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I. Introduction

Few terms in public finance and economics are as familiar in daily life, or as evocative, as "taxes" and "subsidies" — opposing sides of the same coin. To the average citizen what he renders unto Caesar are taxes; what he receives back are entitlements; everybody else get subsidies. When economists in the 18th century spoke of "bounties" and those in the 19th century spoke of subsidies they generally had in mind government grants or, to use a more modern term, "state aids". In recent years, however, the term "subsidies" has been pressed into service as a catch-all for any benefit granted to an individual, firm or sector, including those resulting from government *in*action. The proliferation of legal definitions for "subsidy" invests the word with even more connotations.

Definitional confusion has not prevented various organisations and individuals from offering estimates of subsidies to certain sectors, particularly primary industries — i.e., industries that directly exploit natural resources. It is impossible to give an exact figure, but a very approximate estimate based on recent studies would place global subsidies to agriculture, fishing, logging, energy production, and water extraction and distribution at around \$500 billion a year. Subsidies of this magnitude are naturally of particular interest to exporting countries, who are concerned about their trade effects, and to environmentalists (both in and out of government), who are concerned about their effects on natural resources. Both concerns have prompted calls for new international rules and mechanisms to discipline subsidies to the fisheries sector.

The Asia-Pacific Economic Co-operation (APEC) forum, through its early voluntary sectoral liberalisation (EVSL) initiative, is currently host to the only active multilateral discussions specifically aimed at improving fishery subsidy disciplines.³ But fishery subsidies are being addressed in one way or another in other inter-governmental fora too. A study of the effects on resource sustainability of government financial transfers is being carried out by the Organisation for Economic Co-operation and Development (OECD). The U.N. Food and Agricultural Organisation (FAO) has been considering subsidies in the context of its consultations leading to an "International Instrument for the Management of Fishing

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^{2.} This figure can be derived, for example, by taking David Roodman's (1998) estimate of \$650 million a year and subtracting from it \$150 million for subsidies to transport. Other recent studies have also arrived at roughly similar estimates.

^{3.} Other products in the list of 15 proposed for EVSL include energy, forestry products and food. "Early" in this context means before the target dates set for free trade and investment generally (2010 for industrialised members and 2020 for developing members).

Capacity". And the World Trade Organization's Committee on Trade and Environment has included fisheries among the sectors for which it is examining the environmental effects of trade liberalisation.⁴

Given that many people are hoping that these activities will lead eventually (and sooner rather than later) to the establishment of new rules and mechanisms for disciplining fisheries subsidies, either at a regional or a global level, it is pertinent to ask: What conditions are likely to ensure that such an agreement will be reached, workable and adhered to? This paper attempts to provide some preliminary answers to this question by examining how other multilateral attempts to discipline subsidies to natural resource based industries have fared to date.

The paper is organised as follows. Section II explains why subsidies are so politically resistant to reform. The third and fourth sections give an overview of unilateral and multilateral efforts since the 1940s to deal with subsidies in general. Since that time, nations have agreed disciplines on subsidies almost exclusively within multilateral arrangements to promote trade, and largely — but by no means exclusively — under the aegis of the General Agreement on Tariffs and Trade (GATT). Against this background, the paper then examines multilateral efforts to reduce, eliminate, prohibit or otherwise discipline subsidies to three natural-resource based industries in particular: farming, coal mining and fishing. All three of these sectors have been included in APEC's list of those ripe for EVSL. Section V compares the various subsidy reform initiatives in very broad terms. Its aim is more to stimulate thinking than to break new ground. Section VI remarks on the recent emergence of non-governmental organisations (NGOs), especially environmental NGOs, as major players in international subsidy debates. Some thoughts on the nature of future subsidy deliberations conclude the paper.

Inspiration for this paper comes in part from Bruce Ross's contribution to the 1996 PECC Symposium, which concentrated on the Uruguay Round multilateral trade negotiations over agriculture and the lessons it might hold for fisheries. This study extends his analysis by providing additional evidence from earlier efforts to discipline agricultural subsidies, and ones specifically aimed at other primary products. The set of sectors and initiatives presented form neither the universe of possible cases, nor even a statistically representative sample of them, although it does at least provide enough examples to include both relative successes and failures. Other cases could have usefully been added from negotiations that have taken place within the framework of regional and bilateral trade arrangements, such as the 1987 Canada-US Free Trade Agreement, for which subsidies benefiting primary industries were a central issue.

II. Subsidies—why so intractable?

While economists may not agree among themselves on the precise definition of a subsidy⁵, they do generally agree on their static, first-order effects. Theory shows that these depend on a number of factors, among which are supply and demand elasticities, the form of the subsidy, the conditions attached to it, and how it interacts with other policies. In general terms, elasticities of supply and demand determine to what extent the actual, *economic* incidence diverges from the intended *impact* incidence of a subsidy: in a

^{4.} For a more complete description of these efforts *see* Ronald P. Steenblik and Gordon R. Munro, "Current international work on subsidies in fisheries: a survey", in *Overcapacity, Overcapitalisation and Subsidies in European Fisheries*, Proceedings of the Concerted Action Workshop, Portsmouth, U.K., 28-30 October 1998 (A. Hatcher and K. Robinson, eds.), forthcoming 1999.

^{5.} For the purpose of this first section, a simple definition for a subsidy suffices: a subsidy occurs when public funds are used for private purpose — where the public funds include, in this meaning, not just transfers from taxpayers but also those that consumers are obliged to make to producers (e.g., because of import tariffs) or that producers make to consumers (e.g., because of export restraints).

seller's market, consumer subsidies will be shifted onward to producers, and vice-versa. Other policies can also influence outcomes, as when production quotas are imposed on the subsidised activities.

Critics point to the economic distortions created by subsidies, especially subsidies that are used to promote specific sectors or industries. Generally, such subsidies tend to divert resources from more productive to less productive uses, interfere with price signals, and in so doing reduce economic efficiency: at best they are a waste of money. Those who take a more benign view argue that subsidies can serve redistributive goals, or by dealing with externalities help to correct market failures. But, as Ronald Gerritse warns us, subsides defended on such grounds "may have externalities that we did not bargain for." Indeed it is such second-order effects that have come under attack by environmental economists in recent years.⁸

Perversely, the distributive consequences of subsidies are often precisely the opposite of what the framers of the policies intended. Most countries that subsidise farmers or fishers profess to be looking out for the small owner-operator. Yet, by design, subsidies that are tied to outputs or inputs tend to favour larger producing units. Recently, for example, the Environmental Working Group counted up all the direct payments made by the U.S. Government to farmers between 1985 and 1994 (i.e., before the Freedom to Farm Act was passed) and found that just 2% of recipients accounted for over 25% of the transfers. Analyses of agricultural support programmes in other countries appear to lend credence to the 80:20 rule—the impression that 80% of support goes to 20% of the beneficiaries.

Direct payments to individuals at least have the virtue of high transfer efficiency: most of what a government allocates to such programmes end up in the pockets of the intended recipients — initially. Subsidies to products or inputs, by contrast, leak away to other activities, often in unexpected or unintended ways. Studies of policies used to support market prices for agricultural commodities, for example, have shown that typically 20% of the gross transfers created reach the target group. The remainder gets dispersed among the suppliers of inputs, programme administrators, and even fraudulent operators.¹⁰

Given these shortcomings of subsidies, why do governments keep resorting to them? One basic problem is that, although governments are often motivated to provide subsidies in order to benefit specific groups of people — or, more specifically, voters — they rarely like to be seen doing it through such blatant devices as direct income payments. Hence, in terms of their initial incidence, activities or things tend to get subsidised rather than people. This contributes to the second, and related, problem, which Gordon Tullock labelled "the transitional gains trap": the tendency over time for benefits, or more specifically economic rent, flowing from subsidy programmes to be dissipated by becoming capitalised into the least elastic factor of production. Accordingly, the gains from subsidies tend to be transitional, accruing mainly to those who can immediately take advantage of a new scheme. Their successors end up paying

7. Gerritse (1990: 150).

^{6.} Wolfson (1990: 5).

^{8.} See, in particular, OECD (1998c), and Pieters and Mountford (1999, forthcoming).

^{9.} Ross (1996) refers to the 80:20 rule as "the old truism". Although origins of this rule are uncertain, it is supported by analyses of the distribution of output by class of production unit. Since most forms of support are tied to production or inputs, it logically follows that the distribution of support should approximate the distribution of production.

^{10.} See OECD (1995a) and Ross (1996).

^{11.} Ross (1996). Though, as Wolfson (1990: 15) reminds us, "behind every subsidy there is someone reaping the benefits."

^{12.} Tullock (1975).

higher prices for land, fishing licences, mineral rights. Removing the subsidy thus risks imposing a transitional *loss* on the subsequent owners of these assets.

The beneficiaries of a subsidy can become entrapped in a social sense as well. This is especially the case when subsidies are used to support employment in rural industries, such as agriculture, fisheries and mining, which require specialised skills but not necessarily much formal education. The resulting low mobility of the affected labour force itself becomes a barrier to reform, increasing subsidy dependency, and making structural adjustment all the more traumatic when it finally does come.

Another factor working against reform is that subsidies themselves create a pool of money out of which recipients can influence the very political process that channels money to them in the first place.¹³ In many instances subsidies redistribute wealth from a large number of unknowing contributors to a smaller number of beneficiaries. The latter lobby vigorously to defend their handouts; the former seldom bother, or are empowered, to prevent them.¹⁴ In any case, short-term bursts of public outrage against particular subsidies are usually ineffectual; the offending programmes simply get renamed or cloaked in the latest policy fashion.

Finally, the bureaucracy itself can present an obstacle. Government ministries rarely admit to having a vested interest in the continuation of the support programmes they administer, but it is hard to imagine total disinterest being the norm. More subtly, the bureaucratisation process often feeds a pervasive notion that the subsidised activity forms part of the natural order of things. Subsidies thus metamorphosise into entitlements, and any attempt to curb them becomes politically hazardous. This subversion of rational policy-making feeds the spread of derivative subsidies — for instance:

- Sympathetic support: When support is used to influence the direction of technological developments, it often does so in a manner designed to benefit domestic producers. Many examples can be found in the energy sector, such as when governments support the construction of coal-fired "demonstration" power plants that are dependent on coal from highcost domestic mines rather than on imported coal. 15
- Compensatory support: When support leads to higher input prices for downstream consumers, especially those that derive a significant proportion of their sales from exports, compensation is often provided in order to keep them buying domestically produced raw materials. Subsidies to food processing industries (e.g., tomato canneries, producers of potato starch) are common examples.
- Subsidy clusters: When support or failure to consider opportunity costs leads to lower prices for natural resources, a chain reaction can take place, whereby new investment occurs to take advantage of the cheap input. Often downstream consumers receive additional incentives from governments to do so. Hence aluminium plants are attracted to major hydroelectric projects, which are then followed by airframe manufacturers, and so forth. 16

^{13.} For a recent discussion of how this principle affects a natural resource-based industry see Anderson (1995).

^{14.} This canon of political economy was first described by Vilfredo Pareto (1969[1927]).

^{15.} See the example in Steenblik and Coroyannakis (1995).

^{16.} Koplow (1996: 201), who first coined the term "subsidy clusters", meant it as a play on words of Michael Porter's notion of industry clusters. See also the discussion in Nance (1989: 113 and 118-20).

Taken together, these derivative subsidy forms lend support to the notion that bad subsidies tend to chase out good ones — what C. Ford Runge has called "Gresham's law of subsidies". 17

III. Unilateral reform versus multilateral disciplines

Economics is not called the dismal science without reason. Considering the factors working against reform, Gordon Tullock, writing almost 25 years ago, felt compelled to conclude this about subsidies:¹⁸

[I]t is conceivable that simultaneously abolishing all of them would lead to a net gain for almost everyone. The individual would lose his particular privilege, but would gain from the loss of privileges of other people. ... As to its political practicality, I take it I do not have to explain why I think it is low.

Yet only a decade later the world would witness with astonishment New Zealand's bold experiment to eliminate support to virtually all of its primary industries, and to substantially reduce tariffs on many manufactured products. (As Oscar Wilde once remarked, "There is this world and the next, and then there is New Zealand.")¹⁹ Australia was already moving down that path, though at a more measured pace. Broad-based unilateral reform was conceivable, and not just in theory.

However, cutting through the Gordian knot of domestic subsidies is not a politically feasible option for large democracies with diverse constituencies. Indeed, even those smaller countries that have undertaken unilateral reforms realise that. That their governments have been in the vanguard of efforts to establish international rules and mechanisms for disciplining subsidies is not due simply to an evangelical impulse. It is, along with the promise of economy-wide reform, part of the *quid pro quo* expected of them: their domestic industries can more readily accept what they see as sacrifices if they perceive progress in efforts to open up export markets. The difficult part is convincing reluctant trading partners that subsidy reform is in their national interest as well.

Why should importers with vulnerable, import-competing industries be willing even to consider opening up their markets, much less agreeing to international rules restricting their ability to subsidise? The trade literature offers several explanations, of which no attempt to summarise them is made here. The classic reason, given for reciprocal trade agreements in general, is that the net gains from trade are usually large enough that industries that lose out can be compensated. Multi-sectoral agreements allow such trade-offs among different sectors and nations to be made.

But another important explanation has also been offered, which perhaps also explains why agreements are sometimes reached involving only one or a few sectors — namely, they provide a way for governments to credibly distance themselves from powerful domestic special-interest groups. Thus, by having its hands bound by an external agreement, a government may be able to fend off internal political pressures for protection and subsidies.²⁰ Presumably, it would have a stronger incentive to enter into such an arrangement if at the same time it is trying to control budgetary expenditure generally.

^{17.} Runge (1996).

^{18.} Tullock (1975: 678).

^{19.} According to Bhagwati (1990: 91), Wilde was referring to New Zealand as the prime example of prosperity through primary production.

^{20.} Maggi and Rodríguez-Clare (1998) recently constructed a single-sector model to test this argument and concluded that, despite the fact that a government can derive rents from a protected industry, it may often be in its interest to commit to free trade.

IV. Previous multilateral attempts to discipline subsidies

Given the current interest in multilateral approaches to dealing with subsidies, it is useful to step back from today's situation and examine how previous efforts fared. By way of example, those involving the products of agriculture, coal mining, and fisheries are described in detail. In order to provide a basis for understanding the institutional and economic context against which the various negotiations took place, however, it is important to review the major developments in international economic relations in the postwar years, with particular reference to the General Agreement on Tariffs and Trade (GATT). Readers already familiar with the history of the GATT may wish to skip over this section.

A. The GATT and the world economy

1) Subsidies in GATT 1947

The origins of the GATT trace back to various efforts starting in the early 1940s and led by the United States, to create a new, more open international trading system. Negotiations, which got underway in 1946, followed a dual path. The first, which concluded with the signing on 30 October 1947 of the General Agreement on Tariffs and Trade, aimed at achieving a rapid and deep reduction in tariff levels. The second hammered out a draft charter for a new institution, the International Trade Organisation (ITO). The Havana Charter, which the March 1948 agreement came to be known, was never ratified by the United States, however, and the ITO never came into being. Thus the GATT, originally intended as a temporary instrument, by default became the primary legal framework governing international trade.

Subsidies were dealt with in Article XVI of the GATT (as modified after the GATT Review of 1954-55), and the legal response to subsidies — domestically applied countervailing duties (CVDs) — in Article VI. Since the GATT was an instrument for trade expansion, the main concern of its framers was with subsidies that increased exports or reduced imports. As from 1 January 1958, export subsidies (other than to primary products²¹) were expressly prohibited, but no rules or reduction schedules were established for other subsidies. Rather, Section A of Article XVI merely required that governments notify the other contracting parties of the extent and nature of their subsidies. Under Section B, if a subsidy was then deemed to cause "serious prejudice" to the interests of another contracting party, that contracting party would be permitted to levy a unilateral duty up to the value of the subsidy conferred on the product. The problem was that such an enforcement system based on unilateral declarations was open to exuberant interpretation, particularly by its most economically powerful contracting parties. Moreover, the country that resorted most often to CVDs, the United States, was exempted until 1979 from having to prove "material injury" to a domestic industry before initiating a CVD action.²²

From the outset, primary products were problematical in the GATT, particularly on the question of subsidies. Under Article XVI (section B), contracting parties were admonished "to seek to avoid the use of subsidies on the export of primary products", but were not actually forbidden to do so. Although this exemption from the general rule was conditional on countries respecting "equitable" market shares, the proviso could not be made sufficiently operational to render it effective. Lax enforcement of Article XI (which prohibited quantitative restrictions on imports) on agricultural and fisheries products, and the ex-

^{21.} A primary product is defined in Ad Article XVI (Section B, para. 2) of GATT 1947 as "any product of farm, forest or fishery, or any mineral, in its natural form or which has undergone such processing as is customarily required to prepare it for marketing in substantial volume in international trade."

^{22.} O'Brien (1997: 107).

emption, under Section 2(c) of that Article, which allowed quantitative import restrictions in situations where domestic production was also subject to a quantitative restriction, led to numerous abuses, especially in agriculture.²³

2) The Tokyo Round and the Subsidies Code

In all, eight multilateral trade bargaining sessions, or "rounds" took place under the GATT, keyed to the U.S. President's successive renewals of authority to bargain for tariff concessions.²⁴ The Kennedy Round of multilateral trade negotiations (1964-67), which resulted in reductions in developed country tariffs on non-agricultural goods by about one-third, was the last of the trade rounds conducted during the unprecedented post-war decades of growth and stability. Thereafter important changes in the world economy would increase trade frictions, making multilateral trade negotiations more difficult.

By 1968, structural changes led to the resurgence of domestic political challenges to the international trade management system.²⁵ In the late 1960s, disturbances in primary product markets also began to appear that would soon reverberate throughout the world's major economies. U.S. wheat export prices were falling towards a post-war low. Coal producers were seeing their markets being undercut by cheaper oil; few power companies were ordering new plants designed to burn coal. Harvests of economically important groundfish species and herring in the North Atlantic peaked and began a rapid decline.

By the early 1970s, producers of many primary products were enjoying steeply rising prices, but otherwise the whole global economy seemed in turmoil, at least from the perspective of the OECD countries. For them, this was the decade of the energy crisis (actually it was only an oil price crisis), the global food crisis, and double-digit inflation. Meanwhile, the developing world was demanding the establishment of a "New International Economic Order", with an emphasis on wresting control over natural resources from foreign domination and exploitation.²⁶ The unease in the developed world that these events engendered further contributed to the protectionist mood.²⁷ The fisheries sector was not untouched by these events, especially the rise in oil prices, but in addition it was being turned inside-out by a succession of unilateral declarations of 200-mile exclusive economic zones.

The opening of the Tokyo Round of multilateral trade negotiations under the GATT, in September 1973, thus coincided with a retreat from economic liberalism. Yet, as Spero²⁸ points out, though the Tokyo Round operated under conditions less propitious than those of earlier trade negotiations, its goals were more ambitious. In particular, it attempted not only to pursue the reduction of tariffs, but also to establish

^{23.} This exemption stemmed from a waiver from Article XI granted to the United States in 1955 for agricultural products; the United States in turn agreed to recognise the right of other countries to retaliate (O'Brien 1997: 130).

^{24.} Caves and Jones (1981: 241).

^{25.} Spero (1985: 99).

^{26.} United Nations General Assembly, "Declaration on the Establishment of a New International Economic Order", U.N. General Assembly Resolutions Nos. 3201 (S-VI) and 3202 (S-VI), 1 May 1974.

^{27.} By the late 1970s even New Zealand, or rather the government of the day, decided to start supporting a number of loss-making "Think Big" energy products and in general to foster domestic industries. *See* Chapter 3 in OECD (1994: 136).

^{28.} Spero (1985: 114-115).

new guidelines and mechanisms for the management of trade. Significantly, it was the first GATT trade round to extend trade management to the regulation of non-tariff barriers, including domestic subsidies.²⁹

The Code on Subsidies and Countervailing Duties (formally, the Agreement on Interpretation and Application of Articles VI, XVI and XXIII), adopted at the conclusion of the Tokyo Round in 1979, was an attempt to address the concerns of two major groups. On the one side were countries, led by the United States, who had become frustrated at what they saw as a growing use of domestic production subsidies by their rivals in trade. On the other were those, led by the European Community, who were alarmed by the rapid increase in the number of CVD actions filed in the United States. The result was the so-called "two-track solution": in return for other countries reducing their subsidy practices, the United States had to adopt an injury test in order to limit the reach of its CVD laws.³⁰

In many ways the Code was a temporary fix, and in any case it was signed by only one-third of the contracting parties.³¹ On the positive side, it explicitly recognised subsidies on manufactured goods as non-tariff barriers to trade, and established rules that provided for surveillance and dispute settlement mechanisms, to be overseen by a committee of signatories. But it still relied on unilateral actions as the basis of alleged material injury. And it continued to apply separate rules to export subsidies on "certain primary products". But, unlike in the GATT itself, minerals were not covered by the exemption.³²

3) The Uruguay Round and the Agreement on Subsidies and Countervailing Measures

Despite unfinished business left over from the six-year Tokyo Round, there was not an immediate rush to restart another round of multilateral trade negotiations. At the macroeconomic level, OECD countries were entering a period that would witness the lowest average annual growth rate — 0.75% a year — since the end of World War II. At the microeconomic level, a decade of structural change had produced major shifts in the composition of their economies, putting pressure on older industries.

In 1981, in an effort to save the international trading system from total collapse, the GATT's governing board called for a meeting of trade ministers in September 1982, the first to take place in nine years. As documented by Spero, "each minister was anxious to reaffirm his government's commitment to the principles of the liberal trading system; yet none was prepared, for domestic political reasons, to renounce protectionism for open trade." Within a year the GATT Secretariat itself was calling for a new round of multinational negotiations. Three more years of high-level bilateral and multilateral consensus-building followed before ministers could agree to launch a new round. They did so, finally, at Punta del Este, Uruguay, in September 1986.

The changes in global economic conditions, ideology and interests that helped bring about a new-found willingness among the world's major trading nations to initiate what would eventually prove to be the biggest reform of the international trading system since the GATT was created — the Uruguay Round of multilateral trade negotiations — were many and diverse. Economic conditions were evolving in a more propitious direction, at least for the industrialised countries. In particular, oil prices were falling, and the world's major economies were emerging from recession. The rapid spread of advanced telecommunica-

^{29.} The link between domestic subsidies and trade was certainly appreciated by the framers of the 1947 GATT articles, but at the time the articles were adopted subsidies were viewed either as of relatively minor importance (compared with tariffs), or politically difficult to address because of the exigencies of post-war restructuring.

^{30.} O'Brien (1997: 113).

^{31.} Snape (1991: 150).

^{32.} WTO (1998: 2).

^{33.} Spero (1985: 123-124).

tion and computer technologies was accelerating the globalisation of finance, creating further pressures on nations to adapt to an increasingly competitive world economy. But, fundamentally, the major trading nations had come to realise this: either the GATT had to be substantially strengthened, or it would fall apart.

The Uruguay Round was even more ambitious than the Tokyo Round, and took one year longer to finish. All the original GATT articles were up for review. The *Final Act Embodying the Results of the Uruguay Round of Multinational Trade Negotiations*³⁴, adopted on 15 December of 1993, comprises more than 50 legal texts, including an Agreement Establishing the World Trade Organisation (WTO), an Agreement on Agriculture (URAA), and an Agreement on Subsidies and Countervailing Measures (SCM). Both the URAA and the SCM deal with subsidies, but in substantially different ways. The main differences are that, under the URAA, countries are committed to reducing different kinds of support over a specified period, but are still allowed to provide export subsidies, albeit for declining volumes. Since the URAA is described in greater detail in Section IV.B.1, the focus here is on the SCM, which applies to other primary commodities. What follows is merely a synopsis, however, and is in no way meant to constitute an official interpretation of the text of the Agreement.

The SCM Agreement is intended to build on the Subsidies Code negotiated in the Tokyo Round. Under the Agreement a subsidy is deemed to exist when a benefit is conferred on an industry as a result of a government, or a public body acting on its behalf, transferring to it funds, foregoing revenues, providing it with goods or services (other than general infrastructure), or price support.

Subsidies are classified as either prohibited, actionable or non-actionable. Only export subsidies and subsidies contingent on the use of domestic over imported goods are expressly prohibited. (Developing countries are not subject to the prohibition on export subsidies until 2003, or to the prohibition on subsidies contingent on the use of domestic goods until 2000.) Actionable subsidies can in principle be granted or maintained, as long as they do not adversely affect the interests of other Members. Various criteria are spelled out to determine whether, for example, serious prejudice to the interests of another Member is deemed to exist. Included within this category are subsidies to cover operating losses ("other than one-time measures, which are non-recurrent and cannot be repeated ... and which are given merely to provide time for the development of long-term solutions and to avoid acute social problems"), and direct forgiveness of debt.

Both prohibited subsidies and actionable subsidies are subject to accelerated dispute settlement procedures. In the case of prohibited subsidies, if a Member country is found to be granting or maintaining such a subsidy, it must withdraw it without delay. In the case of an actionable subsidy, if the subsidising Member does not remove the adverse effects nor withdraw the subsidy, the complaining Member can take countermeasures, commensurate with the degree and nature of the adverse effects determined to exist.

Only subsidies that are specific — i.e., limited to an enterprise or industry — are subject to the aforementioned disciplines; non-specific subsidies are generally considered to be non-actionable. Three categories of specific subsidies are also considered to be non-actionable (under Article 8.2): assistance for certain kinds of research activities, assistance to disadvantaged regions, and assistance to help firms adapt to new environmental regulations. Non-actionable subsidies are neither subject to countervailing action nor to dispute settlement challenge, though other authorised remedies are available to a Member if it can

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^{34.} The Final Act was opened for signature at a Ministerial Meeting in Marrakech in April 1994, and countries then had until the end of 1996 to complete domestic ratification procedures to become members of the World Trade Organisation (WTO) — the successor to the GATT Secretariat.

prove that a non-actionable subsidy maintained by another Member results in "serious adverse effects" to its own domestic industry, "such as to cause damage which would be difficult to repair".³⁵

What may prove in the long run to be one of the most crucial changes brought about by the SCM, however, is its strengthened notification requirements. Under Article 25 of the Agreement, Members must notify any subsidy (as defined in Article 1 paragraph 1), which is specific within the meaning of Article 2 (including specific but non-actionable subsidies). The notification must include the form of the subsidy, its amount, its policy objective or purpose, its duration and statistical data permitting other Members to assess its trade effects. To encourage full disclosure, Article 25.7 states that "notification of a measure does not prejudge either its legal status under GATT 1994 and this Agreement, the effects under this Agreement, or the nature of the measure itself." At the same time, however, Article 26 provides for regular surveillance of notifications by the WTO's Committee on Subsidies and Countervailing Measures. New and full notifications are examined at special sessions of the Committee, held every third year; notifications submitted in the intervening years ("updating notifications") are examined at each regular meeting of the Committee.

Moreover, under Article 25 (paragraphs 8 through 10), any Member, at any time, may make a written request for information on the nature and extent of any subsidy granted or maintained by another Member, or for an explanation of the reasons why a specific measure has not been notified. Although there is a widely held view that compliance with Article 25.1 has not been fully adequate — in terms both of the number and content of notifications — there have already been some additional disclosures prompted by the use of Article 25.8 and Article 25.10 procedures, and the list of notifications received by the WTO continues to increase. Written questions and answers on subsidy programmes provided within the context of the SCM Committee's special sessions have elicited even more information on subsidies.³⁶ And all the notifications, questions and answers are accessible by the general public through the WTO's Internet web site.³⁷ The result is that transparency on subsidies at the international level, though not yet full, is nowadays far greater than it ever has been.

B. Three sectors

Let us turn now to the three sectors to be examined in greater detail: agriculture, coal mining and fishing. Despite what might seem to be obvious differences among the products of these industries, they, along with forest products and minerals generally, have often been accorded special treatment in regional and international trade agreements. As already noted, under Article XVI of the original (1947) GATT, "primary products" were essentially exempted from disciplines relating to export subsidies. It is the tendency of governments to lavish all sorts of other subsidies to these sectors, however, that makes them interesting case studies. The reasons why so many governments have traditionally treated these mature sectors differently from others need not be elaborated on here. But an observation made by one participant during the workshop seems to capture the essence of why appeals by these industries to popular

^{35.} Specifically, under Article 9 the Member claiming "serious adverse effects" may initiate a process that begins with a bilateral consultation and can end (if no mutually acceptable solution can be reached and the Committee on Subsidies and Countervailing Measures then determines that such adverse effects exist), with the Committee authorising the requesting Member to take "appropriate countermeasures commensurate with the nature and degree of the effects determined to exist."

^{36.} The Committee's procedures for reviewing the new and full notifications for 1998 are described in Document No. G/SCM/18, 27 April 1998. These written questions and answers are all contained in a series of documents with the symbol "G/SCM/Q2/XXX", where XXX represents the official three-letter code for the country whose subsidy measures are being questioned.

^{37.} Go to: http://www.wto.org/wto/ddf/ep/public.html>.

sentiments have so often been effective: farming, fishing and coal mining are, after all, industries for which folk songs are written.

1) Agriculture

The tradition of sheltering, and later subsidising agriculture, stretches well back into the beginning of the 19th century. Support to agriculture became a much more wide-scale phenomenon in the late 1800s, but among the developed countries it was the policies adopted in the 1920s and 1930s, put in place in response to falling commodity prices and the general protectionist mood, that set the foundation for government intervention in agriculture until our present decade.³⁸

Because of this tradition, the contracting parties to the original (1947) GATT could not agree on mechanisms for imposing firm disciplines on trade in agricultural products. As a 1995 OECD study³⁹ points out, at the root of these differences was the widely held belief that the sector was in decline and could not withstand the full rigours of international competition without suffering unacceptable social and economic disruption. The result was several general or country-specific derogations or exemptions on agricultural products that, in combination, virtually exempted agriculture from the disciplines that were applied to trade in manufactured products.

The results were predictable. High domestic prices were maintained behind protective barriers, and production increased. Imports from traditional supplying countries were curtailed; export subsidies proliferated. Western Europe went from being a net food importing to a net food exporting region. Countries unwilling or unable to subsidise exports lost market share. Trade tensions rose as the GATT's dispute settlement process was resorted to increasingly in an effort to resolve agricultural trade disputes. Of the 82 disputes submitted to the dispute settlement process between 1980 and 1990, 60% concerned agriculture.

Attempts were made in successive Rounds to bring agriculture more fully under GATT disciplines, but each one failed for various reasons. The Tokyo Round came close, but it too fell through. Beginning in the early 1980s, however, various bilateral and multilateral meetings and initiatives started to take place in an effort to achieve some resolution of the issue. Among these was a specific mandate to the OECD, issued in May 1982 by the OECD's Council meeting at Ministerial level, to develop: (i) estimates of the sources of assistance to agriculture on a commodity-by-commodity basis in OECD countries; and (ii) a method for assessing the impact of a progressive and balanced reduction in assistance upon domestic and international markets. Agriculture would also become the focus of a new committee of the GATT, following a decision of that body's governing board, also meeting at Ministerial level, in November of the same year.

Over the next four years determined efforts were made to ensure that agricultural trade disciplines would be improved as part of a next round of international trade negotiations. These efforts culminated in the 1986 Punta del Este declaration, formally launching the Uruguay Round. In that declaration, Ministers stated their wish that the "Negotiations shall aim to achieve greater liberalisation of trade in agriculture and bring all measures affecting import access and export competition under strengthened and more

^{38.} See, for example, Chapter 7 of O'Brien (1997), and Chapter 2 of Boyard (1991).

^{39.} This and several of the following paragraphs draw heavily on OECD (1995b: 10-17).

^{40.} Bello (1998: 2).

^{41.} OECD, Council at Ministerial Level, Communiqué, PRESS/A(82)25, 11 May 1982.

^{42.} Spero (1985: 124).

operationally effective GATT rules and disciplines". Moreover, the competitive environment was to be improved "by increasing discipline on the use of all direct and indirect subsidies and other measures affecting directly or indirectly agricultural trade". Reflecting the general evolution in international attitudes towards subsidies, domestic support policies were recognised as having potential trade effects, and would be dealt with accordingly.

During this period, work at the OECD had already begun to document the massive transfers resulting from Member countries' agricultural policies, and to suggest which types of policies were the most trade distorting. These results were presented in May 1987 to the OECD Council (meeting at Ministerial level) in a synthesis report on National Policies and Agricultural Trade, and a series of country reports analysing and quantifying the links between domestic agricultural policies and trade. In response, the OECD Ministers drew up a set of (non-binding) principles for the reform of their agricultural policies. Besides reiterating the link between domestic agricultural policies and trade, these Principles also outlined a reform agenda, the long-term objective of which was "to allow market signals to influence, by way of a progressive and concerted reduction of agricultural support, as well as by all other appropriate means, the orientation of agricultural production". 44 In order to verify whether countries were making progress in the direction suggested by the Principles, an annual monitoring process was initiated, with the Producer and Consumer Subsidy Equivalents (PSEs and CSEs) as the main indicators of support. The basic data on PSEs, CSEs and Total Transfers were, in turn, taken up by numerous researchers at universities, government research units and think tanks around the world.⁴⁵ At the OECD itself, studies were commenced to look at the possible contributions that supply controls and different forms of direct income support might make to agricultural policy reform, as part of a broader programme of work on ways to facilitate structural adjustment in the sector. 46

This analytical work proved highly influential in the development of the agricultural negotiations in the Uruguay Round's Negotiating Group on Agriculture⁴⁷, and led to specific efforts to identify and discipline trade-distorting domestic support using the PSE or variants thereof.⁴⁸ The details of these discussions — which started in advance of the 1988-89 Mid-Term Review and continued for another two years — are described elsewhere⁴⁹; what matters here is that, in the final Agreement on Agriculture, specific disciplines were applied to domestic support to agriculture, though with numerous caveats and exceptions.⁵⁰

Agreement in principle to accept disciplines in each of three areas — import access, domestic support and export subsidies — was finally achieved in 1991. Various remaining issues proved highly contentious, however, and it was only following protracted bilateral discussions between the US and the EC (the November 1992 "Blair House Accord") that an agreement was finally reached. The definitive text of the

44. OECD, Press Release: Council of the OECD at Ministerial Level, PRESS/A(87)27, Paris, 13 May 1987. These basic reform principles have since been reiterated and expanded upon by Council Ministers on several occasions, and by Agricultural Ministers at their 1992 and 1998 meetings.

^{43.} OECD (1987).

^{45.} For a sampling, *see* Goldin and Knudsen, eds. (1990), and *OECD Economic Studies*, No. 13, Winter 1989-90, special issue on "Modelling the Effects of Agricultural Policies".

^{46.} See, in particular, OECD (1990).

^{47.} According to Bruce Ross (1996), "the decision to seek a binding commitment in the area of domestic support in the Agreement on Agriculture was, in large part, the result of the ongoing OECD work on PSEs."

^{48.} These technical discussions took place in an especially constituted group known as the Technical Group on Aggregate Measurement of Support and Related Matters.

^{49.} See, for example, Hamsvoort (1994); OECD (1995b); and Chapter 7 in O'Brien (1997).

^{50.} For example, a number of countries were very concerned to gain special treatment for commodities claimed to have a special role in their diet, culture or environment.

final "Agreement on Agriculture" (URAA) was finally adopted as part of the *Final Act Embodying the Results of the Uruguay Round of Multinational Trade Negotiations* on 15 December of 1993, and included detailed schedules of reduction commitments from each country. These schedules constitute an integral and legally binding part of the URAA.

The URAA text alone, not including the country schedules, runs to some 16 pages, and is built around disciplines in four areas, here outlined in highly summarised form:⁵¹

- Market access (Articles 4 and 5): Market access concessions relate to bindings and reductions of tariffs, and to other market access commitments, as set out in the country schedules. First, all identified non-tariff barriers (e.g., quantitative import restrictions, variable import levies, minimum import prices, discretionary import licensing, non-tariff measures maintained through state-trading enterprises, etc.) must be converted into ordinary customs duties and bound. (This conversion process is often referred to as "tariffication".) From this base, Members have agreed to reduce tariffs over the course of the six-year (10 years for developing countries, or DCs) implementation period by an average of 36% (DCs: 24%), with a minimum 15% (DCs: 10%) cut per tariff line. Least developed countries (LDCs) are exempted from reduction commitments. Members also have agreed to maintain access to their markets, to ensure that the tariffication process maintains or increases, but does not reduce, potentials for trade.
- Export subsidies (Articles 8, 9 and 10): Members are required to cut both the quantity of subsidised exports and the budgetary outlays on such subsidies by 36% (24% for DCs and zero % for LDCs) over the six-year (DCs: 10 years) implementation period from a 1986-90 base.
- Domestic support (Articles 6 and 7): The domestic support reduction commitments of each Member contained in Part IV of its Schedule apply to all of its domestic support measures in favour of agricultural producers, with the exception of domestic measures that are not subject to reduction. Domestic support deemed to be non- or minimally trade distorting, and direct payments provided through certain production-limiting programmes, are not included in the AMS. Domestic policies identified in the country schedules as trade distorting basically, market price support, production-linked direct payments, and input subsidies, expressed in terms of Total Aggregate Measurement of Support⁵² are subject to reduction commitments of 20% (compared with the 1986-88 base period), with credit granted for any reductions that had already occurred since the base period. Developing countries must reduce their Total AMS by 13% over nine years, and LDCs cannot exceed their Total AMS established for 1986-88.
- Sanitary and Phytosanitary Measures (Article 14): Members have agreed to give effect to the separate "Agreement on the Application of Sanitary and Phytosanitary Measures". Essentially, any trade restrictions relating to agricultural products intended to protect the health of humans, animals or plants must be based on sound scientific principles.

^{51.} The full text can be obtained from the WTO's web site at http://www.wto.org/wto/legal/finalact.htm.

^{52.} The Total AMS, as defined in Part I, Article I of the Agreement, refers to: "the sum of all domestic support provided in favour of agricultural producers, calculated as the sum of all aggregate measurements of support for basic agricultural products, all non-product-specific aggregate measurements of support and all equivalent measurements of support for agricultural products"

There is broad consensus that, as a package, the URAA signalled an important move in the direction of freer trade in agriculture by improving market access and reducing trade restrictions. However, many distortions remain, with much of the trade in agro-food products still governed by a complex set of tariff quota arrangements and many prohibitive over-quota tariffs. Domestic support measures for which exemption from the reduction commitments can be claimed (detailed in Annex 2 of the URAA) include a wide range of general government-supplied services, such as research, food inspection, marketing and promotion, and "infrastructural services". These infrastructural services cover big items in some governments' budgets—notably, roads and other means of transport, market and port facilities, water supply facilities, (irrigation) dams and drainage schemes, and infrastructural works associated with environmental programmes. While no firm numbers are available on government subsidies to irrigation, the available data suggest they are in the tens of billions of U.S. dollars a year—i.e., at least as great as subsidies to fishing, if not greater. Interestingly, the exemption for infrastructural services "shall not include subsidies to inputs or operating costs, or preferential user charges." Yet very few such subsidies were included in country schedules or subsequent notifications.

Despite these shortcomings, has the URAA made much of a difference? Yes, especially by making countries tariffy their non-tariff trade barriers. Also, it appears that countries are abiding by their commitments to phase out subsidised exports. As for domestic support, it is perhaps too early to discern the net effect of the Agreement. However, a recent study prepared for a meeting of the OECD's Agricultural Ministers suggests some positive trends among its own Member countries. To quote from the summary of that paper:

The level of support has fallen for the OECD as a whole but is still high (estimated total transfers of US\$280 billion in 1997 [Figure 1, following page]), with wide variations among Member countries and across commodities. Expressed as a percentage of the value of agricultural production, the Producer Subsidy Equivalent (PSE) fell from 45% for the 1986-88 period to 35% in 1997 [Figure 2]. A shift to direct payments has improved market orientation, yet many direct payments are still linked to production or factors of production, and supply controls persist.

It must be acknowledged that some countries have undertaken, or are contemplating undertaking, unilateral domestic policy reforms that go beyond what they have committed to under the URAA. And most recent bilateral and regional trade agreements have included agriculture to varying degrees. The entry of Austria and Finland into the EU in 1995, for example, required domestic and trade policy reforms in both countries. The North American Free Trade Agreement (NAFTA) led to a further integration of the respective agro-food sectors with significant impacts on structural adjustment, particularly in Canada and Mexico. And Advanced to the respective agro-food sectors with significant impacts on structural adjustment, particularly in Canada and Mexico.

^{53.} OECD (1998b: 5).

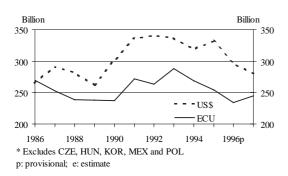
^{54.} As well, many government assistance measures provided by developing countries "to encourage agricultural and rural development" were exempted from the domestic support commitments that would otherwise be applicable to such measures. These exemptions cover, in addition to the exemptions available to developed countries, investment subsidies that are generally available to agriculture, and agricultural input subsidies generally available to low-income or resource-poor producers.

^{55.} See, for example, World Bank (1997: 58-62).

^{56.} For example, in 1997 Australia abolished all tariffs on raw sugar.

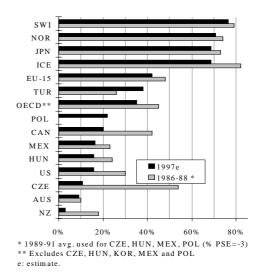
^{57.} OECD (1998b).

Figure 1. Total transfers associated with agricultural policies, OECD*



Source: OECD (1998b).

Figure 2. Percentage PSEs by country*



Source: OECD (1998b).

The URAA was by no means the last word on multilateral efforts to discipline agricultural support. The OECD still monitors its Member countries' agricultural policies (including estimates of PSEs and Total Transfers), and is still engaged in a substantial work programme in the areas of agricultural trade, structural reform and the environment. In March of this year, OECD Ministers of Agriculture reaffirmed their commitment to the long-term goal of domestic and international policy reform. They also reaffirmed their commitment to undertake further negotiations on agriculture, as foreseen in Article 20 of the URAA. Those "negotiations for continuing the process" of reform are scheduled to commence within the WTO's Committee on Agriculture before the end of 1999.

2) Coal mining

Coal has been mined commercially on a large scale since the middle of the last century. Until the 1940s it was largely a local source of fuel, with relatively little entering international trade. Following World War II, however, its importance as a source of energy for the recovering world economy expanded rapidly.

Coal has not been a commodity that has garnered much attention in the GATT. For one, several of the largest coal producing nations — China, Poland, and the Soviet Union — were not contracting parties to the 1947 GATT. In many other countries, coal production was and still is carried out by state-owned or state-sanctioned monopolies. Production tends to be supported generally; explicit export subsidies are uncommon, if used at all. For the most part, subsidies and government-brokered contracts, rather than border measures, have protected producers in high-cost coal producing nations of the developed world.

The first major multilateral effort to curb coal subsidies was the 1951 Treaty Establishing The European Coal And Steel Community (also sometimes referred to as the 1951 Treaty of Paris; hereinafter "the ECSC Treaty") — the first European organisation given supranational powers over national governments and enterprises, and the prototype for the European Economic Community, established six years later.⁵⁸ The ECSC Treaty, which created a common market in two products as vital to economic recovery as they

^{58.} The ECSC Treaty may be viewed at http://europa.eu.int/abc/obj/treaties/en/entoc291.htm>.

were linked to the previous decades' war effort, was a model of liberal-economic thinking. Significantly, not only did the Treaty require free and open trade between its members (though not with the rest of the world), it also prohibited subsidies. As provided in Article 4 of the Treaty:

The following are recognised as incompatible with the common market for coal and steel and shall accordingly be abolished and prohibited within the Community ...:

- (a) import and export duties, or charges having equivalent effects, and quantitative restrictions on the movement of products; ...
- (c) subsidies or aids granted by States, or special charges imposed by States, in any form whatsoever;

Notwithstanding these bold instructions, special allowances were made for Belgium and Italy because of the weak state of their coal industries.⁵⁹

The Treaty also provided for levies to be applied on Community coal and steel products, using part of these levies to finance coal and steel research programmes, as well as to fund worker "re-adaptation" (chiefly accompanying social measures for retraining and redeploying workers in other industries) in the less-efficient regions. Re-adaptation aid first became available in 1954. By 1958, intra-Community transfers to aid the Belgium and Italian coal producers were terminated, leaving the national governments to take up the shortfall. Within a few years, Italy had ceased to be a coal producer.

For its first 14 years or so the ECSC worked more or less as planned. As world prices of competing petroleum products plummeted, however, national coal industries pushed hard to change the rules regarding subsidies. In 1965 the ECSC's High Authority responded to this pressure by passing a temporary derogation to the Treaty — effectively allowing national governments to provide budgetary support to their ailing industries. Member States still had to obtain prior authorisation from the High Authority (later the Commission of the European Communities) before granting aid, but most of these requests met the required criteria and were approved. These criteria were intended to guarantee "that State aid was in the common interest" and that it "was limited to what was strictly necessary in terms of volumes and duration, and did not disturb the functioning of the common market".⁶¹

The oil price rises of the mid-1970s and early 1980s gave hope to the industry, and revived visions of a new era for coal, but did not really change the market fundamentals. The industry still needed protection and "structural assistance" to survive. Further changes to Community rules were established by the Commission over the next two decades (in 1971, 1976 and 1986) in order to reconcile State aid to the coal industry with the objectives of the ECSC Treaty.

The 1986 framework decision, which remained in effect through the end of 1993, recognised explicitly that imported coal, not oil and gas, was the main competing energy source, and that without further restructuring, ECSC producers would continue to lose market share. Accordingly, rules were established on how aid could be provided under six broad categories: deficit grant aid (to cover the difference between production costs and selling prices); sales aid (for the Community's iron and steel industry); investment

^{59.} O'Brien (1997), p. 147. O'Brien's source is a study by William Diebold Jr., *The Schuman Plan: A Study in Economic Co-operation 1950-1959* (New York:, Council on Foreign Relations, 1959), especially pp. 194-222.

^{60.} Articles 49, 50 and 56.

^{61.} Decision No. 2064/86/ECSC of 30 June 1986 establishing Community rules for State aid to the coal industry, *Official Journal of the European Communities*, No. L. 177, 1 July 1986, p. 1

aid; aid for underground staff; aid to offset budgetary shortfalls in social grant schemes specific to the coal industry; and inherited liabilities (such as costs for treating effluent from closed mines). These disciplines — if they can be called that — were largely open-ended, as long as the aid did not interfere with the workings of the common market. Only investment aid was specifically limited, and that could cover up to 50% of the costs of investment.

OECD coal-exporting countries, particularly Australia and the United States, were meanwhile experiencing a slow-down in export growth, just as many new mines, rail lines and port facilities in these countries — built in response to the sellers' market of the early 1980s — were starting to come on-stream. The slow-down in sales was caused only partly by the fall in world oil prices, which lead to the substitution of heavy fuel oil for coal in large combustion units, and a slump in the prices of traded coal. Also important were the arrangements between many coal-burning utilities in European countries that obliged them to buy set amounts from domestic coal producers. Hence adjustments in the utilities' requirements fell disproportionately on import volumes. 62

With such problems in mind, in May 1987 the Governing Board of the International Energy Agency (IEA), meeting at Ministerial level, issued a communiqué calling for, among other actions, the reduction and elimination of barriers to energy trade, "including subsidies". Coincidentally, the IEA began work on its third report on *Coal Prospects and Policies in IEA Countries*. It was clear that, given the circumstances in the market, subsidies had to be dealt with more seriously than they had been in previous exercises.

The IEA added a new section to the report, describing support policies in detail and calculating their subsidy equivalents. In adapting the PSE to coal, the IEA chose an indicator of support that was already being used for agriculture by its sister organisation, the OECD. Nonetheless, the appropriateness of the PSE as a measure of industry assistance was challenged by some governments, mainly because of its inclusion of market price support. It was argued, for example, that one could not establish a meaningful reference price for a depletable natural resource; or that a high proportion of coal was sold under long-term contracts and therefore prices were likely to diverge from border prices in any given year; or that the contracts between (usually state-owned) electric utilities and domestic coal producers were of a purely "commercial" nature, "voluntarily" entered into, hence unrelated to government policy. For the ECSC member states, the inclusion of market price support in the PSE was problematical also because it highlighted the differences between the IEA's definition of support to the industry, and what the countries had been reporting to the European Commission: except in the case of Germany's *kohlenpfennig* — the surcharge on electricity to cover the extra costs of coal purchased from domestic suppliers — no element of market support had been officially acknowledged or approved under the Commission's 1986 notification, appraisal and authorisation procedures.

Ultimately, these problems were overcome and PSE estimates were produced for five countries — four ECSC member states (Belgium, Germany, Spain, and the United Kingdom⁶³) and Japan — and additional information was provided on support programmes in seven other IEA countries. For the five countries alone, PSEs in the mid-1980s were shown to be in the range of \$8 billion, not counting other transfers not directly related to current production. On a per tonne basis, consumers — chiefly electric utilities, which

^{62.} Between 1985 and 1987, imports of steam coal (i.e., the type of coal used in power plants) into OECD Europe declined by more than four per cent. IEA, *Coal Information 1993*, OECD Publications, Paris, 1994, p. 363.

^{63.} PSEs were not initially calculated for France, as it did not join the IEA until 1992.

then passed along the increased prices to consumers — were having to pay as much as three times the price of imported coal of equivalent quality.⁶⁴

There was still at this juncture in the Uruguay Round, just before the Mid Term Review, the possibility of securing a special agreement on natural resources, including coal. During the Mid Term Review's second meeting, in April 1989, Australia distributed a pamphlet⁶⁵, citing the IEA's PSE numbers, and drawing attention to the "unique opportunity" provided by the Uruguay Round trade negotiations "to reduce barriers to trade in coal and other natural resources on a global basis". In the negotiations themselves, Australia put forward proposals covering coal that were designed to achieve "more open markets; negotiated phased reductions in all types of trade barriers and distortions, including subsidies; and new and tighter trade rules on the use of subsidies." The initiative was regarded with interest by some of the other coal exporting nations, but in the end it was abandoned by most of them so that they could concentrate their efforts on securing a deal in the Agreement on Agriculture.

One of the main bilateral tensions in the coal trade was that between Australia (the world's leading exporter) and the European Union (the world's leading importer). Frustrated in its attempts to obtain a multilateral agreement to discipline coal subsidies, Australia continued to pursue its objectives through bilateral discussions. These led, on 15 December 1993 to Australia and the European Commission signing an Agreement on Coal, under which the Community committed to a stand-still in subsidised coal production, in return for a commitment by Australia not to challenge the Community's new coal subsidy scheme. The Agreement was reviewed again in 1998, considered satisfactory by both parties, and will be reviewed again before the end of 2000.

Important also during this period was the changing attitude towards State aids within the Community itself. Just days after the EU-Australia agreement was signed, the European Commission issued a Decision setting out new rules for State aid to the coal industry for the period 1 January 1994 through 23 July 2002. Besides tightening the conditions under which State aid could be provided, it required that all member states intending to grant operating aid during the period covered by the decision submit a "modernisation, rationalisation and restructuring plan" that "provides for appropriate measures ... to generate a trend towards a reduction in production costs at 1992 prices". Given the economics of coal production in the EU, one could assume that such a feat could only be accomplished through mine closures. Perhaps even more significantly, the new rules required that, by 1 January 1997, all aid "shall be authorised only if it is entered in Member States' national, regional or local public budgets or channelled through strictly equivalent mechanisms". In other words, market price support, such as had been provided under some member states' arrangements between domestic coal producers and their electric utilities, would henceforth be prohibited.

The adjustments required of domestic coal industries in order to meet the new Community rules for State aid have not been entirely smooth, especially since the "budgetisation" condition came into force. The

^{64.} Appendix D in IEA (1988). *See* also Steenblik and Wigley (1990). Subsequent estimates of coal PSEs have been reported in the IEA's annual report of *Energy Policies of IEA Countries*.

^{65. &}quot;Coal Subsidies—Barriers to Trade: A Time for Action in the GATT Uruguay Round of Trade Negotiations", Department of Foreign Affairs and Trade, Canberra, Australia, April, 1989.

^{66.} Around this same time, the Organization of the Petroleum Exporting Countries (OPEC) was also starting to take notice of OECD coal subsidies, and did not hesitate to point to what OPEC considered to be an inconsistency between coal support policies and the OECD's call for curbs on carbon-dioxide emissions. *See*, for example, Okugo and Birol (1992) and Ismail (1993: 15).

^{67.} Press Release No. 9402/98, 16/17 June 1998, p. III.

^{68.} Decision No. 3632/93/ECSC of 28 December 1993 establishing Community rules for State aid to the coal industry, *Official Journal of the European Communities*, No. L. 329, 1 December 1993, pp. 12-18.

UK coal industry was in certain respects the least affected, since the Government of that country had already privatised its electricity sector and was in the process of selling off British Coal. In Germany, however, these changes required the Government to more than treble its budgetary assistance to the industry. Attempts by the German Government to phase out most of this support by the year 2005, which jumped to around DM 10 billion (\$6 billion) in 1996, led to huge demonstrations and a decision to reduce support at a slower rate.

The European Commission, for its part, has also seen its relationship with the coal industry change in fundamental ways. At the end of 1997, a request for clarification by the Commission of the Spanish Government's first coal industry restructuring plan led to a month-long protest strike and violent clashes between miners and police. Since then, the Commission has received formal protests from the British Government against State aid to both the Spanish and the German coal industries, and has been petitioned by British mining companies to stop the "dumping" of German anthracite in the British market. In the latter case, the Commission recently ruled in favour of the complainants and ordered two German mining companies to repay DM 20.35 (\$11.5 million) of State aid.

These adjustment problems notwithstanding, the inexorable decline of subsidised coal production is likely to continue. Over the past decade subsidised production of hard coal has ceased in Belgium, Ireland and Portugal, and production in the United Kingdom has fallen by more than half. France is on track to end all support to coal mining by 2005, and Germany and Spain are expected to cut back their production and total support considerably over the same period. Japan, which produced around 15 million tonnes of high-cost coal in 1987, last year produced only 4.3 million tonnes.

3) Fisheries

Fishing, like farming, has a long history of government intervention and support. Per-tonne payments were being made to the herring and whale fisheries in Scotland at least as far back as the late 1700s. Although Adam Smith was critical of the distortions caused by these "bounties", he noted that it could be argued that they contribute to the defence of a nation "by augmenting the number of sailors and shipping ... at a much smaller expense than by keeping up a great standing navy." Kurlansky asserts that this was indeed one of the considerations that motivated the French Government in 1815 to start subsidising that country's fishing fleet, particularly its distant-water fleet, which had been devastated by the French Revolution and the Napoleonic wars. Britain complained about the French subsidy but eventually followed suit. Over the next 100 years, several other North Atlantic fishing nations and Japan would feel compelled to subsidise fishing, out of a very real fear that other countries with more modern fleets would otherwise grab the sea-lion's share of the fish harvested from international waters — in those days a rivalry that was acted out within easy sight of their own coasts. By the middle of the 20th century, as powered ships replaced oar and sail, most governments that thought they could afford to do so were supporting commercial fishing by various means, from direct capital grants and loans to major harbour improvements.

^{69.} See David White, "Spain's miners turn valley into their battleground", Financial Times, 22 January 1998; and D. White, "Spain confident on mines plan", Financial Times, 29 January 1998.

^{70.} Andrew Taylor, "German coal subsidies attacked by UK", Financial Times, 16 March 1998.

^{71.} Samer Iskander and Andrew Taylor, "German mining groups must repay aid", Financial Times, 30 July 1998.

^{72.} Smith (1937 [1798]: 484).

^{73.} Kurlansky (1997: 118).

^{74.} According to Waugh (1994), government subsidies aimed at expanding the Japanese distant water fishing fleet began with the Distant Water Fisheries Promotion Act of 1897.

A full accounting of subsidies to the fisheries sector has never been done⁷⁵, but it seems reasonably safe to say that in most countries they were, and still are, smaller in absolute terms than subsidies to agriculture, and have relied less on border measures. But multilateral attempts to deal with fishery subsidies have nonetheless been influenced greatly by rules relating to farm products. In the 1947 GATT, as mentioned, fishery products were exempted under Article XI from the same disciplines on import restrictions that applied to agricultural products. One major difference between the two sectors, however, has been that, unlike in agriculture, most of the tariffs on fish and fish products applied by developed countries were bound under GATT before the Uruguay Round negotiations got under way.⁷⁶ This tariff binding thus had the effect of denying these countries any possibility of increasing the tariff and non-tariff protection already negotiated.

Ironically, information was being collected on subsidies to the fisheries sectors of developed countries more than 30 years ago. In 1965, the OECD's newly-formed Committee for Fisheries published its first compilation of *Financial Support to the Fishing Industry*. Earlier, in a survey published in September 1960, the Organisation for European Economic Co-operation (the OECD's predecessor) had already noted the difference between trade-distorting subsidies and those "[that] may be necessary for facilitating the alternative employment of fishermen"; it had called upon the Organisation to appraise in detail "all subsidies and other forms of financial aid ... with the object of ... reducing and ultimately abolishing those which are not consistent with the principle of co-operation within the framework of the O.E.E.C."

The 1965 report, the OECD's response to that instruction, collected information from the late 1950s through 1963 and showed, not only that Member countries had put in place a wide range of measures to support their fishery sectors, but also that the levels of support were generally increasing. It was also unequivocal in its recommendations, which were clearly made from a trade perspective:

- "... subsidies directly given to the fishermen on the basis of the quantity of fish landed, gross proceeds, or time spent at sea must be considered ... less acceptable than other types, ... [and] should not be given."
- "... scrapping premiums, shipbuilding and other investment subsidies for the benefits of fisheries ... are only acceptable if they are to be in force for a period of less than five years and/or the granted amount does not exceed 25% of the building cost of a new vessel."

The Report was endorsed by the OECD Council at its meeting on 21 July 1964, which instructed the OECD Committee for Fisheries "to take into consideration" the report's recommendations and conclusions, and "to examine periodically the development of the situation as regards subsidies and other financial supports to the fisheries in Member countries". Monitoring of support was continued over the next several years as part of the OECD's 1967 and 1968 *Review of Fisheries*, and was expanded in a second study on financial support published in 1971. The 1971 report noted that, while Member countries

^{75.} Milazzo (1998), in his study for the World Bank, comes the closest to achieving that goal to date, but even he concedes that his estimates "probably err on the low side, perhaps by a considerable margin" (pp. 73-74). The WTO's Committee on Trade and Environment has also complied a list of fisheries related subsidies; see "GATT/WTO Rules on Subsidies and Aids Granted in the Fishing Industry", Document No. WT/CTE/W/80, 9 March 1998.

^{76.} Sen (1994) claims that, prior to the conclusion of the Uruguay Round Agreements, approximately 80% of tariffs levied on fish and fish products were GATT bound. See also Fihol (1995).

^{77.} OEEC (1960: 258).

^{78.} OECD (1965: 8). The 25% limit also happened to correspond to the maximum capital grant normally permitted under the European Community's Agricultural Guidance and Guarantee Fund (as a supplement to national support), though assistance worth up to 45% of admissible costs was allowed in some areas.

^{79.} OECD (1965: 21).

had generally followed the 1964 Council recommendations at first, "the whole background ... had changed, and ... recently there had been a tendency towards an increase in all sorts of financial aids." The new background — which differed considerably from country to country — was characterised by a combination of declining catches, especially of groundfish and herring in the North Atlantic, in the face of weak demand and prices.

Like its predecessor, the 1971 report was quite candid on many points, including the political economy of support during this period:

In the circumstances many governments, while continuing to support their fisheries for political reasons, were inclined to take a favourable view of phasing out their financial aid over a reasonable period, commonly regarded as five or ten years according to type of aid. As long as demand and prices kept improving, this attitude continued and in 1964, 1965 and 1966, outside aid, and the need for it, gradually diminished. ... In fact, had the reductions progressed at the then current rate, no doubt this review [i.e., the OECD report] would, on the whole, have reported good prospects of undesirable grants disappearing, as recommended, by 1975. 81

Thereafter, monitoring of financial support to OECD fishing industries was less vigorously pursued. The last of the series, for example, which was published in 1980, was purely descriptive of each country's measures, covered only one year (1979), and contained no conclusions or recommendations.

At this point, the fisheries sector stood at the middle point of a two-decade period of unprecedented change, one which had already witnessed most coastal states extending national jurisdiction over fisheries resources from just a few miles to 200 nautical miles (370 kilometres). Resource-rich coastal states had an incentive to provide financial support to their domestic fleet in order to quickly take advantage of fishing opportunities vacated by foreign fleets; the problem was that it was difficult not to overshoot the mark. Countries more dependent on distant-water fishing felt the need to help their now excessively large fleets adjust to the new international order — funding vessel decommissioning schemes, in some cases, but also redirecting them to other exclusive economic zones, and into international high-seas waters. The result of all these actions was global overcapacity.

Renewed attempts to impose binding disciplines on subsidies to the fisheries sector did not get off the ground until the GATT Uruguay round of multilateral trade negotiations. Even then, fisheries became a sort of unwanted foster-child, pushed around from one domicile to another.

Early in the Round, the United States, supported by the Cairns Group, sought to include fisheries in the discussions of the Agricultural Negotiating Group (ANG). As Salapare explains, "since the United States at the onset had hoped to eliminate trade distorting subsidies and barriers to trade in agricultural products, it appeared that participating in this forum would be the most rational and convenient way to negotiate fisheries trade policies." However, because other countries in the ANG did not lend support to this approach, or actively opposed it, efforts were shifted to the Market Access Group. There, the U.S. proposed a "zero-for-zero" deal — if you eliminate tariffs and non-tariff barriers affecting fisheries, we'll do the same — but found few takers. Moreover, the European Union made it clear that it would agree to take part in the discussions on the fisheries sector only if all the specific factors influencing the sector and af-

^{80.} OECD (1971: 7).

^{81.} OECD (1971: 10).

^{82.} For a thorough review of developments in the worlds fisheries during the 1980s, see FAO (1992).

^{83.} Milazzo (1998: 5).

^{84.} Salapare (1996: 3).

fecting trade in fishery products were taken into account. This position was summed up in the phrase, "market access in return for access to resources". 85

In the interest of helping to provide useful input to the ongoing negotiations, the OECD Fisheries Committee returned to the subject of economic assistance to the fishing industry, and established an Ad Hoc Expert Group to study it. Among the questions with which the Group grappled was whether the producer subsidy equivalent (PSE) method, which had recently been successfully applied to the agricultural sector, could also be applied to fisheries. The exercise became bogged down in controversy, however, and eventually it was abandoned altogether. ⁸⁶

Other approaches were tried during the Round, including ones by New Zealand and Canada, each proposing harmonisation of tariffs (and, in the case of New Zealand's, non-tariff trade barriers as well). But they too suffered the same fate. In the Final Act, fishery products were expressly excluded from the list of products covered by the Agreement on Agriculture, and were presumed to be covered, along with industrial products, by the general SCM Agreement.

The SCM includes within its scope several types of subsidies found in the fisheries sector, including border measures, output-related subsidies, subsidies to intermediate inputs, subsidies to capital, and explicit tax breaks. However, as Stone and others have pointed out⁸⁷, it does not seem to include what some have called "implicit subsidies" — uncollected or under-collected resource rents, or the advantages conferred by lax enforcement of environmental standards.⁸⁸ It is also not clear whether, for instance, exemptions from fuel excise taxes that are also available to other primary producers (e.g., farmers and foresters) would be covered by the code.⁸⁹

The Uruguay Round did, at least, lead to some decrease in border protection, and stricter rules on import restrictions maintained for sanitary reasons. It has been estimated that more than 90% of world fisheries exports have benefited from trade concessions negotiated during the Round. Japan, for example, reduced its tariffs on fish and seafood products by almost one-third; Canada reduced its tariffs by slightly more than one-third. New Zealand and Australia are currently reviewing their restrictions on imported salmon; such reviews might not have taken place without the Uruguay Round Agreement on Sanitary and Phytosanitary measures. Tariffs on imports — particularly of processed fish products — remain high in some countries, however. Trade-weighted tariff reduction targets, under which fisheries were classified, averaged around one-third, but within that general category some countries chose to reduce tariffs by a smaller proportion for fisheries products and to make up the difference on other products.

Finally, it is worth mentioning, while the Uruguay Round was still being negotiated, a separate opportunity arose to discipline one major form of subsidy influencing capital accumulation in the fishing industry: support for vessel construction and repairs. In 1989 the U.S. Government launched negotiations for a new Shipbuilding Agreement, to be administered by the OECD. The Agreement would prohibit most subsidies and limit financing assistance for shipbuilding, allow actions against injurious pricing, and establish a dispute resolution process. However, the final text, signed in December 1994 by the Commission of the

^{85.} Commission of the European Communities (1994: 8).

^{86.} McLeod (1996: 2); Milazzo (1998: 16).

^{87.} Stone (1997: 526-7); see also Milazzo (1998) and Porter (1998).

^{88.} As Stone (1997: 526) stresses, whether these failures could be regarded as "subsidies" under current trade law is unclear, if not doubtful.

^{89.} Porter (1998: 40).

^{90.} Filhol (1995).

^{91.} Formally, the Final Act of the "Agreement Respecting Normal Competitive Conditions in the Commercial Shipbuilding and Repair Industry".

European Communities, and the Governments of Finland, Japan, the Republic of Korea, Norway, Sweden and the United States, exempts military vessels and "fishing vessels destined for the domestic fleet" from all but the reporting requirements. That exemption may only be of academic interest in any case, if the U.S. Senate fails to ratify the Agreement by the end of 1998.

V. Discussion

Having reviewed previous multilateral attempts to deal with subsidies to certain natural-resource based industries, what useful lessons can be drawn? It would be desirable to be able to derive some common explanations as to why some efforts were successful and others failed. To do that thoroughly, however, would require a more systematic analysis than can be attempted even in the space of a lengthy workshop paper. The following discussion is therefore intended to stimulate thinking rather than proffer definitive answers.

One lesson seems pretty clear: disciplining subsidies at the international level can be, and usually is, a slow, painstaking process. An agreement may be reached in one decade, only to be abandoned or ignored in the following. Progress is usually made over the long term, but in a "two steps forward, one step back" manner: rules are tightened, but when governments discover that the rules conflict with domestic requirements they find new ways to get around them. Considering that subsidy agreements challenge one of the most fundamental powers of the modern state — the authority to disperse revenues the fact that progress is made at all is remarkable.

The examples also support the axiom that multilateral agreements are not reached without the major players working out a preliminary deal first. In most of the GATT multilateral trade rounds, this has meant the leading world economies: the United States, the European Union, Japan and Canada. "Deals were usually arranged at the top of the pyramid ... and then presented to middle and smaller powers further down the structure in an effort to establish a consensus." In accommodating the interests of the smaller parties, however, special dispensations often had to be made. Thus developing countries were generally subject to "special and differential treatment" — less rigorous disciplines than those applied to developed countries — in the GATT agreements, including the URAA and the SCM. Similarly, the formation of the European Coal and Steel Community revolved around the two main protagonists, France and Germany, but special allowances were made for Belgium and Italy to ensure their participation in the ECSC as well.

The trade literature offers some other insights into what conditions improve the chances that a multilateral agreement will be reached, workable and adhered to. Bruce Ross, in his paper for the 1996 PECC symposium, for instance, argued that three "key elements" need to be in place for a multilateral agreement to succeed. The contracting parties should have sufficient *motivation* to begin negotiations and to carry them through to an agreement. They should have adequate means, or *mechanisms*, for establishing rules or targets. And the *opportunity* should be ripe — that is to say, the economic and political conditions should be conducive to reaching agreement. ⁹⁵

^{92.} See, Rodrik (1998: 19).

^{93.} Snape (1991); O'Brien (1997: 18).

^{94.} O'Brien (1997: 110) is here describing an analogy suggested by Gilbert Winham ("GATT and the International Trade Regime", *International Journal*, Vol. XLV, pp. 796-822) in reference to the Tokyo Round.

^{95.} Others commentators have also considered rules and procedures for *arbitrating disputes* and *enforcing compliance*. See, for example, Collins-Williams and Salembier (1996) and Schorr (1998).

A. Opportunities

Good *opportunities* for initiating, and successfully negotiating a subsidy agreement, do not present themselves every year. The late 1940s, when the GATT was negotiated and ratified, was a special moment in history. A World War had just ended and the disastrous retreat into protectionism that had preceded it was still relatively fresh in the memories of those who helped frame the agreement. Prospects for economic recovery were good — as long as trade barriers did not choke off export opportunities. Given the prevailing economic optimism, it is not surprising that most developed countries, and even some developing countries, were willing to embrace a general policy of liberalising trade and limiting subsidy-driven export competition.

Regarding sector-specific subsidy agreements, omnibus trade talks or other major international initiatives have provided the main opportunities for negotiation. The ECSC's subsidy agreement on coal and steel was incorporated into what was essentially a treaty to promote economic integration. And it goes without saying that sector-specific subsidy agreements successfully negotiated under the aegis of the GATT were dependent on the timing of its general trade rounds. Late-comers, such as the 1989 attempt to include a special agreement on coal, mid-way through the Uruguay Round, have generally fared poorly.

The market conditions confronting the affected sectors at the time that subsidy negotiations took place appear to have influenced outcomes in some cases, but the sample size is too small to draw definitive conclusions. During the 1950s and early 1960s, when agreements were reached on subsidies to coal mining and fishing, both of these sectors were in a growth phase. The agreements began to unravel when market conditions reversed. On the other hand, when the European Commission finally tightened its rules on coal subsidies (and entered into a "standstill" agreement with Australia) in 1993, the long-run prospects for most European coal producers were bleak, and coal subsidies were already being phased out in all but a couple of member states.

In the case of agriculture, it is more difficult to generalise. Prior to the Tokyo Round, structural adjustment problems in the sector rather than market conditions *per se* probably better explain government protectionist policies and the willingness of the dominant trading nations to treat agriculture as a sector apart. Nevertheless, as O'Brien points out, declining U.S. agricultural exports during the early 1950s created protectionist pressures that ultimately led to the special waiver from GATT disciplines on quantitative import restrictions. By contrast, a relatively good outlook for agricultural trade at the time may have contributed to the successful conclusion of the Uruguay Round Agreement on Agriculture in 1993.

B. Motives

Identifying the actual *motives* behind government action, and the relative strengths of different motives, is a speculative and problematic endeavour, and in this area the author claims no special insight. In all the examples discussed, it can be assumed the desire to increase opportunities for trade in general was always present. But it was not always the only motive, nor even the dominant one.

^{96.} Fishing nations bordering the North Atlantic Ocean and surrounding seas were still reaping one of the legacies of WW II — healthy fish stocks — which they were exploiting with ever more efficient technology; in the case of coal, economic recovery was fuelling demand for steel and power. Adelman (1972: 180) documents that French and German mine-mouth coal prices rose strongly in the four-year period beginning in 1950.

^{97.} Almost two decades ago Tackacs (1981) showed through econometric analysis that pressures for protection (as measured by the number of safeguard petitions filed by U.S. industries seeking import relief between 1949 and 1979) increased in line with adverse macroeconomic conditions.

The OEEC/OECD initiative to control fishing subsidies in the 1960s, for instance, was primarily concerned with preventing wasteful, subsidy-driven competition for common-pool resources in what were then international waters; a decade later, as nations started extending their jurisdiction over fishery resources from a few miles to 200 nautical miles, this concern became much less germane. Similarly, the 1951 Treaty Establishing the European Coal and Steel Community was as much about binding former enemies together as it was about freeing trade; coal (with steel) was just a logical starting point. By the time the ECSC's subsidy disciplines began to be loosened, 14 years later, the peace motive was less urgent, and in any case the same nations had by then become member states of an expanded customs union. A possible lesson from these examples is that a motive other than trade liberalisation may help in securing a free-standing subsidy agreement, but when that motive fades, so does a reason for sticking to the original understanding.

The strength of the trade motive undoubtedly varied across the sectors and initiatives examined. Over time, however, it has probably been increasing. Moreover, as the general trade policies of the industrialised countries have moved in one direction (towards liberalisation), those affecting primary industries have moved in the opposite (towards higher levels of support), thus making the differences more and more glaring. By the time of the Uruguay Round, it had become almost inconceivable that subsidies to primary industries — especially agriculture — would continue to be effectively unregulated.

C. Mechanisms

With regard to *mechanisms*, it would seem to go without saying that obtaining agreement on a common definition of a subsidy, a method for measuring it on a comparable basis, and assurance that information could be collected and verified, would be a necessary prelude to any kind of multilateral negotiation. Yet on several occasions (for example, agricultural products in the Tokyo Round, and fish products in the Uruguay Round), negotiations were begun without these conditions having first been met. Not surprisingly, little if any progress was made on these occasions. The inability of the GATT Contracting parties to agree on a definition of what actually constituted a subsidy, even as they were codifying subsidy disciplines (for non-primary products) at the end of the Tokyo Round, left wide latitude for multiple interpretation and essentially ensured that the parties would have to return to the question in a subsequent round, as they in fact did.⁹⁸

As Collins-Williams and Salembier observe, the GATT's original subsidy provisions "were drafted at a time when economic policy was a more straightforward matter than it has since become . . . it was far less dangerous in that era to employ a term like 'subsidy' in an international agreement without even defining it." Subsequent experiences attest to the crucial importance of addressing the definitional and measurement issues up front. That a method for measuring subsidy equivalents, and an inventory of support measures, had been more or less sanctioned by the major agricultural interests in the Uruguay Round before negotiations began in earnest, was clearly crucial to its success. It is noteworthy in this regard that the 1993 Australia-EU "stand-still" agreement on coal subsidies used a measure of support similar to that already being used by the IEA, which in turn was based on the OECD's measure of support for agriculture. In the case of the failed attempt to include fisheries in the URAA, lack of a common definition and existing database on fisheries subsidies undoubtedly reduced the chances that a special agreement would be reached.

^{98.} O'Brien (1997: 113).

^{99.} Collins-Williams and Salembier (1996: 6).

The complex nature of establishing internationally agreed rules also demands that the consensus-building process begin well in advance of formal negotiations. The more complicated and contentious the issues, the longer or more intense this stage should be. Most subsidy agreements have had to establish general rules that were more flexible and elaborate than the one contained in the 1951 ECSC Treaty, which simply allowed no subsidies whatsoever. While some countries have since proposed "zero-for-zero" deals in trade and subsidy negotiations — notably on agricultural and fish products at the beginning of the Uruguay Round — it is unlikely that they expected other countries to take these offers seriously. Nowadays, disciplining subsidies generally means establishing rules that recognise different degrees of effects (on trade, the environment or whatever), and tailoring remedies to them accordingly.

To do that requires analysis. In the 1940s and 1950s, it might have been "possible for the best minds of the day to proceed on a basis that might be described as 'I know one [i.e., a trade-distorting subsidy] when I see one'." But nowadays parties to multilateral negotiations demand evidence, or at least rigorous arguments, on the effects of subsidies (or of particular reduction proposals), before they are willing to commit to disciplines. One element contributing to a successful conclusion to the Uruguay Round negotiations on agriculture was the abundant number of studies that had recently been undertaken on the trade effects of subsidies. Those carried out by inter-governmental fora, such as the OECD, played a special role in this respect in that they were scrutinised closely by member governments and were generally regarded as free of national bias.

It is important also that research help identify credible policy alternatives: if governments can offer something else besides production subsidies to their industries (such as programmes to help displaced workers) they will be more likely to agree to externally imposed restrictions on the use of subsidies that are more trade or environmentally distorting. As international efforts to discipline subsidies have moved from the regulation of export subsidies to production subsidies as well, the trend has been to exclude certain categories of subsidies as "non-actionable" or "green-box" — i.e., not subject to reduction commitments and exempted from challenges by other countries. Typically included within this category are non-discriminatory government expenditures on general infrastructure, regional development, education and training, and environmental protection. Work undertaken by APEC, the OECD, the WTO and similar bodies has and is continuing to clarify issues in this potentially contentious area and, it is hoped, contributing to the consensus-building process so indispensable to achieving international understanding on subsidies.

VI. A new force for subsidy reform: environmental NGOs

That efforts to discipline subsidies to primary industries will continue to take place at the multilateral level appears virtually certain. But, increasingly — the APEC initiative notwithstanding — the focus of these efforts is shifting away from purely trade-related issues towards, or at least expanding to include, environmental considerations. Wheels have already been set in motion, and not only within APEC:

• An agreement to continue the process of reform is actually written into the Uruguay Round Agreement on Agriculture; negotiations are scheduled to commence within the WTO's Committee on Agriculture by the end of 1999. In the mean time, discussions have taken place on the environmental

^{100.} The 1964 OECD Council recommendation on fishing subsidies, which set out a *specific* programme of subsidy reform on a country-by-country, policy-by-policy basis, appears to have been exceptional.

^{101.} Collins-Williams and Salembier (1996: 6).

^{102.} Destler and Odell (1987: 136-137) make this point in recommending specific steps to strengthen resistance to the forces of protection at the national scale.

effects of removing trade distortions in agriculture (among other sectors) in the WTO's Committee on Trade and Environment.

- Energy subsidies continue to come under attack from many quarters, especially in relation to the climate change issue. As set out in the Kyoto Protocol to the United Nations Framework Convention on Climate Change, each Party to Annex I of that Convention (essentially, the OECD countries plus the countries of eastern Europe, including the Russian Federation), in achieving its quantified emission limitation and reduction commitments, shall progressively reduce or phase out "market imperfections, fiscal incentives, tax and duty exemptions and *subsidies* in all greenhouse gas emitting sectors that run counter to the objective of the Convention and application of market instruments" (emphasis added). ¹⁰³
- Interest in subsidies to the fishing industry has not waned since the conclusion of the Uruguay Round; if anything it has grown. As mentioned in the introduction to this paper, work is underway in several inter-governmental organisations (IGOs) to study the effects of fishing subsidies on trade, the sustainability of fishery resources, or both. The World Wide Fund for Nature, among other international environmental NGOs (ENGOs), has made it one of the top priorities of its Endangered Seas Campaign, calling for the elimination of subsidies that contribute to overfishing and unsustainable fishing practices, and for negotiations to begin immediately on developing new international disciplines to achieve that aim.¹⁰⁴

The much greater degree of interest and involvement of international NGOs, and ENGOs especially, in multilateral trade and subsidy mechanisms is already changing the nature of the international dialogue. Up until the Uruguay Round, interest in disciplining subsidies at the multilateral level was mainly driven by concerns over trade and competition. As well, the setting of the policy agenda was largely dominated by governments and multilateral institutions. Nowadays, people both inside and outside of governments have begun to take a keen interest in the effects that subsidies may be having on the environment and the management of natural resources. The driving force behind this newly focused attention has often been provided by NGOs, and other bodies not previously engaged in the subsidies dialogue. ¹⁰⁵

Several reports by different international organisations, all appearing in 1992 — the year of the United Nations Convention on Environment and Development (UNCED) in Rio de Janeiro — can be credited with boosting awareness of the links between subsidies and environmental effects of subsidies. In agriculture, of course, the OECD's annual estimates of PSEs and Total transfers were already being noticed by environmental groups. The book, *The Greening of World Trade Issues*¹⁰⁶, edited by two economists then associated with the GATT Secretariat, also had considerable influence. In energy and fisheries, however, nothing can compare with the impacts that the World Bank's \$230 billion estimate of world-wide subsidies to fossil fuel consumption¹⁰⁷, and the FAO's \$54 billion estimate of global fishing subsidies¹⁰⁸,

^{103.} Article 2, Section 1, Sub-section (a), Paragraph (v). Available from the World Wide Web at http://www.cop3.de/fccc/docs/.

^{104.} The WWF's Endangered Seas Campaign is chronicled in its web site at http://www.panda.org/endangeredseas/index.htm

^{105.} In the past, of course, pressure groups in general (particularly trade unions), certainly were forces for reform, but mainly at the national level. National organisations, such as the Sierra Club and the Natural Resources Defence Fund in the United States, and the Royal Society for the Protection of Birds in the United Kingdom, have long taken an interest in government policies favouring natural resource based industries, particularly mining, large-scale agriculture and deep-sea fishing. According to Stone (1997: 536), "Most of the support for applying trade-law disciplines to the fisheries trade [nowadays] comes from resource conservationists, not trade diplomats."

^{106.} Anderson and Blackhurst, eds. (1992).

^{107.} Larson and Shaw (1992). In this and their subsequent papers the authors referred to their estimates as total "energy subsidies". But these estimates were based on measuring the gap between domestic prices and world prices

had on environmental ministers and ENGOs. Although more recent studies have led to significantly lower estimates (mainly because of the economic changes that have taken place in the former Eastern Bloc nations), these figures still stick in the minds of policy makers and environmental advocacy groups.

Within the last five years there has been a virtual explosion of ENGO-sponsored studies emphasising the environmentally perverse effects of subsidies to primary industries as a global problem in and of itself. Headline-makers include studies published by or for: the Earth Council, Greenpeace International, the International Institute for Sustainable Development, the Worldwatch Institute, and the World Wide Fund for Nature. More such studies are in the works. The Earth Council's study, for example, is being followed up by a second one focusing more narrowly on the effects of subsidies on biodiversity, this time under the auspices of the World Conservation Union (IUCN). It, together with the International Centre for Trade and Sustainable Development, has decided to make subsidies to the fishing sector the topic of a high-level policy dialogue, scheduled to take place in the first half of 1999. Indeed, virtually every major national and international ENGO has decided to make the reform of subsidies a major focus of its work.

That the green movement has begun to shift its powerful weight behind the cause of subsidy reform can only be seen in a positive light. But reform of what kind? Here, the ENGOs — or at least the authors of their reports — differ in important ways. For some, reform means the "greening" of subsidies. Subsidies are not suspect *per se*, according to this view; it is just that governments have been giving them to the wrong people. ENGOs in this camp call for redirecting subsidies from "bad" to "good" activities, such as biofuel production, organic agriculture, and artisinal fishing.¹¹¹ Consider the following extract from the foreword to Greenpeace International's study on European energy subsidies as an example:¹¹²

The EU and European governments should prioritise the elimination of subsidies promoting the fossil fuel and nuclear industry [and] ... transfer of these funds to programmes to accelerate the commercialisation of solar renewable energy technologies and energy conservation. [emphasis added]

Such appeals simply to shift subsidies from one set of activities to another are not likely to be taken very seriously by the green movement's natural allies in the cause of subsidy reform — trade economists and public finance specialists — though they do strike a chord with the general public.

Fortunately, as ENGOs develop expertise in the subject, their reports are revealing an increasingly deeper scepticism of subsidies, and a more sophisticated understanding of the mechanisms that could be used to discipline them. At the same time, ENGOs are demanding, and increasingly being granted, greater access to multilateral bodies engaged in discussions on matters related to trade liberalisation and subsidy reform. In some cases such access has taken the form of special consultative meetings between the rele-

only in cases were the former were lower than the latter; hence they in fact only reflected a portion of the total: that associated with market transfers to consumers. Market price support to producers was ignored.

108. FAO (1992).

109. In order: de Moor (1997) and de Moor and Calami (1997); Ruijgrok and Oosterhuis (1997); Myers, with Kent (1998); Roodman (1996 and 1998); Burns (1997) and WWF International (1998).

110. See http://economics.iucn.org/subsidies.htm>.

111. For those who bother to ask where the money to subsidise these activities might come from, the answer is often disarmingly simple: new environmental taxes on the bad activities, of course.

112. Ruijgrok and Oosterhuis (1997).

113. Notable in this regard are two reports issued this year: a Greenpeace-sponsored report on Federal subsidies to oil in the United States (Koplow and Martin, 1998) and a series of reports on fishing subsidies produced by the World-Wide Fund for Nature's (WWF) Endangered Seas Campaign under the title *The Footprint of Distant Water Fisheries*; see < http://www.panda.org/seachange/fisheries/report.htm>.

vant committees and the ENGOs. In the FAO Committee on Fisheries' consultations on capacity, ENGOs have actually participated as official observers, alongside inter-governmental organisations.

NGOs have already changed the nature of multilateral discussions on subsidies to natural resource based industries. Their insistence on greater transparency in rule-making bodies has helped to ensure that official documents become public much more quickly. Their research, conducted by teams of international experts, is starting to rival that of the IGOs, in both depth and timeliness. Their access to policy makers and shapers has enabled them to create new pathways of information within international networks. They have become, in short, essential participants in the process.

VII. Concluding remarks

The main aim of this paper has been to compare past attempts to discipline subsidies to primary industries, and to search for lessons that might be able to inform current and future dialogues on subsidy issues. To sum up the paper's tentative findings:

- the best (but not the exclusive) opportunities for negotiating multilateral rules and mechanisms for subsidies to specific sectors seem to arise in conjunction with broader trade talks;
- a favourable market outlook for the sector in question does not hurt the prospects for reaching an agreement (as long as the prospects are realistic);
- governments need to have a compelling reason to expend effort and risk political capital in a multilateral negotiation;
- chances for success are increased if the negotiating parties have agreed on a definition of what constitutes a subsidy *before* entering into negotiations;
- research on the consequences of subsidy reform is a crucial part of the consensus-building process.

So, what of future efforts to discipline subsidies to natural resource based industries? Without commenting on the likelihood or desirability of different initiatives, it is nevertheless possible to make some impartial observations. First, those wishing to press for new or strengthened disciplines on subsidies to natural resource based industries face a surfeit of opportunities over the next three years or so, including major trade summits and environmental conventions. Second, concerns about the effects of subsidies on resource sustainability will likely occupy more and more time in future multilateral subsidy discussions, compared with the amount of time spent on trade effects. Third, while some degree of international consensus has been reached on the trade effects of subsidies, issues related to the environmental effects of subsidies remain highly contentious. Fourth, additional policy analysis on the topic of subsidies and natural resources will thus continue to be needed.

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