

Chapter 8

Comparative analysis

8.1 RELATIVE IMPORTANCE OF COSTS AND VALUES

The estimates of fisheries subsidies that we made above represent important information but to better assess their significance the values need to be compared with something. The industry value of a subsidy could, for example, be put in relation to the total sales value for the part of the industry it affects, or the total government expenditure on fisheries subsidies could be expressed as a percentage of the total added value created by the fisheries sector¹⁸ and compared with similar ratios for other sectors.

The ratios that should be calculated depend of course on the objective of the analysis, e.g., should the fisheries subsidies be compared with other sectors of the economy or with fisheries in other countries, or should the development – increases or decreases in different categories of fisheries subsidies – over time be measured? Some examples of ratios that could be calculated are listed below. The ratios can either be calculated for the fisheries sector as a whole or for different subsectors or groups of firms, depending on the scope and objective of our study.

- *Government expenses (revenues)*
 - Government costs (revenues) divided by the number of employees in the fisheries sector, selected subsectors or groups of operators.
 - Government costs (revenues) divided by the value added created by the sector or subsector.
 - Government costs (revenues) divided by the value of production (turnover) of fisheries industry or part of it.
 - Government costs (revenues) divided by ex-vessel value of landed fish.
- *Change in industry profits*
 - The industry value of the subsidies divided by the total profit/loss (before or after tax) of the fisheries industry, selected subsectors or groups of operators.
 - The industry value divided by the ex-vessel value of landed fish.
 - The industry value (change in profits) divided by the value added created by the fisheries sector, selected subsectors or groups of operators.

If we want to make international analyses, we should make sure that the ratios we calculate are relevant for cross-border comparisons and that data we use are compatible. The different conditions – natural, economic and social – under which the fisheries industry operates in different countries influence the relative values of fisheries subsidies and these may not be immediately comparable. It should also be recognized that the institutional arrangements and the resources available to the public sector vary between different countries and this aspect needs to be taken into consideration when making international comparisons.

8.2 FINANCIAL RATIOS

In addition to the more general ratios discussed above, we may also want to make further use of the results of the costs and earnings analysis. Based on the calculations made on the income statements – discussed in chapter 7 above – we can calculate financial ratios and in this way evaluate the economic performance with and without

¹⁸ The added value created by the fisheries sector is often referred to as the GDP of the fisheries sector.

BOX 23

Costs and earnings analysis - An example

Within the framework of the fisheries subsidies study in Seidisbus, a costs and earnings analysis was carried out for the shrimp fishery. In 2000, there were six companies operating a total of eight boats in this fishery. Income statements were obtained from four of the companies, covering six of the boats. It was assumed that the remaining two companies operated along similar lines to those interviewed and the data obtained was extrapolated to establish a profit and loss account for the shrimp fishery as a whole. All eight vessels in the fishery were of the same type and size although of very different age; the newest had just been taken into service while the oldest had been operating for nearly 25 years. The average age of the fleet was estimated at 8 years. The cost of a new vessel was estimated to be about US\$ 10 000 000 based on information from the national ship wharf. However, there is also an important second-hand market in the region and the average value of the vessels in the fleet was estimated to be 6 000 000 with a life span of 15 years. Accordingly, the total current value of the fleet is US\$ 48 000 000. The commercial interest usually charged for this type of investment was 15% and the loan period would generally be the same as the economic life span of the investment, i.e. 15 years in this case, with payments due at the end of each year.

With regard to subsidies, many of the examples quoted in chapter 6 – and summarized in Figure 9 – were relevant to the shrimp fishery in Seidisbus. The exceptions were the investment grant programme (Box 6) and the restructuring of the shrimp hatchery industry (Box 8) which were only relevant to the aquaculture subsector; the subsidy involved in the state-ownership of the ship wharf (Box 8), the provision of landing sites along the coast for the artisanal fishers (Box 15), the membership in the regional fisheries committee dealing with the management of small pelagic species (Box 19) and the extra costs for new TEDs which were already being used by the fleet (Box 18).

The **income guarantee scheme (Category 1 subsidy)** benefited the fishers working onboard the shrimp trawlers. However, there was no information on the amounts having been paid out to individual fishers and it was hence assumed that the scheme had benefited fishers in the semi-industrial and the shrimp fishery fleets equally: $120 \text{ (employees shrimp fleet)} \div 370 \text{ (total employees semi-industrial and shrimp fleets)} \times 450\,000 \text{ (industry value of subsidy)} = 145\,900$.

All six companies targeted the export market and had their own marketing and distribution structure. Shrimp exports represented 90% of the total value of fish exports in 2000. Four of the companies had participated in the 2000/2001 trade fair organized by the **Export Council (Category 2 subsidy)**:

subsidies. Depending on our sample size and the number of subsectors that we have included in the costs and earnings analysis, average ratios for different parts of the industry can be estimated and assessed. Some of the ratios to calculate could include:

- Gross margin
- Profit margin (return on sales)
- Return on investments

It would also be interesting to examine the change in financial strength and solvency ratios but as the longer-term impact of the subsidies on the firm is not known, this would be difficult to do in any reliable way. The financial strength and solvency ratios are based on information from the balance sheet and in order to make any meaningful assessment, the balance sheet would need to be adjusted for subsidies in the same way as the profit and loss account. The latter is a shorter-term reflection of the business and it is easier to make adjustments with an acceptable level of reliability. The balance sheet is the long-term account of the business's transactions. To adjust the balance

90% of 75 000 (fisheries' share of Export Council budget) plus 4 / 30 (share of shrimp industry participants in trade fair) of 12 000 (fisheries' share of trade fair costs) = 69 100.

For the **fuel tax rebate (Category 2 subsidy)**, there were records of the recipients of the reimbursements. The shrimp fishery fleets had received a total of 550 000 under the scheme.

FAO, and in particular the marine fisheries management project (**Category 2 subsidy**), was important to the shrimp fishery, probably more so than to many other parts of the sector. It was believed that it would be fair to assign 75% of the industry value to the shrimp fleet: 75% of 201 750 = 151 300.

The same share, 75%, was attributed to the shrimp fishery of the total **fisheries management subsidy (Category 3)**: 75% of 2 000 000 = 1 500 000. The **free access subsidy (Category 4)** affected the shrimp fishery proportionally to the value of their landings, i.e., 4% of 35 million = 1 400 000.

AGGREGATED PROFIT AND LOSS ACCOUNT – SHRIMP FLEET (US\$) 2000

Item	Actual: adjusted depreciation and interest costs	Name of subsidies	Amount of subsidy	Account less subsidies
REVENUES				
SALES REVENUES	38 000 000	FAO Export Council Management	151 300 69 100 1 500 000	36 279 600
OPERATING COSTS				
RUNNING (VARIABLE) COSTS	17 000 000	Fuel rebate	550 000	17 550 000
LABOUR COSTS	5 000 000	Income guarantee	145 900	5 145 900
FIXED COSTS	3 000 000	Free access	1 400 000	4 400 000
GROSS CASH FLOW	13 000 000			9 183 700
CAPITAL AND FINANCIAL EXPENSES				
DEPRECIATION	3 200 000			3 200 000
INTEREST COSTS	500 000			500 000
PROFIT OR LOSS BEFORE TAX / TOTAL SUBSIDIES	9 300 000		3 816 300	5 483 700
TAX				
CORPORATE INCOME TAX (15%)	1 395 000			822 555
PROFIT OR LOSS AFTER TAX	7 905 000			4 661 145

sheet for the effects of subsidies would involve, in addition to analysing the history of the direct effects of subsidies, speculations with regard to overall investment and business decisions triggered by the indirect effects of subsidies in the past. In fact, in line with this discussion, also the last profitability ratio suggested above, i.e., *return on investments*, could be questioned with regard to its reliability as it uses total assets – a balance sheet item – as the denominator.

BOX 24

Ratios - An example

In Seidisbus, the following ratios are calculated in the fisheries subsidies study:

1. Government cost (all subsidies) divided by the total number of employees in the fisheries sector: 7 473 750 (from Figure 9) / 16 580 (from Box 22) = **US\$ 451 per employee.**
2. Government cost (only Categories 1 and 2 subsidies) divided by the total number of employees in the fisheries sector: 2 418 750 (from Figure 9: 7 473 750 – 35 000 – 2 000 000 – 2 900 000) / 16 580 = **US\$ 153 per employee.**
3. Government cost (excluding subsidies for aquaculture) divided by the ex-vessel value of catches: 4 583 750 (from Figure 9: 7 473 750 – 770 000 – 120 000) / 75 000 000 (from Box 22) = **9%.**
4. Industry value (all subsidies) divided by the ex-vessel value of catches and value of aquaculture production: 9 648 750 (from Figure 9) / 103 000 000 (75 000 000 + 28 000 000 from Box 22) = **9%.**
5. Industry value (subsidies only for shrimp fishery) divided by profits before tax of the shrimp fleet: 3 816 300 (from Box 23) / 9 300 000 (from Box 23) = **41%.**

BOX 25

Financial ratios - An example

Using the information for the shrimp fishery in Seidisbus (Box 23), the following financial ratios can be estimated:

1. **Return on sales**
 - Actual account: 9 800 000 (net income before interest expenses: 9 300 000 + 500 000) divided by 38 000 000 (sales) = **26%.**
 - Account less subsidies: 5 983 700 (net income before interest expenses: 5 483 700 + 500 000) / 37 779 600 (sales) = **16%.**
2. **Return on investment**
 - Actual account: 9 800 000 (net income before interest expenses: 9 300 000 + 500 000) divided by 48 000 000 (book value of total assets assumed to equal current replacement value of vessels) = **20%.**
 - Account less subsidies: 5 983 700 (net income before interest expenses: 5 483 700 + 500 000) / 48 000 000 (book value of total assets assumed to equal current replacement value of vessels) = **12%.**

Chapter 9

What to include in a subsidy description

So far in this Guide, we have been concerned mainly with the classification of fisheries subsidies and assessments of their costs and values. In the course of these analyses, we have of course collected a lot of information, both quantitative and qualitative. In addition to the table-format presentations of our subsidy assessment data (see Figure 9), it would be advisable to organize all other information in a standardized format. By recording detailed descriptions of the various subsidies, the information is readily available and can be used as an input into further analyses or for reporting to, for example, the WTO¹⁹. Accordingly, a format for how to describe fisheries subsidies is proposed in Table 2 below. It is suggested that each subsidy is described separately according to this checklist. This is also a good place to record observations with regard to the likely long-term impact, externalities and other effects of the subsidies that have not been captured in the earlier quantitative analysis.

TABLE 2

Description of fisheries subsidies – a checklist

NAME OF THE SUBSIDY
FORM OF SUBSIDY AND SHORT DESCRIPTION OF ITS FUNCTION
CLASSIFICATION: CATEGORY 1, 2, 3 or 4 (<i>see chapter 5 of the Guide</i>)
HOW IS THE PROFITS OF THE INDUSTRY AFFECTED BY THE SUBSIDY (<i>revenue-enhancing / cost-reducing etc: see chapter 7 of the Guide</i>)
PERIOD OF IMPLEMENTATION (<i>date of introduction [month/year] to end-date [month/year] – or on-going</i>)
POLICY OBJECTIVE AND PURPOSE OF THE SUBSIDY (<i>short description of why the subsidy has been introduced and what its economic / social / development / environmental objective is</i>)
RESPONSIBLE MINISTRY / DEPARTMENT / AUTHORITY / ORGANIZATION AND LEGISLATION UNDER WHICH THE SUBSIDY IS GRANTED, IF APPLICABLE
FUNDING OF THE SUBSIDY, IF APPLICABLE (<i>fully government funded or with contributions from the industry</i>)
COVERAGE AND TARGET RECIPIENTS (to whom is the subsidy applicable) <ul style="list-style-type: none"> • APPLIES TO WHICH (SUB)SECTORS • APPLIES TO WHICH GEOGRAPHICAL REGIONS • WHO ARE THE RECIPIENTS • WHAT ARE THE CRITERIA FOR RECEIVING THE SUBSIDY
DESCRIPTION OF THE MECHANISM BY WHICH THE SUBSIDY IMPLEMENTED OR CREATED (<i>process through which the benefits/disadvantages are transferred or created, process through which the recipients learn about/apply for/receive the subsidy, etc.</i>)
ASSESSMENT OF THE SUBSIDY (SHORT-TERM EFFECTS) <ul style="list-style-type: none"> • GOVERNMENT COST (REVENUE) OF THE SUBSIDY • INDUSTRY VALUE OF THE SUBSIDY <i>(specify the year or period of the assessment and give details of the calculations)</i>
ASSESSMENT OF LONG-TERM EFFECTS OF THE SUBSIDY
REVIEW OF ANY SIDE EFFECTS OR EXTERNALITIES CAUSED BY THE SUBSIDY (<i>specify indirect beneficiaries or who it affects and how</i>)
ANY OTHER RELEVANT INFORMATION (<i>e.g. ratios, statistical data for assessing the subsidy in a particular context such, for example, trade, etc.</i>)

¹⁹ The format for subsidies description suggested by the Guide is partly based on the information to be provided in WTO's questionnaire for subsidy notifications. However, the statistical data required in the questionnaire needed for the assessment of the trade effects of the subsidy are not explicitly covered here.

Chapter 10

Reporting on subsidies

10.1 THE STUDY REPORT

In this last chapter of the Guide, we will briefly review some aspects with regard to reporting on fisheries subsidies. Examples and suggestion for how to organize the information collected and our results have already been included in different parts of the Guide, e.g. Figure 6 and Figure 9 on listing fisheries subsidies, chapter 7 on making an inventory of the fisheries industry and on costs and earnings analyses, and chapter 9 on descriptions of fisheries subsidies.

If our fisheries subsidies study is being carried out on the request from, for example, a government authority with a particular objective and terms of reference, or it is part of larger research task, we may already have an outline for how our report should look like. If this is not the case, the suggested outline in Table 3 may give some useful ideas.

It is recommended that we put most our efforts into chapter 4 “Presentation of results”. It should be remembered that chapters 2 and 3 are not meant to be the core of the report and even though it is usually relatively easy to include a large amount of

TABLE 3
Tentative outline for the final report of a fisheries subsidies study

No	Chapter	Chapter in Guide
1	INTRODUCTION	1-2
1.1	Background and purpose <ul style="list-style-type: none"> • <i>Application of the study in the national context</i> 	
1.2	Methodologies <ul style="list-style-type: none"> • <i>Basic concepts and main principles</i> • <i>Survey and data collection methodologies</i> 	3-10
1.3	Limitations <ul style="list-style-type: none"> • <i>Precisions of the coverage of the study with regard to, for example, time frame, subsectors, geographical areas or subsidy categories</i> • <i>Description and explanations with regard to particular problems encountered, e.g., methodologies or data availability</i> • <i>Appraisal of the validity and reliability of the study results</i> 	2
2	THE MACROECONOMIC FRAMEWORK <ul style="list-style-type: none"> • <i>Brief description of the main economic and policy aspects</i> 	4
3	THE FISHERIES SECTOR <ul style="list-style-type: none"> • <i>Brief description of the fisheries sector</i> • <i>Inventory of the different economic activities of the different subsectors or groups of operators</i> 	4 & 7
4	PRESENTATION OF RESULTS	4-6 & 9
4.1	Description and assessment of subsidies <ul style="list-style-type: none"> • <i>Categories 1-4</i> • <i>Government cost (revenue) and industry value</i> • <i>Observations with regard to longer-term effects</i> 	
4.2	Costs and earnings analysis	7
4.3	Comparative analysis and ratios	8
5	CONCLUSIONS AND RECOMMENDATIONS	10
	Bibliography	
	Appendices <ul style="list-style-type: none"> • <i>Terms of reference for the study</i> • <i>Details on methodologies and assumptions</i> • <i>Details of the results of the institutional survey and the fisheries sector review</i> • <i>Detailed descriptions of the investigated subsidies</i> 	

interesting information here, they are better kept to a minimum of issues, necessary for giving the context and framework of the subsidy identification and assessments. If we want to include more details, on, for example, the results of the institutional survey or the fisheries sector review, this may be better done in an appendix.

The exact subchapters to include in chapter 4, “Presentation of results”, will of course depend on the scope of our study but, most likely, a substantial part of the report will be on the “Description and assessment of subsidies”. Here we may want to present our findings in a summary listing (see Figure 6 and Figure 9) in addition to giving descriptions of the subsidies as well as explanations regarding the assumptions made for their assessment in the text. We may opt for including additional information on the subsidies (according to Table 2) and more details on the methodologies in an appendix to the report.

10.2 FISHERIES SUBSIDIES STUDY CONVENTIONS

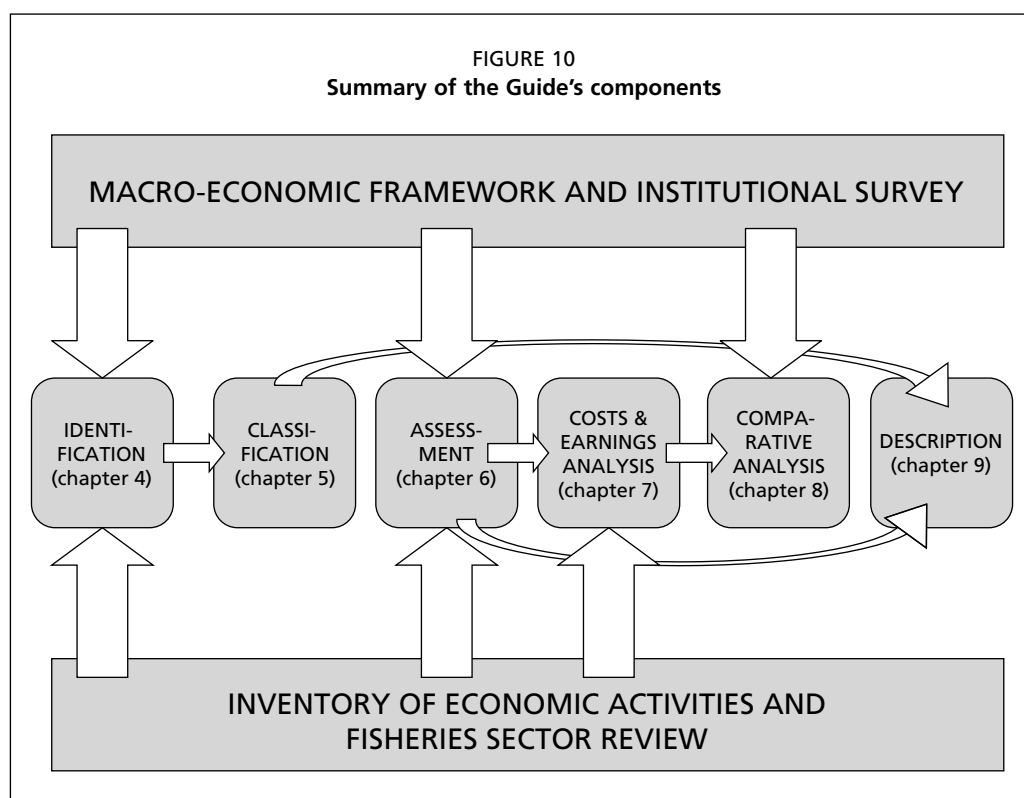
In section 4.2 where the context of the Guide’s subsidy definition was discussed, we noted that there is a lack of international standards and benchmarks to use for identifying and assessing subsidies in the fisheries sector. This shortcoming makes international analyses of subsidies difficult. Nonetheless, as was later discussed in section 5.6, international practice appears to move in a direction towards an increased general acceptance of a broader subsidies concept and the issue is widely discussed. Still, much more work is needed if we want to advance our knowledge on fisheries subsidies. This Guide is provided as a tool to help us in this work. It is, however, in many respects quite an open-ended document and leaves many decisions to the user. In the FAO Expert Consultation held in December 2002, discussing the draft Guide, it was agreed that a number of minimum reporting requirements should be formulated in order to try to steer international work on subsidies in the same direction and hence improve the collective results of the efforts. The following “conventions” on reporting practices were discussed and agreed on in the meeting for the consideration of governments conducting fisheries subsidies studies (FAO 2002):

- *First convention:* specify geographical and subsector scope of the study.
- *Second convention:* specify the criteria used in identifying the presence of a subsidy.
- *Third convention:* specify the benchmarks used to identify interest and tax-rebates and similar measures.
- *Fourth convention:* specify the allocation keys used for joint subsidies included in the study.
- *Fifth convention:* specify if the “opportunity cost” for direct financial transfers has been included as a cost to the provider.
- *Sixth convention:* the industry value of financial transfers should be based on the actual government expenditure – depreciated over time if applicable – and the financial cost the industry has avoided by receiving the transfer.
- *Seventh convention:* goods and services provided to a recipient are considered to have a value corresponding to the difference between what the recipient should have paid for the equivalent goods and/or services if provided in the market and what he/she in fact paid to the public provider.

Accordingly, the Guide recommends adhering to these conventions when reporting on fisheries subsidies.

10.3 SUMMARY OF THE GUIDE

Fisheries subsidies studies can have different objectives and scopes and thus consist of different components. In this Guide, we have discussed those that are felt to be the most important ones. It is of course up to the user of the Guide to decide which parts of the Guide that are most relevant to his or her particular study. Figure 10 summarizes



the different components as they have been presented in the Guide and stresses the importance of collecting information both from the public sector and the fisheries industry.

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Appendix I

Glossary

AD VALOREM TAX

An indirect tax that is expressed as a percentage of the selling price. An example of an ad valorem tax would be the Value Added Tax (VAT).

CASH FLOW

A record of an organization's liquidity, i.e. the flow of money payments (cash income and cash payments).

DEPRECIATION

The decline in value of an asset due to wear, age or technological obsolescence over its economic life span. Depreciation applies both to tangible assets, such as inventory or machinery, as well as intangible assets, e.g. copyrights, licences or leases. For accounting and tax purposes, standardized methodologies for calculating annual depreciation costs are often used that do not necessarily reflect the true economic depreciation.

DIRECT FOREIGN INVESTMENT

Acquisition or construction of physical capital by a firm from one country in another country.

EXCHANGE RATE

Rate at which one currency may be converted into another. Also called rate of exchange or foreign exchange rate or currency exchange rate.

EXTERNALITIES

Externalities – or spillover effects – are costs and benefits imposed by firms or people on others outside the market place. These costs and benefits are not accounted for in the price and market system. For example, people living near a polluting factory are not – as a third party – compensated for the reduction in their welfare the pollution causes them.

FISHERIES INDUSTRY (AS OPPOSED TO PUBLIC ADMINISTRATION)

All productive sub-sectors of the fisheries and aquaculture sector comprising recreational, subsistence and commercial fishing, and including the harvesting, processing, and marketing sectors.

FIXED ASSET

A long-term asset that is not expected to be converted into cash in the current or upcoming fiscal year. Fixed assets can be both tangible assets, such as fishing vessels, processing plants and real estate, as well as intangible assets, e.g. goodwill, patents and share holdings.

FIXED COSTS

Production costs that do not vary with the output quantity. Fixed costs could include building or office rent and marketing costs.

EQUITY CAPITAL

The equity of a company is the residual value of its assets after all outside liabilities (other than to shareholders) have been allowed for. Ordinary shares in a company are popularly called equities. Government equity capital occurs when the government is the investor.

GROSS MARGIN

Gross margin is a financial ratio describing the gross profit. It is expressed as a percentage and is calculated as the gross income (operating income before depreciation) divided by total sales.

INTER-BANK OFFERED RATE (IBOR)

The interest rate at which first-class international banks are offered loans.

ITQ (INDIVIDUAL TRANSFERABLE QUOTA)

A type of quota (a part of a Total Allowable Catch) allocated to individual fishermen or vessel owners and which can be sold to others.

MARKET PRICES

In economic terms, the market price is the price at which the market is in equilibrium, i.e. at which supply and demand converge. In more general terms, the market price is the price at which products and services are generally available to consumers in a market economy.

OPPORTUNITY COSTS

The benefit foregone by using a scarce resource for one purpose instead for its next best alternative.

OVERHEAD (COSTS)

Another term used for fixed costs but generally also including costs such as electricity and postage that may vary with output.

PROFIT MARGIN

Profit margin is a profit ratio expressing the profit as a percentage of total sales. It is calculated by dividing income before extraordinary items and interest expenses by total sales.

RESOURCE RENT

In the fisheries context, the resource rent is the value to fishers of the fish in the water before they are caught. This value is the difference between the total revenues obtained from the fishery resource and the total costs of production, including a reasonable profit. The rent is hence often considered a “surplus” profit.

SHADOW PRICES

The opportunity cost to society in engaging in an economic activity. The concept is used when actual prices cannot be charged or when the actual price does not reflect the real scarcity value of a good or a service.

USURY RATE

An illegally high interest rate on a loan.

VALUE-ADDED

The value that has been added to a good through production or processing, i.e., the value of the final good minus the costs for buying raw materials and intermediate goods.

VARIABLE COSTS

Production costs that vary with the quantity of output. If output increases, then the variable costs will increase.

Appendix II: Other subsidy classifications

There are many ways of classifying subsidies and also many possible subcategories available. Some of the main aspects found in the literature according to which subsidies can be classified are:

- **Modalities**

Classification according to *how the subsidy works*, i.e., what mechanism it has in the fisheries sector. In their report on subsidies and support programmes in the APEC countries, PricewaterhouseCoopers (2000, page 8) has developed a list of six modality categories, i.e.:

- Direct assistance to fishers and fish workers
- Lending support programmes
- Tax preferences and insurance support programmes
- Capital and infrastructure support programmes
- Marketing and price support programmes
- Fisheries management and conservation programmes

OECD also classifies subsidies (GFTs) according to how the transfers are implemented, i.e., as Market price support, Direct payments, Cost reducing transfers or as General services. The latter covers the subcategories fisheries management, enforcement and research (OECD 2000).

- **Application**

Classification according to *where in the fisheries sector the subsidy exists*. PricewaterhouseCoopers (2000, page 9) defines three subsectors, i.e., Capture fisheries, Aquaculture and Fish processing. In cases where the industry is vertically integrated to a high degree, it may at times be difficult to clearly define the limits between the different subsectors.

- **Origin and specificity**

Classification according to *which government body is funding the subsidy* – a fishery specific department or institution such as the Ministry of Fisheries, or one not directly related to fisheries – and whether the subsidy is specific for the fisheries sector or available also to other sectors. Subsidies can also be divided into local, national or regional subsidies. Milazzo (1998) reports on two types of “cross-sectoral subsidies”: aid to shipbuilding and infrastructure development. Support to an underdeveloped geographic region, such as the Norwegian Industrial and Regional Development Fund, is an example of a subsidy benefiting the fisheries sector even though not targeting it directly (EEC 1997). A change in monetary policies, e.g., of interest rates, or in tax rates also affects the fisheries industry even if the intervention is general and originates outside the fisheries sector (Schrunk and Keithly Jr. 1999).

- **Small scale vs. Large scale**

Classification according to the monetary *importance of the subsidy*, either with regard to the total public expenditure or the benefits to single operators (PricewaterhouseCoopers 2000).

- **Short- vs. Longer-term**

Classification according to *within what time frame the subsidy is affecting the profits* of the industry. Subsidies implying changes in capital usually mean longer-term effects. However, the issue is complex and the long-term effect can be defined in different ways. For example, a scheme subsidizing investment in fishing vessels will have both a short-term and a longer-term effect on the profits of the industry since it implies a change in capital. At the same time, it is known that with an increasing total fishing capacity, the rents from the fishery – and hence its profitability – will eventually diminish and in a further perspective the impact of the subsidy on profitability may be negative (Schrang and Keithly Jr. 1999). Moreover, subsidies are likely to have more implicit effects on efficiency in general and short-term effects on profits will over time translate into the overall economic sustainability of the activity.

- **Budgetary vs. Non-budgetary**

Classification according to *whether the subsidy is identifiable in the Government budget*, e.g., the budget of a fisheries agency or department, or un-/under-budgeted, for example subsidized lending or tax preferences. This latter category may also include subsidies from non-fisheries agencies (Milazzo 1998).

- **“Normal” subsidies vs. Conservation subsidies**

Classification according to *whether the subsidies tend to increase production, e.g., the harvesting capacity, or whether they favourably affect the environment*, aiming at decreasing fishing operations and enhancing the resource base. The former are often called “bad” subsidies while the latter are commonly considered to be “good” (Milazzo 1998).

- **Profit-enhancing vs. Profit-decreasing subsidies**

Classification according to *whether it is a subsidy that tends to increase the industry's profits, e.g., a grant or a loan guarantee, or a subsidy reducing profits, e.g., taxes*. It should be noted, though, that a subsidy that is profit-decreasing – i.e. negative – to the fishing industry would be expected to be positive to society as a whole through positive effects accruing to other sectors. Likewise, externalities resulting from subsidies in other sectors can be negative subsidies for the fisheries industry (Schrang and Keithly Jr. 1999). Individual negative and positive subsidies sometimes cancel each other out. For example, a government levy on landed fish could be classified as a negative subsidy but if it finances a fish price support scheme of which the benefits accrue to the fishers paying the levy, the two programmes together constitute a self-financing activity rather than subsidies. Still, the government regulations supporting the activity can be classified as a subsidy since this is a government intervention affecting the profits of the industry.

- **Cost reducing vs. Income increasing**

Classification according to *how the subsidy influences the profits of the industry*. In a communication to the WTO, the United States differentiated between Subsidies that reduce capital (fixed) and operating (variable) costs, and Subsidies that support incomes and prices (WTO Committee of Trade and Environment, 1999/2000). This classification can be further broken down and subsidies classified according to what type of earnings and costs that are affected by the subsidy.

Appendix III: More examples of possible subsidies of different categories²⁰

CATEGORY 1

- Grants to purchase new or old vessels, or to modernize
- Income support, unemployment insurance and income guarantee payments
- Vessel decommissioning payments
- Licence, permit and quota buyouts and retirement grants
- Compensation for closed or reduced seasons
- Gear conflict compensation programmes
- Disaster relief payments to fishers
- Equity infusions to fish processing, harvesting or aquaculture firms by governments
- Price support payments to fishers
- Grants to small fisheries and direct aid to participants in specific fisheries
- Grants to establish joint ventures
- Support to improve economic efficiency
- Grants for safety equipment
- Direct export incentives
- Grants for retraining fishers for other industries
- Bad weather unemployment compensation schemes
- Taxes (*negative*)
- Import/export duties (*negative*)
- Compensation for damages
- Investment grants for pond construction
- Grants for temporarily withdrawing fishing vessels
- Vacation support payments
- Payments to reduce accounting costs
- Matching contributions for private sector investment
- Transport subsidies

CATEGORY 2

- Government funded health programmes specific to fisheries
- Payments to foreign governments to secure access to fishing grounds
- Fishery-specific infrastructure, e.g. fish markets, landing sites and ports
- Provision of bait services
- Gear development
- Support to community based management, regional development and producer organizations
- Fuel tax exemptions for vessel fuel
- Sales tax exemptions
- Special income tax deductions for fishers

²⁰ From FAO Fisheries Department/FIPP (internal working document) and prototype studies.

- Tax exemptions for deep-sea fisheries
- Deferred tax programmes
- Investment tax credits
- Loans made on favourable terms
- Government guarantees of bank loans
- Fishers' insurance programmes or subsidized insurance
- Market promotion programmes
- Support to consultative groups and mechanisms
- Government funded research and development programmes
- Reduced charges by government agencies
- Sales of commodities to fishers at less than market price
- Information collection, analysis and dissemination
- Promotion and development of fisheries
- Exploratory fishing and gear development
- Fisheries enhancement including support for artificial reefs
- Research on deep-sea fishing
- International fisheries cooperation
- Regional development programmes
- Price support systems
- Promotion of fish consumption
- Free trade zones
- Market research
- Inspection and certification services
- Training and extension services
- Provision of seeds and feed for aquaculture

CATEGORY 3

- Hatchery and fish habitat programmes
- Environmental regulations
- Enhancement of the fisheries community environment
- Technology transfers
- Protection of marine areas
- Gear regulations (e.g. TEDs)
- Food safety and hygiene regulations
- Input and output regulations
- Tariffs and tariff quotas
- Import quotas
- Waivers of import duties
- Ownership restrictions
- Allocation of catch quotas only to national fishers
- Chemical and drugs regulations for aquaculture
- Production and feed quota schemes in aquaculture
- Licence requirements for fish farming
- Veterinary surveillance requirements for aquaculture
- Regulations with regard to the escape of fish in aquaculture
- Record keeping and reporting requirements
- Nationality and residence requirements for company officials/managers and crew
- Landing bans
- Prohibitions on foreign direct investment
- Fisheries management

CATEGORY 4

- Free or below market price resource access
- Lack of implementation of fish quality standards
- Fisheries registration fees not collected
- Non-enforcement of existing regulations
- Lack of pollution control
- No requirement of certificate of competence or fisherman's licence
- Use of free public services, e.g. water; sewerage services, for fishers