bluefish.

Economic performance in 2002²²

Spanish fleet was composed of about 13,000 active vessels, which employed in 2002 56,000 fishermen and produced a total value of 1,600 mln Euro. Due to lack of data it is not possible to make an overall assessment of the performance of the Spanish fishing fleet in 2002.

The fleet used about 1,000,000 tonnes of fuel, 50% of which was used by trawlers >24m. Fuel costs represented on average 17% of the total revenues and 32% of the total operational costs.

Table 15.1 Spain, Performance of main fleet segments in 2002, (value in mln Euro)

Gear	Size class	Value of landings	Fuel costs	GVA	Employment on board	Number of active vessels	Fuel use (1000 t)
Total		1,598.7	215.3	934.4	56,576	13,658	1,020
Demersal and pelagic	<12m	25.5	1.7	18.2	513	171	8
Trawlers and seiners	12m–24m	271.4	17.8	193.8	6,514	1,551	84
	24m–40m	419.4	65.1	254.7	5,916	510	308
	>40m	278.8	43.3	169.3	2,150	86	205
Passive gears	<12m	244.6	35.4	120.9	32,352	10,110	168
	12m–24m	154.5	22.4	76.3	5,910	985	106
	24m–40m	170.3	24.7	84.2	2,596	220	117
	>40m	34.3	5.0	17.0	625	25	24

Consequences of fuel price rise by 100%

In 2002 average fuel price amounted to 0.211 Euro/litre. Fuel price rise by 100% implies additional costs of 215 mln Euro. Consequently, in the short term the gross value added would be reduced by 23% or 4,000 Euro/man. In the long run a reduction of employment by 14% can be expected. About 8,000 jobs may disappear. Part of this reduction is due to the losses faced by some segments already in the years 2002. After restructuring, the gross value added / man would decrease by 1,000 Euro. Required adjustment of performance is in most fleet segments feasible.

Table 15.2 Spain, Economic and social consequences of an average increase of fuel price by 100% (change compared to the situation in 2002)

Gear type	Size class	Short term effect		Long term effect		GVA (%)	GVA/man (1000 Euro)
		GVA (%)	GVA / man (1000 Euro)	Los of jobs (number)	Loss of jobs (%)		
Total		-23%	-4	-7,977	-14%	-20%	-1
Demersal and pelagic trawlers and seiners	<12m	-9%	-3	-118	-23%	-5%	8
	12m–24m	-9%	-3	-1,502	-23%	-5%	7
	24m–40m	-26%	-11	-986	-17%	-22%	-3
Passive gears	>40m	-26%	-20	-358	-17%	-22%	-5
	<12m	-29%	-1	-3,909	-12%	-26%	-1
	12m–24m	-29%	-4	-714	-12%	-26%	-2
	24m–40m	-29%	-10	-314	-12%	-26%	-5

²² Available costs and earnings data covers only 10-20% of the fleet. Therefore the presented results must be interpreted with caution.

>40m -29% -8 -76 -12% -26% -4

Table 15.3 Spain, Performance in 2002 and assessment of break-even performance after fuel price rise by 100%

Gear type	Size class	Value of landings per vessel in 2002 (1000 Euro)	Assessment of 2002 performance	Threshold fuel price (Euro / ton)	Break-even VL/vessel after fuel price rise by 100% (1000 Euro)	Feasibility of increase of effort per vessel
Total		117		255	140	
Demersal and pelagic trawlers and seiners	<12m	149	<i>Weak</i>	<i>loss in 2002</i>	194	<i>Uncertain</i>
	12m–24m	175	<i>Weak</i>	<i>loss in 2002</i>	227	<i>Uncertain</i>
	24m–40m	822	<i>Strong</i>	255	987	<i>Feasible</i>
	>40m	3,242	<i>Strong</i>	255	3,890	<i>Feasible</i>
Passive gears	<12m	24	<i>Strong</i>	301	28	<i>Feasible</i>
	12m–24m	157	<i>Strong</i>	301	178	<i>Feasible</i>
	24m–40m	774	<i>Strong</i>	301	880	<i>Feasible</i>
	>40m	1,372	<i>Strong</i>	301	1,561	<i>Feasible</i>

Table 15.4 Spain, Employment by segment in 2002 and loss of jobs under different scenarios of fuel price (change compared to 2002, number of jobs)

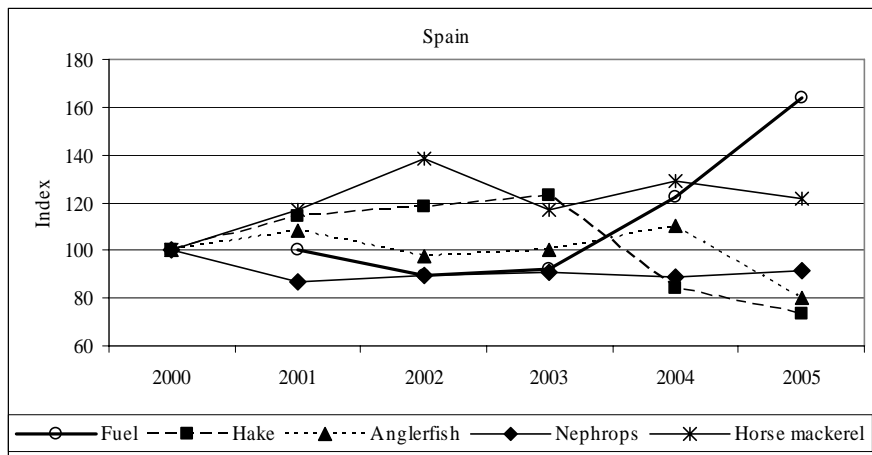
	Size class	Employment in 2002	Break - even	Fuel price 50% up	Fuel price 100% up	Fuel price 150% up
Total		56,576	-1,071	-1,536	-7,977	-16,480
Demersal and pelagic trawlers and seiners	<12m	513	-78	-98	-118	-138
	12m–24m	6,514	-993	-1,248	-1,502	-1,757
	24m–40m	5,916	0	-140	-986	-1,832
	>40m	2,150	0	-51	-358	-666
Passive gears	<12m	32,352	0	0	-3,909	-9,426
	12m–24m	5,910	0	0	-714	-1,722
	24m–40m	2,596	0	0	-314	-756
	>40m	625	0	0	-76	-182

Policy measures

Spanish authorities have introduced a special credit line of up to 200 mln Euro, offering transitory loans at 0% interest rate. Apart from refundable VAT, no further taxes are applicable to fuel price.

There is no relation between prices of fish and fuel.

Fig. 15.1 Development of prices of fuel and fish, 2000-2005



There is no information available regarding changes in fishing effort in terms of level and regional distribution. Effects on stocks cannot yet be determined.

16. SWEDEN

The Swedish fleet operates primarily in the Baltic Sea where 55% of the total catch is made. Other fishing grounds are the North Sea, the Skagerrak, the North Atlantic and the Kattegat. In 2002 Swedish vessels caught approximately 285,000 tonnes of fish. Cod accounted for 24% of total value of landings, followed by fish which is used for reduction purposes (20%), herring and sprat for human consumption, northern prawn and Nephrops.

Economic performance in 2002

Swedish fleet is composed of about 700 active vessels, which employed in 2002 about 1,600 fishermen and produced a total value of 111 mln Euro²³. In economic terms, pelagic vessels >24m produce the highest value of landings.

In 2002 a combination of increased fuel price and a decline in the value of landings due to lower prices and lower volume of landings, has left the majority of the fleet under financial strain. The situation is most serious for vessels in the pelagic segment >24m and for vessels targeting nephrops, where cash flow is negative. Demersal and pelagic trawlers <24m have improved their economic performance. The size of the fleet has declined further.

The fleet used about 67,000 tonnes of fuel, 94% of which was used by the 12-40m trawlers. Fuel costs represented on average 13% of the total revenues and 26% of the total operational costs.

Table 16.1 Sweden, Performance of main fleet segments in 2002, (value in mln Euro)

Gear	Size class	Value of landings	Fuel costs	GVA	Employment on board	Number of active vessels	Fuel use (1000 t)
Total		111.4	14.5	56.4	1,596	717	67
Demersal and pelagic trawlers and seiners	12m–24m	38.7	5.1	19.1	685	284	23
	24m–40m	62.7	8.8	31.7	429	76	40
Passive gears	<12m	6.7	0.4	3.4	386	309	2
	12m–24m	3.3	0.2	2.2	96	48	1

Consequences of fuel price rise by 100%

In 2002 average fuel price amounted to 0.218 Euro/litre. Fuel price rise by 100% implies additional costs of 15 mln Euro. Consequently, in the short term the gross value added will be reduced by 26% or 9,000 Euro/man. In the long run all segments will on average continue operating above the break-even level so that restructuring of the fleet is on average not imminent. The average GVA/man would decrease by 9,000 Euro. Performance of various small sub-segments (not presented in the tables) is widely different and some of these sub-segments certainly face major problems due to the fuel price increase.

Table 16.2 Sweden, Economic and social consequences of an average increase of fuel price by 100% (change compared to the situation in 2002)

Gear type	Size class	Short term effect		Long term effect		GVA (%)	GVA/man (1000 Euro)
		GVA (%)	GVA / man (1000 Euro)	Los of jobs (number)	Loss of jobs (%)		
Total		-26%	-9	0	0%	-26%	-9
Demersal and pelagic	12m–24m	-27%	-7	0	0%	-27%	-7
Trawlers and seiners	24m–40m	-28%	-21	0	0%	-28%	-21
Passive gears	<12m	-12%	-1	0	0%	-12%	-1

²³ These figures exclude about 700 occasional fishermen whose production is estimated at some 5 mln Euro.

The following table shows that the average value of landings per vessel in 2002 was well above the break-even level required after the fuel price increase.

Table 16.3 Sweden, Performance in 2002 and assessment of break-even performance after fuel price rise by 100%

Gear type	Size class	Value of landings per vessel in 2002 (1000 Euro)	Assessment of 2002 performance	Threshold fuel price (Euro / ton)	Break-even VL/vessel after fuel price rise by 100% (1000 Euro)	Feasibility of increase of effort per vessel
Total		155		621	87	
Demersal and pelagic trawlers and seiners	12m-24m	136	Strong	577	86	Feasible
	24m-40m	825	Strong	632	429	Feasible
Passive gears	<12m	22	Strong	654	17	Feasible
	12m-24m	69	Strong	1,199	8	Feasible

Table 16.4 Sweden, Employment by segment in 2002 and loss of jobs under different scenarios of fuel price (change compared to 2002, number of jobs)

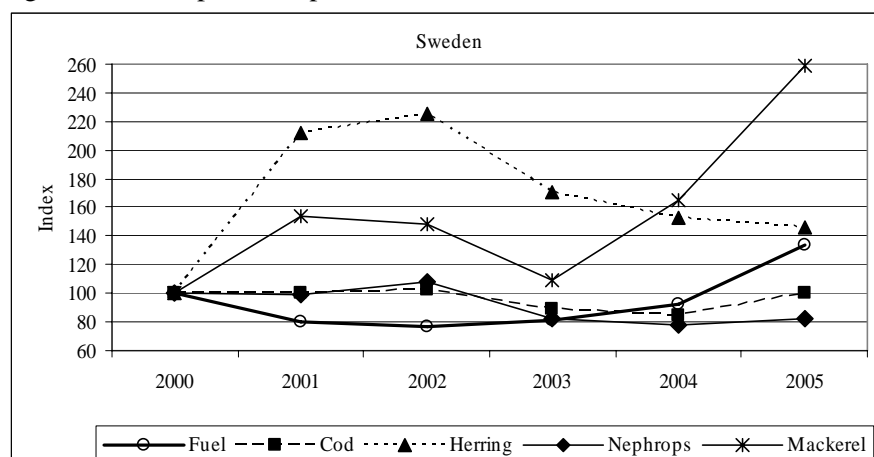
	Size class	Employment in 2002	Break - even	Fuel price 50% up	Fuel price 100% up	Fuel price 150% up
Total		1,596	0	0	0	0
Demersal and pelagic trawlers and seiners	12m-24m	685	0	0	0	0
	24m-40m	429	0	0	0	0
Passive gears	<12m	386	0	0	0	0
	12m-24m	96	0	0	0	0

Policy measures

Swedish authorities have not undertaken any special measures to cushion the consequences of the fuel price rise. Apart from refundable VAT, no further taxes are applicable to fuel price.

There is no relation between prices of fish and fuel.

Fig. 16.1 Development of prices of fuel and fish, 2000-2005



There is no information available regarding changes in fishing effort in terms of level and regional distribution. Effects on stocks cannot yet be determined.

17. UNITED KINGDOM

The UK fishing fleet is composed of a large variety of vessel size and gears, from small coastal vessels to large trawlers and purse seiners. In 2002 the fleet landed on 680,000 tonnes of fish, of which 29% was mackerel. Mackerel and nephrops are most important in value terms, accounting for about 30% of the total.

Economic performance in 2002²⁴

UK fleet is composed of some 4,000 active vessels, which employed in 2002 12,200 fishermen and produced a total value of 866 mln Euro. The value of landings was 6% lower compared to 2001.

The fleet used over 526,000 tonnes of fuel, 62% of which was used by trawlers >12m. Fuel costs represented on average 16% of the total revenues and 27% of the total operational costs.

Table 17.1 UK, Performance of main fleet segments in 2002, (value in mln Euro)

Gear	Size class	Value of landings	Fuel costs	GVA	Employment on board	Number of active vessels	Fuel use (1000 t)
Total		865.7	136.9	368.0	12,205	3,958	526
Beam trawlers	<12m	1.4	0.4	0.3	164	82	1
	12m–24m	6.1	1.6	1.1	143	34	6
	24m–40m	81.8	22.0	15.3	660	110	85
	>40m	16.4	4.4	3.1	325	13	17
Demersal and pelagic trawlers and seiners	<12m	62.1	10.9	25.3	1,420	710	42
	12m–24m	248.4	43.5	101.4	3,128	844	167
	24m–40m	131.3	20.4	47.8	818	146	78
Passive gears	>40m	133.4	20.7	48.5	650	26	80
	<12m	95.9	4.4	69.5	3,226	1,604	17
	12m–24m	19.9	1.0	13.2	544	137	4
Dredges	24m–40m	18.1	2.6	9.0	460	39	10
	<12m	8.1	0.8	5.3	158	79	3
	12m–24m	26.9	2.5	17.8	336	102	10
	24m–40m	16.0	1.5	10.6	174	29	6

²⁴ Available costs and earnings data covers 35-50% of the UK fleet.

Consequences of fuel price rise by 100%

In 2002 average fuel price amounted to 0.260 Euro/litre. Fuel price rise by 100% implies additional costs of 137 mln Euro. Consequently, in the short term the gross value added will be reduced by 37% or 11,000 Euro/man. In the long run a reduction of employment by 25% can be expected. About 3,000 jobs would disappear. Situation after restructuring, is difficult to assess because data is not available for some important segments and estimations had to be made.

Table 17.2 UK, Economic and social consequences of an average increase of fuel price by 100% (change compared to the situation in 2002)

Gear type	Size class	Short term effect		Long term effect		GVA (%)	GVA/man (1000 Euro)
		GVA (%)	GVA / man (1000 Euro)	Los of jobs (number)	Loss of jobs (%)		
Total		-37%	-11	-3,068	-25%	-16%	4
Beam trawlers	<12m	-144%	-2	-124	-75%	2%	5
	12m-24m	-144%	-11	-108	-75%	2%	25
	24m-40m	-144%	-33	-497	-75%	2%	72
	>40m	-144%	-14	-245	-75%	2%	29
Demersal and pelagic trawlers and seiners	<12m	-43%	-8	-470	-33%	-23%	3
	12m-24m	-43%	-14	-1,036	-33%	-23%	5
	24m-40m	-43%	-25	-297	-36%	-17%	18
Passive gears	>40m	-43%	-32	-236	-36%	-17%	23
	<12m	-6%	-1	0	0%	-6%	-1
	12m-24m	-7%	-2	0	0%	-7%	-2
Dredges	24m-40m	-29%	-6	-56	-12%	-26%	-3
	<12m	-14%	-5	0	0%	-14%	-5
	12m-24m	-14%	-8	0	0%	-14%	-8
	24m-40m	-14%	-9	0	0%	-14%	-9

In order to achieve a new break-even situation the average value of landings per vessel will have to increase by 24% to 271,000 Euro. Major improvement of performance would be required particularly for the beam trawler segments, where value of landings per vessel would have to double which is probably unfeasible. In the trawler segments major improvements would be needed too²⁵. Assuming constant productivity (value of catch per unit of effort), fishing effort per vessel would also have to increase by the required improvement of the value of landings per vessel.

²⁵ The conclusions regarding improvement of performance of trawlers and beam trawlers are partly consequence of assumptions made to estimate parameters for segments for which costs and earnings data is not available.

Table 17.3 United Kingdom, Performance in 2002 and assessment of break-even performance after fuel price rise by 100%

Gear type	Size class	Value of landings per vessel in 2002 (1000 Euro)	Assessment of 2002 performance	Threshold fuel price (Euro / ton)	Break-even VL/vessel after fuel price rise by 100% (1000 Euro)	Feasibility of increase of effort per vessel
Total		219		265	305	
Beam trawl	<12m	17	<i>Weak</i>	<i>loss in 2002</i>	69	<i>Unfeasible</i>
	12m–24m	178	<i>Weak</i>	<i>loss in 2002</i>	722	<i>Unfeasible</i>
	24m–40m	744	<i>Weak</i>	<i>loss in 2002</i>	3,011	<i>Unfeasible</i>
	>40m	1,260	<i>Weak</i>	<i>loss in 2002</i>	5,102	<i>Unfeasible</i>
Demersal and pelagic trawlers and seiners	<12m	87	<i>Reasonable</i>	<i>loss in 2002</i>	131	<i>Unfeasible</i>
	12m–24m	294	<i>Reasonable</i>	<i>loss in 2002</i>	440	<i>Unfeasible</i>
	24m–40m	899	<i>Reasonable</i>	<i>loss in 2002</i>	1,413	<i>Unfeasible</i>
	>40m	5,130	<i>Reasonable</i>	<i>loss in 2002</i>	8,061	<i>Unfeasible</i>
Passive gears	<12m	60	<i>Strong</i>	1,374	32	<i>Feasible</i>
	12m–24m	145	<i>Strong</i>	1,208	96	<i>Feasible</i>
	24m–40m	464	<i>Strong</i>	371	528	<i>Feasible</i>
Dredges	<12m	103	<i>Strong</i>	697	74	<i>Feasible</i>
	12m–24m	264	<i>Strong</i>	697	190	<i>Feasible</i>
	24m–40m	552	<i>Strong</i>	697	397	<i>Feasible</i>

Table 17.4 United Kingdom, Employment by segment in 2002 and loss of jobs under different scenarios of fuel price (change compared to 2002, number of jobs)

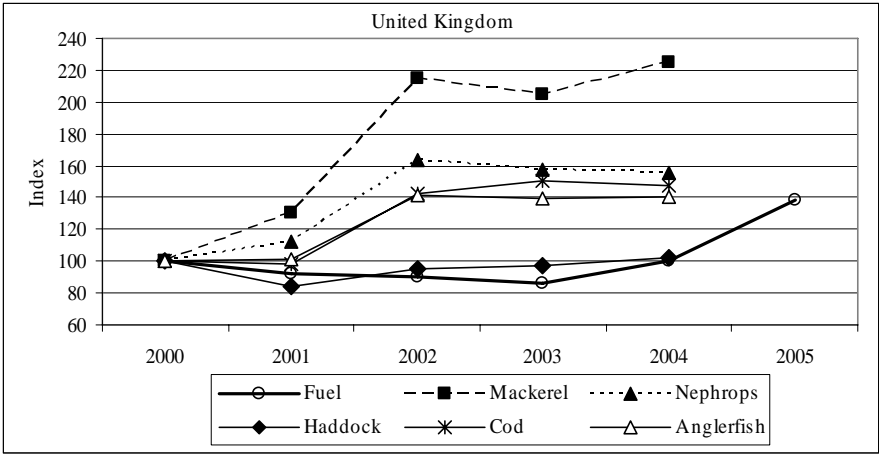
	Size class	Employment in 2002	Break - even	Fuel price 50% up	Fuel price 100% up	Fuel price 150% up
Total		12,205	-702	-1,857	-3,068	-4,302
Beam trawl	<12m	164	-64	-94	-124	-153
	12m–24m	143	-55	-81	-108	-134
	24m–40m	660	-256	-377	-497	-618
	>40m	325	-126	-185	-245	-304
Demersal and pelagic trawlers and seiners	<12m	1,420	-26	-248	-470	-692
	12m–24m	3,128	-58	-547	-1,036	-1,525
	24m–40m	818	-65	-181	-297	-414
	>40m	650	-51	-144	-236	-329
Passive gears	<12m	3,226	0	0	0	0
	12m–24m	544	0	0	0	0
	24m–40m	460	0	0	-56	-134
Dredges	<12m	158	0	0	0	0
	12m–24m	336	0	0	0	0
	24m–40m	174	0	0	0	0

Policy measures

UK authorities have not undertaken any special measures to cushion the consequences of the fuel price rise. Apart from refundable VAT (17.5%), no further taxes are applicable to fuel price.

There is no relation between prices of fish and fuel.

Fig. 17.1 Development of prices of fuel and fish, 2000-2005



There is no information available regarding changes in fishing effort in terms of level and regional distribution. Effects on stocks cannot yet be determined.

18. CYPRUS, MALTA AND SLOVENIA

Very little data is available for these three new Member States. Therefore only a general discussion can be presented.

The fisheries of these three countries are largely small scale, with prevailing importance of passive gear vessels <12m. Some 1,300 vessels employ 2,300 fishermen and produce value of about 27 mln Euro. Gross value added per fisherman amounts to about 7,000 Euro, which implies that the crew share per man would be in the order of 4,000 Euro / year. This compares rather unfavourably with average annual gross wage of 22,200 Euro in Cyprus and 12,000 Euro in Slovenia.

The costs and earnings data presented in the tables below assume that the performance of the fleets in these countries is comparable to other Mediterranean countries for which data is available.

Overall the fisheries of these three countries use about 13,000 tonnes of fuel. Fuel costs represent about 15% of the value of landings and 39% of total operational costs. An increase of the fuel price by 100% would imply additional costs of 4 mln Euro and it would reduce the gross value added by approximately 25%. Long term effects cannot be estimated.

Table 18.3 shows that the value of landings in the break-even situation after fuel price rise is still well below the estimated Mediterranean performance in 2002. However, such low production values would reduce the incomes of fishermen to extremely low levels.

Table 18.1 Cyprus, Malta, Slovenia, Performance of main fleet segments in 2002, (value in mln Euro)

Gear	Size class	Value of landings	Fuel costs	GVA	Employment on board	Number of active vessels	Fuel use (1000 t)
Cyprus		10.9	1.7	6.6	922	482	6
Malta		12.7	1.7	8.1	1,271	706	6
Slovenia		3.2	0.7	1.7	142	82	2

Table 18.2 Cyprus, Malta, Slovenia, Economic and social consequences of an average increase of fuel price by 100% (change compared to the situation in 2002)

Gear type	Size class	Short term effect		Long term effect (cannot be calculated)			
		GVA (%)	GVA / man (1000 Euro)	Los of jobs (number)	Loss of jobs (%)	GVA (%)	GVA/man (1000 Euro)
Cyprus		-25%	-2				
Malta		-21%	-1				
Slovenia		-40%	-5				

Table 18.3 Cyprus, Malta, Slovenia, Performance in 2002 and assessment of break-even performance after fuel price rise by 100%

Gear type	Size class	Value of landings per vessel in 2002 (1000 Euro)	Assessment of 2002 performance	Threshold fuel price (Euro / ton)	Break-even VL/vessel after fuel price rise by 100% (1000 Euro)	Feasibility of increase of effort per vessel
Cyprus						
Malta						
Slovenia						

These indicators cannot be calculated due to lack of data and difficulty of interpretation at country level.

Table 18.4 Cyprus, Malta, Slovenia, Employment by segment in 2002 and loss of jobs under different scenarios of fuel price (change compared to 2002, number of jobs)

	Employment in 2002	Break - even	Fuel price 50% up	Fuel price 100% up	Fuel price 150% up
Cyprus	922	0	-4	-41	-88
Malta	1,271	0	-3	-34	-74
Slovenia	142	0	-3	-28	-55

19. NON-EU COUNTRIES

Point 3 of the Terms of Reference requires to review situation ‘in the most important third countries’. Information was collected from Norway, Iceland and Faeroe Islands. The results are consistent with information obtained from most EU Member States.

None of the three reviewed countries has introduced any measures to cushion the effect of higher fuel price on the fishing industry. There also no indications that such intentions would exist.

The fuel price in these countries lies well in the range of prices charged within the EU (see figure 1.1). No special taxes are imposed.

Appendix A. METHODOLOGY OF ESTIMATIONS

The presented analysis is based on two main sources of data:

1. Costs and earning of fishing fleets in 2002, as published in the annual reports 'Economic performance of selected European fishing fleets' (AER);
2. Contributions of the partners of the consortium regarding specific national issues.

The estimations have been carried out as follows.

Base year 2002

The year 2002 was used as base year and all changes expected due to increase of the fuel price have been related to 2002 values.

The only exception made to this rule regards Poland where 2004 data was used, as it was much more detailed and solid than 2002 data.

Average costs and earnings per vessel were calculated from the aggregate value of each segment.

Using 2002 as base year leads probably to too 'optimistic' conclusions regarding total social and economic consequences as of 2006. As shown in figure 1.1, value of landings of the EU fleets has been structurally decreasing, so that the performance is not only negatively effected by higher fuel costs, but also by lower revenues. In 2005 the nominal value of landings was probably 5-8% below the 2002 level.

Application of standard fleet segments (average values per vessel)

On the basis of their technical characteristics, the AER segments have been transposed into standard segments defined by gear and length of vessel. These standard segments are proposed in the 'Data collection regulation' EC Reg. 1639/2001. (see table A.1). Certain gears (particularly passive gears) specified in the Regulation were merged into larger segments as otherwise the data coverage would not be sufficient. However, only segments with comparable fuel intensities were merged, so that this does not affect the conclusions of the analysis.

In some cases the definition of the AER segments may not be entirely consistent with the DCR segments as the AER segments may also contain vessels smaller or larger than the indicated length threshold. The average length of the vessels in the AER segments was used as guiding criterion for the translation.

Estimation of missing segments

Fishing fleets of some countries are almost fully covered by AER. This is the case particularly for Belgium, Denmark, Finland, Germany, Italy, Netherlands, Sweden, Lithuania and Poland²⁶. Only minor estimations were required in some of these countries.

The data coverage in the remaining countries is rather incomplete and additional estimations of earnings and costs of the main fleet segments were necessary. These estimations were made in one of the two following ways:

²⁶ For the Estonia and Latvia the full coverage applies to the fishing in the Baltic Sea, but not to the distant water fleets.

- a) Average revenues/kW and costs/kW of ‘neighbouring’ segments in the same country were extrapolated to the larger (or smaller) average size of the vessels in kW in the segment for which the estimation was made.
- b) In case that there was no suitable data available in the given country, a comparable segment was selected from a different country. This was especially required for the Greece, Malta, Cyprus and Slovenia.
- c) The average value of landings and crews per vessel of the estimated segments were subsequently ‘calibrated’ to obtain national totals which are known for all countries.

In this way average costs and earnings per fully active vessel were obtained for most standard segments in order to cover a large part of the EU fleet. However, not all vessels are fully active on year round basis. Furthermore the composition of the fleet and the average earnings and crews must generate the totals of national values of landings and employment, which are available for almost all Member States from official national statistics. Therefore the activity factor was introduced. This is a number < 1 which indicates the percentage of the vessels which can be considered as fully operational. By adjusting the activity factor, mostly to the segments of vessels $< 12\text{m}$, the national totals of value of landings and employment were generated in an iterative procedure.

For countries where AER covers a significant part of the fleet, the aggregation to the national total was done with the numbers of vessels stated in AER. These numbers are usually lower than the numbers stated in the EU fleet register and account already for the inactivity level. For countries where AER coverage is low, the numbers of vessels from the fleet register were used in combination with the activity factor. The estimated national totals of value of landings and employment fall within $\pm 5\%$ range of the given national values. Specific comments are made in the national chapters.

Numbers of vessels which were assumed as active are presented in x.1 of the national chapters. The details of transposition from AER to DCR segments are presented in table A.1.

In order to achieve consistency the presented data reflects the results of estimation procedure described above. As already stated, the difference with actual official statistics is usually less than 5%.

Structure of national chapters

All national chapters are presented in an identical way:

- Brief description of the national fishery;
- Economic performance in 2002, with main indicators in table X.1;
- Consequences of fuel price rise by 100%
 - o Table X.2: short term and long term effects in the base line scenario (100%);
 - o Table X.3: assessment of the performance in 2002 and feasibility of adjustment; This table presents also a threshold value of fuel price;
 - o Table X.3: comparison of employment consequences in several scenarios;
- Policy measures taken to alleviate the consequences of the high fuel price;
- Figure X.1 on trend in fish and fuel prices.

Consequences of the increase of the fuel price

Short term and long term social and economic consequences of the fuel price increase are distinguished in tables x.2 of the national chapters. Furthermore the average performance of 2002 is compared to the required break-even performance in table x.3.

Break-even performance is defined as performance when profits are zero. This performance may be determined by adjusting various indicators, e.g. value of landings, price of fuel, etc.

In the calculation of the break-even revenues it was assumed that in all segments crew share is partly dependent on fuel costs. Evidence collected from participating countries shows that this is correct for most segments. In some countries crew receives a share (percentage) of the value of landings, without

accounting directly for fuel or other costs. However, in those segments / countries the share percentage is regularly renegotiated between the owner and the crew so that it is adapted to new conditions of costs. In those cases fuel costs are also accounted for but in a slightly different way.

Social consequences are expressed as threat to loss of employment, which is particularly relevant in the long run. Employment is threatened when the average performance of a segment (i.e. the value of landings) is insufficient to cover all expenses. In that case it would be 'theoretically' necessary to share the total segment revenues among a smaller number of vessels. Consequently also employment would decrease approximately proportionately with the fleet.

Economic consequences are defined as loss of gross value added, i.e. income to vessel owner and crew. No distinction is made between income to crew and income to the owner. This is justified by the fact that large part of the EU vessels is still skipper-owned.

In the short term (1-2 years) there are primarily economic consequences. Higher fuel costs lead to decrease of gross value added and gross value added per man. The employment may not be directly affected as most vessels will continue in operation for some time.

In the long term (3-4 years) size of the fleet will have to be adjusted to the new conditions of structurally higher fuel costs. The social and economic consequences will depend on the precise situation which existed before the fuel price rise and which will occur thereafter. Three situations must be distinguished:

- a) In 2002 the segment was already making a loss and this loss increases further due to fuel price rise. The fleet would have to be reduced proportionately to the relation between original revenues and break-even revenues after the fuel price increase. Only a part of this reduction is a direct consequence of the fuel price, while the other part is a result of an already existing situation. The analysis (tables X.2) presents the total effect on fleet and employment. (Which part of the adjustment can be ascribed to the already existing losses and which to the price increase is presented in table X.4.) After structural adjustment the gross value added per man may in the end improve because of the general improvement of the performance of the remaining vessels. It is assumed that the total production value of the segment will remain constant at the 2002 level. This implies that the productivity of the remaining individual vessels would have to increase proportionately with the decrease of the fleet. This may be feasible up to a certain level (see *Feasibility* below).
- b) In 2002 the segment was making a profit, which turns into loss after the fuel costs increase. In this case only the difference between break-even level of revenues and the estimated loss level of revenues is taken into account as employment threat. Gross value added will decrease slightly less than the extra fuel costs, because smaller segment will have to bear lower total vessel costs (i.e. costs which are independent of the level of activity, e.g. insurance)
- c) In 2002 the segment was making a profit and it remains profitable, although at a lower level. In this situation employment can be maintained at the original level and no jobs are threatened. Gross value added is reduced by the extra fuel costs.
- d) In some segments (in Ireland and Poland) the gross cash flow (i.e. difference between value of landings and total operational costs) was negative in 2002. This means that costs per unit of effort are higher than revenues. Consequently, break-even solution does not exist and employment effect is equal to the number of persons working in the segment.

In all situations it is assumed that:

- the total revenues of the each segment will remain at the level of 2002;
- average productivity (value of landings per unit of fishing effort) will remain constant;

- size of the fleet (number of vessels) is adjusted to achieve a break-even situation and consequently:
- value of landings and gross value added per vessel will change depending on the specific situation.

It is not possible to assess how fast the fleet and employment reduction may occur. There are too many considerations on the part of the vessel owners (their expectations regarding recovery of stocks, fish prices, fuel prices and management policies) to allow a well founded judgement.

Feasibility

Table X.3 presents a qualitative assessment of the feasibility of the required adjustment. As stated above, elimination of losses requires that the size of the fleet is reduced and effort per vessel is proportionately increased. Such an increase is not always feasible. In table X.3 the following threshold values have been used:

- Feasible increase is less than 20% of the 2002 level
- Uncertain increase is 20-40% of the 2002 level
- Unfeasible increase is more than 40% of the 2002 level.

Threshold fuel price

Table X.3 presents a threshold fuel price, i.e. a maximum fuel price which could be born by the segment under the 2002 conditions. The price was calculated as:

$$\text{Price} = (\text{fuel costs} + \text{net profit}) / \text{fuel use}$$

Consequently, for segments which were already making loss, a higher threshold value of the fuel price does not exist. A lower price was not calculated, as it is not realistic to translate the overall poor economic performance to fuel price alone.

When the resulting threshold fuel price is applied to the performance of a fleet segment new values of crew share and profit will occur. The new profit will not be zero, but the gross value added will decrease by the amount of extra fuel costs. Because of the link between fuel costs and crew remuneration it is not realistic to calculate a 'break-even fuel price', i.e. fuel price which would reduce the profit to zero. Such fuel price would namely reduce also the crew share to practically zero.

Table A.1 Transposition of AER segments into standard segments and approaches to estimations

MS	Gear	Size class	AER segment or <i>basis for estimation</i>
BE	Beam trawl	12m–24m	Shrimp beam trawlers, Beam trawlers < 24 m
		24m–40m	Beam trawlers > 24 m
DK	Demersal and pelagic trawlers and seiners	12m–24m	Trawlers < 24 m, Danish seiners
		24m–40m	Trawlers 24 - < 40 m
		>40m	Purse s. / trawlers >= 40
	Passive gears	<12m	Gillnetters
		12m–24m	<i>Estimation based on FR Passive gears 12-24 m</i>
FI	Demersal and pelagic trawlers and seiners	12m–24m	Trawlers < 24 m
		24m–40m	Trawlers > 24 m
	Passive gears	<12m	Coastal vessels
		12m–24m	Gillnetters
FR	Demersal and pelagic trawlers and seiners	<12m	<i>Estimate based on 12-24m segment, with adjustment for average size</i>
		12m–24m	Atlantic bottom trawlers, Mediterranean 18-25 m
		24m–40m	<i>As <12m</i>
		>40m	<i>As < 12m</i>
	Passive gears	<12m	Atlantic longliners & liners, Atlantic potters

MS	Gear	Size class	AER segment or <i>basis for estimation</i>
		12m–24m	Atlantic netters
		24m–40m	<i>Estimate based on 12-24m segment, with adjustment for average size</i>
		>40m	<i>As 24-40m segment</i>
	Dredges	<12m	<i>Estimate based on 12-24m segment, with adjustment for average size</i>
		12m–24m	Atlantic trawlers-dredgers
DE	Beam trawl	12m–24m	Shrimp beam trawlers, <i>Includes beam trawlers <12m</i>
		24m–40m	<i>Estimation based on BE Beam trawlers 24-40 m</i>
	Demersal and pelagic trawlers and seiners	12m–24m	Baltic trawlers
		24m–40m	North Sea trawlers
		>40m	Demersal freezer trawlers, Pelagic freezer trawlers
	Passive gears	<12m	Baltic coastal vessels
GR	Demersal and pelagic trawlers and seiners	<12m	<i>Estimate based on 12-24 m segment, with adjustment for average size</i>
		12m–24m	Thermaikos trawlers < 24m
		24m–40m	Thermaikos trawlers > 24m
		>40m	<i>Estimate based on 24-40 m segment, with adjustment for average size</i>
	Passive gears	<12m	<i>Estimate based on IT Passive gears < 12m</i>
		12m–24m	<i>Estimate based on IT Passive gears 12-24m</i>
IE	Demersal and pelagic trawlers and seiners	<12m	Polyvalent < 12 m
		12m–24m	Polyvalent 12 < 18 m, Polyvalent 18 < 24 m
		24m–40m	Polyvalent >= 24m
		>40m	<i>Estimate based on 24-40 m segment, with adjustment for average size</i>
	Passive gears	<12m	Polyvalent < 12 m
		12m–24m	Polyvalent 12 < 18 m, Polyvalent 18 < 24 m
		24m–40m	Polyvalent >= 24m
		>40m	<i>Estimate based on 24-40 m segment, with adjustment for average size</i>
	Dredges	<12m	Polyvalent < 12 m
		12m–24m	Polyvalent 12 < 18 m, Polyvalent 18 < 24 m
		24m–40m	Polyvalent >= 24m
IT	Demersal and pelagic	12m–24m	Mediterranean trawlers, Midwater pair trawlers, Purse seiners
	Passive gears	<12m	Small scale fisheries
		12m–24m	Multipurpose vessels
	Dredges	12m–24m	Dredgers
NL	Beam trawl	12m–24m	Shrimp beam trawlers<24m, Beam trawlers <= 24 m
		24m–40m	Beam trawlers > 24 m, <i>contains also vessels >40m</i>
	Demersal and pelagic trawlers and seiners	24m–40m	Trawlers > 24m
		>40m	Pelagic freezer trawlers
PT	Demersal and pelagic trawlers and seiners	<12m	<i>Estimate based on 12-24 m segment, with adjustment for average size</i>
		12m–24m	Coastal purse seiners
		24m–40m	Trawlers
		>40m	NAFO trawlers
	Passive gears	<12m	<i>Estimate based on 12-24 m segment, with adjustment for average size</i>
		12m–24m	Gillnetters, north>40GT
		24m–40m	Longliners
ES	Demersal and pelagic trawlers and seiners	<12m	<i>Estimate based on 12-24 m segment, with adjustment for average size</i>
		12m–24m	Galician purse seiners
		24m–40m	300 fleet, N and NW trawlers
		>40m	<i>Estimate based on 24-40 m segment, with adjustment for average size</i>
	Passive gears	<12m	<i>Estimate based on IT Passive gears < 12m</i>

MS	Gear	Size class	AER segment or <i>basis for estimation</i>
		12m–24m	<i>Estimate based on IT Passive gears 12-24m</i>
		24m–40m	Atlantic Longliners
		>40m	<i>Estimate based on 12-24 m segment, with adjustment for average size</i>
SE	Demersal and pelagic trawlers and seiners	12m–24m	Cod trawlers < 24 m, Pelagic trawlers < 24 m, Shrimp trawlers, Nephrop trawlers
	Passive gears	24m–40m	Pel. trawlers/purse s.>24m, Cod trawlers >= 24 m
		<12m	Gillnetters < 12 m
		12m–24m	Gillnetters >= 12 m
UK	Beam trawl	<12m	<i>Estimate based on 12-24m segment with adjustment for average size</i>
		12m–24m	<i>Estimate based on 24-40m segment with adjustment for average size</i>
		24m–40m	Beam trawlers
		>40m	<i>Estimate based on 24-40m segment with adjustment for average size</i>
	Demersal and pelagic trawlers and seiners	<12m	<i>Estimate based on 12-24m segment with adjustment for average size</i>
		12m–24m	Scot. demersal trawlers<24m Scottish nephrops trawlers, North. Irish nephrops trawlers, Scallop trawlers
		24m–40m	Scot. demersal trawlers>24m, Scottish seiners
		>40m	<i>Estimate based on 24-40 m segment with adjustment for average size</i>
	Passive gears	<12m	<i>Estimate based on FR Passive gears < 12m</i>
		12m–24m	<i>Estimate based on FR Passive gears 12-24 m</i>
		24m–40m	<i>Estimate based on ES Passive gears 24-40 m</i>
	Dredges	<12m	<i>Estimate based on 12-24m segment with adjustment for average size</i>
		12m–24m	<i>Estimate based on FR Dredges 12-24 m</i>
		24m–40m	<i>Estimate based on 12-24m segment with adjustment for average size</i>
EE	Demersal and pelagic trawlers and seiners	12m–24m	Trawlers < 24m
		24m–40m	Trawlers > 24m
LV	Demersal and pelagic trawlers and seiners	12m–24m	Trawlers < 24m
		24m–40m	Trawlers > 24m
		>40m	<i>Estimate based on LT Trawlers >40m, with adjustment for average size</i>
	Passive gears	<12m	<i>Estimate based on LT Passive gears <12m</i>
		12m–24m	<i>Estimate based on LT Passive gears 12-24m</i>
	Passive gears	24m–40m	Gillnetters
LT	Demersal and pelagic trawlers and seiners	24m–40m	Baltic trawlers
		>40m	Atlantic trawlers
	Passive gears	<12m	Coastal vessels < 12 m
		12m–24m	Gillnetters
PL	Demersal and pelagic trawlers and seiners	<12m	Demersal trawlers < 12
		12m–24m	Demersal trawlers 12 -< 24
		24m–40m	Demersal trawlers 24 -< 40, Pelagic trawlers 24 -< 40
	Passive gears	<12m	Passive gear vessels < 12, Longliners < 12
		12m–24m	Gillnetters 12 -< 24, Polyvalent 12 -< 24
		24m–40m	Gillnetters 24 -< 40
CY			<i>All estimates based on IT data</i>
MA			<i>All estimates based on IT data</i>
SI			<i>All estimates based on IT data</i>

Appendix B. EXPLANATION OF ECONOMIC TERMS

Basic accounting indicators

Value of landings (a)	Revenues from sale of fish, sometimes incl. other minor income (vessel rent, etc.).
Fuel costs (b)	Costs of fuel and lubricants
Other running costs (c)	Costs depending on vessel activity, excl fuel, e.g. sale of fish, ice, food, repair of fishing gear, etc.
Vessel costs (d)	Costs which are independent of vessel activity, e.g. insurance, part of maintenance, etc.
Crew share (e)	Remuneration of the crew, often calculated as a percentage share of value of landings minus fuel costs (minus other running costs)
Depreciation (f)	Decrease of the value of the vessel and equipment due to age, use, etc.
Interest (g)	Opportunity costs of capital, i.e. potential interest income which would have been received if the capital value would be in a bank deposit.

Derived indicators

Operational costs	Sum of fuel costs (b) + Other running costs (c) + Vessel costs (d)
Capital costs	Sum of depreciation (f) + interest (g)
Gross value added (GVA)	Contribution to gross national product (GNP), sum of remuneration of labour (crew) and capital (owner), before meeting capital costs. $GVA = (a) - (b) - (c) - (d)$ $GVA = \text{crew share} + \text{capital costs} + \text{net profit}$
Gross cash flow (GCF)	Value of landings minus all expenses, excl. depreciation and interest. This amount is available to cover capital costs. $GCF = (a) - (b) - (c) - (d) - (e)$
Net profit (NP)	Value of landings minus all expenses, incl. depreciation and interest. This amount is before tax. $NP = (a) - (b) - (c) - (d) - (e) - (f) - (g)$
Break-even revenue (BE)	Level of value of landings at which all costs are covered and net profit is zero. Usually constant productivity is assumed so that the level of activity (=revenue) and relevant costs (fuel, crew and other vessel costs) are increased or decreased to the BE-level.
Productivity	Production value (real or nominal) per unit of input (man-year, kW, etc.)

		Value of landings	Fuel costs	Other running costs	Vessel costs	Crew share	Gross cash flow	Gross value added	Employment on board (FTE)	Volume of landings (tonne)	Fleet - number of vessels	
Beam trawl	12m-24m	185	18	27	21	73	46	119	2	64	279	
	24m-40m	1,129	268	204	127	355	175	530	7	0	9	
	Demersal and pelagic trawlers and seiners	12m-24m	157	18	37	21	67	14	81	3	169	114
		24m-40m	788	113	207	104	328	37	364	5	881	31
	Passive gears	>40m	8,120	750	1,480	1,080	2,810	2,000	4,810	43	10,650	10
	<12m	7	0	2	1	4	0	4	0	9	1,642	
GR	Total											
Demersal and pelagic trawlers and seiners	<12m	53	13	10	5	16	8	24	3	0	14	
	12m-24m	139	35	27	14	43	21	64	4	30	15	
	24m-40m	246	49	45	23	80	49	129	6	66	39	
	>40m	501	100	92	46	164	100	264	10	0	5	
Passive gears	<12m	12	1	1	1	3	7	9	2	0	17,071	
	12m-24m	47	4	5	4	14	21	34	4	0	423	
IE	Total											
Demersal and pelagic trawlers and seiners	<12m	26	3	16	7	9	-10	0	2	0	64	
	12m-24m	193	44	135	24	90	-100	-10	6	0	158	
	24m-40m	544	130	371	58	227	-241	-15	9	0	53	
	>40m	3,044	745	303	715	1,013	268	1,281	35	0	21	
Passive gears	<12m	26	3	16	7	9	-10	0	2	0	593	
	12m-24m	193	44	135	24	90	-100	-10	6	0	52	
	24m-40m	544	130	371	58	227	-241	-15	9	0	17	
	>40m	1,433	351	142	337	477	126	603	22	0	2	
Dredges	<12m	26	3	16	7	9	-10	0	2	0	342	
	12m-24m	193	44	135	24	90	-100	-10	6	0	40	
	24m-40m	544	130	371	58	227	-241	-15	9	0	37	
IT	Total											
Demersal and pelagic	12m-24m	263	48	31	23	87	73	160	4	67	2,854	
Passive gears	<12m	35	3	4	3	10	15	26	2	5	10,296	
	12m-24m	102	16	13	8	35	30	65	3	20	2,051	
Dredges	12m-24m	91	7	4	6	37	37	74	2	21	714	

		Value of landings	Fuel costs	Other running costs	Vessel costs	Crew share	Gross cash flow	Gross value added	Employment on board (FTE)	Volume of landings (tonne)	Fleet - number of vessels	
NL	Total											
	Beam trawl	12m–24m	281	37	54	37	109	44	153	3	83	235
		24m–40m	1,294	355	221	157	340	221	561	7	411	141
	Demersal and pelagic trawlers and seiners	24m–40m	341	41	71	41	129	59	188	3	124	17
		>40m	7,418	1,124	2,059	1,224	1,900	1,112	3,012	34	21,647	17
PT	Total											
	Demersal and pelagic trawlers and seiners	<12m	24	2	2	5	12	3	14	2	0	113
		12m–24m	275	23	29	58	135	30	165	17	455	160
		24m–40m	401	79	58	88	111	64	175	11	175	111
		>40m	1,972	483	196	463	656	173	830	35	1,193	14
	Passive gears	<12m	21	4	3	5	7	2	9	4	0	4,433
		12m–24m	173	32	27	40	59	15	75	15	54	24
		24m–40m	485	66	107	124	144	45	189	16	265	26
ES	Total											
	Demersal and pelagic trawlers and seiners	<12m	149	10	13	19	83	24	107	3	0	171
		12m–24m	175	11	16	23	97	28	125	4	193	1,551
		24m–40m	822	128	98	97	347	153	499	12	172	510
		>40m	3,242	503	386	384	1,368	601	1,969	25	0	86
	Passive gears	<12m	24	4	5	3	7	5	12	3	0	10,110
		12m–24m	157	23	35	22	45	32	78	6	0	985
		24m–40m	774	112	173	106	223	160	383	12	293	220
		>40m	1,372	199	307	188	395	283	678	25	0	25
SE	Total											
	Demersal and pelagic trawlers and seiners	12m–24m	136	18	26	25	34	33	67	2	99	284
		24m–40m	825	116	145	147	197	220	417	6	3,336	76
	Passive gears	<12m	22	1	4	6	8	3	11	1	14	309
		12m–24m	69	4	17	2	27	19	46	2	42	48
UK	Total											
	Beam trawl	<12m	17	5	3	6	4	-1	3	2	0	82
		12m–24m	178	48	32	65	46	-12	33	4	0	34

		Value of landings	Fuel costs	Other running costs	Vessel costs	Crew share	Gross cash flow	Gross value added	Employment on board (FTE)	Volume of landings (tonne)	Fleet - number of vessels
	24m–40m	744	200	135	269	190	-51	139	6	254	110
	>40m	1,260	339	229	456	322	-86	235	25	0	13
Demersal and pelagic trawlers and seiners	<12m	87	15	15	22	27	8	36	2	0	710
	12m–24m	294	52	50	73	92	28	120	4	117	844
	24m–40m	899	140	199	233	267	60	327	6	540	146
Passive gears	>40m	5,130	798	1,136	1,330	1,523	344	1,866	25	0	26
	<12m	60	3	6	8	27	16	43	2	0	1,604
	12m–24m	145	7	12	29	57	39	96	4	0	137
Dredges	24m–40m	464	67	104	64	134	96	230	12	0	39
	<12m	103	10	7	18	41	26	68	2	0	79
	12m–24m	264	25	18	47	107	67	174	3	0	102
	24m–40m	552	52	38	98	223	141	364	6	0	29
EE	Total										
Demersal and pelagic trawlers and seiners	12m–24m	11	1	0	2	5	2	7	3	65	60
	24m–40m	132	17	11	21	39	44	83	6	839	76
	>40m	2,493	748	103	564	125	954	1,078	55	0	6
LV	Total										
Demersal and pelagic trawlers and seiners	12m–24m	50	12	4	36	10	-12	-2	3	270	50
	24m–40m	152	40	2	42	25	43	68	6	689	81
	>40m	2,493	748	103	564	125	954	1,078	55	0	10
Passive gears	<12m	3	1	1	0	1	1	2	3	0	746
	12m–24m	74	13	21	6	18	17	35	6	0	10
Passive gears	24m–40m	107	15	3	42	18	28	47	6	62	60
LT	Total										
Demersal and pelagic trawlers and seiners	24m–40m	96	23	24	5	17	27	44	6	173	40
	>40m	4,533	1,359	186	1,026	227	1,734	1,961	102	8,200	17
Passive gears	<12m	5	1	1	0	1	3	3	2	6	67
	12m–24m	67	13	22	6	14	11	25	6	53	15
PL	Total										
Demersal and pelagic	<12m	12	1	1	1	3	6	9	3	38	13

		Value of landings	Fuel costs	Other running costs	Vessel costs	Crew share	Gross cash flow	Gross value added	Employment on board (FTE)	Volume of landings (tonne)	Fleet - number of vessels	
trawlers and seiners	12m-24m	35	16	5	4	7	3	10	4	59	141	
	24m-40m	125	52	18	27	30	-2	28	6	806	154	
	Passive gears	<12m	13	2	2	1	2	7	9	2	20	776
		12m-24m	34	8	7	6	10	3	13	5	36	131
		24m-40m	36	12	8	3	12	1	13	6	40	20
CY	Total											
Demersal and pelagic trawlers and seiners	12m-24m	139	35	27	14	43	21	64	4	0	19	
	24m-40m	246	49	45	23	80	49	129	6	0	8	
	>40m	501	100	92	46	164	100	264	10	0	1	
Passive gears	<12m	9	1	1	1	3	4	6	2	0	411	
	12m-24m	47	4	5	4	14	21	34	4	0	43	
MA	Total											
Demersal and pelagic trawlers and seiners	<12m	53	13	10	5	16	8	24	3	0	2	
	12m-24m	139	35	27	14	43	21	64	4	0	14	
	24m-40m	246	49	45	23	80	49	129	6	0	4	
	>40m	501	100	92	46	164	100	264	10	0	3	
Passive gears	<12m	9	1	1	1	3	4	6	2	0	630	
	12m-24m	47	4	5	4	14	21	34	4	0	53	
SI	Total											
Demersal and pelagic trawlers and seiners	<12m	53	13	10	5	16	8	24	2	0	5	
	12m-24m	139	35	27	14	43	21	64	4	0	14	
	24m-40m	246	49	45	23	80	49	129	6	0	2	
Passive gears	<12m	9	1	1	1	3	4	6	1	0	60	
	12m-24m	47	4	5	4	14	21	34	4	0	3	

APPENDIX D. CONSEQUENCES OF FUEL PRICE RISE BY 100% FROM 2002 LEVEL (BASELINE SCENARIO)

Member State	Gear	Size class	Short term effect (change compared to 2002)			Long term effect (change compared to 2002)			Break-even situation after price increase	
			GVA (%)	GVA/man (1000 Euro)	Number of jobs	Number of jobs (%)	Gross value added	GVA / man (1000 euro)	Value of landings per vessel (1000 Euro)	Feasibility of increase of effort per vessel
(segments in italics are estimated)										
BE	Total		-42%	-27	-310	-44%	-34%	12		
	Beam trawl	12m–24m	-35%	-18	-51	-26%	-29%	-2	459	Uncertain
		24m–40m	-45%	-34	-233	-52%	-36%	24	2,382	Unfeasible
DK	Total		-14%	-11	-924	-23%	-9%	13		
	Demersal and pelagic trawlers and seiners	12m–24m	-16%	-9	-393	-26%	-8%	14	352	Uncertain
		24m–40m	-20%	-19	-80	-10%	-18%	-8	1,084	Feasible
		>40m	-12%	-25	0	0%	-12%	-25	1,798	Feasible
	Passive gears	<12m	-7%	-3	-451	-52%	7%	53	272	Unfeasible
		12m–24m	-7%	-7	0	0%	-7%	-7	192	<i>Feasible</i>
FI	Total		-21%	-5	0	0%	-21%	-5		
	Demersal and pelagic trawlers and seiners	12m–24m	-18%	-6	0	0%	-18%	-6	64	Feasible
		24m–40m	-25%	-18	0	0%	-25%	-18	300	Feasible
	Passive gears	<12m	-19%	-2	0	0%	-19%	-2	17	Feasible
		12m–24m	-17%	-3	0	0%	-17%	-3	82	Feasible
FR	Total		-20%	-11	0	0%	-20%	-11		
	Demersal and pelagic trawlers and seiners	<12m	-25%	-10	0	0%	-25%	-10	190	<i>Feasible</i>
		12m–24m	-25%	-17	0	0%	-25%	-17	540	Feasible
		24m–40m	-25%	-13	0	0%	-25%	-13	741	<i>Feasible</i>
		>40m	-25%	-14	0	0%	-25%	-14	3,022	<i>Feasible</i>
	Passive gears	<12m	-6%	-3	0	0%	-6%	-3	64	Feasible
		12m–24m	-7%	-4	0	0%	-7%	-4	192	Feasible
		24m–40m	-7%	-3	0	0%	-7%	-3	356	<i>Feasible</i>
		>40m	-7%	-2	0	0%	-7%	-2	662	<i>Feasible</i>
	Dredges	<12m	-14%	-7	0	0%	-14%	-7	76	<i>Feasible</i>

		12m–24m	-14%	-8	0	0%	-14%	-8	190	Feasible
DE	Total		-19%	-9	-807	-34%	-13%	15		
	Beam trawl	12m–24m	-15%	-8	0	0%	-15%	-8	146	Feasible
		24m–40m	-50%	-40	-35	-58%	-37%	41	2,684	Unfeasible
	Demersal and pelagic trawlers and seiners	12m–24m	-23%	-7	-135	-45%	-11%	19	286	Unfeasible
		24m–40m	-31%	-23	-103	-68%	-12%	127	2,424	Unfeasible
		>40m	-16%	-18	-55	-13%	-13%	0	9,312	Feasible
	Passive gears	<12m	-8%	-1	-480	-61%	7%	13	18	Unfeasible
GR	Total		-10%	-1	-81	0%	-10%	-1		
	Demersal and pelagic trawlers and seiners	<12m	-54%	-5	-15	-44%	-44%	0	94	Unfeasible
		12m–24m	-54%	-9	-26	-44%	-44%	0	249	Unfeasible
		24m–40m	-38%	-8	-32	-14%	-36%	-5	285	Feasible
		>40m	-38%	-10	-7	-14%	-36%	-7	581	Feasible
	Passive gears	<12m	-9%	0	0	0%	-9%	0	2	Feasible
		12m–24m	-13%	-1	0	0%	-13%	-1	15	Feasible
IE	Total ²⁷									
IT	Total		-23%	-5	0	0%	-23%	-5		
	Demersal and pelagic	12m–24m	-30%	-11	0	0%	-30%	-11	167	Feasible
	Passive gears	<12m	-11%	-2	0	0%	-11%	-2	11	Feasible
		12m–24m	-24%	-6	0	0%	-24%	-6	66	Feasible
	Dredges	12m–24m	-10%	-3	0	0%	-10%	-3	39	Feasible
NL	Total		-46%	-34	-1,121	-48%	-31%	24		
	Beam trawl	12m–24m	-24%	-13	-230	-33%	-17%	12	417	Unfeasible
		24m–40m	-63%	-50	-609	-61%	-46%	32	3,354	Unfeasible
	Demersal and pelagic trawlers and seiners	24m–40m	-22%	-14	-4	-7%	-20%	-9	367	Feasible
		>40m	-37%	-33	-279	-48%	-18%	50	14,179	Unfeasible
PT	Total		-37%	-2	-8,262	-37%	-21%	1		
	Demersal and pelagic trawlers and seiners	<12m	-14%	-1	-3	-2%	-14%	-1	24	Feasible
		12m–24m	-14%	-1	-41	-2%	-14%	-1	279	Feasible
		24m–40m	-45%	-7	-405	-33%	-29%	1	598	Unfeasible
		>40m	-58%	-14	-197	-40%	-36%	2	3,292	Unfeasible
	Passive gears	<12m	-42%	-1	-7,315	-43%	-19%	1	37	Unfeasible

²⁷ Result for Ireland cannot be calculated due to negative cash flow..

		12m–24m	-42%	-2	-156	-43%	-19%	2	306	Unfeasible
		24m–40m	-35%	-4	-144	-35%	-12%	4	743	Unfeasible
ES	Total		-23%	-4	-7,977	-14%	-20%	-1		
	Demersal and pelagic trawlers and seiners	<12m	-9%	-3	-118	-23%	-5%	8	194	Uncertain
		12m–24m	-9%	-3	-1,502	-23%	-5%	7	227	Uncertain
		24m–40m	-26%	-11	-986	-17%	-22%	-3	987	Feasible
		>40m	-26%	-20	-358	-17%	-22%	-5	3,890	Feasible
	Passive gears	<12m	-29%	-1	-3,909	-12%	-26%	-1	28	Feasible
		12m–24m	-29%	-4	-714	-12%	-26%	-2	178	Feasible
		24m–40m	-29%	-10	-314	-12%	-26%	-5	880	Feasible
		>40m	-29%	-8	-76	-12%	-26%	-4	1,561	Feasible
SE	Total		-26%	-9	0	0%	-26%	-9		
	Demersal and pelagic trawlers and seiners	12m–24m	-27%	-7	0	0%	-27%	-7	86	Feasible
		24m–40m	-28%	-21	0	0%	-28%	-21	429	Feasible
	Passive gears	<12m	-12%	-1	0	0%	-12%	-1	17	Feasible
		12m–24m	-9%	-2	0	0%	-9%	-2	8	Feasible
UK	Total		-37%	-11	-3,068	-25%	-16%	4		
	Beam trawl	<12m	-144%	-2	-124	-75%	2%	5	69	Unfeasible
		12m–24m	-144%	-11	-108	-75%	2%	25	722	Unfeasible
		24m–40m	-144%	-33	-497	-75%	2%	72	3,011	Unfeasible
		>40m	-144%	-14	-245	-75%	2%	29	5,102	Unfeasible
	Demersal and pelagic trawlers and seiners	<12m	-43%	-8	-470	-33%	-23%	3	131	Unfeasible
		12m–24m	-43%	-14	-1,036	-33%	-23%	5	440	Unfeasible
		24m–40m	-43%	-25	-297	-36%	-17%	18	1,413	Unfeasible
		>40m	-43%	-32	-236	-36%	-17%	23	8,061	Unfeasible
	Passive gears	<12m	-6%	-1	0	0%	-6%	-1	32	Feasible
		12m–24m	-7%	-2	0	0%	-7%	-2	96	Feasible
		24m–40m	-29%	-6	-56	-12%	-26%	-3	528	Feasible
	Dredges	<12m	-14%	-5	0	0%	-14%	-5	74	Feasible
		12m–24m	-14%	-8	0	0%	-14%	-8	190	Feasible
		24m–40m	-14%	-9	0	0%	-14%	-9	397	Feasible
EE	Total		-43%	-3	-98	-5%	-41%	-3		
	Demersal and pelagic trawlers and seiners	12m–24m	-13%	0	-70	-47%	-2%	2	20	Unfeasible
		24m–40m	-21%	-3	-28	-6%	-19%	-2	141	Feasible

		>40m	-69%	-14	0	0%	-69%	-14	2,085	Feasible
LV	Total		-61%	-4	-311	-9%	-49%	-3		
	Demersal and pelagic trawlers and seiners	12m–24m	0%	-4	-111	-67%	0%	10	152	Unfeasible
		24m–40m	-58%	-7	-200	-42%	-32%	2	262	Unfeasible
		>40m	-69%	-14	0	0%	-69%	-14	2,085	Feasible
	Passive gears	<12m	-30%	0	0	0%	-30%	0	1	Feasible
		12m–24m	-36%	-2	0	0%	-36%	-2	55	Feasible
	Passive gears	24m–40m	-32%	-3	0	0%	-32%	-3	95	Feasible
LT	Total		-68%	-11	-121	-5%	-67%	-11		
	Demersal and pelagic trawlers and seiners	24m–40m	-53%	-4	-79	-33%	-49%	-2	143	Unfeasible
		>40m	-69%	-13	0	0%	-69%	-13	3,791	Feasible
	Passive gears	<12m	-32%	-1	0	0%	-32%	-1	1	Feasible
		12m–24m	-53%	-2	-42	-44%	-42%	0	119	Unfeasible
PL²⁸	Total									
	Demersal and pelagic trawlers and seiners	<12m	-12%	0	-15	-37%	-8%	1	19	Unfeasible
		12m–24m								
		24m–40m								
	Passive gears	<12m	-21%	-1	-107	-7%	-20%	-1	14	Feasible
		12m–24m	-61%	-2	-484	-82%	-22%	9	188	Unfeasible
		24m–40m								
CY	Total		-25%	-2	-41	-4%	-23%	-1		
	Demersal and pelagic trawlers and seiners	12m–24m	-54%	-9	-33	-44%	-44%	0	249	Unfeasible
		24m–40m	-38%	-8	-7	-14%	-36%	-5	285	Feasible
		>40m	-38%	-10	-1	-14%	-36%	-7	581	Feasible
	Passive gears	<12m	-13%	-1	0	0%	-13%	-1	3	Feasible
		12m–24m	-13%	-1	0	0%	-13%	-1	15	Feasible
MA	Total		-21%	-1	-34	-3%	-20%	-1		
	Demersal and pelagic trawlers and seiners	<12m	-54%	-5	-2	-44%	-44%	0	94	Unfeasible
		12m–24m	-54%	-9	-25	-44%	-44%	0	249	Unfeasible
		24m–40m	-38%	-8	-3	-14%	-36%	-5	285	Feasible
		>40m	-38%	-10	-4	-14%	-36%	-7	581	Feasible
	Passive gears	<12m	-13%	-1	0	0%	-13%	-1	3	Feasible

²⁸ Results for some segments cannot be calculated due to negative cash flow.

		12m–24m	-13%	-1	0	0%	-13%	-1	15	<i>Feasible</i>
SI	Total		-40%	-5	-28	-20%	-34%	-2		
	Demersal and pelagic trawlers and seiners	<12m	-54%	-9	-3	-44%	-44%	0	94	<i>Unfeasible</i>
		12m–24m	-54%	-9	-24	-44%	-44%	0	249	<i>Unfeasible</i>
		24m–40m	-38%	-8	-1	-14%	-36%	-5	285	<i>Feasible</i>
	Passive gears	<12m	-13%	-1	0	0%	-13%	-1	3	<i>Feasible</i>
		12m–24m	-13%	-1	0	0%	-13%	-1	15	<i>Feasible</i>

APPENDIX E. CONSEQUENCES OF FUEL PRICE RISE BY 50% FROM 2002 LEVEL

(segments in italics are estimated)

Member State	Gear	Size class	Short term effect (change compared to 2002)		Long term effect (change compared to 2002)				Break-even situation after price increase	
			GVA (%)	GVA/man (1000 Euro)	Number of jobs	Number of jobs (%)	Gross value added	GVA / man (1000 euro)	Value of landings per vessel (1000 Euro)	Feasibility of increase of effort per vessel
BE	Total		-21%	-14	-154	-22%	-17%	4		
	Beam trawl	12m–24m	-17%	-9	-11	-6%	-16%	-6	361	Feasible
		24m–40m	-22%	-17	-125	-28%	-18%	10	1,587	Uncertain
DK	Total		-7%	-5	-733	-18%	-4%	14		
	Demersal and pelagic trawlers and seiners	12m–24m	-8%	-4	-299	-20%	-2%	13	325	Uncertain
		24m–40m	-10%	-10	-1	0%	-10%	-9	979	Feasible
		>40m	-6%	-12	0	0%	-6%	-12	1,700	Feasible
	Passive gears	<12m	-4%	-2	-433	-50%	10%	52	261	Unfeasible
		12m–24m	<i>-4%</i>	<i>-3</i>	<i>0</i>	<i>0%</i>	<i>-4%</i>	<i>-3</i>	<i>186</i>	<i>Feasible</i>
FI	Total		-10%	-2	0	0%	-10%	-2		
	Demersal and pelagic trawlers and seiners	12m–24m	-9%	-3	0	0%	-9%	-3	60	Feasible
		24m–40m	-12%	-9	0	0%	-12%	-9	275	Feasible
	Passive gears	<12m	-9%	-1	0	0%	-9%	-1	16	Feasible
		12m–24m	-8%	-1	0	0%	-8%	-1	79	Feasible
FR	Total		-10%	-6	0	0%	-10%	-6		
	Demersal and pelagic trawlers and seiners	<12m	<i>-12%</i>	<i>-5</i>	<i>0</i>	<i>0%</i>	<i>-12%</i>	<i>-5</i>	<i>168</i>	<i>Feasible</i>
		12m–24m	-12%	-8	0	0%	-12%	-8	477	Feasible
		24m–40m	<i>-12%</i>	<i>-7</i>	<i>0</i>	<i>0%</i>	<i>-12%</i>	<i>-7</i>	<i>654</i>	<i>Feasible</i>
		>40m	<i>-12%</i>	<i>-7</i>	<i>0</i>	<i>0%</i>	<i>-12%</i>	<i>-7</i>	<i>2,667</i>	<i>Feasible</i>
	Passive gears	<12m	-3%	-1	0	0%	-3%	-1	62	Feasible
		12m–24m	-4%	-2	0	0%	-4%	-2	186	Feasible
		24m–40m	<i>-4%</i>	<i>-2</i>	<i>0</i>	<i>0%</i>	<i>-4%</i>	<i>-2</i>	<i>344</i>	<i>Feasible</i>
		>40m	<i>-4%</i>	<i>-1</i>	<i>0</i>	<i>0%</i>	<i>-4%</i>	<i>-1</i>	<i>641</i>	<i>Feasible</i>
	Dredges	<12m	-7%	-3	0	0%	-7%	-3	71	Feasible
		12m–24m	-7%	-4	0	0%	-7%	-4	178	Feasible

DE	Total		-9%	-4	-690	-29%	-5%	16		
	Beam trawl	12m–24m	-8%	-4	0	0%	-8%	-4	134	Feasible
		24m–40m	-25%	-20	-21	-35%	-17%	23	1,740	Unfeasible
	Demersal and pelagic trawlers and seiners	12m–24m	-11%	-3	-104	-35%	-2%	15	241	Unfeasible
		24m–40m	-15%	-11	-85	-56%	0%	95	1,792	Unfeasible
		>40m	-8%	-9	-22	-5%	-7%	-2	8,553	Feasible
Passive gears	<12m	-4%	0	-457	-58%	10%	12	16	Unfeasible	
GR	Total		-5%	0	-5	0%	-5%	0		
	Demersal and pelagic trawlers and seiners	<12m	-27%	-3	-2	-5%	-26%	-2	56	Feasible
		12m–24m	-27%	-4	-3	-5%	-26%	-3	147	Feasible
		24m–40m	-19%	-4	0	0%	-19%	-4	212	Feasible
		>40m	-19%	-5	0	0%	-19%	-5	433	Feasible
	Passive gears	<12m	-4%	0	0	0%	-4%	0	2	Feasible
12m–24m		-6%	-1	0	0%	-6%	-1	14	Feasible	
IE	Total									
IT	Total		-11%	-3	0	0%	-11%	-3		
	Demersal and pelagic	12m–24m	-15%	-6	0	0%	-15%	-6	138	Feasible
	Passive gears	<12m	-6%	-1	0	0%	-6%	-1	10	Feasible
		12m–24m	-12%	-3	0	0%	-12%	-3	57	Feasible
	Dredges	12m–24m	-5%	-2	0	0%	-5%	-2	37	Feasible
NL	Total		-23%	-17	-673	-29%	-14%	16		
	Beam trawl	12m–24m	-12%	-6	-148	-21%	-7%	9	356	Uncertain
		24m–40m	-32%	-25	-323	-33%	-22%	12	1,920	Unfeasible
	Demersal and pelagic trawlers and seiners	24m–40m	-11%	-7	0	0%	-11%	-7	318	Feasible
		>40m	-19%	-16	-202	-34%	-5%	40	11,318	Unfeasible
PT	Total		-18%	-1	-5,437	-24%	-9%	1		
	Demersal and pelagic trawlers and seiners	<12m	-7%	0	0	0%	-7%	0	22	Feasible
		12m–24m	-7%	-1	0	0%	-7%	-1	261	Feasible
		24m–40m	-23%	-4	-192	-16%	-15%	0	475	Feasible
		>40m	-29%	-7	-89	-18%	-19%	0	2,407	Uncertain
	Passive gears	<12m	-21%	-1	-4,954	-29%	-5%	1	30	Unfeasible
		12m–24m	-21%	-1	-105	-29%	-5%	2	245	Unfeasible
24m–40m		-17%	-2	-97	-23%	-2%	3	634	Uncertain	
ES	Total		-12%	-2	-1,536	-3%	-11%	-1		

	Demersal and pelagic trawlers and seiners	<12m	-5%	-2	-98	-19%	-1%	8	185	Uncertain
		12m–24m	-5%	-1	-1,248	-19%	-1%	7	216	Uncertain
		24m–40m	-13%	-6	-140	-2%	-12%	-4	842	Feasible
		>40m	-13%	-10	-51	-2%	-12%	-8	3,320	Feasible
	Passive gears	<12m	-15%	-1	0	0%	-15%	-1	23	Feasible
		12m–24m	-15%	-2	0	0%	-15%	-2	149	Feasible
		24m–40m	-15%	-5	0	0%	-15%	-5	737	Feasible
		>40m	-15%	-4	0	0%	-15%	-4	1,307	Feasible
SE	Total		-13%	-5	0	0%	-13%	-5		
	Demersal and pelagic trawlers and seiners	12m–24m	-13%	-4	0	0%	-13%	-4	75	Feasible
		24m–40m	-14%	-10	0	0%	-14%	-10	374	Feasible
	Passive gears	<12m	-6%	-1	0	0%	-6%	-1	16	Feasible
		12m–24m	-5%	-1	0	0%	-5%	-1	7	Feasible
UK	Total		-19%	-6	-1,857	-15%	-5%	4		
	Beam trawl	<12m	-72%	-1	-94	-57%	39%	4	40	Unfeasible
		12m–24m	-72%	-6	-81	-57%	39%	18	415	Unfeasible
		24m–40m	-72%	-17	-377	-57%	39%	52	1,731	Unfeasible
		>40m	-72%	-7	-185	-57%	39%	21	2,933	Unfeasible
	Demersal and pelagic trawlers and seiners	<12m	-21%	-4	-248	-17%	-11%	1	106	Uncertain
		12m–24m	-21%	-7	-547	-17%	-11%	3	357	Uncertain
		24m–40m	-21%	-12	-181	-22%	-6%	12	1,155	Uncertain
		>40m	-21%	-16	-144	-22%	-6%	16	6,588	Uncertain
	Passive gears	<12m	-3%	-1	0	0%	-3%	-1	31	Feasible
		12m–24m	-4%	-1	0	0%	-4%	-1	93	Feasible
		24m–40m	-15%	-3	0	0%	-15%	-3	442	Feasible
	Dredges	<12m	-7%	-2	0	0%	-7%	-2	69	Feasible
		12m–24m	-7%	-4	0	0%	-7%	-4	178	Feasible
		24m–40m	-7%	-4	0	0%	-7%	-4	372	Feasible
EE	Total		-21%	-1	-65	-3%	-21%	-1		
	Demersal and pelagic trawlers and seiners	12m–24m	-7%	0	-65	-43%	4%	2	19	Unfeasible
		24m–40m	-10%	-1	0	0%	-10%	-1	128	Feasible
		>40m	-35%	-7	0	0%	-35%	-7	1,467	Feasible
LV	Total		-31%	-2	-217	-6%	-22%	-1		
	Demersal and pelagic	12m–24m	0%	-2	-95	-57%	0%	10	117	Unfeasible

	trawlers and seiners	24m–40m	-29%	-3	-122	-26%	-13%	2	204	Uncertain
		>40m	-35%	-7	0	0%	-35%	-7	1,467	Feasible
	Passive gears	<12m	-15%	0	0	0%	-15%	0	1	Feasible
		12m–24m	-18%	-1	0	0%	-18%	-1	42	Feasible
	Passive gears	24m–40m	-16%	-1	0	0%	-16%	-1	86	Feasible
LT	Total		-34%	-6	-7	0%	-34%	-5		
	Demersal and pelagic	24m–40m	-26%	-2	0	0%	-26%	-2	88	Feasible
	trawlers and seiners	>40m	-35%	-7	0	0%	-35%	-7	2,668	Feasible
	Passive gears	<12m	-16%	0	0	0%	-16%	0	1	Feasible
		12m–24m	-26%	-1	-7	-7%	-25%	-1	72	Feasible
PL	Total		-42%	-2	-1,883	-46%	-19%	2		
	Demersal and pelagic	<12m	-6%	0	-13	-33%	-2%	1	18	Unfeasible
	trawlers and seiners	12m–24m	-78%	-2	-500	-93%	-42%	20	511	Unfeasible
		24m–40m	-93%	-4	-832	-88%	-10%	29	1,032	Unfeasible
	Passive gears	<12m	-10%	0	0	0%	-10%	0	13	Feasible
		12m–24m	-30%	-1	-423	-71%	3%	7	120	Unfeasible
		24m–40m	-48%	-1	-116	-96%	-24%	43	1,007	Unfeasible
CY	Total		-13%	-1	-4	0%	-12%	-1		
	Demersal and pelagic	12m–24m	-27%	-4	-4	-5%	-26%	-3	147	Feasible
	trawlers and seiners	24m–40m	-19%	-4	0	0%	-19%	-4	212	Feasible
		>40m	-19%	-5	0	0%	-19%	-5	433	Feasible
	Passive gears	<12m	-6%	0	0	0%	-6%	0	3	Feasible
		12m–24m	-6%	-1	0	0%	-6%	-1	14	Feasible
MA	Total		-11%	-1	-3	0%	-11%	-1		
	Demersal and pelagic	<12m	-27%	-3	0	-5%	-26%	-2	56	Feasible
	trawlers and seiners	12m–24m	-27%	-4	-3	-5%	-26%	-3	147	Feasible
		24m–40m	-19%	-4	0	0%	-19%	-4	212	Feasible
		>40m	-19%	-5	0	0%	-19%	-5	433	Feasible
	Passive gears	<12m	-6%	0	0	0%	-6%	0	3	Feasible
		12m–24m	-6%	-1	0	0%	-6%	-1	14	Feasible
SI	Total		-20%	-2	-3	-2%	-19%	-2		
	Demersal and pelagic	<12m	-27%	-4	0	-5%	-26%	-4	56	Feasible
	trawlers and seiners	12m–24m	-27%	-4	-3	-5%	-26%	-3	147	Feasible
		24m–40m	-19%	-4	0	0%	-19%	-4	212	Feasible

Passive gears	<12m	-6%	0	0	0%	-6%	0	3	<i>Feasible</i>
	12m-24m	-6%	-1	0	0%	-6%	-1	14	<i>Feasible</i>

APPENDIX F. CONSEQUENCES OF FUEL PRICE RISE BY 75% FROM 2002 LEVEL

(segments in italics are estimated)

Member State	Gear	Size class	Short term effect (change compared to 2002)			Long term effect (change compared to 2002)			Break-even situation after price increase	
			GVA (%)	GVA/man (1000 Euro)	Number of jobs	Number of jobs (%)	Gross value added	GVA / man (1000 euro)	Value of landings per vessel (1000 Euro)	Feasibility of increase of effort per vessel
BE	Total		-32%	-21	-232	-33%	-26%	7		
	Beam trawl	12m–24m	-26%	-13	-31	-16%	-22%	-4	404	Feasible
		24m–40m	-34%	-25	-179	-40%	-27%	16	1,905	Unfeasible
DK	Total		-10%	-8	-829	-20%	-7%	14		
	Demersal and pelagic trawlers and seiners	12m–24m	-12%	-7	-346	-23%	-5%	13	338	Uncertain
		24m–40m	-15%	-14	-41	-5%	-14%	-9	1,029	Feasible
		>40m	-9%	-18	0	0%	-9%	-18	1,748	Feasible
	Passive gears	<12m	-6%	-2	-442	-51%	9%	52	266	Unfeasible
		12m–24m	-6%	-5	0	0%	-6%	-5	189	<i>Feasible</i>
FI	Total		-16%	-3	0	0%	-16%	-3		
	Demersal and pelagic trawlers and seiners	12m–24m	-13%	-4	0	0%	-13%	-4	62	Feasible
		24m–40m	-18%	-14	0	0%	-18%	-14	287	Feasible
	Passive gears	<12m	-14%	-1	0	0%	-14%	-1	16	Feasible
		12m–24m	-13%	-2	0	0%	-12%	-2	81	Feasible
FR	Total		-15%	-9	0	0%	-15%	-9		
	Demersal and pelagic trawlers and seiners	<12m	-19%	-8	0	0%	-19%	-8	178	<i>Feasible</i>
		12m–24m	-19%	-13	0	0%	-19%	-13	507	Feasible
		24m–40m	-19%	-10	0	0%	-19%	-10	695	<i>Feasible</i>
		>40m	-19%	-11	0	0%	-19%	-11	2,834	<i>Feasible</i>
	Passive gears	<12m	-5%	-2	0	0%	-5%	-2	63	Feasible
		12m–24m	-6%	-3	0	0%	-6%	-3	189	Feasible
		24m–40m	-6%	-2	0	0%	-6%	-2	350	<i>Feasible</i>
		>40m	-6%	-1	0	0%	-6%	-1	652	<i>Feasible</i>
	Dredges	<12m	-11%	-5	0	0%	-11%	-5	73	<i>Feasible</i>

		12m–24m	-11%	-6	0	0%	-11%	-6	184	Feasible
DE	Total		-14%	-7	-748	-32%	-9%	16		
	Beam trawl	12m–24m	-11%	-6	0	0%	-11%	-6	140	Feasible
		24m–40m	-38%	-30	-28	-47%	-27%	30	2,111	Unfeasible
	Demersal and pelagic trawlers and seiners	12m–24m	-17%	-5	-120	-40%	-7%	17	261	Unfeasible
		24m–40m	-23%	-17	-94	-62%	-6%	109	2,061	Unfeasible
		>40m	-12%	-13	-38	-9%	-10%	-1	8,917	Feasible
	Passive gears	<12m	-6%	0	-469	-59%	8%	13	17	Unfeasible
GR	Total		-8%	0	-23	0%	-8%	0		
	Demersal and pelagic trawlers and seiners	<12m	-41%	-4	-9	-25%	-35%	-1	70	Uncertain
		12m–24m	-41%	-6	-15	-25%	-35%	-2	185	Uncertain
		24m–40m	-28%	-6	0	0%	-28%	-6	243	Feasible
		>40m	-28%	-7	0	0%	-28%	-7	496	Feasible
	Passive gears	<12m	-6%	0	0	0%	-6%	0	2	Feasible
		12m–24m	-9%	-1	0	0%	-9%	-1	14	Feasible
IE	Total									
IT	Total		-17%	-4	0	0%	-17%	-4		
	Demersal and pelagic	12m–24m	-23%	-9	0	0%	-23%	-9	151	Feasible
	Passive gears	<12m	-8%	-1	0	0%	-8%	-1	10	Feasible
		12m–24m	-18%	-5	0	0%	-18%	-5	61	Feasible
	Dredges	12m–24m	-7%	-3	0	0%	-7%	-3	38	Feasible
NL	Total		-35%	-25	-896	-38%	-22%	19		
	Beam trawl	12m–24m	-18%	-9	-189	-27%	-12%	10	384	Uncertain
		24m–40m	-47%	-38	-466	-47%	-34%	19	2,442	Unfeasible
	Demersal and pelagic trawlers and seiners	24m–40m	-16%	-11	0	0%	-16%	-11	341	Feasible
		>40m	-28%	-24	-241	-41%	-11%	44	12,588	Unfeasible
PT	Total		-28%	-1	-6,827	-31%	-15%	1		
	Demersal and pelagic trawlers and seiners	<12m	-11%	-1	0	0%	-11%	-1	23	Feasible
		12m–24m	-11%	-1	0	0%	-11%	-1	270	Feasible
		24m–40m	-34%	-5	-299	-24%	-22%	1	530	Uncertain
		>40m	-44%	-10	-143	-29%	-27%	1	2,780	Unfeasible
	Passive gears	<12m	-32%	-1	-6,134	-36%	-12%	1	33	Unfeasible
		12m–24m	-32%	-2	-131	-36%	-12%	2	272	Unfeasible
		24m–40m	-26%	-3	-121	-29%	-7%	4	684	Unfeasible

ES	Total		-17%	-3	-3,725	-7%	-15%	-2		
	Demersal and pelagic trawlers and seiners	<12m	-7%	-2	-108	-21%	-3%	8	189	Uncertain
		12m–24m	-7%	-2	-1,375	-21%	-3%	7	222	Uncertain
		24m–40m	-19%	-8	-563	-10%	-17%	-4	909	Feasible
		>40m	-19%	-15	-205	-10%	-17%	-7	3,582	Feasible
	Passive gears	<12m	-22%	-1	-1,150	-4%	-21%	-1	25	Feasible
		12m–24m	-22%	-3	-210	-4%	-21%	-2	163	Feasible
		24m–40m	-22%	-7	-92	-4%	-21%	-6	803	Feasible
>40m		-22%	-6	-22	-4%	-21%	-5	1,423	Feasible	
SE	Total		-19%	-7	0	0%	-19%	-7		
	Demersal and pelagic trawlers and seiners	12m–24m	-20%	-6	0	0%	-20%	-6	80	Feasible
		24m–40m	-21%	-15	0	0%	-21%	-15	399	Feasible
	Passive gears	<12m	-9%	-1	0	0%	-9%	-1	16	Feasible
		12m–24m	-7%	-2	0	0%	-7%	-2	8	Feasible
UK	Total		-28%	-8	-2,451	-20%	-10%	4		
	Beam trawl	<12m	-108%	-2	-109	-66%	20%	4	51	Unfeasible
		12m–24m	-108%	-9	-95	-66%	20%	20	527	Unfeasible
		24m–40m	-108%	-25	-437	-66%	20%	59	2,198	Unfeasible
		>40m	-108%	-10	-215	-66%	20%	24	3,725	Unfeasible
	Demersal and pelagic trawlers and seiners	<12m	-32%	-6	-359	-25%	-17%	2	117	Uncertain
		12m–24m	-32%	-10	-791	-25%	-17%	4	394	Uncertain
		24m–40m	-32%	-19	-239	-29%	-11%	15	1,271	Unfeasible
		>40m	-32%	-24	-190	-29%	-11%	19	7,250	Unfeasible
	Passive gears	<12m	-5%	-1	0	0%	-5%	-1	32	Feasible
		12m–24m	-6%	-1	0	0%	-6%	-1	95	Feasible
		24m–40m	-22%	-4	-16	-4%	-21%	-4	482	Feasible
	Dredges	<12m	-11%	-4	0	0%	-11%	-4	71	Feasible
		12m–24m	-11%	-6	0	0%	-11%	-6	184	Feasible
24m–40m		-11%	-7	0	0%	-11%	-7	384	Feasible	
EE	Total		-32%	-2	-73	-4%	-31%	-2		
	Demersal and pelagic trawlers and seiners	12m–24m	-10%	0	-67	-45%	1%	2	19	Unfeasible
		24m–40m	-16%	-2	-6	-1%	-15%	-2	134	Feasible
		>40m	-52%	-10	0	0%	-52%	-10	1,722	Feasible
LV	Total		-46%	-3	-264	-8%	-35%	-2		

	Demersal and pelagic trawlers and seiners	12m–24m	0%	-3	-103	-62%	0%	10	132	Unfeasible
		24m–40m	-44%	-5	-161	-34%	-23%	2	230	Unfeasible
		>40m	-52%	-10	0	0%	-52%	-10	1,722	Feasible
	Passive gears	<12m	-22%	0	0	0%	-22%	0	1	Feasible
		12m–24m	-27%	-2	0	0%	-27%	-2	47	Feasible
	Passive gears	24m–40m	-24%	-2	0	0%	-24%	-2	90	Feasible
LT	Total		-51%	-8	-53	-2%	-51%	-8		
	Demersal and pelagic trawlers and seiners	24m–40m	-40%	-3	-29	-12%	-38%	-2	109	Feasible
		>40m	-52%	-10	0	0%	-52%	-10	3,132	Feasible
	Passive gears	<12m	-24%	0	0	0%	-24%	0	1	Feasible
		12m–24m	-39%	-2	-24	-25%	-33%	0	89	Uncertain
PL	Total		-62%	-3	-2,088	-51%	-13%	4		
	Demersal and pelagic trawlers and seiners	<12m	-9%	0	-14	-35%	-5%	1	18	Unfeasible
		12m–24m								
		24m–40m	-140%	-6	-926	-98%	-47%	112	6,011	Unfeasible
	Passive gears	<12m	-15%	-1	-22	-1%	-15%	-1	13	Feasible
		12m–24m	-46%	-1	-454	-77%	-9%	8	147	Unfeasible
		24m–40m								
CY	Total		-19%	-1	-19	-2%	-18%	-1		
	Demersal and pelagic trawlers and seiners	12m–24m	-41%	-6	-19	-25%	-35%	-2	185	Uncertain
		24m–40m	-28%	-6	0	0%	-28%	-6	243	Feasible
		>40m	-28%	-7	0	0%	-28%	-7	496	Feasible
	Passive gears	<12m	-9%	0	0	0%	-9%	0	3	Feasible
		12m–24m	-9%	-1	0	0%	-9%	-1	14	Feasible
MA	Total		-16%	-1	-15	-1%	-15%	-1		
	Demersal and pelagic trawlers and seiners	<12m	-41%	-4	-1	-25%	-35%	-1	70	Uncertain
		12m–24m	-41%	-6	-14	-25%	-35%	-2	185	Uncertain
		24m–40m	-28%	-6	0	0%	-28%	-6	243	Feasible
		>40m	-28%	-7	0	0%	-28%	-7	496	Feasible
	Passive gears	<12m	-9%	0	0	0%	-9%	0	3	Feasible
		12m–24m	-9%	-1	0	0%	-9%	-1	14	Feasible
SI	Total		-30%	-4	-15	-11%	-27%	-2		
	Demersal and pelagic trawlers and seiners	<12m	-41%	-7	-2	-25%	-35%	-2	70	Uncertain
		12m–24m	-41%	-6	-13	-25%	-35%	-2	185	Uncertain

	24m–40m	-28%	-6	0	0%	-28%	-6	243	<i>Feasible</i>
Passive gears	<12m	-9%	-1	0	0%	-9%	-1	3	<i>Feasible</i>
	12m–24m	-9%	-1	0	0%	-9%	-1	14	<i>Feasible</i>

APPENDIX G. CONSEQUENCES OF FUEL PRICE RISE BY 125% FROM 2002 LEVEL

Member State	Gear	Size class	Short term effect (change compared to 2002)			Long term effect (change compared to 2002)			(segments in italics are estimated)	
			GVA (%)	GVA/man (1000 Euro)	Number of jobs	Number of jobs (%)	Gross value added	GVA / man (1000 euro)	Value of landings per vessel (1000 Euro)	Break-even situation after price increase
BE	Total		-53%	-34	-389	-56%	-43%	19		
	Beam trawl	12m–24m	-43%	-22	-72	-36%	-35%	0	530	Unfeasible
		24m–40m	-56%	-42	-288	-64%	-46%	38	3,177	Unfeasible
DK	Total		-17%	-13	-1,020	-25%	-12%	13		
	Demersal and pelagic trawlers and seiners	12m–24m	-20%	-11	-439	-29%	-11%	15	368	Unfeasible
		24m–40m	-25%	-24	-120	-15%	-21%	-7	1,146	Feasible
		>40m	-15%	-31	0	0%	-15%	-31	1,852	Feasible
	Passive gears	<12m	-9%	-4	-460	-53%	5%	54	278	Unfeasible
		12m–24m	-9%	-8	0	0%	-9%	-8	195	<i>Feasible</i>
FI	Total		-26%	-6	0	0%	-26%	-6		
	Demersal and pelagic trawlers and seiners	12m–24m	-22%	-7	0	0%	-22%	-7	66	Feasible
		24m–40m	-31%	-23	0	0%	-31%	-23	315	Feasible
	Passive gears	<12m	-24%	-2	0	0%	-24%	-2	17	Feasible
		12m–24m	-21%	-4	0	0%	-21%	-4	83	Feasible
FR	Total		-25%	-14	0	0%	-25%	-14		
	Demersal and pelagic trawlers and seiners	<12m	-31%	-13	0	0%	-31%	-13	204	<i>Feasible</i>
		12m–24m	-31%	-21	0	0%	-31%	-21	579	Feasible
		24m–40m	-31%	-17	0	0%	-31%	-17	794	<i>Feasible</i>
		>40m	-31%	-18	0	0%	-31%	-18	3,237	<i>Feasible</i>
	Passive gears	<12m	-8%	-3	0	0%	-8%	-3	65	Feasible
		12m–24m	-9%	-5	0	0%	-9%	-5	195	Feasible
		24m–40m	-9%	-4	0	0%	-9%	-4	362	<i>Feasible</i>
		>40m	-9%	-2	0	0%	-9%	-2	673	<i>Feasible</i>
	Dredges	<12m	-18%	-8	0	0%	-18%	-8	79	<i>Feasible</i>

		12m–24m	-18%	-9	0	0%	-18%	-9	197	Feasible
DE	Total		-23%	-11	-866	-37%	-17%	15		
	Beam trawl	12m–24m	-19%	-10	0	0%	-19%	-10	153	Feasible
		24m–40m	-63%	-50	-41	-69%	-46%	60	3,682	Unfeasible
	Demersal and pelagic trawlers and seiners	12m–24m	-29%	-9	-151	-50%	-15%	21	316	Unfeasible
		24m–40m	-39%	-29	-111	-73%	-18%	154	2,944	Unfeasible
		>40m	-19%	-22	-71	-17%	-16%	1	9,744	Uncertain
	Passive gears	<12m	-10%	-1	-492	-62%	5%	14	18	Unfeasible
GR	Total		-13%	-1	-141	0%	-12%	-1		
	Demersal and pelagic trawlers and seiners	<12m	-68%	-7	-22	-63%	-54%	3	144	Unfeasible
		12m–24m	-68%	-11	-38	-63%	-54%	4	380	Unfeasible
		24m–40m	-47%	-10	-66	-28%	-42%	-4	343	Uncertain
		>40m	-47%	-12	-14	-28%	-42%	-5	700	Uncertain
	Passive gears	<12m	-11%	-1	0	0%	-11%	-1	2	Feasible
		12m–24m	-16%	-1	0	0%	-16%	-1	15	Feasible
IE	Total									
IT	Total		-28%	-7	0	0%	-28%	-7		
	Demersal and pelagic	12m–24m	-38%	-14	0	0%	-38%	-14	187	Feasible
	Passive gears	<12m	-14%	-2	0	0%	-14%	-2	11	Feasible
		12m–24m	-31%	-8	0	0%	-31%	-8	72	Feasible
	Dredges	12m–24m	-12%	-4	0	0%	-12%	-4	40	Feasible
NL	Total		-58%	-42	-1,347	-58%	-39%	32		
	Beam trawl	12m–24m	-31%	-16	-270	-38%	-21%	14	456	Unfeasible
		24m–40m	-79%	-63	-752	-76%	-58%	60	5,355	Unfeasible
	Demersal and pelagic trawlers and seiners	24m–40m	-27%	-18	-7	-14%	-24%	-8	397	Feasible
		>40m	-47%	-41	-318	-54%	-25%	57	16,232	Unfeasible
PT	Total		-46%	-2	-9,752	-44%	-27%	1		
	Demersal and pelagic trawlers and seiners	<12m	-18%	-1	-11	-5%	-16%	-1	25	Feasible
		12m–24m	-18%	-2	-134	-5%	-16%	-1	289	Feasible
		24m–40m	-57%	-9	-511	-42%	-36%	2	686	Unfeasible
		>40m	-73%	-17	-251	-51%	-44%	3	4,034	Unfeasible
	Passive gears	<12m	-53%	-1	-8,496	-50%	-26%	1	42	Unfeasible
		12m–24m	-53%	-3	-181	-50%	-26%	2	350	Unfeasible
		24m–40m	-44%	-5	-168	-40%	-17%	5	813	Unfeasible

ES	Total		-29%	-5	-12,229	-22%	-24%	0		
	Demersal and pelagic trawlers and seiners	<12m	-11%	-4	-128	-25%	-7%	9	199	Uncertain
		12m–24m	-11%	-3	-1,630	-25%	-7%	7	233	Uncertain
		24m–40m	-32%	-14	-1,409	-24%	-27%	-2	1,079	Uncertain
		>40m	-32%	-25	-512	-24%	-27%	-4	4,255	Uncertain
	Passive gears	<12m	-37%	-1	-6,667	-21%	-31%	0	30	Uncertain
		12m–24m	-37%	-5	-1,218	-21%	-31%	-2	198	Uncertain
		24m–40m	-37%	-12	-535	-21%	-31%	-4	975	Uncertain
>40m		-37%	-10	-129	-21%	-31%	-4	1,728	Uncertain	
SE	Total		-32%	-11	0	0%	-32%	-11		
	Demersal and pelagic trawlers and seiners	12m–24m	-33%	-9	0	0%	-33%	-9	92	Feasible
		24m–40m	-35%	-26	0	0%	-35%	-26	463	Feasible
	Passive gears	<12m	-15%	-1	0	0%	-15%	-1	17	Feasible
12m–24m		-11%	-3	0	0%	-11%	-3	8	Feasible	
UK	Total		-46%	-14	-3,685	-30%	-21%	4		
	Beam trawl	<12m	-180%	-3	-138	-84%	-17%	7	110	Unfeasible
		12m–24m	-180%	-14	-121	-84%	-17%	35	1,146	Unfeasible
		24m–40m	-180%	-42	-557	-84%	-17%	101	4,777	Unfeasible
		>40m	-180%	-17	-274	-84%	-17%	41	8,094	Unfeasible
	Demersal and pelagic trawlers and seiners	<12m	-54%	-10	-581	-41%	-29%	4	148	Unfeasible
		12m–24m	-54%	-17	-1,280	-41%	-29%	7	498	Unfeasible
		24m–40m	-53%	-31	-355	-43%	-22%	22	1,591	Unfeasible
		>40m	-53%	-40	-283	-43%	-22%	28	9,076	Unfeasible
	Passive gears	<12m	-8%	-2	0	0%	-8%	-2	33	Feasible
		12m–24m	-9%	-2	0	0%	-9%	-2	98	Feasible
		24m–40m	-37%	-7	-95	-21%	-31%	-3	585	Uncertain
	Dredges	<12m	-18%	-6	0	0%	-18%	-6	77	Feasible
12m–24m		-18%	-9	0	0%	-18%	-9	197	Feasible	
24m–40m		-18%	-11	0	0%	-18%	-11	412	Feasible	
EE	Total		-53%	-4	-140	-7%	-50%	-3		
	Demersal and pelagic trawlers and seiners	12m–24m	-17%	0	-72	-48%	-5%	3	20	Unfeasible
		24m–40m	-26%	-4	-51	-11%	-23%	-2	149	Feasible
	>40m	-87%	-17	-17	-6%	-84%	-16	2,642	Feasible	
LV	Total		-77%	-5	-390	-11%	-61%	-3		

	Demersal and pelagic trawlers and seiners	12m–24m	0%	-5	-119	-72%	0%	10	178	Unfeasible
		24m–40m	-73%	-8	-239	-50%	-42%	2	305	Unfeasible
		>40m	-87%	-17	-32	-6%	-84%	-16	2,642	Feasible
	Passive gears	<12m	-37%	0	0	0%	-37%	0	1	Feasible
		12m–24m	-45%	-3	0	0%	-45%	-3	65	Feasible
	Passive gears	24m–40m	-40%	-3	0	0%	-40%	-3	100	Feasible
LT	Total		-85%	-14	-286	-13%	-82%	-13		
	Demersal and pelagic trawlers and seiners	24m–40m	-66%	-5	-129	-54%	-60%	-1	207	Unfeasible
		>40m	-87%	-17	-97	-6%	-84%	-16	4,803	Feasible
	Passive gears	<12m	-40%	-1	0	0%	-40%	-1	1	Feasible
		12m–24m	-66%	-3	-60	-62%	-51%	1	176	Unfeasible
PL	Total		-104%	-5	-2,643	-64%	58%	17		
	Demersal and pelagic trawlers and seiners	<12m	-15%	0	-16	-39%	-10%	1	20	Unfeasible
		12m–24m								
		24m–40m								
	Passive gears	<12m	-26%	-1	-192	-12%	-24%	-1	15	Feasible
		12m–24m	-76%	-2	-515	-87%	-35%	11	262	Unfeasible
		24m–40m								
CY	Total		-31%	-2	-65	-7%	-28%	-2		
	Demersal and pelagic trawlers and seiners	12m–24m	-68%	-11	-48	-63%	-54%	4	380	Unfeasible
		24m–40m	-47%	-10	-14	-28%	-42%	-4	343	Uncertain
		>40m	-47%	-12	-3	-28%	-42%	-5	700	Uncertain
	Passive gears	<12m	-16%	-1	0	0%	-16%	-1	3	Feasible
		12m–24m	-16%	-1	0	0%	-16%	-1	15	Feasible
MA	Total		-27%	-2	-54	-4%	-24%	-1		
	Demersal and pelagic trawlers and seiners	<12m	-68%	-7	-3	-63%	-54%	3	144	Unfeasible
		12m–24m	-68%	-11	-35	-63%	-54%	4	380	Unfeasible
		24m–40m	-47%	-10	-7	-28%	-42%	-4	343	Uncertain
		>40m	-47%	-12	-9	-28%	-42%	-5	700	Uncertain
	Passive gears	<12m	-16%	-1	0	0%	-16%	-1	3	Feasible
		12m–24m	-16%	-1	0	0%	-16%	-1	15	Feasible
SI	Total		-50%	-6	-42	-29%	-41%	-2		
	Demersal and pelagic trawlers and seiners	<12m	-68%	-11	-4	-63%	-54%	4	144	Unfeasible
		12m–24m	-68%	-11	-34	-63%	-54%	4	380	Unfeasible

	24m–40m	-47%	-10	-3	-28%	-42%	-4	343	<i>Uncertain</i>
Passive gears	<12m	-16%	-1	0	0%	-16%	-1	3	<i>Feasible</i>
	12m–24m	-16%	-1	0	0%	-16%	-1	15	<i>Feasible</i>

APPENDIX H. CONSEQUENCES OF FUEL PRICE RISE BY 150% FROM 2002 LEVEL

(segments in italics are estimated)

Member State	Gear	Size class	Short term effect (change compared to 2002)		Long term effect (change compared to 2002)				Break-even situation after price increase	
			GVA (%)	GVA/man (1000 Euro)	Number of jobs	Number of jobs (%)	Gross value added	GVA / man (1000 euro)	Value of landings per vessel (1000 Euro)	Feasibility of increase of effort per vessel
BE	Total		-63%	-41	-467	-67%	-51%	30		
	Beam trawl	12m–24m	-52%	-26	-92	-46%	-42%	4	629	Unfeasible
		24m–40m	-67%	-50	-342	-76%	-55%	66	4,771	Unfeasible
DK	Total		-21%	-16	-1,115	-28%	-15%	13		
	Demersal and pelagic trawlers and seiners	12m–24m	-24%	-13	-486	-33%	-14%	16	385	Unfeasible
		24m–40m	-30%	-29	-160	-20%	-25%	-6	1,215	Uncertain
		>40m	-18%	-37	0	0%	-18%	-37	1,909	Feasible
	Passive gears	<12m	-11%	-5	-469	-55%	4%	55	285	Unfeasible
		12m–24m	<i>-11%</i>	<i>-10</i>	<i>0</i>	<i>0%</i>	<i>-11%</i>	<i>-10</i>	<i>199</i>	<i>Feasible</i>
FI	Total		-31%	-7	0	0%	-31%	-7		
	Demersal and pelagic trawlers and seiners	12m–24m	-26%	-8	0	0%	-26%	-8	68	Feasible
		24m–40m	-37%	-28	0	0%	-37%	-28	331	Feasible
	Passive gears	<12m	-28%	-3	0	0%	-28%	-3	18	Feasible
		12m–24m	-25%	-4	0	0%	-25%	-4	85	Feasible
FR	Total		-31%	-17	-260	-2%	-30%	-16		
	Demersal and pelagic trawlers and seiners	<12m	-37%	-16	-30	-3%	-36%	-14	219	<i>Feasible</i>
		12m–24m	-37%	-25	-118	-3%	-36%	-23	623	Feasible
		24m–40m	-37%	-20	-56	-3%	-36%	-19	855	<i>Feasible</i>
		>40m	-37%	-21	-56	-3%	-36%	-19	3,485	<i>Feasible</i>
	Passive gears	<12m	-9%	-4	0	0%	-9%	-4	66	Feasible
		12m–24m	-11%	-5	0	0%	-11%	-5	199	Feasible
		24m–40m	<i>-11%</i>	<i>-5</i>	<i>0</i>	<i>0%</i>	<i>-11%</i>	<i>-5</i>	<i>368</i>	<i>Feasible</i>
		>40m	<i>-11%</i>	<i>-3</i>	<i>0</i>	<i>0%</i>	<i>-11%</i>	<i>-3</i>	<i>685</i>	<i>Feasible</i>
	Dredges	<12m	-22%	-10	0	0%	-22%	-10	82	<i>Feasible</i>
		12m–24m	-22%	-11	0	0%	-22%	-11	204	Feasible
DE	Total		-28%	-13	-925	-39%	-21%	14		

	Beam trawl	12m–24m	-23%	-12	0	0%	-23%	-12	160	Feasible
		24m–40m	-76%	-60	-48	-81%	-56%	101	5,862	Unfeasible
	Demersal and pelagic	12m–24m	-34%	-11	-166	-55%	-20%	24	352	Unfeasible
	trawlers and seiners	24m–40m	-46%	-34	-120	-79%	-24%	194	3,747	Unfeasible
		>40m	-23%	-26	-88	-21%	-19%	2	10,218	Uncertain
	Passive gears	<12m	-12%	-1	-503	-64%	3%	14	19	Unfeasible
GR	Total		-15%	-1	-201	-1%	-15%	-1		
	Demersal and pelagic	<12m	-81%	-8	-29	-83%	-63%	11	305	Unfeasible
	trawlers and seiners	12m–24m	-81%	-13	-50	-83%	-63%	18	804	Unfeasible
		24m–40m	-57%	-12	-101	-43%	-49%	-2	432	Unfeasible
		>40m	-57%	-15	-22	-43%	-49%	-3	882	Unfeasible
	Passive gears	<12m	-13%	-1	0	0%	-13%	-1	2	Feasible
		12m–24m	-19%	-2	0	0%	-19%	-2	16	Feasible
IE	Total									
IT	Total		-34%	-8	0	0%	-34%	-8		
	Demersal and pelagic	12m–24m	-45%	-17	0	0%	-45%	-17	212	Feasible
	Passive gears	<12m	-17%	-2	0	0%	-17%	-2	11	Feasible
		12m–24m	-37%	-9	0	0%	-37%	-9	79	Feasible
	Dredges	12m–24m	-15%	-5	0	0%	-15%	-5	41	Feasible
NL	Total		-70%	-51	-1,573	-68%	-48%	44		
	Beam trawl	12m–24m	-37%	-19	-311	-44%	-26%	17	504	Unfeasible
		24m–40m	-95%	-76	-894	-90%	-70%	169	13,271	Unfeasible
	Demersal and pelagic	24m–40m	-33%	-21	-11	-21%	-28%	-6	433	Uncertain
	trawlers and seiners	>40m	-56%	-49	-357	-61%	-31%	66	18,979	Unfeasible
PT	Total		-55%	-3	-11,241	-51%	-32%	2		
	Demersal and pelagic	<12m	-21%	-1	-19	-8%	-18%	-1	26	Feasible
	trawlers and seiners	12m–24m	-21%	-2	-226	-8%	-18%	-1	300	Feasible
		24m–40m	-68%	-11	-618	-50%	-43%	2	805	Unfeasible
		>40m	-87%	-21	-305	-62%	-53%	6	5,208	Unfeasible
	Passive gears	<12m	-63%	-2	-9,677	-57%	-33%	1	49	Unfeasible
		12m–24m	-63%	-3	-206	-57%	-33%	3	407	Unfeasible
		24m–40m	-52%	-6	-191	-46%	-22%	5	898	Unfeasible
ES	Total		-35%	-6	-16,480	-29%	-28%	0		
	Demersal and pelagic	<12m	-14%	-5	-138	-27%	-9%	9	204	Uncertain
	trawlers and seiners	12m–24m	-14%	-4	-1,757	-27%	-9%	7	240	Uncertain

		24m–40m	-38%	-17	-1,832	-31%	-32%	-1	1,191	Unfeasible
		>40m	-38%	-30	-666	-31%	-32%	-1	4,696	Unfeasible
	Passive gears	<12m	-44%	-2	-9,426	-29%	-36%	0	34	Unfeasible
		12m–24m	-44%	-6	-1,722	-29%	-36%	-1	221	Unfeasible
		24m–40m	-44%	-14	-756	-29%	-36%	-3	1,092	Unfeasible
		>40m	-44%	-12	-182	-29%	-36%	-3	1,936	Unfeasible
SE	Total		-39%	-14	0	0%	-39%	-14		
	Demersal and pelagic trawlers and seiners	12m–24m	-40%	-11	0	0%	-40%	-11	100	Feasible
		24m–40m	-42%	-31	0	0%	-42%	-31	503	Feasible
	Passive gears	<12m	-18%	-2	0	0%	-18%	-2	17	Feasible
		12m–24m	-14%	-3	0	0%	-14%	-3	8	Feasible
UK	Total		-56%	-17	-4,302	-35%	-26%	4		
	Beam trawl	<12m	-216%	-3	-153	-94%	-35%	15	266	Unfeasible
		12m–24m	-216%	-17	-134	-94%	-35%	72	2,770	Unfeasible
		24m–40m	-216%	-50	-618	-94%	-35%	211	11,551	Unfeasible
		>40m	-216%	-20	-304	-94%	-35%	86	19,570	Unfeasible
	Demersal and pelagic trawlers and seiners	<12m	-64%	-11	-692	-49%	-35%	5	171	Unfeasible
		12m–24m	-64%	-21	-1,525	-49%	-35%	9	574	Unfeasible
		24m–40m	-64%	-37	-414	-51%	-28%	27	1,820	Unfeasible
		>40m	-64%	-48	-329	-51%	-28%	34	10,383	Unfeasible
	Passive gears	<12m	-9%	-2	0	0%	-9%	-2	33	Feasible
		12m–24m	-11%	-3	0	0%	-11%	-3	99	Feasible
		24m–40m	-44%	-9	-134	-29%	-36%	-2	655	Unfeasible
	Dredges	<12m	-22%	-7	0	0%	-22%	-7	79	Feasible
		12m–24m	-22%	-11	0	0%	-22%	-11	204	Feasible
		24m–40m	-22%	-13	0	0%	-22%	-13	427	Feasible
EE	Total		-64%	-4	-242	-12%	-54%	-3		
	Demersal and pelagic trawlers and seiners	12m–24m	-20%	-1	-75	-50%	-8%	3	21	Unfeasible
		24m–40m	-31%	-4	-73	-16%	-27%	-2	158	Feasible
		>40m	-104%	-20	-93	-31%	-88%	-16	3,603	Unfeasible
LV	Total		-92%	-6	-586	-17%	-68%	-4		
	Demersal and pelagic trawlers and seiners	12m–24m	0%	-5	-126	-77%	0%	10	214	Unfeasible
		24m–40m	-87%	-10	-278	-58%	-51%	2	366	Unfeasible
		>40m	-104%	-20	-176	-31%	-88%	-16	3,603	Unfeasible
	Passive gears	<12m	-44%	0	0	0%	-44%	0	1	Feasible

		12m–24m	-54%	-3	-5	-8%	-53%	-3	81	<i>Feasible</i>
	Passive gears	24m–40m	-48%	-4	0	0%	-48%	-4	106	<i>Feasible</i>
LT	Total		-102%	-17	-790	-36%	-86%	-13		
	Demersal and pelagic	24m–40m	-79%	-6	-179	-75%	-71%	1	379	<i>Unfeasible</i>
	trawlers and seiners	>40m	-104%	-20	-533	-31%	-88%	-16	6,552	<i>Unfeasible</i>
	Passive gears	<12m	-48%	-1	0	0%	-48%	-1	2	<i>Feasible</i>
		12m–24m	-79%	-3	-77	-81%	-60%	4	344	<i>Unfeasible</i>
PL	Total		-125%	-6	-2,994	-73%	56%	24		
	Demersal and pelagic	<12m	-18%	-1	-16	-41%	-13%	1	20	<i>Unfeasible</i>
	trawlers and seiners	12m–24m								
		24m–40m								
	Passive gears	<12m	-31%	-1	-278	-18%	-29%	-1	16	<i>Uncertain</i>
		12m–24m	-91%	-3	-546	-92%	-48%	16	432	<i>Unfeasible</i>
		24m–40m								
CY	Total		-38%	-3	-88	-10%	-33%	-2		
	Demersal and pelagic	12m–24m	-81%	-13	-63	-83%	-63%	18	804	<i>Unfeasible</i>
	trawlers and seiners	24m–40m	-57%	-12	-21	-43%	-49%	-2	432	<i>Unfeasible</i>
		>40m	-57%	-15	-4	-43%	-49%	-3	882	<i>Unfeasible</i>
	Passive gears	<12m	-19%	-1	0	0%	-19%	-1	3	<i>Feasible</i>
		12m–24m	-19%	-2	0	0%	-19%	-2	16	<i>Feasible</i>
MA	Total		-32%	-2	-74	-6%	-29%	-2		
	Demersal and pelagic	<12m	-81%	-8	-4	-83%	-63%	11	305	<i>Unfeasible</i>
	trawlers and seiners	12m–24m	-81%	-13	-46	-83%	-63%	18	804	<i>Unfeasible</i>
		24m–40m	-57%	-12	-10	-43%	-49%	-2	432	<i>Unfeasible</i>
		>40m	-57%	-15	-13	-43%	-49%	-3	882	<i>Unfeasible</i>
	Passive gears	<12m	-19%	-1	0	0%	-19%	-1	3	<i>Feasible</i>
		12m–24m	-19%	-2	0	0%	-19%	-2	16	<i>Feasible</i>
SI	Total		-60%	-7	-55	-39%	-48%	-2		
	Demersal and pelagic	<12m	-81%	-13	-6	-83%	-63%	19	305	<i>Unfeasible</i>
	trawlers and seiners	12m–24m	-81%	-13	-45	-83%	-63%	18	804	<i>Unfeasible</i>
		24m–40m	-57%	-12	-5	-43%	-49%	-2	432	<i>Unfeasible</i>
	Passive gears	<12m	-19%	-1	0	0%	-19%	-1	3	<i>Feasible</i>
		12m–24m	-19%	-2	0	0%	-19%	-2	16	<i>Feasible</i>

APPENDIX I. AVERAGE FUEL PRICES PAID BY THE FISHING FLEETS BY COUNTRY 2000-2005

	(Euro / litre)					
	2000	2001	2002	2003	2004	2005
Belgium	0.300	0.280	0.250	0.260	0.310	0.430
Denmark	0.365	0.330	0.313	0.333	0.386	0.512
Finland	0.288	0.261	0.233	0.250	0.293	0.407
France	0.294	0.257	0.235	0.244	0.288	0.397
Germany	0.290	0.270	0.240	0.240	0.280	0.410
Greece	0.309	0.261	0.233	0.245	0.301	0.405
Ireland	0.227	0.261	0.231	0.248	0.272	0.375
Italy	0.361	0.338	0.310	0.328	0.380	0.513
Lithuania	0.277	0.273	0.302	0.320	0.351	0.442
Netherlands	0.236	0.230	0.205	0.212	0.247	0.353
Poland	0.349	0.272	0.259	0.273	0.331	0.435
Portugal	0.225	0.245	0.303	0.323	0.376	0.493
Spain		0.235	0.211	0.217	0.287	0.385
Sweden	0.285	0.227	0.218	0.233	0.264	0.381
UK	0.290	0.268	0.260	0.251	0.291	0.400
Faroe Isl.	0.344	0.311	0.284	0.311	0.356	0.470
Iceland	0.366	0.313	0.231	0.2335	0.277	0.384
Norway		0.265	0.238	0.237	0.273	