

**TRADE AND AGRICULTURE DIRECTORATE
FISHERIES COMMITTEE**

Cancels & replaces the same document of 04 March 2011

FOSSIL FUEL SUBSIDIES

14-20 April 2011

Delegates will find enclosed a revised version of the paper on Fossil fuel Subsidies. This paper is submitted for Discussion and Approval at the Committee's 107th Session under Agenda item 6. Delegates are asked to consider that the paper be disseminated in the OECD's Food, Agriculture and Fisheries Working Paper Series.

For further information, please contact the Head of Division, Mr. Carl-Christian Schmidt (e-mail: Carl-Christian.Schmidt@oecd.org).

JT03300269



NOTE BY THE SECRETARIAT

This version of the paper on fossil fuel consumption, fuel subsidies and tax concessions has been revised following discussions and feedback received on the draft of the paper presented at the 106th Session of the COFI, and in light of the additional information and data received during the inter-sessional period.

Preliminary analysis based on country submissions (as of March 2010) was included as part of the Organisational response to the G-20 Leader's request for information and analysis on fuel subsidies as follows. There was a report for G-20 Finance Ministers (April 2010) and a final version of the report presented to G-20 Leaders (June 2010) which included a line on the fisheries as follows: "A preliminary and incomplete analysis of tax concessions relating to rebates, reductions and exemptions on excise taxes normally charged on fuels used by OECD fishing vessels suggests these could be on the order of USD 1.4 billion a year".

This document has benefitted from the voluntary submissions and responses of most countries surveyed. In order to develop a credible estimate of the total value of fuel subsidies and tax concessions for OECD fishing vessels, it is critical that all countries are transparent in providing a comprehensive submission of their respective fossil-fuel subsidies and tax concessions as part of this voluntary exercise. Data compiled during this exercise has been included in the Committee's Governmental Financial Transfers (GFT) database.

This revised document is presented to Delegates at the 107th Session for DISCUSSION and APPROVAL. Delegates are requested to:

- Verify the accuracy of the data presented here, and ensure that their national submissions are appropriately captured.
- It is envisaged that this paper would be included in the OECD Food, Fisheries and Agriculture Working paper series following confirmation at the 107th Session of COFI.
- Agree to submit information on fuel-tax exemptions to the Secretariat on a regular basis as part of the *Review of Fisheries* (Government Financial Transfers – GFT - section). This current assessment of fuel-tax exemptions is also a useful starting point for a possible future review of the Committee's GFT framework.

TABLE OF CONTENTS

FOSSIL FUEL IN THE FISHERIES: TAX CONCESSIONS AND CONSUMPTION	5
Context.....	5
1. METHODS AND ANALYSIS	7
Methods	7
Analysis: Summary of Data Submissions	9
Preliminary Analysis	12
Possible impacts of removing fuel subsidies and tax concessions	15
Environmental impacts.....	15
Impacts on the fishing industry/stocks	16
Concluding Comments.....	21
Possible Future Work.....	23
2. COUNTRY REVIEWS	24
European Union OECD Member Countries	24
Belgium	25
Denmark	25
Finland.....	26
France	26
Germany	26
Greece.....	26
Italy	27
Netherlands.....	27
Poland.....	27
Portugal	27
Slovenia.....	27
Spain.....	28
Sweden	28
United Kingdom.....	29
Non-European Union OECD Member Countries	30
Australia	30
Canada.....	30
Chile	31
Iceland.....	32
Japan.....	32
Korea	35
New Zealand	36
Norway	37
Turkey	38
United States	39
OECD Accession Countries.....	41
Estonia (Accession).....	41
Russia (Accession Country)	41
Non-OECD economies	41
Latvia (EU member state)	41
Thailand (COFI Observer)	41

REFERENCES	42
ANNEX 1: DATA REQUEST	43
General Comments and Definitions	43
Specific Request	43
1: Value of the Fossil Fuel Subsidy	43
2: Volume of fuel consumed	44
3: National level market price for fuel (Optional)	44
ANNEX 2: G-20 LEADERS' STATEMENT - THE PITTSBURGH SUMMIT	45
Preamble	45
Main Text	45
ANNEX 3: DIESEL OIL PRICES FOR COMMERCIAL USE, IEA, ENERGY PRICES AND TAXES (ISSUE 2 ND QUARTER 2009)	46

Tables

Table 1. Indices of real energy prices	6
Table 1.1. Summary of Country Responses	9
Table 1.2. Value of fuel tax concessions and Volume of Fuel consumed	11
Table 1.3. Effects of subsidizing variable and capital costs	17
Table 1.6. Fuel costs as a proportion of operating costs in selected OECD fisheries	21
Table 2.1. Fuel Types Used in Finland	26
Table 2.2. Total volume of fuel consumed by national Chilean fishing vessels	31
Table 2.1 Annual Consumption of fuel by fishing sector, by fuel type	33
Table 2.2 Ratio of fuel price in fisher's operations	35
Table 2.3. Total share of fuel-tax relief rate as a % of fuel oil consumption (Turkey)	38
Table 2.4. Number of fishing vessels that benefitting from fuel-tax relief, by year (Turkey)	39

Figures

Figure 1 Development of indices of real energy prices by quarter	6
Figure 1.1. Fuel tax concessions (2007) as a percentage of total landed value by country (2007)	12
Figure 1.2. Fuel consumed per tonne of fish caught in 2008 (litres/tonnes)	13
Figure 1.2. Fuel consumed per tonne of fish caught in 2008 (litres/tonnes)	15
Figure 2.1. Index of fuel-prices in Sweden	29
Figure 2.2. Fisheries production (excluding sardine) and the number of licensed vessels (Japan)	34
Figure 2.3. Trend in the price of heavy fuel oil, type A, in Japan	35

Boxes

Box 1.1. OECD's GFT Analytical Framework	8
Box 1.2. International comparability	10
Box 1.3. Fuel consumption in the fisheries	16
Box 2.1. EU <i>de minimis</i> aid and fuel costs	25
Box 2.1. Estimating fuel consumption in Chile	32

FOSSIL FUEL IN THE FISHERIES: TAX CONCESSIONS AND CONSUMPTION

Context

1. In September 2009, leaders from the Group of Twenty (G-20) nations gathered in Pittsburgh for a Summit. Among other things, they agreed to “phase out and rationalise over the medium term inefficient fossil fuel subsidies while providing targeted support for the poorest”. In their joint communiqué, they “request relevant institutions, such as the IEA, OPEC, OECD, and World Bank, provide an analysis of the scope of energy subsidies and suggestions for the implementation of this initiative and report back at the next summit”.

2. In October 2009, at its 104th session, the Committee for Fisheries identified an interest in assessing the long-term impacts to fishing fleets of phasing out fuel subsidies. In this regard, the Committee agreed to an immediate effort that would both contribute to this interest while also providing timely input to the G-20 process. This analysis responds to that request. It endeavors to:

- provide an approximation of the value of fuel subsidies for fishing fleets in OECD Member countries, as well as non-member economies where data was made available.
- provide an initial assessment of the impacts of fuel subsidies and the implications for the fishing industry of phasing out such subsidies.

3. At the 2009 Pittsburgh Summit, G-20 Leaders recognised that “inefficient fossil fuel subsidies encourage wasteful consumption, reduce our energy security, impede investment in clean energy sources and undermine efforts to deal with the threat of climate change”. The presence of pre-existing policies whose side effects encourage carbon emissions (*e.g.* fossil fuel subsidies, tax exemptions) can undermine the effectiveness of climate policy instruments. This context is important as it points to the reason for undertaking this exercise: to reduce inefficient fossil fuel consumption with a view to reduce greenhouse-gas emissions. It is worth recalling that the fuel consumption of fishing vessels have been estimated to be 1.2% of the world oil use.¹ This exercise is *not* about the relative importance of “subsidies” to fuel used by fishing vessels; indeed the question of to what extent the various fuel tax exemptions/concessions reported in this document can be equated to a “fuel subsidy” is still debated in various forums (in particular WTO). This is further underscored by the measuring difficulties making comparisons across fisheries and countries a very challenging task. However, this document provide a starting point in determining the extent of fuel tax concessions and fuel consumption in the fisheries sector (primarily in OECD member countries), as well as provide an indication of the potential contribution to reducing greenhouse-gas emissions and other impacts that phasing out inefficient fuel subsidies would yield.

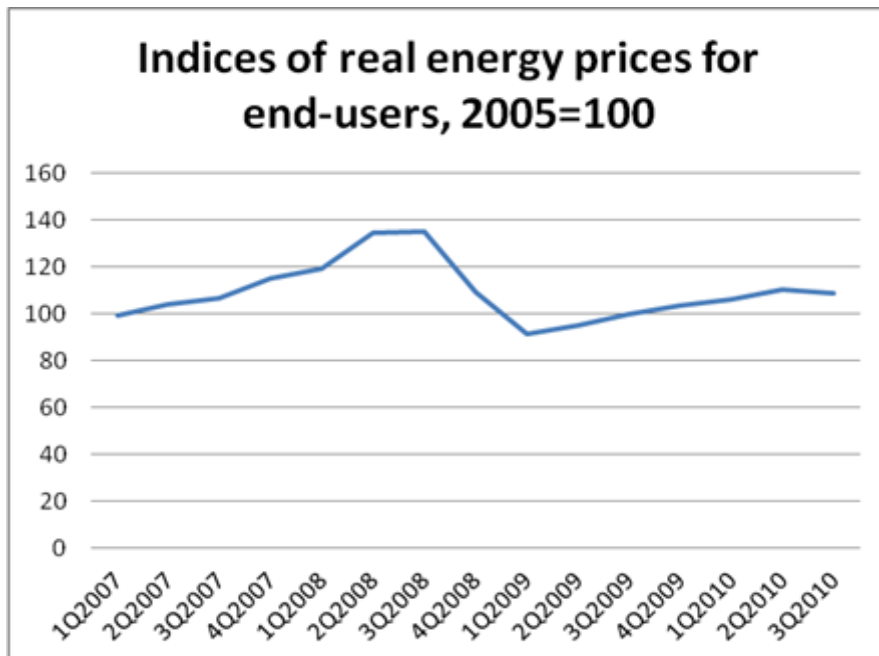
4. It is important to recognise that fuel prices are volatile and have been particular so during the last decade. Based on data from the International Energy Agency (IEA) published in “Energy Prices and Taxes”, Table 1 traces OECD Indices of real energy prices for end-users (industrial index, 2005=100) of oil products. Figure 1 traces the developments of the same but for the latest available quarters (2007Q1-2010Q3).

1. Tyedmers, Watson and Pauly (2005) “Fuelling global fishing fleets”, *Ambio* vol 34. In particular “As a consequence of burning almost 42.4 million t of fuel in 2000, representing approximately 1.2% of total global oil consumption, fishing boats released approximately 134 million t of CO₂ into the atmosphere at an average rate of 1.7 t of CO₂ per tonne of live-weight landed product.” See http://sres.management.dal.ca/Files/Tyedmers/Fueling_Fleets1.pdf

Table 1. Indices of real energy prices

Year	Real energy prices
2000	78.3
2001	76.1
2002	74.7
2003	79.0
2004	85.2
2005	100
2006	105.9
2007	106.3
2008	124.4
2009	97.3

Figure 1 Development of indices of real energy prices by quarter



1. METHODS AND ANALYSIS

Methods

5. Subsidies for fossil fuels are prevalent in most of the world, although the type of support varies. The scope and definition of the term ‘subsidies’ have been the subject of intense international debate over the last several years, and continue to be debated in various forums.

6. The data reported as part of this exercise indicates that most respondents rely primarily on indirect mechanisms, such as various forms of tax relief or concessions on fossil fuels (primarily diesel) used by fishing vessels.² In this regard, this exercise does not attempt to make any interpretations of the WTO definition of a subsidy. The Norwegian submission to this exercise specifically notes that “... in the context of subsidies within the framework of the WTO, tax relief systems may or may not be considered as subsidies. The purpose of such systems is primarily to regulate or ‘improve’ the conditions of competition between different national sectors and the WTO does not take as a premise that possible countervailing measures will even out different conditions of competition between like sectors in different countries. To the contrary, the situation where a country taking countervailing measures subsidises its own sector (for the ‘like product’) is not addressed by the WTO Agreement.”

7. For this reason, and given that it is not the purpose of this exercise to define what constitutes a subsidy, this paper will henceforth refer to such transfers as “fuel-tax concessions” or “fuel-tax exemptions”. Such fuel-tax concessions are often made available to other primary production sectors of the economy as well, such as agriculture, mining and forestry, though this varies by country.

8. While the rate of the fuel-tax expenditure per litre varies across countries, in the majority of instances, a full tax exemption is applied to the fisheries sector. In some countries, fuel-tax concessions vary depending on the level of government. For example in Canada and the United States, fuel taxes, and therefore the value of concessions from these taxes, vary at the sub-national (provincial or state) level, as well as from those at the federal level. These sub-national tax concessions are not fully captured in this exercise.

9. The international debate over financial support to the fisheries sector has resulted in a variety of definitions and classification frameworks. This has the potential for creating a range of interpretations about the effects of various types of support as well as policy implications. Against this backdrop, the OECD’s Committee for Fisheries developed an analytical framework to define and catalogue all government financial transfers (GFT) to the fishing industry, specifically the monetary value of government interventions associated with fisheries policies (Box 1.1). The GFT framework does not attempt to define which transfers may or may not constitute a subsidy, but is rather intended to lead to a complete dataset of public funding directed to the fishing sector and an understanding of the effects of such transfers on the fisheries.

10. As part of the detailed GFT classification system, fuel-tax exemptions fall into one of the seven categories: “Other cost-reducing transfers and direct payments”. This category refers to all monetary transfers that are intended to reduce the costs of fishers that are not elsewhere captured in the classification system. A 2006 OECD study notes that “these transfers will have the effect of increasing incomes or reducing variable costs, and will more directly affect the competitive position of fishers in international

2. These are classified as *tax expenditures* by the OECD, which is defined as “a transfer of public resources that is achieved by reducing tax obligations with respect to a benchmark tax, rather than by a direct expenditure” (Kraan, 2004) – cited in *Tax Concessions in OECD Countries* (OECD, 2010).

trade and maintain their profits in the short term, with the long-term effects dependent on the management regime in place” (OECD, 2006).

Box 1.1. OECD's GFT Analytical Framework

The OECD's Committee for Fisheries has undertaken a systematic effort to define and measure GFTs to the fisheries sector in Member countries. The development of a GFT classification system and the collection of detailed information on GFTs in OECD Member countries were undertaken as part of the OECD's project on the *Transition to Responsible Fisheries*. As a result, country-level data have been collected by the OECD on an annual basis, and results included in its regular statistical publications, *The Review of Fisheries in OECD Countries: Country Statistics*. GFTs are defined as “the monetary value of government interventions associated with fisheries policies” and covers transfers from central, regional and local governments.

The analytical framework used to develop the GFT framework is based on the sustainable development concept. Government implementation of a transfer policy will impact firstly on the economic dimension as it is an economic policy instrument designed to change the prices faced by agents in the sector, or to change the relative wealth of participants. The effects on the economic dimension will then flow through to the environmental and social dimensions, which will in turn generate dynamic feedback effects among the three dimensions. The main advantage of taking a sustainable-development approach is that it allows the full range of short-term and long-term effects of transfer policies to be addressed, potentially identifying and avoiding unintended or unforeseen consequences.

Sources : OECD (2000, 2006)

11. For the purposes of collecting data for this exercise, a questionnaire was developed and circulated to Delegates of the Committee for Fisheries (COFI) in December 2009, which includes OECD member countries as well as some non-member economies (Annex 1). This questionnaire defined the term “fuel subsidy” (to fishers) as any government intervention relating to fossil fuels that reduces the cost and increases the revenues of commercial fishers, regardless of whether or not they involve direct financial transfers. This would include a rebate, refund, expenditure or reduction (to fishers) from Value Added Taxes (VAT) and other such direct fuel taxes that are normally levied by the government on fuel users in the economy; price controls that suppress fuel prices below normal market prices; and programmes that provide direct transfers or payments.

12. Data on fossil fuel consumption by the fisheries sector, subsidies and tax concessions were provided through the voluntary responses of OECD Member countries, accession and observer economies. The most recent data were requested, with a focus on 2007 and 2008 (as feasible) and for both the national and sub-national levels. Information was also requested on any specific fuel subsidy or tax-relief programs implemented as a result of the sharp increase in fuel prices in 2008 (see Figure 1 above). Existing data captured as part of the annual statistical collection on GFTs was also examined.

13. This information was supplemented by the data collected on fuel-taxes, which are compiled in a database of instruments used for environmental policy and natural resources management by the OECD and the European Environment Agency³, as well as a desktop review of the literature. The market price paid for fuel by fishers was calculated using data from the International Energy Agency (OECD/IEA, 2009) (See Annex 3).

14. The methods used by countries for calculating the total value of fuel-tax concessions depends on how the tax concessions are applied in each case: this may be through a tax refund where an individual pays the fuel tax and the government refunds part or all of it. In such cases, the amount of the refund the government makes (*i.e.* forgone revenue) is the value of the tax concession. Alternatively, there may be a tax reduction or an immediate exemption; this refers to instances in which an individual pays less or no tax at the time fuel is purchased.

3. The database is located at <http://www2.oecd.org/ecoinst/queries/index.htm>

Analysis: Summary of Data Submissions

15. In order to develop a credible estimate of the total value of fuel-tax concessions in the fisheries for the OECD as a whole, it is crucial that all countries be transparent in providing a comprehensive submission of their respective fossil-fuel subsidies and tax concessions as part of this voluntary exercise. Twenty-eight responses were submitted, while two OECD Member countries were not responsive in the timeframe of the development of this report. Of these countries, the questionnaire was not applicable to seven OECD economies as no system for fuel-tax exemptions were in place during the years assessed. Table 1.1 summarises the responses received. Detailed country data are provided in Table 1.2, with methodological comments and ancillary information presented in Section 2.

Table 1.1. Summary of Country Submissions (as of August 2010)

Submissions Received	Fuel-tax Concession	Australia, Belgium, Canada, Denmark, Estonia, Finland, France, Greece, Italy, Japan, Latvia, New Zealand, Norway, Slovenia, Spain, Sweden, Turkey, United Kingdom, United States, Korea
	Subsidy	Russian Federation ⁴
	No Fuel-tax concession or subsidy	Chile, Germany, Iceland, Netherlands, Poland, Portugal, Thailand
	Not applicable	Austria, Czech Republic, Hungary, Luxembourg, Slovak Republic, Switzerland, Israel
Submissions not yet received		Ireland, Mexico

16. Specifically, Table 1.2 provides a summary of the responses received, including rate of the fuel-tax and the total value of the tax concession in U.S. dollars (USD), as well as the total volume of fuel consumed by national fleets. Based on the data submitted, the total value of fuel-tax concessions for OECD countries was USD 1.91 billion in 2008, with a total amount of fuel consumed of 9.3 billion litres; this latter figure also includes fuel consumed by fishing vessels that was not eligible for a tax concession or subsidy. Chile, Germany, Iceland, Netherlands, Poland, Portugal, and Thailand indicated that they have not provided fuel subsidies or tax concessions to their fishing vessels in recent years, while Ireland and Mexico have not provided a submission within the timeframe for this report.

17. The EU also provides other payments which may be linked to fuel use, but are not captured here. Specifically, the "*de minimis*" regulation for fisheries, EC Reg. 875/2007, allows a maximum support of EUR 30 000 per firm for each three-year period during 2007-2013 for which the Commission does not require prior-notification; nevertheless they are subject to a monitoring mechanism, including ex-post reporting to the Commission, if it so requires; these funds cannot be used to increase fishing capacity, though they may be used to finance variable costs of fishing vessels, including fuel. A recent study indicates that EUR 1.3 billion was spent on fuel in 2006 (based on 53 700 vessels); this amount has been estimated to have increased to EUR 1.7 to 1.8 billion under the average fuel price of 2008 (Box 2.1 provides additional details). As a result, the aid that could be provided by way of *de minimis* resources would represent approximately 13% of the 2008 fuel costs of the EU fleet (Framian BV in co-operation with Symbeyond Research Group, 2009).

4. The Russian Federation submission and subsequent clarification indicates that there was a one-time subsidy of RUB 817m (USD 32m) instituted in 2009 as a response to rising fuel costs. This subsidy was not in place in 2008 nor was it carried over to 2010.

18. These estimates of fuel-tax concessions should be treated with caution and not compared across countries, given the variations in the methods of estimation used and the specific (country) purpose of the tax concession. It should also be noted that USD 1.91 billion is an under-estimate of the total value of fuel-tax concessions in OECD countries, because:

- some countries have yet to respond;
- there are possibly sub-national tax concessions that have not been reported; and,
- in some cases, a reasonable estimate of the total value of fuel-tax concessions could not be estimated because fuel-consumption data were not available, though the tax and exemption rates were known.⁵

19. The *relative* level of the fuel-tax concession is a factor limiting the meaningfulness of international comparisons to be drawn from the data presented. Specifically, a reference point or benchmark tax system that could be used to establish the nature and extent of any concession cannot be easily determined. It is not the purpose of this exercise to harmonise international tax levels. The only relevant benchmarks in this study are fuel-tax concessions accorded to a sector within a particular national economy. As such, drawing international comparisons of fuel-tax concessions based on the data provided in Table 1.2 is a challenge and cannot be undertaken with the information presented here. This is because there are different benchmarks (*e.g.* level and extent of fuel-tax) across countries which result in significant differences in terms of the value of the fuel-tax concession (Box 1.2).

Box 1.2. International comparability

Tax expenditure accounting was never designed with international comparability in mind. The main challenge in any analysis of tax expenditures is to identify the reference point or benchmark tax system to be used in order to establish the nature and extent of any concession. Even where countries have adopted broadly the same methodological approach, the way in which they have implemented it in response to practical issues such as how far a relief should be regarded as a structural part of the tax regime may well differ (*e.g.* depreciation allowances used in calculating taxable profits). Moreover, differences in reporting in nominal versus present values can bias comparability. Without definitive answers to many of the issues outlined above, countries have either taken different approaches in measuring their tax expenditures or have simply not measured them at all. Ensuring relative consistent approaches across countries in this regard is a first step.

Even once such conceptual difficulties have been overcome, a simple cross-country comparison of tax expenditures can provide a highly distorted picture of countries' "green" credentials. Tax expenditures are dependent on two important factors: (i) the level of the standard or "optimal" tax rate and (ii) the existence of taxes on fossil fuels. As an example of the first issue, if two countries each applied a reduced rate of VAT of 10% to domestic consumption of fuel and power, but the standard VAT rate in one was 20% and in the other it was 25%, the latter would show a higher tax expenditure (in relation to GDP). In the case of the second issue where there are few taxes on fossil fuels, a country that applies a carbon tax with some tax breaks would have more tax expenditures than another country with no carbon tax in an analysis where the baseline was a standard tax and not an "optimal" tax. Clearly, any final statistic must be taken in the context of other statistics.

Source : Extracted from OECD (2010b).

20. Several countries (Canada, Denmark, Japan, Korea, New Zealand, Norway and the United States) specified that they do not consider fuel-tax exemptions reported here as subsidies, but nevertheless provided data, in keeping with the G-20 Leaders' request.

5. An example is that of Canada, where there is a rebate of the federal excise tax of 4 cents per litre of diesel, available to many sectors of the economy, including fishing vessels that fish outside 12 nautical miles offshore. However, access to data on how many vessels proceed beyond 12 nautical miles from shore is not available, and there is therefore no way of knowing how many claim this federal rebate or the total amount of rebates claimed.

Table 1.2. Value of fuel-tax concessions (FTC) and Volume of Fuel consumed, 2008

Country	Fuel Tax rate (\$USD/litre)	FTC as % of national market price	Total Value of all FTCs (in USD)	Total volume of fuel consumed (litres)	Type of fuel	Type of tax
Australia	0.32	23.9%	62 642 008	196 664 668		Tax
Belgium	0.03	1.8%	1 231 609	45 570 578	Gasoline	Excise duty
Canada (Federal)	0.04	-	NA	NA	Diesel	Excise Tax
Newfoundland & Labrador	0.15	-	1 225 725	7 930 505	Diesel	Excise Tax
Maritimes	0.12	-	2 847 615	23 294 ,977	Diesel	Excise Tax
Gulf	0.14	-	1 632 427	11 409 287	Diesel	Excise Tax
Quebec	0.15	-	1 107 870	7 300 713	Diesel	Excise Tax
Pacific	0.12	-	3 831 557	32 723 269	Diesel	Excise Tax
Canada (total)	0.13	11.1%	10 645 195	82 658 751		
Chile	0.00	0.0%	0	167 284 589		Not applicable Direct tax, CO2 tax, VAT
Denmark	0.54	36%	81 803 921	92 805 000	Diesel Petrol, diesel, domestic fuel	Excise tax
Finland	0.37	24.6%	457 180	1 226 700	Marine diesel	Special Consumption Tax
France	0.63	0.0%	328 959 392	225 000 000	Diesel, unleaded Marine diesel, heavy fuel oil	VAT; other direct fuel taxes
Greece	0.43	28.9%	42 980 496	100 333 056		VAT, import levies and other levies
Iceland	0.00	0.0%	0	163 955 000	Gas oil, fuel oil	Not applicable VAT; other direct fuel taxes
Italy	0.95	58.1%	398 151 593	421 968 384	Petrol, LPG, CNG	Base tax on mineral oil; carbon dioxide
Japan	0.08	7.1%	165 190 031	2 021 000 000	Mineral oil	Excise Tax
Korea	0.55	37.5%	460 300 000	836 818 000	Diesel	Excise Tax
Netherlands	0.00	0.0%	0	238 000 000	TBC	Private Consumption Tax
New Zealand	0.00	0.2%	306 337	216,000,000	Diesel	Fuel duty, VAT
Norway	0.25	14.3%	58 810 096	404 000 000		Highway User Fee
Poland	0.43	30.3%	6 944 338	15 969 936		
Slovenia	0.44	32.3%	77 847	175 392		
Spain	0.14	9.8%	46 457 838	674 937 960		
Sweden	0.59	36.5%	28 132 128	47 544 688		
Turkey	0.73	32.8%	67 033 739	93 604 000		
United Kingdom	0.17	9.3%	57 794 143	338 606 007		
United States	0.06	6.4%	85 599 627	1 337 494 165		
TOTAL OECD			1 907 435 891	7 721 616 874		
Estonia (A)	0.09	6.5%	365 470	4 071 400		To be confirmed
Russian Federation (A)	0.00		0	1 590 000 000	Diesel	
Latvia (other)	0.40	29.4%	7 107 216	17 859 000	Diesel	Excise tax
GRAND TOTAL			1 910 940 204	9 333 547 274		

Notes:

1: Most recent data available used; 2007 for Australia and Japan; 2009 data for Estonia and Russian Federation.

2: New Zealand fuel consumption estimate is from 2005; averages used for Sweden and Estonia as a range of values supplied. French fuel tax-exemption and fuel consumption data from 2005.

3: The national fuel market price was not available in all submissions. As such, data provided here derives from the International Energy Agency's 2009 report - Automotive Diesel Oil Prices for Commercial Use in US Dollars/litre section (OECD/IEA 2009). *For Iceland, no IEA data available - used GTZ data instead for 2008 (<http://www.gtz.de/de/dokumente/gtz2009-en-ifp-full-version.pdf>)

4: OECD calculated total volume of fuel consumed for Spain and total value for Japan based on the respective country submission.

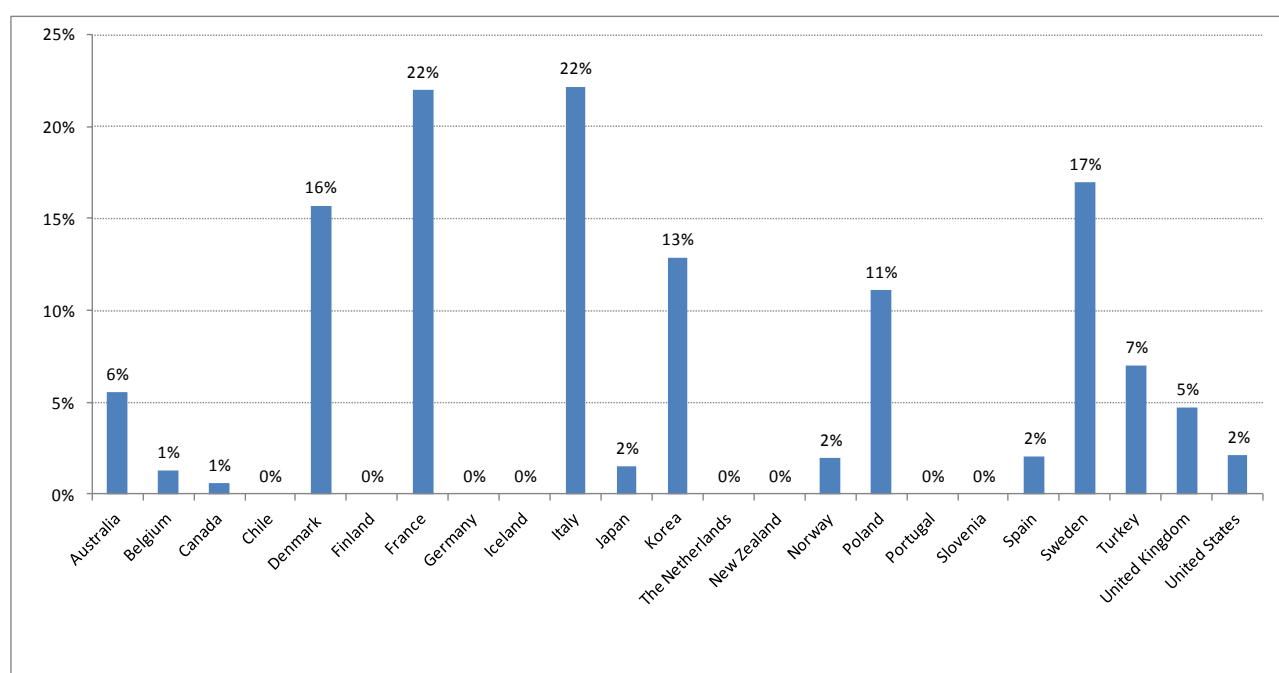
Sources: Country Submissions to the OECD; USD exchange rate extracted on 20 Jan 2010 from OECD.Stat.; Latvian exchange rate from www.oanda.com

Preliminary Analysis

21. The relative importance of fuel-tax concessions compared with the primary output generated by the fishing industry varies considerably across countries (Figure 1.1). The 23 countries which provided data for this exercise and for which current landed value data are available, can be divided into three broad categories: those for which fuel-tax concessions account for less than 3% of the total landed value, those for which concessions account for between 3% and 10% of the total landed value, and finally, those for which concessions exceed 10% of the total landed value. The majority of countries (fourteen) fell into the first category, with fuel-tax concessions accounting for less than 3% of the total landed value. Four countries were in the second category (3% to 10%), while six countries out of the fifteen were in the last category (more than 10%).

22. These varying proportions show that the relative importance of fuel-tax concessions to fishers differs significantly across countries. Equally, fuel use per ton caught differ considerably across countries, reflecting a variety of fishing patterns (access to stocks, gear use and management system). Once more, caution should be taken when comparing these figures across the different national fisheries endowments and fisheries management policies which may lead to erroneous conclusions. A similar issue is the landings figures, which may be reported on different weight basis⁶. In the meantime, where the tax concessions represent a higher proportion of landed value, we can expect that phasing them out may have greater consequences for the fishing industry than where they are lower. Considering transition mechanisms such as the gradual phasing out of fuel-tax concessions may be particularly relevant for countries where their relative importance is the highest.

Figure 1.1. Fuel tax concessions (2008) as a percentage of total landed value by country (2007)



1. For a variety of reasons mentioned throughout this paper, international comparisons cannot be drawn.

2. For Japan, the landed value for 2006 was used as data were not available for 2007.

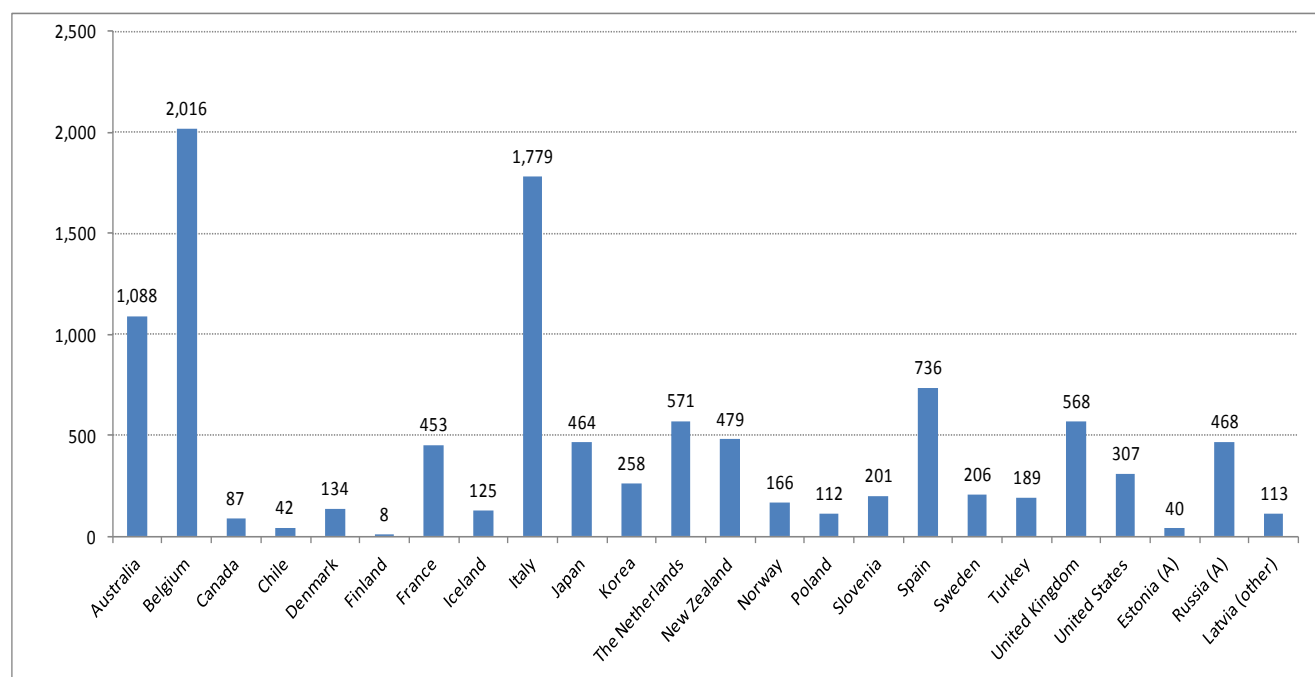
Source: 2007 landed value data from OECD.stat and country submissions to the OECD

6. Green weight, live weight, landed (processed) weight, and weight recalculated to live weight are all used. The composition of catch (fish, crustaceans and algae) may also influence the analysis.

23. Figure 1.2 provides an indication of the ratio of fuel consumed by fleets to land fish in OECD countries to give an indication of the fuel intensity of fishing. Volumes of fuel consumed (in litres) per metric tonne of fish caught are obtained by dividing the total landed volume by the total amount of fuel consumed in each country in 2008.

24. Uncertainty in estimates can affect the results depicted in Table 1.2 regarding the amount of fuel consumed per tonne of fish caught. Several factors explain the variability of fuel consumed per tonne caught, such as the distance to fishing grounds, vessel size, the type of gear used (*e.g.* trawling uses more fuel), engine and gear efficiency, type and characteristics of the stock fished. There is also uncertainty related to estimating fuel consumption in the fishing fleet as it is difficult to distinguish the sales between the petroleum industry, shipping, fisheries and distributors. These factors likely play a greater role in explaining the differences than the amount of fuel-tax concessions, although this relationship has not been explored empirically in this exercise. Given a more complete dataset, this line of research could be further pursued.

Figure 1.2: Fuel consumed per tonne of fish caught in 2008 (litres/tonnes)



1. Fuel consumption data is indicative only, as some countries only reported consumption of marine diesel and not heavy oil, or vice versa, as well as for the uncertainties identified in this paper. Given this, international comparisons cannot be drawn.
2. Data not available for the following OECD member countries: Ireland, Korea, Mexico.
3. (A) refers to OECD accession countries.

Source : OECD.stat, FAO (for volume caught) and Country submissions to the OECD

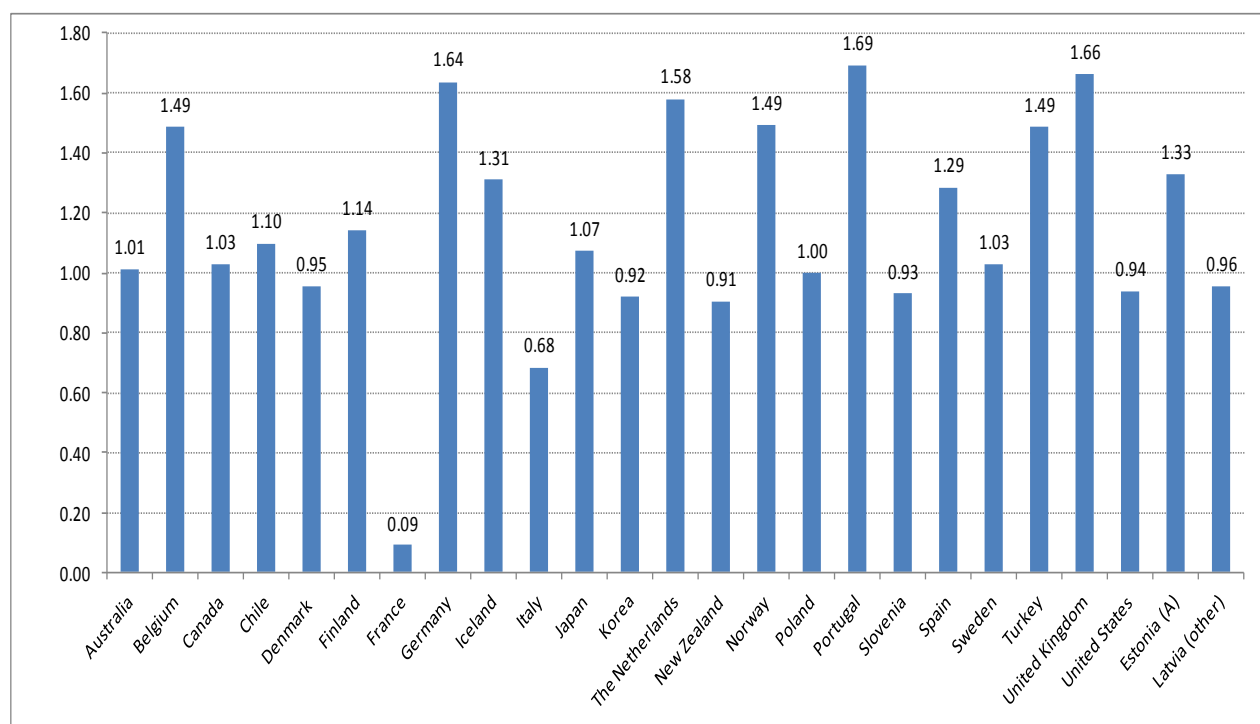
25. Previous to this specific information request, only a handful of countries had reported the value of fuel-tax concessions (exemptions and rebates for fossil fuels) as part of the information collected for the fisheries Government Financial Transfer analysis (Review of Fisheries exercise in particular). Nevertheless, it has been widely known that most OECD countries provide such fuel-tax concessions to

their maritime industries or for navigation, in one form or another.⁷ Examining GFT data would provide an indication of the relative importance of fuel subsidies and tax concessions compared with other forms of financial transfers to the fisheries sector. The relative importance varies: in some countries, fuel-tax concessions account for the major part of all GFTs, while fuel subsidies and tax concessions form only a small part of all GFTs to the fisheries sector in other countries. But here again caution is needed when interpreting the numbers; a direct payment to a fisher (GFT) is often limited to a specific action/program (*e.g.* modernisation, shift of fishing gear) by an individual fisher or vessel and will create a different incentive structure than a non-payment of a tax, *e.g.* fuel tax concession applied across the fisheries sector.

26. And problems with data are numerous. In this regard, the Greek data situation is worth a special mention. In Greece the competent services of the Ministry of the Economy does not keep records of fishing vessels (irrespective of size) that may benefit from fuel-tax concessions. At the same time, records regarding landings of fish by the Greek General Directorate of Fisheries excludes landings of vessel of less than 19 HP as a major part of the artisanal fishing fleet (of less than 19 HP) do not have an obligation to declare catches. In 2008, of the total active fleet of 17 268 vessels only 6 833 (40%) had an engine power greater than 19 HP.

27. Figure 1.3 compares the estimated cost of fuel to fishers across OECD countries. The data were estimated by using the average annual International Energy Agency commercial diesel price (see Annex 3), minus the fuel-tax exemptions that fishers receive in each country (OECD/IEA 2009). From this graph we can observe that the effect of the fuel-tax exemptions is to smooth the cross-country differences in cost of fuel per litre. In the countries where fuel prices are higher due to higher country-wide taxes or fees, the impact of fuel-tax exemptions is to bring down the cost of fuel for fishers to the cross-country average. In countries where there are no fuel-tax exemptions or very low fuel-tax exemptions, the costs of fuel to fishers are higher if country-wide fuel tax rates are high (*e.g.* Belgium, Germany, The Netherlands, Portugal) or close to the cross-country average if country-wide tax rates are low (*e.g.* New Zealand and the United States). Note that differences in fuel prices are also explained by country-specific variables such as supply and demand balance, degree of competition, relative transportation costs, etc. Further analysis to develop more precise values of the price of fuel paid by fishers is required.

7. In this regards, a particular interesting case is fishing vessels on the high seas that may not be subject to the same tax regime as fishing vessels fishing domestic grounds.

Figure 1.3: Estimated price paid by fishers USD/litre (market price minus FTC) in 2008

Note: This is an approximated cost of fuel for fishers, based on the average country IEA price for commercial diesel, minus reported fuel-tax exemptions (USD).

Source: OECD/IEA 2009

Possible impacts of removing fuel subsidies and tax concessions ⁸

28. In theory, reducing fuel subsidies can be an attractive policy option because in contrast with other alternatives, it can generate both environmental and economic benefits (OECD, 2005). This of course depends on the original policy goals (why was the tax introduced) of the fuel tax and an understanding of the actual effects of the subsidy or tax concession. The following sections summarise these potential impacts. Central to considering impacts (of removing or introducing GFTs) in the fisheries sector (as is the case with GFTs in general) is the fisheries management system in place and the actual fishing intensity on the stock (below or above MSY).

Environmental impacts

Carbon emissions

29. Subsidies distort price and resource allocation decisions and may also affect the amount of goods and services produced and consumed in an economy. Given this, subsidies may have a detrimental impact on the environment that are either unanticipated or otherwise not captured in the policy process.

8. Caution should be taken in interpreting the numbers: fishers are generally costs minimisers and have no incentive to use more inputs than necessary. Shifting between fuel types is often not an option (little substitution possibilities). However, time and speed (which also use fuel) back and forth to fishing grounds may be two variables that can change the incentive fishers have to use more fuel at lower prices (*i.e.* use more fuel to reduce time at sea). Fuel tax concessions and subsidies may also inhibit the investment in more fuel efficient engines.

Specifically, the OECD study on *Environmentally Harmful Subsidies: Challenges for Reform* (2005) noted that "... fuel-tax rebates and artificially low energy prices stimulate the use of fossil fuels and greenhouse-gas emissions."

30. Under any fisheries management regime, reducing the cost of fuel will encourage fishers to use more of this input relative to other inputs, and to use fuel-intensive fishing techniques, including larger and longer boats and heavier capital equipment (in theory, these activities could be managed by other means in such a way as to negate these potential effects; see, however, footnote 8). This shift in the pattern of input usage has implications for marine pollution and carbon-dioxide emissions. More generally, the OECD and the International Energy Agency estimate that eliminating fossil fuel subsidies by 2020 would reduce global greenhouse-gas emissions in 2050 by 10%. Removing environmentally harmful fossil-fuel subsidies would also lower the cost of achieving a given mitigation target through other measures such as carbon taxes and as such could be considered an important first step in any strategy to tackle climate change. More detailed consideration of the environmental impacts of these transfers is required, including within the fishing sector. Possible future work on green growth in the fisheries and agriculture sector would consider such aspects.

31. The FAO (2006) calculated that the 14 million tonnes of fuel used by the global fishing industry accounted for less than 0.5% of global oil consumption in 2006. Tyedmers *et al.* (2005) estimate that fisheries account for about 1.2% of global oil consumption and directly emit more than 130 million tonnes of CO₂ into the atmosphere (Box 1.3). However, estimating the impact of removing fuel-tax exemptions in terms of global emissions reductions would be a difficult task. For example, the 10% reduction in greenhouse gases by 2050 through the removal of fuel subsidies referenced above includes a wide range of fuel sources, from natural gas, to oil and coal; fishing vessels primarily use diesel.

Box 1.3. Fuel consumption in the fisheries

Tyedmers *et al.* (2005) estimate that fisheries account for about 1.2% of global oil consumption and directly emit more than 130 million tonnes of CO₂ into the atmosphere. This study calculates that the energy content of the fuel burned by global fisheries is 12.5 times greater than the edible protein energy content of the resulting catch. However, the paper notes that "while the fishing sector consumes a substantial amount of fuel, its use of energy is far more efficient than many other contemporary food production systems, a finding that flies in the face of some widely held perceptions of capture fisheries in general. This seeming incongruity between perception and reality may, in part, result from the relatively high proportion of total energy inputs, and resulting energy-related costs that accrue at the level of the fishing enterprise itself. In contrast, in the case of many other animal protein production systems, the majority of energy inputs tend to occur farther back in the production chain".

Source : Tyedmers *et al.* (2005).

Habitats

32. Fuel subsidies and tax concessions that make fuel less costly relative to other inputs can lead to an increase in the use of fuel-intensive fishing techniques such as dredging, beam trawling and bottom trawling. Under certain conditions (*e.g.* a hard ocean floor) such fishing techniques may be more damaging to the marine environment, especially benthic species and habitat, than other, less fuel-intensive fishing techniques (*e.g.* long-lines).

Impacts on the fishing industry/stocks

33. The impact of fuel tax concessions and subsidies on the fishing industry is largely dependent on the type of fisheries management regime in place, and in turn, the impacts of removing fuel subsidies will

also depend on the management system (Table 1.3). In open-access fisheries⁹, fuel subsidies and tax concessions will lead to the expansion of effort by individual vessels, increasing both fuel usage and pressure on the resource. Under rights-based regimes (such as ITQs), subsidies would generally not have any effect on the volume caught, but could distort the choice of production inputs compared with a cost-minimizing choice at market prices. The degree to which this effect will produce new outcomes will depend on the extent to which production inputs, or factors of production, are substitutable. While fishers will not have an incentive to fish more under fixed individual quotas¹⁰, they may elect, for example, to fish for longer periods of time and with less gear or manpower. If this substitution is not possible (and it is unlikely to be possible in the short run), then the impact of subsidies will be to raise the market price of quotas (OECD, 2006).

Table 1.3. Effects of subsidizing variable and capital costs

Management Regime or Status of the Fish Stocks	Property Rights		No Property rights		No Property rights, no controls
	Catch Controls	Effort controls	Catch Controls	Effort controls	
Overfished	No effect on the catch or stock. No effect on effort. High value of fish quotas.	Higher market value of effort rights. Total effort may expand, with effects as with effort control.	No effect on catch or stock. Greater effort and more boats. Same revenue or lower. Higher costs and lower industry profits. Negative resource rent.	Effort expansion likely, which would reduce stocks and catches and vessel profit except perhaps for new and refitted vessels. Lower resource rent and possibly negative.	Greater effort and more boats. Smaller fish stocks. Lower fish catch. Lower revenue. Higher costs. Negative resource rent.
Underfished	Same as for overfished stocks.	Higher market value of effort rights. Total effort may expand, with effects as with effort control.	Same as for overfished stocks.	Same as for overfished stocks, except that catches would increase.	Greater effort and more boats. Smaller fish stocks. Greater fish catch. Higher revenue. Higher costs. Higher intra marginal rents. Negative resource rent.

Note: It is assumed that the management regulations that are in place are fully and effectively enforced. The impacts on key variables are the expected effects in the face of perfect enforcement of existing regulations.

Source : OECD, 2006.

34. Removing fuel subsidies will have the opposite effect in open-access fisheries: effort will decrease, leading to less pressure on the resource. The magnitude of the impact depends on the efficiency of the fleet initially. In the case of inefficient fleets with low profitability, the removal of fuel subsidies could drive the less efficient firms out of the fishery, further reducing pressures on the resource and

9. The concept of “open-access fisheries”, while theoretical important, is largely non-existent in OECD fisheries. In OECD countries most fisheries are characterised as “regulated open access” (e.g. TAC, permissions, technical regulations) and, increasingly as rights-based fisheries, where access has been curtailed and the allowable catch has been given to individual fishers, their vessels or groups of fishers or vessels. A detailed and complete modelling of the impacts of fuel subsidies and tax concessions therefore needs to be based on individual fisheries regimes in place.

10. Unless the quotas correspond to a level of effort that, in the absence of subsidies, would be acceptable.

increasing the profitability of the remaining firms. Under a rights-based regime with catch controls, removing fuel subsidies should result in only input substitution: fishers will adjust their input mix to lower the proportion of the now more costly fuel input.

35. Under a fishery managed through effort controls, the impact of subsidies will be similar to that which occurs under a rights-based regime, and will depend on how effort is controlled. If the number of days at sea is limited, for example, with subsidised fuel, fishers may switch to more powerful engines or bigger boats, which may lead to raising the total real effort of the fleet despite the controls.

36. Fuel-tax concessions, a form of cost-reducing transfer, are widespread among OECD countries as the present survey shows. They can distort patterns of fuel use and fishing similarly to other types of more direct subsidies (such as direct budgeted fuel subsidies). However, such distortions are likely greater for true fuel subsidies (*e.g.* those that reduce the price below the international price) than those that, through tax-concessions, bring most fishing fleets' prices down to the international level. Even when all industrial and commercial vessels in a country benefit from a fuel-tax concession or rebate, there will still be a distortion in fuel usage patterns, likely leading to higher usage of fuel than otherwise would take place, especially when compared with other sectors of the economy and other countries (particularly those that do not exempt fuel-tax or provide rebates).

37. Fuel-tax concessions lower the variable costs of fishing. Fuel costs generally account for an important percentage of total variable costs of fishing, but their importance varies significantly depending on parameters such as the type of fishing and gear, vessel, distance to fishing grounds, and time spent fishing. For example, the FAO¹¹ estimates that capture fisheries consumed 14 million tons of fuel in 2005, costing USD 22 billion and corresponding to about 25% of the sector's revenue. The FAO provides some interesting insights into the development of fuel costs over the past several years depending on the gear used, as depicted in the tables below (1.4 and 1.5 from FAO). In the OECD some countries have analysed the fuel consumption. For example, fuel costs are generally higher for mobile-gear fleets than for fixed-gear fleets that fish close to the coast (Table 1.6). For example, UK North Sea beam trawlers have fuel costs that can reach as much as 78% of all operating costs, while in some fixed-gear coastal fisheries fuel costs can reach a percentage as low as 3% to 5% of operating costs.

38. Given these examples, it would appear that, generally speaking, the impact of reducing or eliminating fuel subsidies or tax concessions should be greater on the mobile-gear fleets. However, the effectiveness of the different fishing gear and types of fishing may distort this picture when looking at the fuel consumed per tonne of fish caught, as discussed by Tyedmers et al. (Box 1.3). This counter intuitive result is due to the "catch effectiveness" of fishing gear, *e.g.* Danish seine for mackerel vs. set nets for plaice.

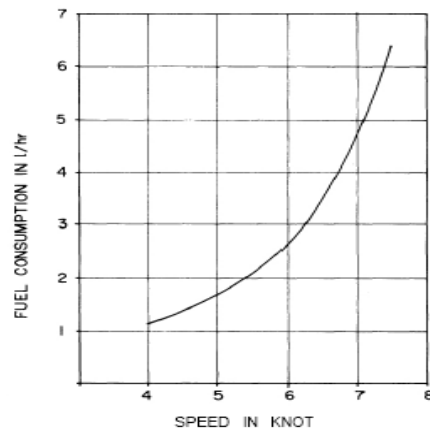
39. There are very few empirical studies of the effects of varying fuel-tax concessions on fishing operations. One such study was undertaken of the Senegalese fishery (UNEP, 2002). Based on the operating accounts of small-scale fishing units, a reduction in the fuel subsidy by one-half was estimated to result in a substantial reduction in the operating profits of boats, possibly leading to losses. That notwithstanding, the elimination of these subsidies would not necessarily put an end to small-scale fishing, but it would certainly cause some boats to leave the fishery and so reduce fishing effort. The lower effort would, however, most likely result in a higher catch per unit of effort as fish stocks increase. The study shows that, over time, the catch per unit of effort has declined drastically for most Senegalese stocks, which most likely is due to the increase in effort and the resulting depletion of fish stocks over the same period. Other studies¹² report that the most effective way to reduce fuel consumption is to reduce speed (to

11. *The State of the World's Fisheries and Aquaculture*, 2006, FAO

12. See for example: FAO BOPB/WP/27 *Reducing the Fuel Costs of Small Fishing Boats*, 1986.

and from fishing grounds). A telling graph from a Bay of Benegal (FAO) study (see footnote 12) provides the estimated fuel consumption related to speed of a vessel of 35 tonnes displacement and 80 metres of length at water line and reproduced in figure 1.4.

Figure 1.4. Estimated fuel consumption



ESTIMATED FUEL CONSUMPTION

SERVICE CONDITION
LWL = 80m
DISPLACEMENT - 35 tone

**Table 1.4. Fuel costs as a percentage of the revenue from fish landed
(developing and developed countries)**

**Table 1.5. Fuel costs as a percentage of the revenue landed by type of fishing gear
(developing and developed countries)**

Table 17

Fuel costs as a percentage of the revenue from fish landed, developing and developed countries

	Fuel costs as a percentage of revenue			
	1995–1997	1999–2000	2002–2003	2005 ¹
Developing countries	18.52	20.65	21.63	43.26
Developed countries	11.08	9.78	10.20	20.40
Global average	14.85	16.70	18.53	37.06

¹ Estimated.

Table 18

Fuel costs as a percentage of the revenue landed by type of fishing gear, developing and developed countries

	Fuel costs as a percentage of revenue			
	1995–1997	1999–2000	2002–2003	2005 ¹
Developing countries				
Active demersal	17.19	30.28	26.15	52.30
Active pelagic	17.33	17.60	16.99	33.98
Passive gear	18.78	17.06	19.33	38.66
Developed countries				
Active demersal	10.57	8.64	14.37	28.74
Active pelagic	n.a.	7.65	5.48	10.96
Passive gear	5.57	4.95	4.61	9.22

Note: n.a. = not available.

¹ Estimated.

Table 1.6: Fuel costs as a proportion of operating costs in selected OECD fisheries

Country and fishery	Fuel costs as percentage of operating costs
Australia	
Torres Strait prawn	39
Commonwealth trawl sector	23
Eastern tuna and billfish	17
Gillnet, hook and trap sector	10
France	
Chalutiers de fond exclusifs (12-16m)	22
Chalutiers drageurs (12-16m)	16
Arts dormants (12-16m)	7
Iceland	
Pelagic trawlers / purse seiners	15
Trawlers	13
Freezer trawlers	15
Coastal vessels (<10m)	3
Norway	
Trawlers	19
Purse seiners (blue whiting)	15
Purse seiners (other)	12
Pelagic trawlers (herring, blue whiting)	20
Trawlers (cod)	20
Coastal vessels (<13m, cod)	5
Spain	
Mediterranean National waters/longliners	35.4
North Atlantic national waters/longliners)	30.5
North Atlantic No-National waters longliners	31.5
United Kingdom	
North Sea beam trawl (over 300 kW)	78
Area VIIA nephrops twin-rig trawl	38
Irish Sea demersal trawl	36
UK pelagic (over 40m)	25
UK pelagic (10-40m)	16
Potters and creelers (over 12m)	12

Sources: Vieira and Hohen (2007), Vieira *et al.* (2007), Seafish Industry Authority (UK).
Planchot and Daures (2008), STECF (2006).

Concluding Comments

40. In order to understand the effects of fuel subsidies and fuel-tax concession (and impacts from phasing them out) there are data, methodological and definitional issues that merit additional reflection and consideration, not only in a fisheries context, but also broadly. Indeed, as reported above, it would be a very challenging task to calculate the impacts of fuel subsidies and tax concessions, even if it is assumed that data are readily available. Albeit an intellectual stimulating exercise, lack of funds and data, force us to consider more pragmatic approaches for estimating the likely impacts of fuel subsidies and tax concessions.

41. Reducing fuel subsidies and fuel-tax concessions can be an attractive policy option; in contrast with other alternatives, it is likely to generate both environmental and economic benefits, but this depends on the original policy goals and an understanding of the actual effects of the subsidy.

42. The implications of phasing out subsidies and tax concessions to fisheries are determined largely on the initial level of the subsidies, the extent to which they are phased out globally, the profitability of the subsidised fisheries, the type of fleet and fishery affected and the particular fisheries management regime in place.¹³ Country-based initiatives to reduce subsidies could place national fisheries at a disadvantage compared with others that continue to provide subsidies. However, New Zealand's strong performance and competitiveness in the fisheries sector following the phasing out of all subsidies has shown that this is not necessarily the case. However, the phasing out of subsidies in the New Zealand Fisheries in the 1980s (and likewise those in Norway in 2000s) was complemented with domestic fisheries management reform that instituted, in both cases, rights-based fisheries management. This underscores a central message from previous COFI work¹⁴ that the success of policy reform initiatives in the fisheries sector cannot be seen in isolation from reform of the fisheries management regime.

43. A 2009 OECD report addresses the consequences for the Norwegian fishing fleet should the country's current system of refunding the CO₂ tax and the base tax on mineral oil be terminated. This report has revealed some interesting conclusions that are of relevance to this paper and possible future work on the issue.

The report demonstrated that the fishing fleet has limited possibilities for fuel substitution. The vessels would be able to adjust their operations (*e.g.* reduce the time of travel between fishing areas, more seasonal fisheries, higher capacity for storing fish on each tour) but these modifications would be of minor significance. However, the varying possibilities of substitution between different vessel groups could be explored further, and it could also be seen in relation to Table 1.5 presenting fuels costs as a proportion of operating costs in selected vessel groups (see also footnote 8).

In the Norwegian case, it appears that the larger vessels (*i.e.* the ocean going fleet) will not necessarily adjust or change their input mix to lower the proportion of more costly fuel input if the refunds are terminated but go abroad to fuel at lower and some sort of tax-exempt price.¹⁵ At the present time, some larger vessels already fuel abroad, and there are reasons to believe that this practice could increase if the refunds are terminated. The vessels that have least flexibility for adaptation, and limited possibilities for fuel consumption reduction or fuelling abroad, are the smaller vessels (coastal fleet). In most cases the coastal vessels have the most favourable operation pattern with least fuel consumption per kg harvested.

44. An unintended consequence of eliminating fuel-tax exemptions could at worst lead to an increase of emissions due to longer distances travelled for fuelling. As such, the importance of a multilateral approach to reducing or phasing out fossil-fuel subsidies and tax exemptions is of utmost importance to mitigate the possibility of such undesired consequences.

13. See OECD work on Liberalising Fisheries Markets: Scope and Effects (2003), Using Market Mechanisms to Manage Fisheries (2006), and Fisheries Policy Reform: National Experiences (forthcoming)

14. See footnote 13 and work on capacity reduction, *i.e.* *Reducing Fishing Capacity: Best Practices for Decommissioning Schemes* (OECD, 2009).

15. As an extension of this particular case it may be worthwhile to ascertain if similar possibilities are available in other fishing areas characterised by short distances to foreign harbours *e.g.* the Baltic Sea, the Southern part of the North Sea, etc. A key issue is if such practices provide a competitive edge to certain types and sizes of vessels that can fuel abroad.

Possible Future Work

45. The underlying purpose of a fuel-tax varies and there may be some areas for which fisheries are reasonably exempted from such taxes. The purpose of a fuel-tax can vary according to different economic or policy goals, ranging from raising revenue for various state expenses (*e.g.* to fund specific initiatives), or it could be a means of correcting externalities from the production or consumption of the goods or service upon which the tax is levied. For example, a few countries indicated in their response to this survey that since the taxes levied on fuels are earmarked for a specific purpose (*e.g.* a road repair and maintenance fund), a rebate or credit is applied for those that use fuels for non-highway uses (such as fishers)¹⁶. Taxes may also be applied to fuel to capture externalities, such as the effect of greenhouse-gases. More specifically:

- Taxes to raise revenue for specific purposes: In some countries (*e.g.* New Zealand, Japan and the United States), the fuel-tax is levied as a highway user tax such that those that use diesel or other fuels for non-highway uses, such as fishing vessels, can receive an income-tax credit/tax concession. In certain countries, fuel-tax concessions are also available to numerous other sectors of the economy, such as agriculture and forestry. The consideration of these circumstances is necessary in the categorisation of the value and impact of such transfers. Likewise, in such a context, identifying whether a fuel-tax concession is (indirect) a transfer to a particular sector would be a valuable exercise and a key input to the task of categorising tax concessions as GFT, subsidies, or not.¹⁷
- Taxes to address externalities (*e.g.* pricing externalities such as CO₂ emissions): Work in this area will be important for estimating the costs and benefits of removing fuel subsidies and tax concessions. While the costs are generally known or relatively straightforward to calculate, quantifying and monetizing the benefits of phasing out *inefficient* fossil fuel subsidies, especially in the interest of reducing greenhouse gas emissions, is more challenging. This benefit-valuation exercise could take advantage of the ongoing work on the social cost of carbon, if the reduction in greenhouse gases from phasing out subsidies and tax concessions in the fisheries sector could be reliably estimated. The G20 Leaders statement also hinges on the phrase “inefficient fuel subsidies”, which would thus benefit from discussion on what types of transfers should be considered in this context.
- The OECD is developing an inventory of fossil-fuel subsidies (including tax exemptions) as the basis for future work. Given the recent efforts by COFI Delegates to provide such information, it is well placed to contribute to this larger inventory. Concurrently, Delegates are invited to continue to submit information on fuel-tax concession to the annual *Review of Fisheries – Statistics* exercise.

16. One specific example includes the United States, where the tax revenues are applied to the Highway Trust Fund. Section 2 provides information on this and other such cases (Japan, Korea and New Zealand).

17. In this respect only if a transfer is given to a particular sector (or limited to few sectors of the economy) would it be considered a GFT.

2. COUNTRY REVIEWS^{18 19}

46. This section provides an overview of the methods used to calculate or estimate the total value of fuel-tax concessions for fishing vessels. For most countries, this information is drawn largely from country submissions to the OECD, based on the questionnaire circulated in December 2009 ([TAD/FI(2009)22 and summarised in Annex 1). Possible fuel-tax concessions applicable to fishing vessels were also extracted from the OECD and the European Environment Agency database on instruments used for environmental policy and natural resources management. Finally, reference is made as to whether an OECD member country has supplied this information for previous years as part the annual submission on GFTs.

European Union OECD Member Countries

47. The Council of the European Union issued a directive in 2003 (Directive 2003/96/EC) which restructured the Community framework for the taxation of energy products and electricity and established minimum tax rates and tax exemptions. Article 14 (1) (b) of this Directive states that fishing activities can be exempted from fuel taxes in Community waters as follows:

In addition to the general provisions set out in Directive 92/12/EEC on exempt uses of taxable products, and without prejudice to other Community provisions, Member States shall exempt the following from taxation under conditions which they shall lay down for the purpose of ensuring the correct and straightforward application of such exemptions and of preventing any evasion, avoidance or abuse:

(c) Energy products supplied for use as fuel for the purposes of navigation within Community waters (including fishing), other than private pleasure craft, and electricity produced on board a craft.

48. Data on fuel consumption in the marine fishing fleet is gathered according to the data collection framework, Council regulation (EC) No 199/2008 of 25 February 2008 concerning the establishment of a Community framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the Common Fisheries Policy, Commission regulation (EC) No 665/2008 of 14 July 2008 laying down detailed rules for the application of Council Regulation (EC) No 199/2008 and the Commission decision of 6 November 2008 adopting a multiannual Community programme pursuant to Council Regulation (EC) No 199/2008.

49. The EU also provides other payments which may be linked to fuel use. Specifically, the "de minimis" regulation for fisheries, EC Reg. 875/2007, allows a maximum support of € 30,000 per firm for each three-year period during 2007-2013 for which the Commission does not require prior-notification nevertheless they are subject to a monitoring mechanism, including ex-post reporting to the Commission, if it so requires these funds cannot be used to increase fishing capacity, though they may be used to finance variable costs of fishing vessels, including fuel.

18. As currently defined, this questionnaire is not applicable to Austria, Czech Republic, Hungary, Israel, Luxembourg, Slovak Republic or Switzerland as they do not have commercial fishing fleets, and are such, not included here.

19. Data included in the submissions are not repeated here, but are included as part of Table 1.2.

50. This aid can be made available to fishing enterprises as well as to fish processing, trade and aquaculture companies. Eligibility rules are determined and set by the individual EU Member States. Box 2 provides a summary of a recent assessment of the “*de minimis*” aid and the link to fuel for fishing vessels.

Box 2.1. EU *de minimis* aid and fuel costs

In July 2008, the European Commission agreed to a package of measures to promote the restructuring of fishing fleets most affected by the fuel-price increases, allowing short-term support to fishers who undertake restructuring (European Commission 2008b, 2008c). As part of this effort, a study was commissioned to examine the effects of amending the regulation to allow for € 30,000 *de minimis* aid per vessel instead of per firm, with a limit of € 100,000 per enterprise. Below is an extract from the Commission funded study assessing *de minimis* aid and fuel costs:

“The maximum amount per firm allowed under the present regime leads to highly different impacts on fishing firm firms, depending on the size of the vessels they operate. On one hand, for small vessels below 12m, EUR 30 000 would often represent a very significant contribution to their annual production value and income. On the other hand, for vessels over 24m, and even more strongly for those over 40m, the maximum *de minimis* represents less than 10% of their gross value added over the total period of three years. Consequently, the present regime over-compensates the higher fuel costs, for the purpose of which it was set up, for small vessels, which are not very energy dependent. At the same time, the contribution to the alleviation of high fuel costs for the larger vessels remains uncertain because of the constrained ceilings.

The total fuel costs of the European fishing fleets have been estimated at about EUR 1.8 billion, at average 2008 price level. The fuel price increased between 2006 and 2008 by 29%. This implies that in 2008 fuel costs were about EUR 400 million higher than two years earlier. The *de minimis* budget could on average compensate 60% of this increase over the three year period for which it is set. However, it must be stressed that 58% of the total fuel costs are incurred by 6% of the fleet (in terms of numbers), being vessels over 24m. This illustrates to which extent the increase of fuel costs of small vessels is over-compensated and of the larger vessels under-compensated, unless additional eligibility criteria in this respect would be introduced.”

Source: Adapted from *Framian BV in co-operation with Symbeyond Research Group*. (2009) Economic Analysis of Raising De Minimis aid for Fisheries (MARE/2008/12).

Belgium

51. Belgium reports that its fuel subsidy consists of an excise-duty exemption, granted at the national level, for gasoline - light fuel oil [HS code 2710 1945]. This type of fuel is differentiated in the tax codes according to its final use. The level of excise duty for the fuel used by the Belgian fleet is EUR 18 4854 per 1 000 litres (instead of EUR 21/1000 litres). Fishers are exempted from this excise tax on the basis of “Energy products supplied for use as motor fuel or heating fuel for the purposes of navigation within Community waters (including fishing) and electricity produced on board a craft” (OECD and the European Environment Agency database on instruments used for environmental policy and natural resources management). Data provided by companies that supply the Belgian fishing fleet with fuel indicate that fishers use gasoline of 0.1% sulphur content (with 0.86 density); this is also known as marine gas oil.

Denmark

52. No direct fuel subsidies are paid to fisheries. The calculated fuel subsidy provided to the OECD Secretariat represents tax-exemptions (e.g. taxes that *would* have to be paid *if* fisheries were subject to the same tax regime as road transport). Processing of fish etc. is not included. The taxes consist of a direct tax on fuel, a CO₂ tax on fuel and 25% VAT. These fuel-taxes are not paid by fishing vessels. The VAT is calculated as 25% of the value of the fuel including other taxes. In its submission, Denmark specifies that “In general it should be noted that this type of calculation tends to overstate the value of the subsidy

because it does not take into consideration the substitution which would take place at higher prices. Moreover VAT, if it was imposed, would be a tax on the added value not a fuel tax”.

53. The volume of fuel consumed is calculated from the “Account Statistics for Fishery 2008”. The statistics cover 97% of the fishing fleet measured in landings and revenue. Some fuel is bought abroad and foreign fishing vessels buy fuel in Danish ports. These quantities are not known. The fuel market price is based on information from SHELL DANMARK on diesel fuel for transport.

Finland

54. Article 9 of the Law of the Liquid Fuel Excise (no 1472/1994) notes that fuel used by commercial vessels (including fishing vessels to the extent they are used in commercial fisheries) are exempt from the fuel-excise taxes. This tax-exemption represents the full value of the excise tax.

55. Finland distinguishes three types of fuel (petrol, diesel and domestic fuel oil) consumed by fishing fleets along with the respective fuel-tax concession rates (see below).

Table 2.1. Fuel Types Used in Finland

Fuel Type	Tax rate (2008)	Tax Concession Value (€) (2008)	Fuel Consumed (2008)
Petrol	0.63	234,600	374,400
Diesel Oil	0.36	5,700	15,800
Domestic Fuel Oil	0.09	72,400	836,500

France

56. In December 2005, the Ministry of Food, Agriculture and Fisheries estimated the annual fuel consumption of the French fishing fleet (based on figures supplied by distributors) to have amounted to 520 000 tonnes, while the DGDDI (Directorate-General of Customs and Indirect Rights in the Ministry of Finance) estimated that the cost of granting exemption from the TIPP (domestic duty on petroleum products) that year had amounted to EUR 225 million. The cost of exemption from VAT was considered to be negligible due to the tax deductions for which enterprises would have been eligible

Germany

57. Through a separate exercise, Germany reported a fuel-tax concession for the OECD and European Environment Agency *database on instruments used for environmental policy and natural resources management* - an Exemption for Navigation specified as “Use as fuel for the purpose of navigation, except private pleasure craft”.

58. The Germany Delegation has clarified that this tax concession does not apply to its fishing fleet, and as such, Germany does not provide any fuel subsidies or tax concessions to its fishing vessels.

Greece

59. Professional fisheries are exempted from the *Special Consumption Tax* on fuel under Law 2960/2001 (article 78, paragraph 1b) “National Customs Code” (O.G.J. 265 A’), as amended by Law 3366/2005 (O.G.J. 96 A’) and according to the provisions of Decision T1940/41/14.4.2003 of the Ministry of Economy and Finance. Greece also routinely reports the value of its fuel-tax exemption as part of its notification to the OECD on its Government Financial Transfers.

Italy

60. In Italy, a fuel subsidy for fishing vessels consists of an exemption from Value Added Taxes (VAT) and other direct fuel taxes, in accordance with the Council Directive 2003/96/EC of 27 October 2003. Italy has one fuel-tax rate for all fleets, but provided a breakdown of fuel consumption (and total value of the fuel-tax concession) by fleet; the total values are reported in Table 1.2.

61. Between 2007 and 2008 the cost of a litre of diesel fuel for fishing boats rose from €0.55 to €0.70. Italian authorities have not undertaken any special measures to mitigate the consequences of the fuel-price rises.

Netherlands

62. Through a separate exercise, Germany reported a fuel-tax concession for the OECD and European Environment Agency *database on instruments used for environmental policy and natural resources management* - Exemptions for Navigation: Petrol used for the propelling of ships (other than pleasure crafts) and Exemptions for Navigation: Mineral oils used for the propelling of ships (other than pleasure craft).

63. The Dutch Delegation has clarified that these fuel-tax concessions do not apply to its fishing fleet, and as such, the Netherlands reports no subsidies or tax concessions for fuel used by fishing vessels. In 2008, 66% of the fuel oil for Dutch fishing vessels was purchased outside the country.

Poland

64. Fuel used for commercial navigation purposes (including commercial fishing trips) are exempt from the fuel-excise tax under the Law on Excise Tax of 6 December 2008. The fuel-excise tax in 2007 and 2008 year was 1048pln/1000 litres (Law on Excise Tax of 23 January 2004).

Portugal

65. Through a separate exercise, Portugal reported the following fuel-tax concession to the OECD and European Environment Agency *database on instruments used for environmental policy and natural resources management* - an Exemption for Navigation specified as "Gas oil and fuel oils for consumption in sea-coast and inland waterways navigation."

66. However, the submission from Portugal to this exercise indicates that there are no fuel subsidies or tax concessions available to their fishing vessels.

Slovenia

67. Fossil fuel tax concessions in Slovenia are regulated by the Excise Duty Act (Official Journal of the RS, No 2/07, 25/09 and 41/09). Article 55(1) of this Act states that excise duties for fossil fuels shall not be paid for fossil fuels that are used to power fishing vessels. The implementation of the Excise Duty Act is regulated by Rules on the Implementation of the Excise Duty Act (Official Journal of the RS, No 49/04, 47/05 and 17/07). Article 42(1) of these Rules provides that natural persons that are in position of a valid fishing license and perform fishing activities can assert the right to the use of fuel from Article 55(1) of the Excise Duty Act in the form of the return of the excise duty that was paid.

68. No quantity of fuel was acquired out of the country for national fishing vessels. The conditions for granting the fuel-tax exemption do not distinguish between certain fleet segments or gear types.

Spain

69. In Spain, fuel-tax exemptions relevant to fishing vessels are governed by Real decreto 1517/2007, de 16 de noviembre (Aids granted to undertakings with fuel consumption between 1/11/2004-31/10/2005). Due to exceptional circumstances in 2008 measures to help the fleet were in place. These exemptions were applied on a temporary basis and only during 2008.

Sweden

70. Registered fishing vessels are exempted from the carbon-dioxide levy and from the energy tax on fuel. Most fishing vessels are able to buy tax-free fuel directly from the fuel suppliers and the suppliers have the right to make a reduction in their specific tax declarations. The Swedish tax authority does not collect any separate data on tax expenditures attributable to fishing vessels specifically, since other businesses such as trains and aircrafts as well as other maritime shipping are also exempted from the tax. For vessels other than fishing vessels, the owners pay the tax directly and request reimbursement in their declaration for tax on vessel fuel. The Swedish tax authority does not distinguish fishing vessels from other reimbursement claims. The only available data therefore refers to all professional shipping.

71. The fuel-tax expenditure is divided into two parts, the carbon-dioxide tax which is the same for all fuel types, 2883 SEK per m³. The other part, the special energy tax, differs depending on fuel type. For vessels with an expenditure to buy green-coloured diesel the energy tax is SEK 764 per m³. For highly taxed fuel the energy tax differs depending on the environmental standard of the fuel type. For the highest environmental standard, MK1 the energy tax is SEK 1277 per m³. Because of this the rate of fuel subsidies and total value of all fuel subsidies are given as a range. The range is compiled by multiplying the estimated fuel consumption with the tax range $((2883+764)/1000) = \text{SEK } 3.647$ per litre of fuel, $(2883+1277)/1000 = \text{SEK } 4.16$ per litre fuel). Table 1.2 provides an average of this calculated range. Sweden did not provide any additional fuel price support to its fishing fleet in response to the recent fuel price rises of 2008.

Volume of fuel consumed:

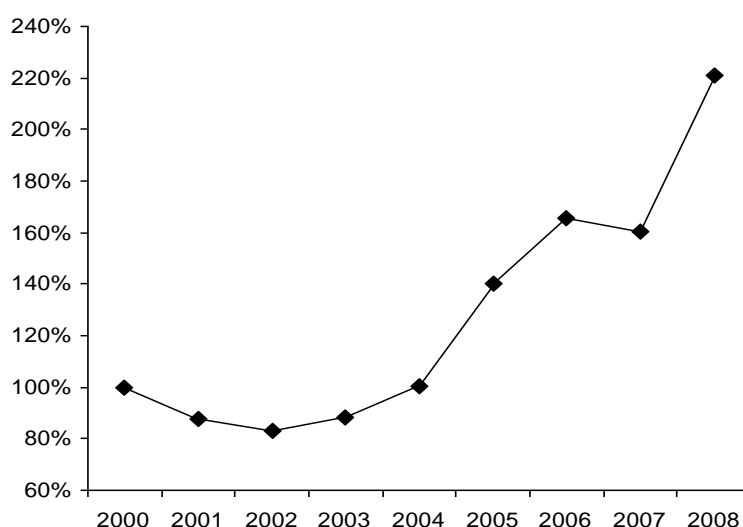
72. Data on fuel consumption are collected and estimated from a yearly survey distributed to a random sample of fishing vessels. The fuel consumption is extrapolated to the total population by using an extrapolation based on the number of days at sea in the population related to the days at sea in the sample.

73. Data are not compiled per type of fuel. Most of the fuel consumption, however, consists of diesel. Gasoline is only used for some smaller vessels.

National level market price for fuel:

74. Information on the average national fuel price is gathered and compiled from the Swedish Board of Fisheries for research vessels bunkering of diesel. The research vessels buy their diesel from the same places as other fishing vessels and are also subject to the fuel subsidy. Figure 1 shows two major shocks in fuel price in recent years.

Figure 2.1. Index of fuel-prices in Sweden (2000=100)



United Kingdom

75. Weekly fuel prices are collected from a number of suppliers to the fishing industry around the UK. From this information, an annual average duty-free price is produced. UK-wide averages are available only, as prices from Welsh and Northern Ireland suppliers are not available.

76. A combination of bottom-up techniques (from a 2005 and 2006 fleet survey) and a top-down estimation using MFA figures for 2007 and 2008 fleet activity, was used to estimate the volume of fuel consumed. The UK estimates were calculated as follows:

- The Seafish fleet survey for 2005 and 2006 give estimates of total expenditures by the UK fleet on fuel.
- For 2005 and 2006, the estimated total UK fleet spent on fuel was divided by the price per litre, to provide an estimate of total litres used by UK fleet in those years.
- MFA fisheries statistics contain figures giving total kW days at sea expended by the whole UK fleet, per year.
- The UK's estimate of fuel volume for the UK, divided by total UK kW days at sea in the same year (2005/2006 average), provides an estimated average of fuel volume required per kW day at sea for the UK fleet, with the assumption that figure remained stable for 2007/2008.

77. National estimates of fuel consumption were derived through MFA fisheries statistics that indicate the volume of landings into each of the UK nations. It was assumed that vessels from one nation landing into another will even out to a net effect of zero. The total UK volume of landings per kW day at sea were estimated from the MFA figures for 2007 and 2008. Each UK nation's volume of landings then provides the required kW days at sea per nation, for 2007 and 2008. The figure for average UK fuel volume per kW day at sea (2006 figure, assumed to remain stable in 2007 and 2008) was applied to give estimated fuel volume per nation.

Non-European Union OECD Member Countries

*Australia*²⁰

78. The fuel tax credit rate for the following activities is 38.143 cents per litre.

79. If the fisher is undertaking commercial fishing operations, you can claim for taxable fuel (for example, diesel or petrol) the fisher uses for any of the following activities, provided these activities are not connected with sport, recreation or tourism:

- Taking, catching, capturing of fish;
- Processing fish on board vessels;
- Fish farming;
- Constructing ponds and tanks or other structure to contain fish to be farmed, as long as this is done by the fish farmer or a contractor or subcontractor to the farmer;
- Pearling;
- Operating a dedicated mother vessel in connection with eligible fishing operations;
- Sailing a vessel to or from a port for the purpose of refitting or repairing the vessel or its equipment;
- Undertaking trials connected with the repair or refit.

Canada

80. Both federal and provincial taxes apply to fuel in Canada.

- The federal excise tax rate is 4 cents per litre on diesel for all users, with a full expenditure for many sectors of the economy. For marine vessels (fishing or otherwise), the full rebate on the excise tax is available when they proceed outside of Canadian inland waters (*i.e.* further than 12 nautical miles from the coast). There is no access to data on how many vessels proceed beyond 12 nautical miles from shore, and therefore there is no way of knowing how many claim this federal rebate or the total amount of rebates claimed.
- Canada manages its fisheries in six Regions: Newfoundland and Labrador, Maritimes, Gulf, Quebec, Central and Arctic, and Pacific. The Maritimes and Gulf Regions do not align exactly with provinces. Each province levies its own taxes on diesel fuel, and a general fuel tax expenditure available to many sectors (to be defined), including fisheries. The exemption is from the full amount of the excise tax in four regions (Newfoundland and Labrador, Maritimes, Gulf, Québec). In the Pacific Region, there is also a general fuel tax exemption available to many sectors, including fisheries, for diesel fuel.

81. As data on fuel consumption by fleets is available by region, Canada has approximated each Region's tax rebate by taking the average of the rates (per litre) in its constituent provinces. The Maritimes

20. *Source* : Australian Taxation Office (2009). Fuel tax credits for business.
Available at: <http://www.ato.gov.au/content/downloads/BUS76594nat14584.pdf>.

Region includes parts of both New Brunswick and Nova Scotia, so the tax exemption rate was calculated using the average of the rates in these two provinces. Gulf Region includes parts of New Brunswick, Nova Scotia and Prince Edward Island. The tax exemption rate was estimated using the average of the rates in these three provinces. Fuel consumption values are estimates only. Those on the Atlantic coast (all Regions except the Pacific) are based on surveys of fishers in 2004. Those in the Pacific Region are based on surveys and economic models from 2007. Estimates from those years are used for both 2007 and 2008.

Chile

82. Chile responded that no subsidies are applied to fossil fuels in the fishing sector, and is keen on keeping that policy in the future.

Table 2.2. Total volume of fuel consumed by national Chilean fishing vessels

Year	Total volume of fuel consumed (lt.)	Fuel Market price CLP/lt.	Currency Annual average. (CLP/USD)
2008	167 284 589	440.5	522.46
2009	203 763 242	276.6	559.61

83. In order to obtain an estimate of the fuel consumption of the fleet, the following methodology was used (Box 2.1).

1. The estimate has been made only for the industrial fleet, as the small-scale fleet does not have data to make a sound and reliable estimate.
2. The total fuel consumption corresponds to the annual corresponds to each vessels operating in the national fishing fleet.
3. The consumption of each vessel is estimated on two components. The first is the fuel consumption when the vessel is conducting fishing operations; the second is the consumption of the vessel when in port (basic consumption).

Box 2.1. Estimating fuel consumption in Chile

Chile estimated fuel consumption in the fishing sector as described below; validation of the model was carried out by evaluating real data of a 10-vessel fleet, which was compared with real consumption regarding the consumption determined by the model.

$$\text{Consumption in operation} = \frac{(\text{N}^\circ \text{days} * 24 * \text{Const Yield} * \text{Main Engine Power} * 0.85)}{1000}$$

Where,

N° days= Number of days in operation

Constant Yield= Yield of fuel of the main engine (115 gr./HP*hrs.)

Main Engine Power= Main Engine Power (HP)

24= day-to-hour-conversion constant (hr/day)

0.85= fuel density constant (0.85 gr/cm³)

1000= conversion constant (cm³ to lts)

$$\text{Consumption in port} = \frac{(\text{N}^\circ \text{days} * 24 * \text{Const Yield} * \text{Aux Engine Power} * 0.85)}{1000}$$

Where,

N° days= Number of days in port

Constant Yield= Yield of fuel of the engine (115 gr./HP*hrs.)

Aux Engine Power= Auxiliary Engine Power (HP)

24= day-to-hour-conversion constant (hr/day)

0.85= fuel density constant (0.85 gr/cm³)

1000= conversion constant (cm³ to lts)

Source : Chilean country submission (2010)

Iceland

84. Iceland provided data on the fossil fuel usage of domestic fishing vessels (marine diesel oil and heavy fuel oil) from the Icelandic National Energy Authority (<http://www.nea.is/>) on. The figures apply to fuel sold, but would reflect fuel usage in general.

85. The Icelandic submission notes that no fuel-tax subsidies or exemptions apply to the fishing fleet. Vessels as well as other vehicles that do not use the road system in Iceland are not subject to a levy/tax for road usage, but that would not be an exemption, but a special levy on vehicles using roads.

Japan

86. A tax exemption for heavy fuel oil (type A) in Japan is applied not only to fishing activities, but also to the use of heavy fuel oil by the agriculture and forestry sectors. There is also a special-purpose tax on light oil; the revenue generated is used for the construction and maintenance for public roads in Japan. For this reason, light oil consumed by any industrial activity that does not use roads is exempt from this tax. This exemption is available to all vessels (not only fishing vessels), as well as other industrial activities such as agriculture, forestry, and railways that are not road users.

Table 2.1. Annual Consumption of fuel by the fishing sector, by fuel type (1,000 kiloliters)

	1990	1995	2000	2005	2007
Heavy fuel oil type A	3 934	2 782	2 803	1 730	1 590
Light [diesel] oil	848	930	856	486	431

Source : Fisheries Agency of Japan.

87. As noted above, the tax exemption for fossil fuels is applied to various sectors of the economy, including agriculture and forestry; it does not target the fisheries sector. In particular, the tax on light oil in Japan is a special-purpose tax whose revenue is used for the construction and maintenance for public roads in Japan. Based on this institutional taxation arrangement, this exemption is applied to all vessels that do not use public roads, and is not granted exclusively to fishing sectors. The Japanese submission notes that this means that this fuel-tax exemption has not been established to promote or support any particular industry. This treatment is closely related to the national financial and administrative system including its overall taxation system. In this respect, the Japanese submission states that whether the analysis is intended for overfishing or climate change, singling out the fisheries sector and dealing with it separately from the national financial system upon which the tax exemption is based, is not considered to be fair and appropriate treatment.

88. Observations included in the Japanese submission regarding taxation and the fishing industry:

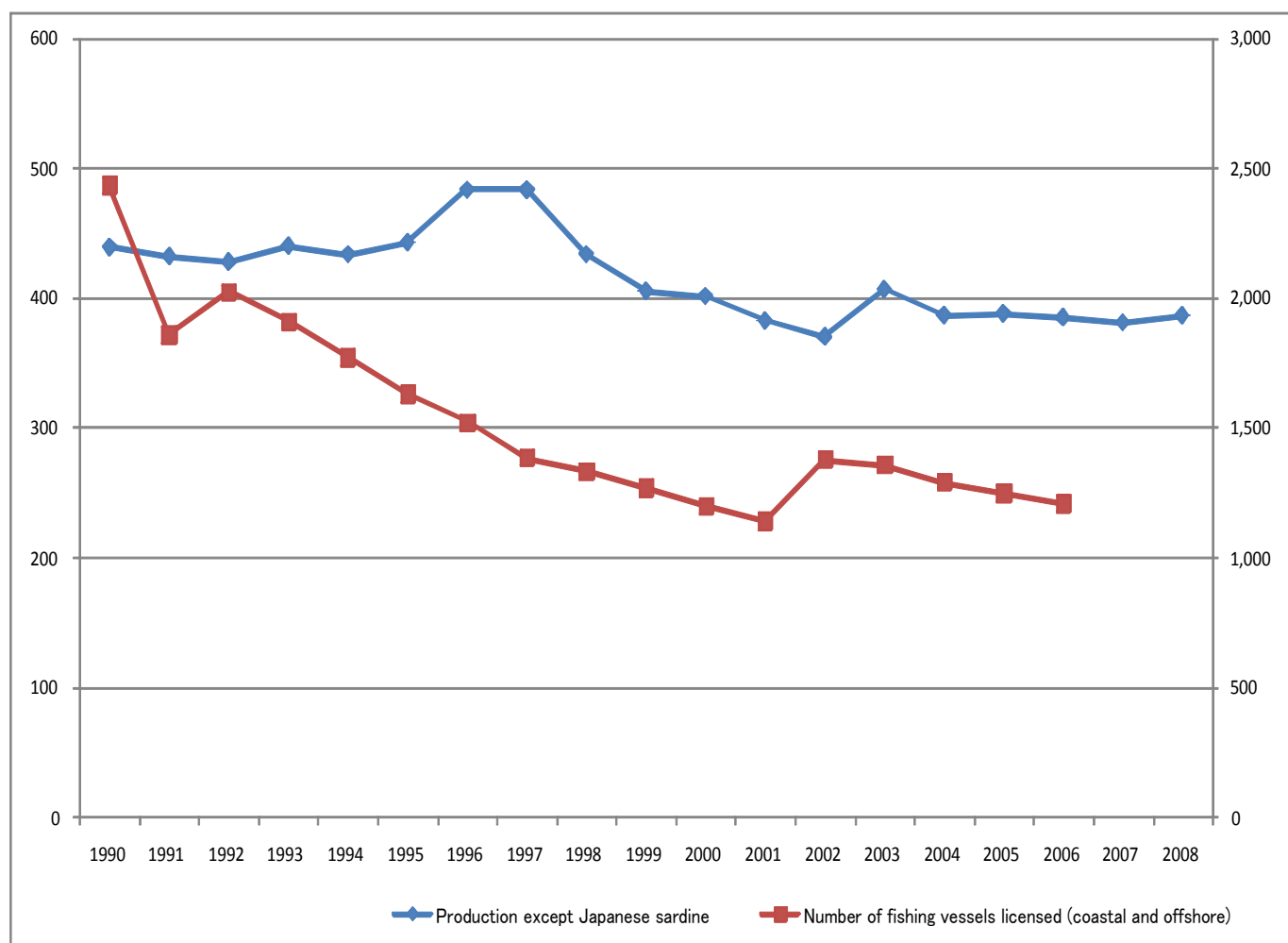
- As noted above, the fuel-tax exemption is not aimed at increasing fish production. It neither contributes to overcapacity nor to over-fishing. Figure 2.2 shows that fish production in the Japanese coastal and offshore area (excluding Japanese sardine, whose stock fluctuates regardless of fishing pressure), has been fairly constant since 1990. This suggests that serious overfishing has not been observed in the Japanese EEZ. This fact further indicates that, even if fisheries subsidies exist in Japan, they have not contributed to overfishing. This represents Japan's position that fish resource sustainability will be realised through appropriate fisheries management, regardless of the fisheries subsidies applied.
- In order to verify this contention, an econometric analysis was conducted which examined the relationship between subsidies and fish production in Japan. The results of analysis²¹ did not find a significant causal relationship between fisheries subsidies and overcapacity or overfishing.
- As shown in Figure 2.2, there is a declining trend in the number of licensed coastal and offshore fishing vessels mainly operating within the Japanese EEZ. This fact also supports the assertion that fisheries subsidies in Japan have not contributed to the over-capacity of its fisheries.

89. Further observations as part of the Japanese submission regarding taxation and amount of fuel consumption indicate:

- Annual consumption of fuel by the Japanese fishing fleet has declined over time despite the fuel-tax exemption. Given the relatively high share of fuel as part of a fisher's operations, further aggravated by rising prices, fishers are not inclined to increase the amount of fuel consumed by their fishing activities even if increased catch is expected.

21 Yagi, et al. A time-series data analysis to examine effects of subsidies to fishery productions in Japan "The Japanese Society of Fisheries Science" (2009) 75:3-11.

Figure 2.2. Fisheries production (excluding sardine) by coastal and offshore fishing vessels and the number of licensed vessels)



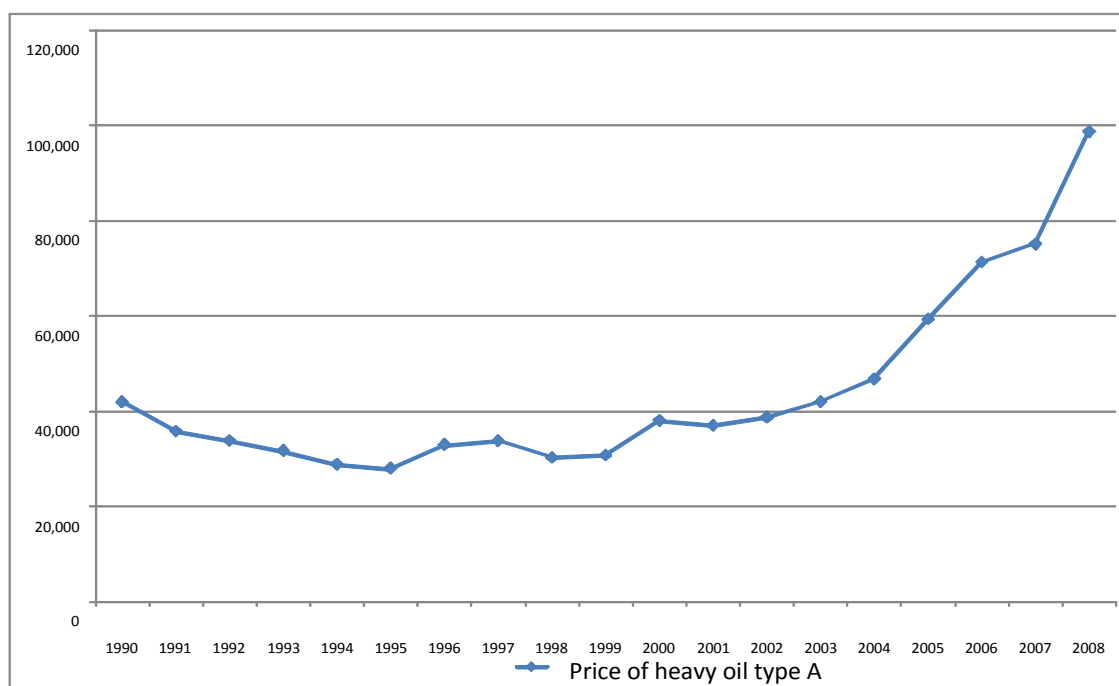
Source: Fisheries Agency of Japan

90. In response to the steep rise in the price of fuel between 2004 and 2007, the government of Japan introduced an emergency program to encourage energy-efficient fishing operations. This was introduced in the second half of 2007 in order to prevent the collapse of fishing operations. Under certain conditions, this program can support up to 90% of the incremental increase in the oil price, compared with the base-price of December 2007. As the price of fuel oil significantly declined after the introduction of this program, the number of fishers which participated in this program was very limited. Consequently, the total amount of the nominal financial transfer from the government to fishers under this program was limited to about JPY 30 million (approximately USD 0.33 million). In a general sense, however, the share of the fuel price in fishers' operations remains significantly high throughout the marine capture fishery sectors, as shown in the Table 2.2. In addition, the retail price of fuel oil doubled from 2004 to 2007 (Figure 2.2). The Japanese submission claims that there was a strong and legitimate need for the government to introduce such an emergency measure in order to prevent the collapse of fishers operations.

Table 2.2: Ratio of fuel price in fisher's operations (Japan)

Type of Fishing		Small trawler	Gillnet	Offshore trawler	Coastal squid
Ratio of oil	2005	22.6	16.6	18.7	23.3
Price/total Expenditure (%)	2007	29.6	22.4	25.0	30.5

Source: Fisheries Agency of Japan

Figure 2.3. Trend in the price of heavy fuel oil, type A in Japan

Source : The National Federation of Fisheries Co-operative Associations

Korea

91. In Korea, tariff and fossil fuel import levies are imposed on fuel for fishing vessels. However, in accordance with the 'Special Tax Treatment Control Act (1965)', value-added taxes (VAT), special consumption taxes, transportation, energy, and environmental taxes, educational taxes and mileage taxes on fuels (light fuels, heavy fuels and others) for agriculture, livestock farming, forestry and fisheries are exempted. These tax concessions are given not only to the fisheries sector but also to other primary production sectors as well.

92. Fuel-tax exemptions for fishing vessels are given when taxing on such fuel does not conform to the purpose of the tax law or when there is a need to protect the socially and economically vulnerable groups. These exemptions are legitimate in line with Korea's tax legislation system. For example, the purpose of transportation, energy, and environmental taxes is to secure financial resources that are needed to improve transportation infrastructure, promote public transportation and implement energy-related projects. Therefore, it is reasonable to exempt such taxes for fuels for fishing vessels. Also, mileage taxes are imposed to discourage the use of cars and mitigate traffic congestions which are not related to fisheries and thus not applicable to fuels for fishing vessels.

93. Studies have found that, despite the tax concessions, fish stocks are showing signs of general recovery (e.g. enhanced stocks of snow crab and deep-sea red crab, increased length of jack mackerels) thanks to the Korean government's implementation of efficient and enforceable fisheries management systems (TAC, community-based fisheries management, stock recovery policies, etc) and strengthened monitoring, control and surveillance. Also, the enactment of the Fisheries Resources Management Act (2009) made it possible for the government to manage the fisheries resources more comprehensively and systemically. In addition, the fishing capacity of Korean fishing fleets has gradually decreased with the government's Vessel Decommissioning Scheme (from 99 658 vessels and 976 731 GT in 1990 to 77 713 vessels and 594 772 GT in 2009). As such, as long as the fisheries sector is well managed with effective policy tools, fuel-tax concessions do not necessarily contribute to overexploitation of fisheries resources.

94. The amount of fuel used by fishing vessels has been on the decline in recent years (1.51 billion litres in 2000 compared to 830 million litres in 2008). Also, the Korean government, with the national vision of 'low carbon green growth', is taking various measures to reduce the fuel consumption by the fisheries sector. For instance, with the government's support, Korean fishers are encouraged to use fuel saving devices and LED (light) fish aggregating devices. The government is also supporting the establishment of seaweeds forests as carbon sinks.

95. If the tax exemption on fuel on fishing vessels is repealed, many small-scale fishers would face difficulties due to decreased income. Also, repealing fuel-tax concessions might result in the fishers' resistance because it could hinder the fair and consistent distribution of taxes among primary production sectors, where the fisheries sector is left with a disproportionate burden, and put them in unfair competitive condition against other countries' fishers due to the different tax policies on fuel among countries.

96. The OECD's study on fuel-tax concessions should not affect the WTO negotiations on fisheries subsidies. To avoid any possible confusion, Korea would like to request that the term 'subsidies' to be used with very careful consideration in the report, including the title.

97. Also, given that different countries have different taxation systems and there are no suitable criteria for comparison among the systems, careful approaches are needed regarding this issue.

New Zealand

98. New Zealand does not provide any sector-specific fuel subsidies for its fishing sector, but in the interests of transparency they have provided some details on a refund (Motor Vehicle Excise Duty Refund) for which fishing vessels may be eligible. The New Zealand submission notes that it will be apparent from the nature of the programme, and the very small proportion of estimated refunds to the fishing sector, that the design and application of the programme is directed elsewhere; namely across the economy as a whole and to all forms of commercial transport within the economy. Operators of commercial fishing vessels may be eligible for a Motor Spirits Excise Duty Refund.²² This is an economy-wide programme which provides for a refund on the excise duty and the goods and services tax charged on motor spirits that are used:

- as fuel in an exempted vehicle;
- as fuel in a road user charges-licensed vehicle;
- as fuel in a commercial vessel;
- for commercial purposes other than as fuel in any motor vehicle, vessel, or aircraft.

99. Diesel, the principle fuel used in fishing vessels, is not eligible for a refund. The refund is only available for petrol, LPG and CNG.

22. Further information on this program is available at:
<http://www.nzta.govt.nz/resources/factsheets/14/excise-duty.html>.

100. A maximum estimate for refunds for commercial fishing vessels is NZD 435 306 in 2007, and NZD 436 681 in 2008, representing approximately 1.25% of the total of the programme.

101. Estimates are not available for total fuel use of the New Zealand fishing fleet in 2007 or 2008, but total fuel use in 2005 is estimated to have been 216 million litres. This figure was determined in 2009 using the following two converging methods:

- Direct method. A letter was sent to every vessel operator in the fishing industry seeking quantitative data on 2005 fuel consumption. The replies that were received represented nearly two thirds of the industry's installed capacity when expressed in terms of kilowatt-hours. Based on calculated estimates of total consumption, nearly 70% of the total consumption for 2005 is known from actual figures derived from this survey.
- Indirect method. The Ministry of Fisheries holds information on the engine size (the kilowatt output) and the time spent at sea for each vessel in the fishing fleet. This information was compared with the actual fuel consumption of vessels, where that information was known from the direct survey. This comparison allowed a correlation to be drawn between kilowatt-hours and actual litres consumed, from which a conversion factor was derived to allow the calculation of fuel use where only kilowatt hours are known.

102. These two approaches were drawn together by using the conversion factor to estimate consumption from kilowatt-hours, based on information held by the Ministry of Fisheries, where direct survey information was not available.

*Norway*²³

103. Fuel taxation in Norway consists of several different elements, each meant to address different issues within the overall taxation policy. The rate of fuel subsidies provided in Norway's response to the OECD includes the base tax on mineral oil and the carbon-dioxide tax, which are both refunded for fishing within the Norwegian economic zone; fishing vessels are completely exempt from the base tax on mineral oil and the carbon-dioxide tax. The taxes are described below.

- Base tax on mineral oil: The base tax is intended to correct any adverse effects arising from the introduction of an electricity tax in the year 2000. The base tax thus counteracts the tax incentives to the use of fossil fuels for heating. The tax is levied on all mineral oil, with the following exceptions: all mineral oil where a diesel tax applies, and jet fuel. Mineral oil used for the following purposes is also exempt: international shipping, goods and passengers traffic in international waters, construction on the continental shelf, supply shipping, high-seas fishing, and production in the fishmeal industry. The tax is refunded for fishing within the economic zone. High-sea fishing is exempted from these taxes. (Source: Garantikassen for fiskere).
- Carbon dioxide tax: A carbon dioxide tax is levied on all mineral oil, with the exemption of mineral oil used for international shipping, international flight, and fishing within the economic zone and high-seas fishing. The tax is fully refunded for fishing within the economic zone, whereas vessels fishing in high-seas are exempt from the tax.

23 The figures and description given below is without prejudice to Norway's view on whether or not these constitute a subsidy within the meaning of the WTO Agreement on Subsidies and Countervailing Measures.

- Petrol and diesel tax: A petrol tax is levied on all petrol. This tax is intended to capture the negative externalities from the use of motor vehicles such as: accidents; congestion; noise pollution; road wear; and environmental pollution (except carbon-dioxide emissions). A complete exemption from the tax is given for all petrol used by airplanes, boats, and snowmobiles in areas without roads. Petrol used for technical purposes, medical purposes and for the exploitation of national resources in the oceans outside of Norwegian territory is also exempt from the petrol tax.

104. The tax rate on petrol and diesel tax was not included in the Norwegian submission to the OECD. This tax is intended to capture the negative externalities arising from the use of land-based motor vehicles such as: accidents; congestion; noise pollution; road wear; and environmental pollution (except carbon dioxide emissions). All petrol used by airplanes, boats, and snowmobiles in areas without roads is exempt from the tax. Similarly, the diesel tax is levied on all diesel used for the propulsion of motor vehicles and is also meant to capture the negative externalities from the use of motor vehicles. In the Norwegian tax structure, these taxes are not levied on the use of fossil fuel as such, but on the use of the national road network. Thus, no relevant data regarding fishing vessels exists for these taxes.

105. The NOx tax applicable for each undertaking is based on calculated emissions with the rate in 2008 being NOK 15.39 /kg, and for propulsion engines it applies only to those with an installed engine power over 750 kW. High-seas fishing, international shipping and international air transport are completely exempt from the tax. In addition, an agreement to reduce emissions was signed by the authorities and several industry organizations, effective from 2008. This agreement allows undertakings whose activity falls within the limits of the agreement to pay a reduced tax rate of NOK 11 /kg for offshore oil activity and NOK 4 /kg for fishing, national and international shipping, supply shipping, industrial production, air transport and other sectors included in the agreement. Revenues from this tax are hypothecated to a fund that financially supports investments in emission-reducing measures. The agreement is set to expire in 2011. It has not been possible to calculate any possible subsidy elements for the fishing fleet.

106. The consumption figures reported in Table 1.2 are estimates of the total volume of fuel consumed in Norway and include foreign vessels fuelling in Norway and Norwegian vessels fuelling for fishing in the high-seas. Estimates of fuel acquired in third countries by Norwegian vessels are 29 million litres for 2007 and 28 million litres for 2008. The reliability of the estimates is uncertain and stem from changes in reporting procedures from the oil companies where, inter alia, it is difficult to distinguish the sales between the petroleum industry, shipping, fisheries and distributors. The estimate of the fuel acquired abroad is based on a 30-year analysis, and the reliability of the estimate is uncertain. (Source: Statistics Norway (SSB)).

Turkey

107. Fuel subsidies have been provided since 2004. The subsidy is provided to fisheries through fuel-tax relief. The fossil fuels used are subject to a special tax, namely the Private Consumption Tax. No tax relief was launched due to economic crisis.

108. National level fuel market price: Marketing average price on 2 July 2007, in Istanbul & Marketing average price on 1 July 2008, in Istanbul.

Table 2.3. Total share of fuel-tax relief rate as a % of fuel oil consumption, by year (Turkey)

2004	2005	2006	2007	2008
28%	31%	32%	30%	30%

Table 2.4. Number of fishing vessels benefitting from fuel-tax relief, by year (Turkey)

2004	2005	2006	2007	2008
2 357	3 195	3 674	3 907	4 131

United States

109. The Amount of Fuel Used By U.S. Commercial Fishing Vessels in 2007 and 2008: Economists at each of the six National Marine Fisheries Service (NMFS) Fisheries Science Centres and at the Office of Sustainable Fisheries provided estimates of the amount of fuel used and landings by fishery for the most recent year(s) that fuel use or expense data were available. In most cases, the fisheries were defined by species or species group and gear. That information was used to calculate the litres of fuel used per metric ton of landings by fishery, and those estimates were used with fishery-specific landings estimates for 2007 and 2008 to estimate the amount of fuel used in each of those two years. Although the litres per metric ton of landings can vary by year, better proxies of the litres of fuel used in 2007 and 2008 for those fisheries were no available.

110. The estimates for some fisheries are based on trip level data on the amount of fuel used and/or expenses on fuel that are collected on an ongoing basis. This is done with economic add-ons either to at-sea observer programs or to logbook programs. The estimates for the other fisheries for which fuel data were provided for this report are based on annual fuel use and/or expense data that are collected each year, periodically (*e.g.* each two to three years), on a less frequent but regular basis, or on an ad-hoc basis. In addition, there are some fisheries for which such data were not provided for this report. The fisheries for which no fuel use data were provided for this report presented more of a problem. Those fisheries include a number of Federally-managed commercial fisheries and most commercial fisheries that are not Federally managed. The fuel use estimates for the two largest components of those fisheries (*i.e.* the Gulf of Mexico and Atlantic menhaden fisheries and much of the groundfish fishery off Alaska) were estimated using the landings from those fisheries and estimates of the litres per metric ton of landings from somewhat comparable fisheries. The fuel use estimates for all other commercial fisheries combined were generated using the aggregate landings for those fisheries and the median of the estimated litres of fuel per metric ton of landings for all the fisheries for which fuel use data had been provided. The landings estimate for all other fisheries is the difference between the total landings of U.S. commercial fishing vessels as reported in Fisheries of the United States, 2008 (FUS 2008) and the sum of the landings for the individual fisheries with fuel estimates in Tables 1 and 2, respectively, for 2007 and 2008. Before determining that difference, the landings for scallops and clams were converted from the round (live) weights used in this assessment to be comparable with the landings reported in FUS 2008 that typically are reported in round (live) weight for all items except univalve and bivalve molluscs, such as clams, oysters, and scallops, which were reported in weight of meats (excluding the shell). The other fisheries accounted for about 21% of the total commercial landings by U.S. commercial fishing vessels in 2007 and about 23% of that total for 2008; and the fuel use estimates for the other fisheries, which probably are the least certain part of the total fuel use estimates, accounted for about 41% of the total fuel use estimate for 2007 and 43% of that total for 2008. It is estimated that about 1.4 billion litres (L) and 1.3 billion L of fuel were used by U.S. commercial fishing vessels in 2007 and 2008, respectively. This was predominantly diesel fuel.

111. The estimates of the fuel used per metric ton of landings ranged from less than 10 L for the West Coast coastal pelagic species fishery, which is principally a purse seine fishery, to about 3,000 L for the Federally managed (*i.e.* offshore) Gulf of Mexico shrimp trawl fishery. In their 2005 article, *Fuelling Global Fishing Fleets*, Peter Tyedmers, Reg Watson and Daniel Pauly note a similar variability across fisheries.

112. The scale of direct fuel inputs, however, can range widely. Purse seine fisheries for small pelagic species, such as herring and menhaden, that are destined for reduction to fish meal and oil, typically use under 50 L of fuel per tonne of fish landed. In contrast, fisheries targeting high value species like shrimp, tuna, or swordfish frequently consume in excess of 2000 L per tonne of landings.

113. Fuel Subsidies: Federal taxes paid on fuels are credited to the Highway Trust Fund (HTF). The HTF was established by the Highway Revenue Act of 1956 as a mechanism to finance an accelerated highway program, including construction of the Interstate Highway System. Initially, the revenues of the HTF were intended for financing highways, with the taxes dedicated to the HTF paid by the users of highways. Now, tax revenues directed to the HTF are derived from excise taxes on highway motor fuel and truck related taxes on truck tires, sales of trucks and trailers, and heavy vehicle use; and those tax revenues are also used for the Mass Transit Account and the Leaking Underground Storage Tank Trust Fund.

114. Because the Federal fuel tax is in principle a highway user tax, those that use diesel or other fuels for non-highway use can receive an income tax credit for most of the Federal fuel taxes they pay as part of the cost of the fuel they purchase for nontaxable purposes. That tax credit can be claimed using the Internal Revenue Service Form 4136 (Credit for Federal Tax Paid on Fuels). The following types of nontaxable uses, including a boat engaged in commercial fishing, are identified in the instructions for that tax form:

- On a farm for farming purposes
- Off-highway business use (for business use other than in a highway vehicle registered or required to be registered for highway use)
- Export
- In a boat engaged in commercial fishing
- In certain intercity and local buses
- In a qualified local bus
- In a bus transporting students and employees of schools (school buses)
- For diesel fuel and kerosene (other than kerosene used in aviation) used other than as a fuel in the propulsion engine of a train or diesel-powered highway vehicle (but not off-highway business use)
- In foreign trade
- Certain helicopter and fixed-wing aircraft uses
- Exclusive use by a qualified blood collector organization
- In a highway vehicle owned by the United States that is not used on a highway
- Exclusive use by a non-profit educational organization
- Exclusive use by a state, political subdivision of a state, or the District of Columbia
- In an aircraft or vehicle owned by an aircraft museum
- In military aircraft

115. The Federal fuel tax is now USD 0.244 per gallon of diesel fuel and USD 0.184 per gallon of gasoline. This includes a USD 0.001 tax per gallon that goes to the Leaking Underground Storage Tank Trust Fund. However, the tax credit per gallon is USD 0.243 and USD 0.183, respectively, for diesel fuel and gasoline because there is no tax credit for the USD 0.001 per gallon tax levied to support the Leaking Underground Storage Tank Trust Fund. This means that, with respect to the Federal fuel taxes, there is not

a subsidy for commercial fishing boats. The income tax credit they can receive is intended to exempt them from the part of the Federal fuel tax that is a highway use tax, just as it exempts other non-highway uses of most of the Federal fuel tax.

116. State and local motor fuel excise tax rates in coastal states ranged from about \$0.08 to \$0.32 per gallon for diesel fuel and gasoline as of 1 January 2008. Typically, these fuel taxes are intended to be road or highway use taxes; therefore, to the extent that they do not apply to commercial fishing vessels or other non-road uses, such concessions are not subsidies. However, an assessment of any subsidies associated with state and local fuel taxes was beyond the scope of this brief report.

OECD Accession Countries

Estonia (Accession)

117. Data provided has been included in Table 1.2.

Russia (Accession Country)

118. Subsidies to fisheries organizations (legal entities) and individuals have been provided for a one-year period to partially compensate their expenses on loan interest payment received from Russian credit institutions in 2009 for material and technical supplies and fishing vessel equipment.

119. A considerable number of the vessels in the Russian fishing fleet have reached a critical level of depreciation. Russian fishing vessels consume far more volumes of diesel oil when conducting fishing operations as compared to modern, technologically advanced vessels of foreign fishing companies. For example, a domestic fishing vessel consumes about 400 litres of diesel oil to harvest one tonne of resources, whereas the corresponding figure for foreign fishing vessels is about 200 litres of diesel per tonne of catch.

120. The Russian submission notes that there has been a recent increase in the price of diesel oil used by fishing vessels. This has resulted in the escalation of costs incurred by Russian fishing organizations during fish harvesting, which in turn leads to an appreciation of domestic fishery products (price) and a decrease in their competitiveness as compared to the same seafood products produced abroad.

Non-OECD economies

Latvia (EU member state)

121. The law "On excise tax" exempts marked oil products used by ships from taxation, other than those used for private recreation and entertainment purposes. The State Revenue Service is responsible for the collection of excise taxes.

122. The information provided as part of this exercise includes only uncollected excise taxes from marked diesel sold to ships in the country; the ships eligible to use marked fuel without paying the tax include not only the national fishing fleet, but also warships, transport ships, and pilot boats. Ships used for private and recreational purposes are not eligible for this rebate. There is no data on value of subsidies for the amount of fuel consumed on the high-seas.

Thailand (COFI Observer)

123. Thailand stated that no such subsidy as outlined in the OECD questionnaire has been available to fishing vessels in 2007 and 2008.

REFERENCES

- European Commission Regulation (EC) No 875/2007 (2007) on the application of Articles 87 and 88 of the EC Treaty to de minimis aid in the fisheries sector and amending Regulation (EC) No 1860/2004.
- FAO (2007). *The State of World Fisheries and Aquaculture 2006*. Rome, Italy.
- Framian BV in co-operation with Symbeyond Research Group. (2009) *Economic Analysis of Raising De Minimis aid for Fisheries* (MARE/2008/12).
- G20 communiqué (2009), *Leader's Statement*. The Pittsburgh Summit, September 24-25.
- OECD, 2000, *Transition to Responsible Fisheries: Economic and Policy Implications*, Paris.
- OECD, 2005. *Environmentally Harmful Subsidies: Challenges for Reform*, Paris.
- OECD, 2006. *Financial Support to Fisheries: Implications for Sustainable Development*, Paris.
- OECD, 2010a. *Tax Concessions in OECD Countries*, Paris.
- OECD 2010b. *Tax Expenditures as Providing Indirect Subsidies to Fossil Fuels*. Internal draft paper. , Paris.
- OECD/IEA 2009. *Energy Prices & Taxes - Quarterly statistics*. Paris.
- Planchot, M. and F. Daures (2008), "Le secteur français des pêches maritimes face à l'augmentation du prix du gasoil", Note de synthèse, IFREMER, July.
- Seafish (2008), *The Seafish Guide to Improving Fuel Efficiency*, Seafish Industry Authority UK, August, available at <http://sin.seafish.org> .
- Sumaila, U.R., L. The, R. Watson, P. Tyedmers and D. Pauly (2006), "Fuel subsidies to fisheries globally: magnitude and impacts on resource sustainability", in U.R. Sumaila and D. Pauly (eds), *Catching More bait: A Bottom-up Re-estimation of Global Fisheries Subsidies*, Fisheries Centre Research Reports 14(6), University of British Columbia, Vancouver, pp. 38-48.
- STECF (2006), *Economic Performance of Selected European Fishing Fleets*, Annual Report 2005, March.
- Tyedmers, P.H., R. Watson and D. Pauly (2005), "Fueling Global Fishing Fleets", *Ambio*, Vol. 34, No. 8, pp. 635-8.
- Vieira, S. and L. Hohen (2007), *Australian Fisheries Survey Report 2007 : Results for Selected Fisheries, 2004-05 and 2005-06*, ABARE report Prepared for the Fisheries Resources Research Fund, Canberra, October.
- Vieira, S., R. Wood and D. Galeano. (2007), *Australian Fisheries Survey Report 2006 : Results for Selected Fisheries, 2003-04 and 2004-05*, ABARE report Prepared for the Fisheries Resources Research Fund, Canberra, June.
- UNEP. 2002. *Integrated assessment of trade liberalization and trade related policies. A country study on fisheries sector in Senegal*. UNEP/ETB/2002/10. UNEP, Geneva.

ANNEX 1: DATA REQUEST

General Comments and Definitions

124. The goal of this exercise is to estimate the total benefit fishers may receive from governments regarding the price of fossil fuels. The term “fuel subsidy” (to fishers) refers to any government intervention regarding fossil fuels that reduce the cost and/or increase revenues of commercial fishers, regardless of whether or not they involve direct financial transfers.

125. For the purpose of this exercise, a fuel subsidy (to fishers) is defined broadly as a rebate, refund, expenditure²⁴ or reduction (to fishers) from Value Added Taxes (VAT) and other such direct fuel taxes that are normally levied by the government on fuel users in the economy; price controls that suppress fuel prices below normal market prices; and, programs that provide direct transfers or payments.

126. It is recognised that there will be cases of fossil fuel subsidies as defined here that may be considered as working towards “green purposes” and not be considered as such inefficient; should this case arise for any country, it would nevertheless be appreciated if countries would provide the data specified in this request, along with the description of the program²⁵.

127. This analysis is focussed on the commercial fishing sector; the term “fishing fleet” refers to vessels in the fish harvesting sector (marine and inland).

128. Data is requested for the years 2007 & 2008, or the most recent years for which data is available. Data is requested as whole numbers in national currency; any conversion of monetary values into another currency or unit (*e.g.* millions, thousands) will be undertaken by the Secretariat. Volume (weight) is requested in litres.

129. Fuel subsidies should be reported at both the national and sub-national levels. The type of fuel used by the fishing fleets should also be specified (diesel, gasoline, biofuels etc.).

Specific Request

130. Member countries are requested to provide data as outlined in Table 1, based on the information detailed in this section. A brief description of each type of subsidy/program is also requested (*e.g.* its nature and how it operates).

1: Value of the Fossil Fuel Subsidy

131. The value of the fuel subsidy to all fishing fleets and the relevant authority as indicated in legislation or otherwise should be provided. This value may be represented as follows, depending on data capture and availability in Member countries; where possible, responses to both Option A and Option B is requested:

-
24. An expenditure from a fuel tax to fishers may either be specified directly in the legislation or may be represented by cases where there is an economy wide tax that is not applied to fishing vessels.
25. This may include programs whereby authorities allow fishers to make payments to a general fund for a specific purpose (*e.g.* use of greener technology for fishing vessels) in lieu of a tax collected by government that reverts to the state’s treasury.

Option 1.A: The rate of the fuel subsidy per litre of fuel. In cases where there are different and varying sub-national level fuel subsidies in addition to a national level subsidy, these should be provided as well, with a distinct accounting for each level.

AND

Option 1.B: The aggregate foregone revenue to the national accounts for taxes not collected.

Considerations:

132. Where available, further details regarding the breakdown of the fuel subsidy by fishing fleet (*e.g.* inshore, offshore, high seas) or by gear type etc. can be provided, should the fuel subsidy be applicable in only certain cases.

133. Any additional one off fuel price supports provided to the fishing fleet, for example in response to the recent fuel crisis of 2008, should be reported separately and indicated as such, including the end date of such programs.

2: Volume of fuel consumed

134. The total amount [volume] of fuel consumed by all fleets, expressed in litres should be provided. Should the volume be estimated, the details of the methodological approach taken should be provided.

Consideration:

135. In cases where there may be different and varying sub-national level fuel subsidies, the breakdown in the volume per jurisdiction should be provided, if possible.

3: National level market price for fuel (Optional)

136. If readily available, countries are requested to provide a national average market price for fuel.

Country	Country Level	Unit [Currency]	1.A. Rate of fuel subsidies (price per litre)		1.B. Total value of all fuel subsidies		2. Total volume of fuel consumed by national fishing fleets (litres) ^{Error!} Reference source not found.		3. National level fuel market price (price per litre)		Brief description of subsidy, scope
			2007	2008	2007	2008	2007	2008	2007	2008	
Country A	National	ABC									
	Region 1	ABC									
	Region 2	ABC									

1. Where applicable and if known, indicate through a footnote whether or not some quantity of fuel is acquired out of country for national fishing vessels and an approximation of that amount (%).
2. Please provide additional information if the fuel subsidy is applicable only to certain fleet segments/gear type and duration of the program (start and end dates).
3. Please attach a description of each subsidy/program, the type of fuel used (*e.g.* diesel).
4. This includes budgeted (direct transfers) and unbudgeted (market mechanisms) subsidies.

ANNEX 2: G-20 LEADERS' STATEMENT - THE PITTSBURGH SUMMIT***Preamble***

(Agreement ...) To phase out and rationalise over the medium term inefficient fossil fuel subsidies while providing targeted support for the poorest. Inefficient fossil fuel subsidies encourage wasteful consumption, reduce our energy security, impede investment in clean energy sources and undermine efforts to deal with the threat of climate change. [paragraph 24]

Main Text

Enhancing our energy efficiency can play an important, positive role in promoting energy security and fighting climate change. Inefficient fossil fuel subsidies encourage wasteful consumption, distort markets, impede investment in clean energy sources and undermine efforts to deal with climate change. The Organization for Economic Cooperation and Development (OECD) and the IEA have found that eliminating fossil fuel subsidies by 2020 would reduce global greenhouse gas emissions in 2050 by ten percent. Many countries are reducing fossil fuel subsidies while preventing adverse impact on the poorest. Building on these efforts and recognizing the challenges of populations suffering from energy poverty, we commit to [paragraph 29]:

- Rationalise and phase out over the medium term inefficient fossil fuel subsidies that encourage wasteful consumption. As we do that, we recognise the importance of providing those in need with essential energy services, including through the use of targeted cash transfers and other appropriate mechanisms. This reform will not apply to our support for clean energy, renewables, and technologies that dramatically reduce greenhouse gas emissions. We will have our Energy and Finance Ministers, based on their national circumstances, develop implementation strategies and timeframes, and report back to Leaders at the next Summit. We ask the international financial institutions to offer support to countries in this process. We call on all nations to adopt policies that will phase out such subsidies worldwide.

We request relevant institutions, such as the IEA, OPEC, OECD, and World Bank, provide an analysis of the scope of energy subsidies and suggestions for the implementation of this initiative and report back at the next summit [paragraph 30].

ANNEX 3: DIESEL OIL PRICES FOR COMMERCIAL USE, IEA, ENERGY PRICES AND TAXES (ISSUE 2ND QUARTER 2009)

334 - ENERGY PRICES & TAXES, 2nd Quarter 2009

Table 7
Automotive Diesel Oil Prices for Commercial Use in US Dollars/litre

	2000	2001	2002	2003	2004	2005	2006	2007	2008	4Q2008	1Q2009	2Q2009*
Australia	..	..	..	..	..	..	..	..	..	..	..	..
Austria	0.598	0.558	0.565	0.650	0.747	0.810	0.890	0.981	1.257	0.973	0.826	..
Belgium	0.602	0.563	0.565	0.706	0.911	1.068	1.119	1.238	1.513	1.196	1.048	..
Canada	0.459	0.445	0.406	0.492	0.581	0.765	0.852	0.921	1.156	0.887	0.680	..
Czech Republic	0.524	0.520	0.544	0.638	0.809	0.978	1.077	1.189	1.562	1.243	0.994	..
Denmark	0.702	0.668	0.689	0.825	0.911	1.022	1.101	1.213	1.491	1.157	1.027	..
Finland	0.642	0.601	0.606	0.748	0.863	0.987	1.051	1.143	1.515	1.189	1.025	..
France	0.650	0.597	0.608	0.749	0.919	1.062	1.132	1.250	1.553	1.242	1.049	1.107
Germany	0.637	0.635	0.682	0.863	1.004	1.143	1.208	1.345	1.637	1.296	1.145	..
Greece	0.527	0.481	0.496	0.610	0.779	0.919	1.006	1.133	1.481	1.193	1.010	..
Hungary	0.610	0.583	0.625	0.749	0.864	1.026	1.076	1.197	1.491	1.184	0.927	1.023
Ireland	0.634	0.611	0.603	0.750	0.904	1.068	1.136	1.222	1.537	1.335	1.049	..
Italy	0.685	0.648	0.672	0.826	0.971	1.147	1.218	1.327	1.635	1.309	1.132	..
Japan	0.578	0.529	0.503	0.562	0.649	0.745	0.797	0.817	1.155	1.177	0.866	..
Korea	..	..	..	..	..	..	..	..	..	..	..	..
Luxembourg	0.553	0.511	0.517	0.627	0.745	0.911	1.001	1.114	..	..	..	..
Mexico	0.385	0.421	0.429	0.398	0.392	0.419	0.434	0.466	0.490	0.461	0.451	..
Netherlands	0.663	0.617	0.626	0.755	0.938	1.068	1.146	1.263	1.581	1.263	1.049	..
New Zealand	0.294	0.269	0.266	0.321	0.430	0.564	0.653	0.683	0.907	0.636	0.475	..
Norway	0.915	0.775	0.823	0.956	1.039	1.223	1.277	1.413	1.739	1.351	1.220	..
Poland	0.482	0.511	0.518	0.598	0.711	0.933	1.008	1.116	1.435	1.109	0.825	..
Portugal	0.559	0.556	0.561	0.738	0.900	1.066	1.197	1.356	1.692	1.360	1.138	..
Slovak Republic	0.557	0.515	0.505	0.679	0.882	1.019	1.128	1.287	1.638	1.371	1.174	..
Spain	0.553	0.534	0.560	0.676	0.809	0.957	1.024	1.131	1.424	1.127	0.960	1.019
Sweden	0.738	0.669	0.690	0.804	0.931	1.108	1.208	1.303	1.620	1.299	1.060	..
Switzerland	0.721	0.690	0.711	0.850	0.993	1.129	1.195	1.268	1.623	1.413	1.161	..
Turkey	0.695	0.597	0.725	0.927	1.080	1.459	1.555	1.771	2.212	1.792	1.486	..
United Kingdom	1.048	0.954	0.963	1.083	1.277	1.405	1.491	1.651	1.834	1.460	1.243	..
United States	0.395	0.371	0.348	0.398	0.477	0.633	0.714	0.761	1.003	0.790	0.580	..
OECD Europe	0.678	0.638	0.662	0.802	0.954	1.109	1.185	1.311	1.609	1.283	1.090	..
Total OECD	0.551	0.520	0.521	0.612	0.732	0.879	0.956	1.042	1.311	1.061	0.859	..

* Prices for 2Q2009 are preliminary.

**For Korea Automotive Diesel Oil Prices for Non Commercial Use in 2007: 1.37 USD/litre and 2008: 1.47 USD/litre has been used.