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y la
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TECHNICAL CONSULTATION ON THE USE OF SUBSIDIES IN THE FISHERIES SECTOR

Rome, Italy, 30 June – 2 July 2004

A SUMMARY OF RECENT WORK ON SUBSIDIES IN THE FISHING SECTOR

ABSTRACT

During the last decade governments, intergovernmental organizations and non-governmental organizations have carried out work on environmental, social and economic effects of subsidies. This document gives an account of recent work and future plans of nine of them: the Asia-Pacific Economic Cooperation; the Association of Southeast Asian Nations; the Caribbean Community; the Permanent Commission for the South Pacific; the Food and Agriculture Organization of the United Nations; the Organization for Economic Co-operation and Development; the United Nations Environment Programme; the World Trade Organization; and, the World Wide Fund for Nature.

ABBREVIATIONS

APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
ASWGF ⁱ	ASEAN Sectoral Working Group on Fisheries
CARICOM	Caribbean Community
CIAT	International Centre for Tropical Agriculture
COFI	FAO Committee on Fisheries
CPPS	Permanent Commission for the South Pacific
CTE	Committee on Trade and Environment (WTO)
CRFM	Caribbean Regional Fisheries Mechanism (CARICOM)
CRNM	Caribbean Regional Negotiating Machinery (CARICOM)
DMD	The Doha Ministerial Declaration (WTO)
EVSL	Early Voluntary Sectoral Liberalisation (APEC)
FIP	Fishery Policy and Planning Division (FAO)
GFT	Government Financial Transfer
IGO	Intergovernmental Organization
IUU	Illegal, unreported and unregulated (fishing)
NGO	Non-Governmental Organization
OECD	Organization for Economic Co-operation and Development
OLDEPESCA	Latin-American Organization for Fisheries Development
SADC	Southern African Development Community
SCM	Agreement on Subsidies and Countervailing Measures (WTO)
SEAFDEC	Southeast Asian Fisheries Development Center
UNEP	United Nations Environment Programme
WSSD	World Summit on Sustainable Development
WTO	World Trade Organization
WWF	World Wide Fund for Nature

I. INTRODUCTION

The interest in fisheries subsidies in international fora continues to increase and work on environmental, economic and social effects of subsidies is carried out by many organizations and institutes. At the World Trade Organization (WTO), the ongoing negotiations cover the improvement of the disciplines on fisheries subsidies. In the World Summit for Sustainable Development (WSSD) in September 2002, fisheries subsidies were identified as an important issue in relation to sustainable fisheries and in the Summit's Plan of Implementation governments were called upon to take action.

The FAO Fisheries Department has for some time been taking the initiative to promote cooperation among intergovernmental organizations (IGOs) with regard to work on subsidies in fisheries. On 23-25 July 2003, the department organised its third *ad hoc* meeting on work programmes related to fisheries subsidies. As a background paper for the meeting, a report entitled "Effects and impacts of subsidies: A review of missions and methods" was prepared. The document gave an account of the ongoing work of selected IGOs in the field of fisheries subsidies. It also discussed possible synergies and links between the work of the different organizations and gave suggestions for future cooperation.

The present document is an updated version of the earlier report and its purpose is to give a thorough overview of current activities and recent achievements by the IGO community as well as by other organizations and institutes involved in work on subsidies in fisheries.

After this brief introduction, chapter 2 gives an account of current plans and progress made in international work on fisheries subsidies. The various organizations covered are presented in alphabetical order. Some of the academic work published recently is also briefly reviewed.

II. REVIEW OF WORK PROGRAMMES OF SELECTED ORGANIZATIONS

A. APEC – ASIA-PACIFIC ECONOMIC COOPERATION¹

The issue of subsidies has been on the agenda of the annual ministerial meetings attended by the leaders of the 21 APEC member economies for some time. Within the context of trade promotion and investment liberalisation, official statements supporting the abolition of subsidies have been made in recent "Economic Leaders' Declarations"².

The fisheries sector was one of the sectors targeted for accelerated trade liberalisation within the Early Voluntary Sectoral Liberalisation (EVSL) initiative in the region. At the request of their trade ministers, the APEC Fisheries Working Group initiated a project in 1997 that included the

¹ This section is based on information provided by Mr. S. Tinkham of the APEC Fisheries Working Group and on documents available at the APEC website.

² See www.apecsec.org.sg/apec/leaders_declarations.html

reporting of tariffs on fish and fish products in the various member economies. A second step of the project covered non-tariff barriers but most economies failed to report on these. A study on subsidies and support programmes in the fisheries sector was carried out in 1999³. The study included an inventory and a categorisation of subsidies and looked into the implications of subsidies on international trade and fisheries.

The definition of subsidies adopted in the study was rather broad and included fisheries management, conservation, enforcement and research and development. With regard to the categorisation, subsidy programmes were classified according to:

- the modality of the subsidy – how the programme operates, i.e.:
 - direct assistance to fishers and fisheries 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;
- the application of the subsidy – where in the fisheries sector the programme is used (capture fisheries, aquaculture or fish processing);
- the scale of the subsidy – whether the programme is “small-scale” or “large-scale”⁴.

Data were collected from Internet sources and published literature, with a questionnaire survey and from interviews. Information on subsidies was available in 19 of the 21 APEC member countries and a total 162 subsidy programmes were identified. The policy objectives of these programmes were reviewed and the programmes grouped according to whether they were based on a policy objective implying an increased pressure on fish stocks or a decreased pressure. However, case studies carried out in relation to the study showed that the effects were not always evident and that a support programme intending to be positive for fisheries sustainability did not necessarily have the desired effect. The study does hence not give any conclusions with regard to whether the different subsidies in the region are “bad” or “good”. The programmes were also assessed in the light of the WTO Agreement on Subsidies and Countervailing Measures (SCM).

B. ASEAN – ASSOCIATION OF SOUTHEAST ASIAN NATIONS⁵

The issue of fisheries subsidies is addressed by the ASEAN member countries through the ASEAN Sectoral Working Group on Fisheries (ASWGF_i) under the “Program on Fish Trade”. It is also included in the agenda for the collaboration with the Southeast Asian Fisheries Development Center (SEAFDEC) in the ASEAN-SEAFDEC Fisheries Consultative Group. In the ASEAN-SEAFDEC Conference on Sustainable Fisheries for Food Security in the New Millennium, “Fish for the People”, in November 2001, it was agreed that the ASEAN member countries should assess the impact of subsidies on fisheries, in particular in relation to the needs of small-scale fisheries. Towards this end, the ASEAN member countries intend to:

- Carry out empirical studies on the impact of fisheries subsidies on resource sustainability and trade;
- Review available experience on how to phase out subsidies;

³ PricewaterhouseCoopers, 2000. Study into the nature and extent of subsidies in the fisheries sector of APEC Member Economies. CTI 07/99. Prepared for Fisheries Working Group, Asia Pacific Economic Co-operation (APEC).

⁴ Small-scale: less than USD 10 million in total or less than USD 1 million per recipient.

Large-scale: more than USD 10 million in total or more than USD 1 million per recipient.

⁵ This section draws on information provided by Mr. Somsak Pippopinyo of the ASEAN Secretariat and by Mr. Suriyan Vichitkarn of the SEAFDEC Secretariat.

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- Collect information on fisheries subsidies;
 - Develop a common ASEAN position with regard to a classification system for fisheries subsidies that can be used in the forthcoming WTO negotiations.

ASEAN and SEAFDEC organised a Regional Technical Consultation on Fisheries Subsidies on 9-10 October 2003 in Bangkok. The objective of the consultation was to monitor the status of government fisheries subsidies in the region and to review the progress of international work on the issue. The meeting also constituted a forum in which ASEAN member countries could start to discuss common positions and policies in international discussions on fisheries subsidies.

In the consultation, the ASEAN member countries stressed the importance of having effective fisheries management systems in place for ensuring the sustainability of fisheries. Fisheries are important to food security and to the livelihoods of the people in the region. Fisheries subsidies are often used as a tool in a broader national development context with a view to ensure a sustainable use of resources. It was recognised that the application of subsidies should be accompanied by close monitoring of their environmental and socio-economic impact. This impact is likely to be different in different countries. It was also agreed that certain subsidies should be removed, i.e. those contributing to the overexploitation of resources, while others – contributing to sustainable fisheries and poverty alleviation – should be permitted.

The consultation recommended that the SEAFDEC Secretariat should assist member countries to obtain information on international initiatives with regard to fisheries subsidies. It was also agreed that the ASEAN member countries should develop a common policy in relation to discussions in international fora, e.g. for the FAO Technical Consultation on the Use of Fisheries Subsidies to be organised in Rome on 30 June – 2 July 2004.

The outcome of the consultation was reviewed at the Regional Meeting on Fish Trade and Environment held on 16-18 March 2004. The meeting reconfirmed the conclusions and recommendations of the consultation. The results of the consultation were also noted in the 6th meeting of the ASEAN-SEAFDEC Fisheries Consultative Group on 5 April 2004 and, subsequently, in the 36th Meeting of the SEAFDEC Council (6-9 April 2004, Bangkok, Thailand) and in the 12th Meeting of the ASWGFi (20-22 April 2004, Penang, Malaysia). The importance of agreeing on a common position for the ASEAN countries in international discussions was stressed again. It was also suggested that due consideration should be given to the socio-economic importance of fisheries subsidies in the current WTO negotiations and that any proposal against the use of fisheries subsidies not supported by sufficient scientific evidence and/or undermining on-going national resource management should not be supported.

C. CARICOM – CARIBBEAN COMMUNITY⁶

There is a growing interest in fisheries subsidies in the Caribbean Community even though little data and information are available on the actual extent and impact of fisheries subsidies in the region. Work on fisheries in the region is coordinated by the Caribbean Regional Fisheries Mechanism (CRFM) by whom steps are being taken to improve the collection of social and economic data on fisheries. The Caribbean Regional Negotiating Machinery (CRNM) is involved in conducting studies on the impact of trade liberalisation on the CARICOM countries and is advising these countries on matters related to trade and trade negotiations.

⁶ This section is based on information given by Mr. M. Haughton of the CRFM and by Mr. R. Chatioo of the CRNM.

The CRFM is interested in clarifying and improving the understanding of fisheries subsidies and their relationship to exploitation of fishery resources and to trade distortions. The CRFM feels that there is a need to improve the disciplines on subsidies in the fisheries sector within the context of the WTO negotiations. It is also felt that the situation of small-island states is special and that differential treatment may be needed regarding future subsidy regimes. A study is currently being undertaken by the CRFM analysing the likely effects of globalisation on fisheries development in the CARICOM countries and on trade in fish and fish products. The study will identify critical issues with regard to fisheries and trade policies and propose a strategy for addressing possible obstacles to the development of the sector and to the opportunities to benefit from current trade negotiations. This work will also include looking into the aspect of fisheries subsidies, i.e. by identifying and documenting the nature and extent of:

- existing subsidies and other forms of economic incentives provided to the fisheries sector;
- the impact of these subsidies on the sustainability of fishery resources;
- the impact of these subsidies on trade in fish and fish products.

The draft report is expected to be ready at the end of May 2004.

The CRFM has also requested the CRNM to organise a workshop on environmental and trade issues involving fisheries, including fisheries subsidies aspects. The CRNM has received a similar request from a regional NGO, the Caribbean Conservation Association, and is now considering organising a joint workshop in the middle of 2004.

D. CPPS – PERMANENT COMMISSION FOR THE SOUTH PACIFIC⁷

The CPPS plays an important role with regard to maritime policy coordination for its four member countries Chile, Colombia, Ecuador and Peru. Although the level of subsidisation in the fisheries sector in the region has reportedly decreased, the organization takes a keen interest in the subject and recognises the impact on international trade, the environment and sustainable development that subsidies are likely to have.

A CPPS workshop on fisheries subsidies was organised in Valparaíso, Chile, on 21-22 October 2003. The purpose of the meeting was to increase the participants' knowledge of the impact of fisheries subsidies and to inform them of the status of current international work in this field. The meeting also gave the CPPS member countries an occasion to present their views and national policies with regard to fisheries subsidies. National experts from both the public sector and private industry in Chile, Ecuador and Peru⁸ participated in the meeting and representatives for the Latin-American Organization for Fisheries Development (OLDEPESCA) and for FAO attended as observers.

The experts at the meeting deemed fisheries subsidies potentially harmful for international trade and sustainable development. Based on this consideration, a number of recommendations to the CPPS Assembly were formulated, i.e.:

- To consider taking a proactive role on the subsidies issue and develop a regional strategy based on the mandate emanating from the Santiago Declaration of 2002.

⁷ This section is based on information by Mr. Alfonso Jalil Alvarez, Economic Director CPPS.

⁸ Colombia, the fourth CPPS member country, could not attend.

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- To support the undertaking of specific case studies (e.g. on Ecuador's tuna fishery) on the quantitative effects of fisheries subsidies.
 - To strengthen the relationship between CPPS and FAO, OLDEPESCA, CIAT and other international bodies in order to better coordinate work on the fisheries subsidies issue in the region.
 - To encourage and seek mutual support of Member Countries in multilateral discussions related to subsidies (i.e. WTO).
 - To consolidate the working group emerging from the workshop and establish it as a permanent consultative body to the CPPS with regard to fisheries subsidies issues.
 - To inform other intergovernmental and regional organizations and neighbouring countries of the results of the work by CPPS on fisheries subsidies.
 - To improve the knowledge of the FAO "Guide for Identifying, Assessing and Reporting on Subsidies in the Fisheries Sector"⁹ in the Member Countries of the CPPS in order to facilitate its use.
 - To request FAO to assist Member Countries in enhancing their capacities with regard to developing methodologies for evaluating the impact of subsidies in the South Pacific Region.

The CPPS Assembly has reviewed the recommendations and they were formally approved in November 2003. Another workshop is scheduled for October 2004 for discussing the implementation of the FAO Guide and the carrying out of regional case studies.

E. FAO – FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

The FAO Fisheries Department's work on subsidies is coordinated by its Fishery Policy and Planning Division (FIP). The department receives its mandate from the Committee on Fisheries (COFI). Already in 1992, FAO pointed out that subsidies were having negative effects on capture fisheries. In the 23rd Session of the FAO Committee on Fisheries (COFI) in 1999, explicit references were made to FAO's role in analysing these effects. Based on this mandate, the work on fisheries subsidies undertaken by the department has since focused on two aspects, i.e.:

- Promotion of cooperation and coordination of work on fisheries subsidies within the IGO community.
- Technical work contributing to an improved understanding of the effects of fisheries subsidies, e.g.:
 - Organization of an Expert Consultation on Economic Incentives and Responsible Fisheries.
 - Development of a technical tool, i.e. guidelines for identifying, assessing and reporting on subsidies in the fisheries sector.
 - Formulation of terms of reference for future empirical and analytical work.
 - Organization of a Technical Intergovernmental Consultation on the Use of Subsidies in the Fisheries Sector.

(i) Promotion of cooperation and coordination of work with other international organizations

Since 1999, the FAO Fisheries Department has been reporting on its work with regard to fisheries subsidies at all major relevant international meetings. The department has also at three occasions – in 2001, 2002 and 2003 – organised meetings for intergovernmental organizations to discuss

⁹ See section II.E

work programmes related to subsidies in fisheries. The purpose of these meetings have been to provide a forum for exchanging views and information and for discussing cooperation and collaboration.¹⁰

(ii) Expert Consultation on Economic Incentives and Responsible Fisheries

An Expert Consultation on the issue of fisheries subsidies was organised by the Fisheries Department on 28 November – 1 December 2000. The preparations for the Expert Consultation included a thorough inventory of ongoing research activities and existing literature on fisheries subsidies and their effects. Four desk studies were carried out reviewing, among other things, forms and definitions of subsidies. In the consultation, the experts were asked to find an operational definition of subsidies and to identify ways and strategies by which more could be learnt about the effects of subsidies in a practical and affordable manner.

The consultation was not able to produce an exclusive definition of fisheries subsidies that could be used for measurement, analysis and political debate. None of the existing definitions in common use were found to be adequate. Instead, it was concluded that four different sets of subsidies needed to be defined in order to advance the measurement, analysis and discussion of subsidies in fisheries and aquaculture. The consultation recommended that any analysis and discussion on this issue state explicitly which of the four proposed sets of subsidies were considered¹¹. The consultation also concluded that there was very little empirical evidence of the direct relationship between subsidies to the fisheries industry and harmful effects on the aquatic resources. Moreover, the current state of knowledge on the magnitude of subsidies and their impact on trade was found to be limited.

(iii) Guide for identifying, assessing and reporting on subsidies in the fisheries sector

In response to the conclusions of the Expert Consultation and in accordance with the recommendations made by COFI in 2001, guidelines were developed for assisting governments and institutes in studying fisheries subsidies. These guidelines – presented in the document *Guide for Identifying, Assessing and Reporting on Subsidies in the Fisheries Sector*¹² – are designed to be a practical and flexible tool for those who carry out studies and prepare reports on subsidies in the fisheries sector. However, the Guide does not cover the analysis of the effects of subsidies on resources, fisheries or trade, but aims at assisting in collecting and organising the data on which these analyses would be based. This covers defining, classifying and quantifying fisheries subsidies as well as investigating the processes by which subsidies are provided. Considering the

¹⁰ FAO, 2201. Report of the *ad hoc* Meeting of Intergovernmental Organizations on Work Programmes Related to Subsidies in Fisheries. Rome, 21-22 May 2001. *FAO Fisheries Report No. 649*. FAO, Rome.

and

FAO, 2002. Report of the Second *ad hoc* Meeting of Intergovernmental Organizations on Work Programmes Related to Subsidies in Fisheries. Rome, 4-5 July 2002. *FAO Fisheries Report No. 688*. FAO, Rome.

and

FAO, 2003. Report of the Third *ad hoc* Meeting of Intergovernmental Organizations on Work Programmes Related to Subsidies in Fisheries. Rome, 23-25 July 2003. *FAO Fisheries Report No. 719*. FAO, Rome.

¹¹ FAO, 2000. Report on the Expert Consultation on Economic Incentives and Responsible Fisheries. FAO Fisheries Report no 638. Rome (paragraphs 13 and 31).

¹² The Guide is currently (2004) being printed in the FAO Fisheries Technical Paper series, see Westlund, L., (in press). *Guide for Identifying, Assessing and Reporting on Subsidies in the Fisheries Sector. FAO Fisheries Technical Paper No. 438*, FAO, Rome.

lack of quantitative data on fisheries subsidies, it was felt that this approach was a necessary first step towards an in-depth analysis of the impact of subsidies.

The Guide adheres to the main principles that were agreed on in the “FAO Expert Consultation on Economic Incentives and Responsible Fisheries”. In early 2002, a preliminary draft Guide was prepared, based on available literature and information. This draft was then tested by the carrying out of prototype studies in four different countries after which it was revised to incorporate the experience from the test studies. The definitions and methodologies presented in the Guide were thus developed by combining available theoretical knowledge with practical experience. A final draft version of the Guide was discussed in a second Expert Consultation in December 2002 before the document was finalised¹³.

The Guide proposes a broad definition of subsidies, including all government interventions – or lack of interventions – that affect the fisheries industry and that have an economic value. This economic value is interpreted as something having an impact on the costs or revenues of the fisheries industry. The action, or non-action, should also be something that is out of normal practice, i.e. something that does not apply generally to other industries. The Guide does not take any position with regard to whether a subsidy is “good” or “bad”; subsidies are only seen as government actions, or non-actions, that increase or decrease revenues and costs of the industry.

Four categories of subsidies are defined in the Guide, i.e.:

- 1 Direct financial transfers (investment grants, grants for safety equipment, vessel decommissioning programmes, equity infusions, income guarantee schemes, disaster relief payments, price support, direct export incentives, etc).
- 2 Services and indirect transfers (investment loans on favourable terms, loan guarantees, ports and landing site facilities, payments to foreign governments to secure access to fishing grounds, government funded research and development programmes, international cooperation and negotiations, fuel tax exemptions, etc.).
- 3 Regulations (import quotas, direct foreign investment restrictions, environmental protection programmes, gear regulations, chemicals and drugs regulations, fisheries management, etc.).
- 4 Lack of intervention (free access to fishing grounds, lack of pollution control, lack of management measures, non implementation of existing regulations, etc.).

With regard to assessing subsidies, the Guide uses two complementary approaches for measuring the value of a subsidy: based on the cost (revenue) to the government and estimated according to the value to the industry. These values are often different and in an analysis of the impact of subsidies, it is probably the latter that is of most interest.

The Guide also gives recommendations on how to examine the effect of subsidies on industry profits in more detail, what comparative analyses that could be made with the information collected with the help of the Guide, and how to describe and report on subsidies.

(iv) Future activities

¹³ FAO, 2003. Report of the Expert Consultation on Identifying, Assessing and Reporting of Subsidies in the Fishing Industry, 3-6 December 2002. *FAO Fisheries Report No. 696*. FAO, Rome.

The Expert Consultation in 2002 that reviewed the final draft of the Guide strongly recommended that FAO should support the use of the Guide. It was also suggested that FAO undertake analytical and empirical work with regard to the effects of subsidies. These recommendations were endorsed by the 25th Session of COFI that in fact urged the Fisheries Department to accelerate its work regarding the impact of subsidies on fisheries resource sustainability and sustainable development. Reference was also made to the aspects of overcapacity and IUU fishing.

Consequently, as a next step in investigating the impact of fisheries subsidies, the FAO Fisheries Department is now proposing the implementation of a research project consisting of both theoretical and empirical work. The overall objective of the project will be to improve the current knowledge of the impact of subsidies on sustainable development and by what mechanisms these impacts are created. The project will consist of two main components:

- Descriptive and qualitative trend analysis of a number of selected subsidies and indicators by case studies of selected fisheries;
- Quantitative analysis of the effects of subsidies on target stocks and on capital, labour and profitability of the fishing industry through econometric modelling.

Operational aspects are crucial to the successful accomplishment of the project and the collaboration of member countries is indispensable. It is recognised that there may be issues regarding confidentiality and political equity from a geo-economic perspective. It should be stressed that the purpose of the study will be to produce information on the impacts of fisheries subsidies on fishing overcapacity, IUU fishing and sustainable development. They will not have the purpose to measure the present level of subsidisation of a specific fishery or fisheries sector. Moreover, studies will only be published with the consent of the respective governments. Regarding the selection of country studies, an adequate geo-economic balance (regional, developed and developing countries) will be taken into account.

F. OECD – ORGANIZATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT¹⁴

OECD has been taking an increasing interest in fisheries subsidies during the last ten years and there are several important activities. These are generally coordinated by the Fisheries Division of the Directorate of Food, Agriculture and Fisheries. The Directorate receives its mandate from the OECD Fisheries Committee but it also has close links and collaborates with other relevant directorates, e.g. the Directorates of Environment, of Trade and of Science, Technology and Industry. From 2001 to 2004, there was also an OECD Ad Hoc Group on Sustainable Development, whose Bureau was composed of the Chairs of the OECD Committees on Economic Policy, Environmental Policy and Social Affairs.

The main recent and current activities of the OECD relating to fisheries subsidies are:

- Collection of information on government financial transfers (GFTs) in member countries and the study “Transition to Responsible Fisheries”;
- Study on the liberalisation of fisheries markets;

¹⁴ The information presented here is based on information provided by Mr. A. Cox of the OECD Fisheries Division in May 2003 and on various OECD documents.

- Exploration of methods for identifying environmentally harmful subsidies and reducing the obstacles for their removal;
- Analysis of the broader effects of fisheries subsidies within a sustainable development paradigm.

These four activities are briefly presented below. It should be mentioned, though, that there are several issues cutting across the different activities and there are also links to other programmes and studies¹⁵.

(i) Information on government financial transfers (GFTs) and the “Transition to Responsible Fisheries” study

The OECD Fisheries Committee has made inventories of financial support and economic assistance to the fisheries sector in OECD member countries on several occasions since 1965. As part of a study called “Transition to Responsible Fisheries”, GFTs and their impact on resources were reviewed. More detailed data on GFTs were collected for the years 1996 and 1997 and the results were published in the final report of the study in 2000. Data for the years 1999-2001 have been included in the recently published “Review of Fisheries in OECD Countries: Volume 1 and 2 – 2003 Edition”. Information on GFTs will continue to be collected annually from member countries and published in the Review of Fisheries series.

In addition to collecting detailed information on GFTs, the “Transition to Responsible Fisheries” study also developed a definition of GFTs and a classification system for different types of transfers. GFTs were defined as “the monetary value of interventions associated with fisheries policies, whether they are from central, regional or local governments. GFTs include both on-budget and off-budget transfers to the fisheries sector”¹⁶. The classification system built on the different ways transfers are implemented and four main types of GFTs were defined¹⁷:

- Direct payments (grants, decommissioning payments, income support, unemployment insurance, etc.);
- Cost-reducing transfers (fuel tax exemptions, subsidised loans, transport subsidies, income tax deductions, loan guarantees, government payments for access to others countries’ waters, etc.);
- General services (research, management and enforcement expenditures, market interventions schemes, support to build port facilities for commercial fishers, payments to producer organizations, etc.);
- Market price support (generally trade restrictions leading to differences between world market and domestic prices constituting transfers from consumers and taxpayers to fishers).

¹⁵ For example, the work on Environmental, Economic and Social Issues of IUU/FOC fishing (workshop held on 19-20 April 2004).

¹⁶ Page 4, Cox, A., 2002. OECD workshop on environmentally harmful subsidies – OECD work on identifying and measuring subsidies in fisheries, 7-8 November 2002. SG/SD/RD(2002)5, Paris.

¹⁷ In the “Transition to Responsible Fisheries” study, GFTs were also categorised according to the objective of the programme under which the transfer was made, i.e. fisheries infrastructure; management, research, enforcement and enhancement; access to other countries’ waters; decommissioning of vessels and licence retirement; investment and modernisation; income support and unemployment insurance; taxation exemptions; and other objectives.

The fourth category – market price support – although defined and included in the classification framework, was not covered in the study but was later addressed in the fisheries markets liberalisation study (see below). An additional component, related to the category of general services, was included: cost recovery. This component allowed countries to report on the extent to which management costs are recovered from the industry.

With regard to the impact of GFTs on resources, the results of the study showed that the management regime under which a transfer scheme is implemented is very important in determining its effects. This relation between management and subsidies has been further investigated in subsequent work (see below).

The GFT data collected and reported by the OECD countries have so far mainly concerned the marine capture fisheries subsector. Information on the aquaculture, processing and marketing subsectors has been collected where available but has not been reported publicly to date. The OECD Secretariat has identified scope for improving the data collection in the future. The main areas of concern include the lack of independent validation of information provided by countries, an insufficient level of detail for more in-depth analysis and the absence of certain types of data.

(ii) The fisheries markets liberalisation study

The document “Liberalising Fisheries Markets: Scope and Effects” was published in early 2003 and presented the results of the study on fisheries markets liberalisation. The objective of the study was to analyse “how fisheries trade and production are likely to be affected by reductions in present tariff levels and by changes in non-tariff barriers”¹⁸. In addition, the study looked into the effects of changes in restrictions on investment, access to services and subsidies. The need to contribute to the WTO negotiations was taken into account when the study was formulated.

With regard to subsidies to the capture fisheries sector, the results of the study confirmed the outcome of the “Transition to Responsible Fisheries” study and showed that the effect of GFTs on trade and catches is strongly influenced by the type of management regime in place. Professor R. Hannesson assisted the study with regard to the development of the analytical framework showing the implications of different management regimes on the effects on trade and resources. However, although this framework helped bringing about some important insights, it was noted that it contained a number of assumptions that do not necessarily reflect the real world and hence restrict the depth of analysis. The need to develop the framework further was recognized and OECD is now continuing the analysis through its work on environmentally harmful subsidies and fisheries subsidies and sustainable development (see below).

(iii) Environmentally harmful subsidies

The Fisheries Division’s work on environmentally harmful subsidies contributes to the OECD programme on sustainable development and the fisheries sector is included as a case study sector

¹⁸ Page 3, OECD, 2003. Liberalising fisheries markets: Scope and effects. Fisheries Division, Paris.

in the horizontal/cross-sectoral work programme on overcoming obstacles to policy reform initiated in 2001¹⁹.

In a workshop held in November 2002, a checklist methodology was developed as a policy tool for identifying those subsidies whose removal would benefit the environment. The testing of the approach has been one of the main focuses of the various sector case studies and the results of this work was discussed in a subsequent workshop in November 2003²⁰. The final outcome of the study will be reported to the OECD Ministerial Council meeting in May 2004.

The checklist approach focuses on the effects of subsidy removal on consumer and producer decisions and the link between these decisions and the environment. The main steps of the checklist are (see also Figure 1)²¹:

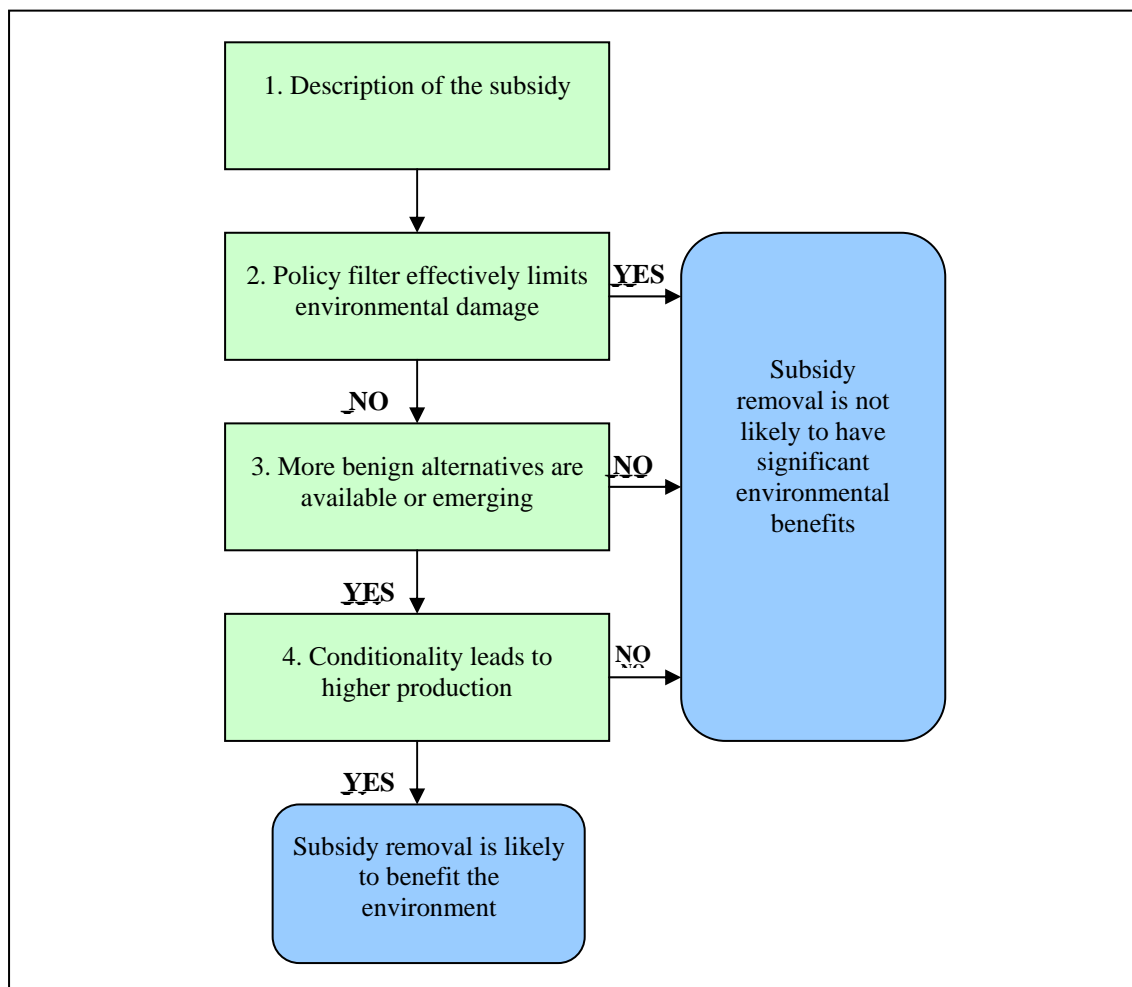
- Description of the subsidy, including the incentives it provides to consumers and producers.
- Determination of the extent to which there are policy filters limiting the negative effects of the subsidy, e.g. restrictions and policies constraining its impact on the environment.
- Determination of whether there are substitutes that are likely to replace the subsidised product or method if removed.
- Identification of the likely response to a subsidy removal by the subsidised industry with regard to production and natural resource utilisation. This response will depend on the conditionality of the subsidy and the extent of market power exercised by the subsidised product/industry.

Figure 1: Flow chart of the checklist approach

¹⁹ The other sectors included are agriculture, water, energy and transport.

²⁰ See Cox, A., 2003. OECD Technical Expert meeting on environmentally harmful subsidies – Environmental aspects of fisheries subsidies, Paris 3-4 November 2004, SG/SD(2003)12.

²¹ For more details, see Pieters, J., 2003. What makes a subsidy environmentally harmful: Developing a checklist based on the conditionality of the subsidies. In OECD environmentally harmful subsidies: Policy issues and challenges. Proceedings of OECD Workshop on Environmentally Harmful Subsidies, 7-8 November 2002, Paris, pp. 143-188.



Source: OECD, *Work on environmentally harmful subsidies – Ad hoc group on sustainable development, 10-11 November 2003, SG/SD(2003)8*

In the fisheries sector case study, the analytical matrix framework developed by Hannesson within the context of the market liberalisation study was further developed by adding dimensions for the status of the stocks and more options with regard to the management regimes. The definition of subsidies used in the study was the same as the one used in “Transition to Responsible Fisheries” study and included “all transfers from the government to the fisheries sector, including “off-budget” items such as tax exemptions and loan guarantees”²². Nine different subsidy categories were defined according to their intended objective, i.e.:

- Management, research and enforcement expenditure
- Infrastructure expenditure
- Payments for access to third country waters
- Subsidies for vessel decommissioning and licence retirement
- Subsidies for labour retirement and retraining
- Subsidies to capital costs

²² Page 7, Cox, A., 2003. OECD Technical Expert meeting on environmentally harmful subsidies – Environmental aspects of fisheries subsidies, Paris 3-4 November 2004, SG/SD(2003)12.

- Subsidies to variable costs
- Income support and employment insurance
- Direct price support subsidies

Within this context, the checklist approach was applied to examine the impact of fisheries subsidies on fish stocks using previous research work on fisheries subsidies published by the OECD. The results of the analysis was summarised in a matrix format, presenting each category of subsidies separately. An example is given in Table 1.

Table 1: Environmental effects of subsidies to decommissioning and licence retirement

Subsidy category	State of fish stock	Management regime				
		Property rights		No property rights		
		Catch controls	Effort controls	Catch controls	Effort controls	No catch or effort controls
Subsidies to decommissioning and licence retirement	Over-fished	No effect on stocks	If total effort reduced, stocks recover	No effect on stocks	If total effort reduced, stocks recover	No effect on stocks Reduced stocks if new vessels more efficient
	Under-fished	No effect on stocks	No effect on stocks	No effect on stocks	No effect on stocks	No effect on stocks Reduced stocks if new vessels more efficient

Source: Page 20, A. Cox, *OECD Technical Expert meeting on environmentally harmful subsidies – Environmental aspects of fisheries subsidies, Paris 3-4 November 2004, SG/SD(2003)12.*

In conclusion, the study showed that the applied checklist approach could be a useful method for screening particular fisheries subsidies with regard to environmental effects. It was found that while the policy filter is the key determinant of the environmental impact of fisheries subsidies, the issues of conditionality and market power are less important. The study confirmed the findings of earlier work that the management regime – and the extent to which a fishery is well managed – is a key determinant for the impact subsidies have on the resources. It would appear that the combination of property rights and catch controls is the most effective management regime for ensuring environmental sustainability of fish stocks.

However, it should be noted that the environmental impact covered by the study only included effects on fishery resources, not on the environment in a larger sense. The analysis also assumed that the fisheries were single species fisheries rather than more complex multispecies fisheries. More work would be needed to explore these broader aspects. Moreover, while the work carried out so far found the checklist to be a useful tool for a “first scan” of environmental effects, the approach cannot substitute for more thorough “real life” studies. The methodology itself also needs to be further investigated by applying the checklist empirically to real world fisheries. Case

studies would be a suitable method for such work. Considering the importance of fisheries management regimes, the focus should not be solely on subsidies but on the way fisheries are managed as well.

(iv) Fisheries subsidies and sustainable development

The need to analyse fisheries subsidies in the broader context of sustainable development became clear during the work on the market liberalisation study. In addition to the work on environmentally harmful subsidies, work is being undertaken more specifically focusing on sustainable development, i.e. with a holistic view covering the three dimensions social, economic and environmental effects.

The work builds on the analysis of the market liberalisation study and a previous study on fisheries management costs. It also has close links with the horizontal work on environmentally harmful subsidies. Consultants have been hired for working on various study components. The framework approach developed by Hannesson earlier is used as the starting point for the economic analysis and Hannesson discusses the effects of subsidies on some key variables in the industry in his report "Economic aspects of subsidies"²³. The long and short-term effects of different types of subsidies – classified according to the categories listed above under *(iii) Environmentally harmful subsidies* – is examined under different management regime and stock status scenarios. The way these effects depend on the effectiveness of the fisheries management regime in place is once more confirmed. It is also shown that the long and short-term effects may be very different depending on the status of fish stocks and the type of management applied.

The component on environmental effects builds on the work carried out for the fisheries sector case study regarding environmentally harmful subsidies. However, this section will have broader scope in the sustainable development project than it has had in earlier studies and include effects also on, for example, by-catch, benthos, marine pollution, gear use, fuel use, etc.

While some work has thus already been completed on the environmental and economic impact of subsidies, less is known with regard to the social effects and appropriate indicators will have to be identified for this purpose. Several consultant reports have been commissioned to examine aspects of the social dimension of the subsidies issue. These include reports on social capital and subsidies and on integrated social assessment. These were discussed at the Committee for Fisheries meeting in April 2004. In addition, existing – also non-fisheries – work will be explored, supplemented by special case studies with questionnaires designed to collect information from member countries. It is anticipated that this collection of information will focus on national responses to social pressures in the fisheries sector. Information on countries' broader social programmes affecting the fisheries sector will also be important.

²³ See Hannesson, R., 2003. The economic aspects of subsidies, document presented to the 92nd Session of the Committee of Fisheries, Paris 6-8 October 2003, AGR/FI(2003)11.

The three different sections – the environmental, economic and social components – will be brought together in a synthesis report. The expected outcome of the study will be an integrated analytical framework that will provide policy makers with a basis for assessing subsidy reform, both domestically and internationally. This framework will have a strong analytical basis with sound theoretical and empirical underpinnings.

The work on the study started mid-2003 and it will be finalised in 2005.

G. UNEP – UNITED NATIONS ENVIRONMENT PROGRAMME²⁴

The work on fisheries subsidies in UNEP is coordinated by the Economics and Trade Branch of the Division of Technology, Industry and Economics. The focus of the work is on the interface between trade and the environment and on enhancing countries' capacity in various areas related to trade, environment and development policies. The organization's mandate gives priority to work with developing countries and economies in transition. Within this framework, UNEP is assisting countries in improving their abilities with regard to assessing fisheries subsidies and their impact, and in finding ways to reduce environmentally harmful subsidies. This work has focused on understanding the relationship between fisheries subsidies, overcapacity and the sustainable management of marine resources. The main activities are case studies, development of analytical frameworks for the assessment of impacts of subsidies and the conduct of workshops.

(i) Case studies

Country case studies on fisheries subsidies have been carried out in Argentina, Senegal, Mauritania and Bangladesh. The Argentina and Senegal studies were finalised in 2001 and the results published in the UNEP Fisheries and the Environment series²⁵. In Senegal, work is continuing in a follow-up project. The report on the marine sector in Bangladesh was presented in the UNEP Workshop on Fisheries Subsidies and Sustainable Fisheries Management in April 2004 (see below) while the Mauritania study is still in draft form, currently under revision.

The studies were implemented through 18-month projects and carried out by local institutes and involved a broad range of stakeholders. The objectives of the studies included awareness creation and capacity building alongside the more policy oriented purpose of investigating the impact of subsidies and trade liberalisation.

The work brought about important insights into the likely causes and effects regarding subsidies and resource exploitation. All the studies illustrated that short-term financial gains from trade enhancing policies and subsidy schemes can be offset by longer-term socioeconomic and environmental losses. However, it also highlighted some difficulties in quantifying the effects and distinguishing the effect of subsidies from other practices leading to, for example, overfishing.

²⁴ This chapter is based on information provided by A. von Moltke of the Economics and Trade Branch.

²⁵ UNEP, 2001. Fisheries subsidies and marine resource management: Lessons learnt from studies in Argentina and Senegal. UNEP/ETU/2001/7 (Vol.II), Geneva.

The analysis has been exploratory and descriptive and constitutes rare examples of empirical field work on this subject matter, in particular in developing economies.

(ii) Development of an analytical framework – the matrix approach

UNEP's analytical work has focused on the relationship between fisheries subsidies, overcapacity and the sustainable management of fisheries. Addressing the environmental impact of fisheries subsidies, a matrix for identifying these effects under different management conditions was developed with the assistance of a consultant, G. Porter, in 2002²⁶ (see example in Table 2).

Table 2: Example of Porter's matrix for identifying effects of subsidies under different management conditions

<i>Subsidy type</i>	Open access Nor property rights Weak output / capacity controls	Open access No property rights Strong output / capacity controls	Limited access No property rights Weak output / capacity controls	Limited access Property rights Weak output / capacity controls	Limited access Property rights Strong output / capacity controls
Management services					
Subsidies to capital costs					
Decommissioning and licence retirement					
Subsidies to foreign access					
Income support					
Subsidies to intermediate inputs					

Source: Page 35, Porter, G., 2002, Fisheries subsidies and overfishing: Towards a structured discussion. UNEP Fisheries Subsidies Workshop, Geneva, 12 February 2001. Economics and Trade Unit (ETU).

Based on this analytical framework, further analyses were carried out in a study in 2003. This study looked at the actual impacts of different types of subsidies under different management

²⁶ Porter, G. 2002. Fisheries subsidies and overfishing: Towards a structured discussion, UNEP Fisheries and the Environment Series, Geneva.

conditions and different bio-economic conditions. For each type of subsidies, the following matrix template was used:

Matrix Template

	Effective Management	Catch Controls	Open Access
Overcapacity			
Full capacity			
Less than full capacity			

The following eight categories of subsidies were used for the purpose of the study:

- Fisheries infrastructure;
- Management services;
- Subsidies for access to foreign countries' waters;
- Decommissioning of vessels and licence retirement;
- Subsidies to capital costs;
- Subsidies to variable costs;
- Income support and employment insurance;
- Price support subsidies.

The study used examples from developed and developing countries to examine the effects of these subsidies on fishery resources. An informal expert consultation was organised by the Economics and Trade Branch on 16 July 2003 in which the draft report of the work was discussed. The revised paper was then presented and discussed in the UNEP Workshop on Fisheries Subsidies and Sustainable Fisheries Management in April 2004 (see below) and is expected to be published later this year (2004).

(iii) Inter-organizational workshops

UNEP has on several occasions organised workshops in consultation with other IGOs. In March 2002, a workshop on the "Impacts of Trade-Related Policies on Fisheries and Measures Required for their Sustainable Management" was held in Geneva. Among the issues discussed, the difficulties of defining subsidies and linkages between subsidies, overcapacity and overfishing received particular attention. In relation to the WTO negotiations, the special conditions, needs and priorities of developing countries were also discussed. The workshop recommended that UNEP conduct further country and regional studies, in particular in cooperation with developing countries and regarding artisanal fisheries. It was also noted that there was a need for best-practice documents and policy advice for the sustainable management of the fisheries sector.

Another workshop was organised on 26-27 April 2004: “UNEP Workshop on Fisheries Subsidies and Sustainable Fisheries Management”. This meeting provided a forum for interaction among governmental and non-governmental experts in the areas of fisheries management and trade policy.

H. WTO – WORLD TRADE ORGANIZATION²⁷

The Committee on Trade and Environment (CTE) of the WTO has studied the issue of fisheries subsidies for several years, but it is only relatively recently that there appears to be a more substantial move forward in the process. The November 2001 declaration of the Fourth Ministerial Conference in Doha, Qatar, provided the mandate for negotiations on fisheries subsidies and it was agreed to clarify and improve the WTO rules in this regard. The relevant negotiations are taking place in the Negotiating Group on Rules where fisheries subsidies are discussed under their own subheading.

Currently, subsidies in the fisheries sector are regulated in the WTO Agreement on Subsidies and Countervailing Measures (ASCM). It specifies that a subsidy exists if “there is a financial contribution by a government or any public body within the territory of a Member” and this contribution fulfils certain specified conditions, or if “there is any form of income or price support in the sense of Article XVI of GATT 1994”. Moreover, benefits have to be conferred. For the subsidy to be offending, it also has to be “specific”, “prohibited” or “actionable” and cause “adverse effects”²⁸. It is argued that these provisions do not cover adequately for subsidies in the fisheries sector since these often are due to production distortions created through unequal access to resources by subsidised and non-subsidised participants in the fishery.

The SCM Agreement obliges member countries to submit notifications of subsidy programmes, including those in the fisheries sector. However, the number of notifications is low and those submitted vary with regard to content and level of detail. Consequently, WTO does not currently hold complete records.

The state of the debate on fisheries subsidies at the time of the 5th Session of the WTO Ministerial Conference in Cancún, Mexico, in September 2003 was reflected in the report to the conference adopted by the Regular Session of the CTE held on 7 July 2003 in Geneva. The following five paragraphs are extracted from that report:

*There was a general recognition of the importance of achieving the objective of sustainable development in the fisheries sector. It was recalled by a number of Members that the very fact that negotiations on the subject of fish had been launched at the Doha Ministerial Conference was largely based on the preceding CTE analysis. Subsequently, the WSSD Plan of Implementation had reaffirmed the call to clarify and improve WTO disciplines on fisheries subsidies, taking into account the importance of this sector to developing countries.*²⁹

A few Members maintained that poor fisheries management – taking place under open-access fisheries – coupled with increasing world demand for fishery products was at the root of declining world fisheries resources resulting from over-exploitation and illegal, unreported and unregulated fishing. In this regard, subsidies could be an effective instrument to reduce capacity,

²⁷ The presentation is based on discussions with C. Schröder of the Agriculture and Commodities Division and on information from the WTO website.

²⁸ WTO 1994 Agreement on Subsidies and Countervailing Measures, article 1.

²⁹ WSSD Plan of Implementation, paragraph 31(f).

for example through vessel buy-back programmes. One Member stressed that the possible effects of subsidies on resources changed depending on resource status and fishery management regimes. The cases of skipjack tuna, and purse seine fishery in the Eastern Pacific Ocean were referred to in this regard.³⁰ It was argued that there was a need for flexibility among products when determining tariff levels, taking into account the level of fishery resources and the status of fishery management.

Other Members argued that over-capacity, and, consequently, a significant part of over-exploitation of fisheries, was caused by subsidies. Even when apparently sound management regimes were in place, subsidies could destabilize fisheries management and impede the objective of reducing over-capacity. A high value tuna species was given as an example of a particular fishery which was under a multinational management regime and where stocks had collapsed. It was emphasized that it was the trade measure (the subsidy) that generated over-capacity and needed to be disciplined. Trade liberalization, in concert with sustainable resource management, could stimulate more efficient production with more long-term environmental benefits. Trade barriers in the form of tariffs, or other non-tariff measures, were no substitute for effective resource management.

Most Members stressed that since relevant negotiations were taking place in the Negotiating Group on Rules and the Negotiating Group on Market Access the issue of fish was best left to these bodies. While agreeing that duplication of work needed to be avoided, one Member argued that the CTE needed to monitor the issue of subsidies from an over-exploitation point of view, i.e. an environmental point of view; this had always been the role of the CTE. Another Member pointed out that the CTE could contribute to the ongoing negotiations, while avoiding an isolated CTE discussion, through paragraph 51 of the DMD.³¹

All agreed that more could be done to provide technical assistance in natural resource conservation and management through the various international environmental organizations in the fisheries sector. Some Members reiterated the importance of further studies on the effects of fisheries subsidies and referred, in particular, to the work of the Food and Agriculture Organization of the United Nations (FAO), UNEP and the OECD in this regard. One delegation in particular called for case studies with respect to the impact of subsidies on fishery resources.

It was expected that progress would have been reviewed at the Fifth Ministerial Conference in Cancún, Mexico, in September 2003 but the issue of fisheries was not brought up at this occasion. The negotiations are nonetheless continuing and a stocktaking and planning exercise took place in March 2004, followed by another – more substantial – meeting by the Rules Group on 28 April 2004. Several Members or groups of Members have submitted discussion papers with regard to fisheries subsidies to the Group. There have also been a number of negotiating proposals put forward, i.e. from the United States, the European Communities, Chile, a group of small island states (Antigua and Barbuda, Belize, Fiji Islands, Guyana, the Maldives, Papua New Guinea, Solomon Islands, St Kitts and Nevis) and New Zealand. Responses and comments to these proposals have been provided by China and Japan. It is likely that the Group will meet on more regular basis from now on, specifically to discuss fisheries subsidies. It is generally considered that good progress is being made even though there are no concrete results to report on yet.

³⁰ For more detail, see WT/CTE/W/226.

³¹ “51. The Committee on Trade and Development and the Committee on Trade and Environment shall, within their respective mandates, each act as a forum to identify and debate developmental and environmental aspects of the negotiations, in order to help achieve the objective of having sustainable development appropriately reflected.”

According to the timetable set out in the Doha declaration, the negotiations should be finalised by 1 January 2005.

I. WWF – WORLD WIDE FUND FOR NATURE³²

WWF has been working since 1997 to eliminate those government subsidies that drive overcapacity and overfishing. This work falls within the broader context of a global marine program aimed at promoting sustainable fisheries management and adequate systems of marine protected areas. A chief goal of the work on fishing subsidies has been to achieve binding and effective new rules under the WTO to better discipline fishing subsidies. In the period from 1997 to 2001, WWF's work focused on raising awareness regarding the problem of fishing subsidies. Since the WTO Doha Ministerial Conference in 2001, where WTO Members agreed *inter alia* to clarify and improve fishing subsidies disciplines in the Agreement on Subsidies and Countervailing Measures, WWF has sought to move debate in the WTO forward by contributing imaginative solutions for addressing fishing subsidies in the WTO context, without reducing the ability of governments to support activities that conserve marine resources and encourage sustainable development. Major reports and activities of WWF are summarized below.

Just prior to the Doha WTO Ministerial Conference in 2001, WWF released a Technical Paper entitled "Hard Facts, Hidden Problems: A Review of Current Data on Fishing Subsidies"³³ in order to highlight both the magnitude of fisheries subsidies and the lack of transparency around fishing subsidy programs. The study sought to answer three basic questions about fishing subsidies: (1) What is the best current calculation of officially reported subsidies to the commercial fishing sector worldwide? (2) What is the quality of this officially reported total and of the information that underlies it? And (3) What is the best "guestimate" of actual levels of fishing subsidies available today? Drawing on published materials from the OECD, APEC and the WTO, the report concludes that officially reported subsidies amount to approximately US\$13 billion annually, that the data underlying this figures are full of gaps and thus the actual level of subsidization must be higher, and that WWF's best guestimate of the actually level of global fishing subsidies in US\$15 billion.

Since the Doha Ministerial Conference, WWF has sought to engage with policy-makers and other stakeholders on the means for actually addressing harmful fishing subsidies within the WTO negotiations. To this end, WWF published an issue brief entitled "Turning the Tide on Fisheries Subsidies: Can the WTO play a positive role?" in 2002. This brief suggests a number of key principles to be considered when elaborating improved WTO disciplines on fisheries subsidies, i.e.:

- Require governments to phase out and avoid subsidies that contribute to excess fishing capacity, overfishing, and unsustainable fishing practices.
- Take account of the needs and perspectives of developing countries.
- Give broad definition to the term "fishing subsidy".
- Recognize that some fishing subsidies can play an important role in the transition to sustainable fisheries and responsible fishing practices.
- Create mechanisms for cooperation with appropriate bodies outside the WTO, such as the FAO.

³² Text contributed by Claudia Saladin, WWF US.

³³ WWF, 2001. Hard facts, hidden problems: A review of current data on fishing subsidies. WWF Technical Paper.

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- Emphasize transparency and effective public participation³⁴.

After the Doha Ministerial Conference, WWF also began a series of consultations which led to the development of a document entitled “New WTO Disciplines on Fishing Subsidies: Outline of a Robust Solution,” initially released in March 2003. This outline has been further developed and a detailed technical paper on “Healthy Fisheries, Sustainable Trade: Crafting New Rules on Fishing Subsidies in the World Trade Organization” will be published in June 2004.

At the WTO Ministerial Conference in Cancun in September 2003, WWF sponsored a panel entitled “WTO Negotiations on Fishing Subsidies – Impacts on Fish Stocks, Marine Biodiversity and Sustainable Development,” which explored the threats posed by fisheries subsidies to the biological and economic sustainability of world fisheries and the role that the WTO can play in addressing this threat.

Reforming access agreements to incorporate principles of the FAO Code of Conduct for Responsible Fisheries has also been a WWF priority. In 2001, WWF published “A Handbook for Negotiating Fishing Agreement”³⁵ to assist coastal States and distant water fishing States in negotiating bilateral and regional fishing access arrangements in developing State EEZs. The objective of the handbook was to promote sustainability in the context of fishing access arrangements. The handbook identifies key elements of sustainable access arrangements and provides several model agreements to assist negotiators. WWF has conducted a number of workshops on access arrangements and participated in the renegotiation of the US – Pacific Island State Regional Access Agreement.

In addition to work in the WTO and on fishing access agreements, from 2001-2003, WWF conducted a major campaign targeting the process of reform of the European Common Fisheries Policy, which included a major focus on subsidies.

J. OTHER WORK³⁶

Work on fisheries subsidies and their impact is also undertaken by a number of international, regional and national organizations other than the ones reported on in this document as well as by individual countries and research institutes. Some of this work has been reported on in the IGO meetings organised by FAO, e.g. by SADC³⁷.

In the academic sphere, Hannesson has already been mentioned in connection with his work with the OECD. Hannesson has also written several other papers on subsidies in the fisheries sector, e.g. a review of support programmes in the Nordic countries³⁸. This paper looked at the development of subsidies during the 1990s and explored their effect by also looking at the

³⁴ Pages 6-10, WWF, 2002. Turning the tide of fishing subsidies: Can the World Trade Organization play a positive role? WWF Issue brief.

³⁵ Martin, W., Lodge, M., Caddy, J. and K. Mfodwo, 2001. A handbook for negotiating fishing agreements. WWF Promoting Sustainable Fisheries Conservation and Management.

³⁶ The work cited here does not constitute an exhaustive list of existing activities; only a few main examples are given.

³⁷ See footnote 10 for references.

³⁸ Hannesson, R., 2000. Fisheries subsidies in the Nordic countries. Paper commissioned by WWF.

development of catches, fishing fleets and the number of fishermen during the same period. However, the effect of subsidies on landings and on the state of the fish stocks was not clear.

In their paper on the impact of subsidies on the ecosystems of the North Atlantic, Munro and Sumaila developed an econometric model for investigating the effects of subsidies under different management regimes³⁹. They showed that subsidies could be harmful to the resource also under a property rights system, which is contrary to the commonly held view that subsidies do not increase catches under an effective management system. Moreover, they argued that subsidies that generally are considered beneficial, e.g. decommissioning schemes, could have a negative environmental impact under certain circumstances. In their paper on “Subsidies, buybacks and sustainable fisheries”, Clark, Munro and Sumaila argued that decommissioning schemes have to be unanticipated by the vessels owners to be successful⁴⁰.

Arnason developed a theoretical, generic, model for examining the impact of subsidies on fishing effort, fishing capital and the economic performance of the fishery⁴¹. He concluded that the economic benefits from subsidies are in most cases insignificant and that subsidies often lead to an increased fishing effort. However, depending on the status of the industry when the subsidies are introduced, the short-term gains to the industry could be quite substantial. He also pointed out that capacity-reducing subsidies could have negative effects unless combined with effective management.

Schrank looked at Arnason’s analysis in the context of tracing the linkages between subsidies and their effects on fisheries resources⁴². Arnason’s analysis focused on profits – resulting from a subsidy programme – and how expected profits lead to changes in fishing effort. The fishing effort, in turn, affects the fish stocks. Schrank suggested that Arnason’s model could be further developed into an integrated econometric model including a marketing sector, a processing sector and a harvesting sector. He also proposed that the effects and costs of fisheries management should be included. Such a model could give indications of the order of magnitude of the response by the fishery to a subsidy programme. However, the data requirements would be considerable. Schrank, Roy and Tsoa developed a model of this type for looking at employment prospects in the Newfoundland ground-fish fishery⁴³.

As can be seen from the examples of academic work cited above, various modelling and simulation work has been carried out and is still ongoing. However, even though the linkages between subsidies and their environmental and economic impact are understood to some extent,

³⁹ Munro, G.R. and U.R. Sumaila, 2001. Subsidies and their potential impact on the management of the ecosystems of the North Atlantic. In Pitcher, T., Sumaila, U.R. and D. Pauly (eds.): *Fisheries Impacts on North Atlantic Ecosystems: Evaluations and Policy Explorations*. Fisheries Centre Research Report. Fisheries Centre, University of British Columbia.

⁴⁰ Clark, C.W., Munro, G. and U.R. Sumaila, 2003. Subsidies, buybacks and sustainable fisheries. In U.R. Sumaila (ed.) *Three Essays on Economics of Fishing*. Fisheries Centre Research Reports 2003, Vol. 11, No. 3. Vancouver, B.C., Canada. Pp. 4-18.

⁴¹ Arnason, R., 1998, Fisheries subsidies, overcapitalisation and economic losses. In *Overcapitalization and subsidies in European fisheries: Proceedings of a workshop*, Portsmouth, U.K., 28-30 October 1998. Portsmouth: Centre for the Economics and Management of Aquatic Resources of the University of Portsmouth.

⁴² Schrank, W. 2003. The linkage between the subsidy and its effects. Annex I in *Introducing fisheries subsidies*, *FAO Fisheries Technical Paper 437*, FAO, Rome.

⁴³ Schrank, W.E., Roy, N. and E. Tsoa, 1986. Employment prospects in a commercially viable Newfoundland fishery: An application of "An econometric model of the Newfoundland groundfishery". *Marine Resource Economics*, Vol. 3, No. 3, pp 237-263.

more work is needed for improving the knowledge of the details of the underlying mechanisms. There is also a general lack of data on subsidies and work on quantifying the effects of subsidies is missing. Yeoman reviewed various possibilities to create models and explain the effects of fisheries subsidies on production and trade but concluded that more data are needed before accurate estimations and modelling can be attempted⁴⁴. Likewise, very little work has yet been done on the social effects of subsidies or on their impact on sustainable development seen from a more holistic perspective.

It should also be mentioned that there are several issues, closely related to subsidies, on which work is being undertaken, e.g. IUU fishing, fisheries management costs and overcapacity, including decommissioning schemes. It is, however, outside the scope of this report to review these activities.

⁴⁴ Yeoman, R.G. Modelling fisheries subsidies: A review and cross sectional modelling. Unpublished working paper, Department of Economics, University of Auckland. Auckland, New Zealand.