ENVIRONMENTAL RESEARCH OF THE
FEDERAL MINISTRY OF THE ENVIRONMENT,
NATURE CONSERVATION AND NUCLEAR SAFETY

Research Report 201 19 107
UBA-FB 000555/e

Texte
76/03
ISSN
0722-186X

The Polluter Pays Principle under WTO Law: The Case of National Energy Policy Instruments

by

Frank Biermann (PIK)
Frédéric Böhm (DIW Berlin)
Rainer Brohm (PIK)
Susanne Dröge (DIW Berlin)
Harald Trabold (DIW Berlin)

Potsdam-Institute for Climate Impact Research, PIK
German Institute for Economic Research, DIW Berlin

On behalf of the Federal Environmental Agency

Publications by the Federal Environmental Agency in the TEXTE series are available subject to advance payment of **7,50 Euro** by bank transfer, crossed cheque or paying-in form to

Account number 4327 65 - 104 at the
Postbank Berlin (Sorting Code 10010010)
Fa. Werbung und Vertrieb
Wolframstraße 95-96,
12105 Berlin

At the same time please direct your written order to the Firma Werbung und Vertrieb naming the ***volume number*** *from the TEXTE series, and the* ***name*** *and* ***address*** *of the orderer.*

Publisher: Federal Environmental Agency (Umweltbundesamt)
Postfach 33 00 22
14191 Berlin
Tel.: +49/30/8903-0
Telex: 183 756
Telefax: +49/30/8903 2285
Internet: http://www.umweltbundesamt.de

Edited by: Section I 2.2
Dr. Ingrid Hanhoff

Berlin, December 2003

Content

List of Abbreviations

ASCM	Agreement on Subsidies and Countervailing Measures
BISD	Basic Instruments and Selected Documents
BTA	Border Tax Adjustment
CIS	Community of Independent States
CTE	Committee on Trade and Environment
DISC	Domestic International Sales Corporations
EAP	Environment Action Programme
EEG	Erneuerbare-Energien-Gesetz
EnEG	Energieeinsparungsgesetz
EnEV	Energieeinsparungsverordnung
EnVGK	Energieverbrauchskennzeichnungsgesetz
EnVKV	Energieverbrauchskennzeichnungsverordnung
EnWG	Energiewirtschaftsgesetz
ETR	Ecological Tax Reform
EU	European Union
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GEN	Global Ecolabelling Network
GFAVO	Großfeuerungsanlagenverordnung
GHG	Greenhouse Gas
IMO	International Maritime Organization
ISO	International Organization for Standardization
KWK	Kraft-Wärme-Kopplung
KWKG	Kraft-Wärme-Kopplungs-Gesetz
LCA	Life Cycle Analysis
NGO	Non-governmental Organisation
ODC	Ozone Depleting Chemicals
OECD	Organisation for Economic Co-operation and Development
PPM	Processes and Production Methods
PPP	Polluter Pays Principle
PSA	Price Standard Approach
SME	Small and Medium-size Enterprises
TBT	Technical Barriers to Trade
UNCED	United Nations Conference on Environment and Development
UNCTAD	United Nations Conference on Trade and Development
WTO	World Trade Organization

Summary[1]

This study addresses the compatibility of the Polluter Pays Principle (PPP) with obligations under world trade law as administered by the World Trade Organization (WTO). In particular we look at the instruments of German domestic and international energy policy.

The Polluter Pays Principle

The PPP is an environmental policy guideline stipulating that the costs of pollution prevention and control should be borne by the polluter. The OECD has included the PPP in its environmental policy guidelines and it can also be found in European Law and in the UNCED Rio Declaration (1992). The PPP is applied to differing degrees by various countries around the world.

Application of the PPP to the global problem of climate change would require that every country reduced emissions stemming from its territory. The Kyoto-Protocol (1997) aims at an international solution to this problem. However, any climate policy measures would still have to be implemented at the national level. Germany and the European Union are acting as forerunners in international climate change policy. This is reflected in several German energy policy laws.

The PPP is not part of the WTO rules, which are concerned with facilitating international trade. This does, however, not hinder PPP-application per se, but has some implications for national policy instruments which require that polluters should bear the environmental costs of their activities. We therefore discuss the following instruments: standards on products and on production methods (command and control policies), labels, taxes, and subsidies.

Command and Control Policies

Command and control measures include laws and regulations on environmental standards, which address products as well as processes and production methods. They force polluters to keep their emissions at a certain level.

[1] The authors would like to thank Ingrid Hanhoff**,** Ulf Jäckel, Michael Kohlhaas, Volker Oschmann, Barbara Praetorius, Kai Schlegelmilch**,** Sabrina Shaw, Jan-Eirik Sørensen, René Vossenaar, and Hans-Joachim Ziesing for helpful comments on an earlier version of this paper.

Under WTO rules every country is free to protect its population from environmental damages through national standards as long as they are not applied in a discriminatory manner to foreign products. When interpreting WTO rules, three types of standards can be identified: product standards, product related and non-product related standards. Only the application of non-product related standards on imports, i.e. standards prescribing production methods which do not determine the physical characteristics of a product, are not compatible with current interpretation of WTO law. Electricity from different sources (e.g. nuclear and solar power) is regarded as a "like product" and imported electricity must not be discriminated against based on its production method. Currently, such discrimination is not part of any German command and control policy.

The regulation of processes or production methods (PPM) will remain an important instrument for energy and climate policies on a national level. Recent WTO case law indicates that the application of non-product related standards to imported goods and services depends on the underlying environmental rationale and the way in which standards are applied.

Unilateral standards on PPMs that discriminate for example between electricity imports based on energy generation, currently seem not to be compatible with WTO regulations. If it is deemed necessary to take action in this regard in order to force polluters to reduce their emissions, consensus should be reached in the context of a *multilateral* environmental agreement, i.e. the Kyoto-Protocol. Multilateral agreements could constitute an exception to WTO rules, if WTO members will reach consensus on this issue in forthcoming trade negotiations.

Labelling and Certification

Labelling and certification are market-based instruments. Labels help to inform consumers and other interested parties about the environmental impacts of a product. Certificates warrant an environmentally friendly production method. Both tools help to hold polluters responsible through the market mechanism.

We distinguish between *voluntary* labels based on labelling programmes, *compulsory* labels (e.g. proof of origin), and *green certificates*. The TBT Agreement and the basic principles of the GATT determine the compatibility of labels with WTO law. Compulsory labels are covered by WTO law as long as there is no discrimination against foreign suppliers. It is, however, not clear whether voluntary labels with specific emphasis on non-product related process and production methods are covered by WTO law. Therefore, a clear statement on the legality of "green" electricity labelling is not

possible. If voluntary labelling initiatives for electricity generation, which regard the production method as a characteristic of electricity itself, were enacted under public German law, it has to be kept in mind, that other WTO members, which feel discriminated by such labels, can ask for a clarification by the WTO dispute settlement bodies.

Green certificates are still in their infancy. They warrant a certain amount of electricity from renewable sources, which can be traded among power generators in order to fulfil domestic quotas for "green" electricity. It is not clear whether these certificates are "goods" or "services" under WTO law. In any case, a preliminary conclusion is that first, a *green certificate* trading system which should go along with WTO rules would have to apply the WTO principles of non-discrimination and most-favoured-nation treatment. This could be achieved best by aiming at harmonisation or mutual recognition of green certificates awarded to producers from different countries. Second, it seems appropriate to find criteria for an international “green single subject label” for power generation methods, because coordinating energy labelling and certification across countries would lead to greater transparency in electricity production. This measure could be closely linked to negotiating energy production standards at the international level.

Taxes

Environmental taxes are levied in order to charge a polluter for the damages caused by his activities. In theory, they help to fully internalise the environmental costs of consumption and production. However, national taxation of energy consumption – like the German Ecological Tax Reform - faces difficulties in open economies, as non-taxed imports are available as substitutes for domestic products. As long as international tax harmonisation is not possible, border tax adjustments could help to offset competitive disadvantages without watering down the environmental objectives of taxation, e.g. the reduction of carbon dioxide emissions.

Whether or not border tax adjustments for energy taxes are permitted under world trade law is not entirely clear given the lack of precise legal provisions and case law. The balance of evidence points to the conclusion that unilateral border adjustments for energy taxes are permissible under world trade law. Yet to prevent conflicts between WTO members and to clarify legal uncertainties, it is advisable to address this situation through multilateral agreement and to consider two possibilities. First, governments could agree on similar climate and energy policies, for example uniform carbon dioxide taxes, which would make border tax adjustments unnecessary. However, this first best option seems to be difficult to implement in the near future. Second, a process could be

initiated to reach a multilateral understanding on the permissibility of border tax adjustments for energy taxation and also for other inputs that are not physically incorporated in the final product. In this process it could be useful to integrate the PPP as a guideline in WTO rules on BTA to prevent inefficient tax rules.

Subsidies

A subsidy can be defined in a broad sense as an economic benefit received by a private agent from public funds. Subsidies are in general not compatible with the PPP. They are, however, often applied as a temporary measure to enable producers to avoid emissions in the long run. The WTO definition of a subsidy is regulated in the GATT and in the Agreement on Subsidies and Countervailing Measures (ASCM). It comprises direct subsidisation (financial contribution) and income or price support by a government. Prohibited are all subsidies that are based on export performance or contingent upon the use of domestic over imported goods.

We have shown that the German price guarantees for renewable energy in the EEG and KWK cannot be considered as subsidies under WTO law. Even if this were the case, they would be regarded as non-actionable, unless a WTO member could prove serious adverse effects to the domestic industry which are difficult to repair. Furthermore, it is also unlikely that the direct German price supports for electricity from renewable energy sources will be challenged in a WTO dispute, because currently, trade in this electricity is low and such subsidies were considered to be non-actionable under Article VIII (2) ASCM up until 1999.

1 Introduction

The conflicts between environmental policy measures and international trade liberalisation have been the subject of detailed analyses and discussions. One aspect, however, which has not yet been given attention, is how the Polluter Pays Principle (PPP), one of the guiding principles of environmental policy in OECD countries, is related to obligations under world trade law as administered by the World Trade Organization (WTO). The PPP stipulates that the costs of pollution prevention and control should be borne by the polluters, like firms and households. The PPP ideally leads to a reflection of all social costs in the price of a product and, if harmonised at the international level, also helps avoid distortions in international trade. However, the PPP is applied to a varying degree around the world and with different policy instruments. This can lead to different costs for polluters from different regions and thus to effects on competitiveness. The PPP is also debated as a principle on the country-by-country level in the case of global environmental problems.

Environmental policy measures, which are based on the PPP, may be subject to WTO law. Measures can comprise standards on products and on production methods, labels, taxes, and subsidies. This study analyses whether the way in which these instruments are applied in German energy policy is compatible with WTO rules. In particular we look at those German policy measures which aim at domestic and international energy-related environmental goals. Chapter two provides an overview on the theoretical foundations as well as the application of the PPP. Then potential conflicts between WTO law and command and control policy measures (chapter three), labels and certificates (chapter four) and taxes (chapter five) are discussed. In chapter five we also discuss border tax adjustments as a special instrument which could help to offset competitive effects of national environmental taxes. Chapter six addresses subsidies and their compatibility with WTO law and chapter seven highlights the specific relevance of exemptions from trade principles for the instruments which enforce the PPP. The paper concludes with some final remarks in chapter eight.

2 The Polluter Pays Principle (PPP)

2.1 Some Theoretical Considerations

Welfare economics asserts that – under certain conditions – the market mechanism leads to an optimal allocation of scarce resources. In particular the social costs and benefits of a product have to be fully reflected in its price. Welfare economics has also identified a wide range of market failures, which do not result in an optimal allocation. Negative external effects (or negative externalities), which affect the environment, may lead to a violation of the optimality conditions. Externalities can be defined as the adverse effects of an economic agent on a bystander. These effects are not reflected in product prices.[2] Without policy intervention, the private costs of production are lower than the social costs of production in the presence of negative externalities, leading to lower product prices and higher product quantities than is socially optimal. Hence, in the presence of externalities, the market fails to provide the socially optimal quantities of a good at socially optimal prices.

Market failures can be prevented either by private initiatives such as negotiations between the agent and bystanders or by government intervention. The target groups for government intervention include polluters, the general public, and victims of environmental damage. Common sense suggests that, unless special circumstances prevail, the polluter should bear the costs of pollution. For centuries, rules have existed stipulating that polluters are responsible for removing their pollution or that they should pay a compensatory fee to the general public or to individuals.[3] The idea of internalising externalities in order to correct market failure was stressed by A. C. Pigou as early as 1920. He suggested that polluters should pay a tax, which corresponds to the marginal cost of pollution abatement (the “Pigouvian tax”). However, the term “polluter pays principle” has been coined only in the early 1970s.

The idea behind the PPP as a policy guideline is threefold. First, most people simply consider it fair that those who damage the environment should also be held responsible for the costs related to pollution abatement. Passing on these costs to consumers is legitimate and consistent with the PPP, because without the demand from consumers for

---

[2] Cp. e.g. Mankiw (1998, p. 200).

[3] Cp. Fauchald (1998, p. 15).

environmentally unsound products, no production of such goods would take place.[4] Second, if polluters bear the external costs of their activities, the private costs of the producer reflect total social costs. This will give an incentive to reduce pollution, because of two effects: higher costs lead to higher prices which in turn will reduce demand, and producers will use less harmful production technologies. These effects will drive the economy towards a higher level of efficiency, and market allocation towards the social welfare optimum. In other words, the application of the PPP corrects market failure. Third, since polluters are the most knowledgeable about their product and production methods, they should also know how to best reduce pollution. Hence, assigning the responsibility for reducing the externalities to the polluters may also be the most efficient way of curbing pollution in most cases.

The PPP is not the only policy guideline for full internalisation of externalities. Coase (1960) argued that no state intervention is necessary to correct market failure. Instead, negotiations between polluters and victims can lead to an internalisation if property rights are clearly defined. For an efficient outcome it is irrelevant whether the property rights are allocated to the polluter or to the victim. It may therefore be preferable to permit private negotiations and side payments between polluters and victims instead of state intervention. Accordingly, also the victim-pays-principle could be applied.[5]

However, the negotiation solution to environmental problems has also difficulties and shortcomings. First, there are transaction costs related to negotiations which could exceed the positive effects from an agreement between polluters and victims. Second, the distributional consequences of a negotiation solution depend on the initial distribution of property rights. From a distributional point of view, it makes a difference whether – prior to the negotiations – firms have a right to pollute the environment or whether people have the right to a clean environment. Third, poverty or credit restraints may render it impossible for the victims to pay the negotiated compensation and this simply forces them to bear the external costs. Fourth, from a political point of view disparities in political power can yield an advantage to one negotiating party and result in a sub-optimal solution of the externality problem. Finally, the high degree of uncertainty related to environmental problems makes it difficult for negotiators to adequately take into account the rights of future generations.[6] It is therefore not surprising that state

---

[4] Cp. Pearson (1994, p. 556).

[5] Cp. Feess (1994), Adams (1989).

[6] Cf. Rawls (1975) and the idea of sustainable development according to the Agenda 21.

interventions based on the PPP dominate negotiation solutions in solving environmental problems.

2.2 Application of the PPP

2.2.1 Historical Evolution of the PPP

The first major reference to the PPP appeared 1972 in the *OECD Guiding Principles Concerning International Economic Aspects of Environmental Policies* (henceforth called OECD Guiding Principles). The PPP as a guiding principle across countries became necessary because some countries faced complaints by national firms about rising costs and a loss of international competitiveness[7] following a national implementation of the PPP within their borders.[8] The OECD Guiding Principles define the PPP as an instrument for "*... allocating costs of pollution prevention and control measures*". The polluter should bear these costs in order to achieve and maintain an "*... acceptable state of environment"* which is determined by the public authorities. The OECD Guiding Principles also state that the PPP should "*... not be accompanied by subsidies that would create significant distortions in international trade and investment.*"[9] This *weak* or *standard* definition of the PPP neither requires polluters to bear the costs of accidental damages, nor do they have to pay for residual pollution.

The range of costs to be borne by the polluter has expanded over time. In 1989, the OECD suggested extending the PPP in order to cover the costs of accident prevention and to internalise the environmental costs caused by accidents.[10] In 2001, the OECD Joint Working Party on Agriculture and Environment stated that according to the PPP *"... the polluter should be held responsible for environmental damage caused and bear the expenses of carrying out pollution prevention measures or paying for damaging the state of the environment where the consumptive or productive activities causing the environmental damage are not covered by property rights."*[11] This version of the PPP is referred to as the *extended* or *strong* PPP in the literature.[12]

---

[7] See Trabold (1995) for a review of different concepts for assessing the competitiveness of an economy.

[8] Cp. OECD (1995, p. 12).

[9] Cp. OECD (1972).

[10] Cp. OECD (1992).

[11] Cp. OECD (2001b, p. 24).

[12] See for instance Pearson (1994, p. 556-9).

Only one year later, the European Community followed the example of the OECD Guiding Principles from 1972 by adopting the first Environment Action Programme (EAP). Since 1987, the PPP has been part of European Law. It is included in Article 174 of the EU Treaty (1997). Since 1990, when the *International Convention on Oil Pollution Preparedness, Response and Co-operation* was agreed upon by the International Maritime Organization (IMO), the PPP has been acknowledged as a " ... *general principle of international environmental law."*[13] In 1992, the Rio Declaration (UNCED) included the PPP in Principle 16: "*National authorities should endeavour to promote the internalisation of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution with due regard to public interest and without distorting international trade and investment."*

2.2.2 How the PPP is Applied Around the World

The PPP is applied to differing degrees by various countries around the world. Almost all OECD countries have implemented the PPP as a guiding principle in their environmental policy. In Germany, the PPP is one of three basic principles for environmental policy, parallel to the co-operation principle and the precautionary principle. However, resistance by lobbyists, potential negative employment effects and low internalisation incentives in the presence of transborder pollution often prevent policymakers from adequately applying instruments in order to achieve full internalisation. The implementation differs widely across OECD countries. While instruments implementing the weak PPP are generally applied in all OECD countries[14], economic instruments implementing the strong PPP, such as environmental taxes, are only used to a limited extent (e.g. in Germany or Denmark).

Most developing countries, however, have not yet subscribed to the PPP as a main environmental policy guideline. As Rege (1994) points out, this is due to adverse economic conditions. First, a large number of poor households, informal sector firms, and subsistence farmers cannot bear any additional charges for energy or for waste disposal. Second, small and medium-size firms from the formal sector, which mainly serve the home market, find it difficult to pass on higher costs to the domestic end-users of their

---

[13] Cp. OECD (2001b, p. 3 and footnote 3).

[14] Cp. OECD (2001b, p. 16).

products. Third, exporters in developing countries usually cannot shift the burden of cost internalisation to foreign customers due to elastic demand. Fourth, many environmental problems in developing countries are caused by an overexploitation of common pool resources. Access to these common pool resources (in line with the PPP) could be limited in some cases through assigning private property rights, however, this solution could lead to severe distributional conflicts.[15]

All of these problems make it difficult to implement the PPP as a guideline for environmental policy in developing countries.

Due to the differing implementation of the PPP world-wide, there is an ongoing debate on the effects on competitiveness of national environmental policy. The creation of economic disadvantages for certain industries or sectors could initiate counteractive strategies on their part. This could be the "runaway-plant" phenomenon, that is, the shift of production to other countries in order to evade strict regulation or taxes. A concentration of pollution-intensive production in 'pollution havens' could be an undesired and environmentally counterproductive result. In extreme cases, like with domestic energy taxation, such a 'leakage' could absorb any positive effects on overall carbon dioxide emissions from a national measure. However, this does not necessarily need to be the case. Recent studies on environmental regulation find little empirical evidence for a significant impact of environmental policy measures on trade flows and competitiveness.[16]

2.3 Climate Change, the PPP and German Energy Policy

The PPP has another dimension with respect to transfrontier and global environmental problems. If a polluter is not situated in the country where a damage occurs, a national application of the PPP will not always lead to an internalisation. Rather the issue arises, whether the state from which emissions originate should be held responsible for the damage abroad.[17] In international negotiations on transfrontier and global environmental problems, countries rather than firms or private households are regarded

---

[15] Cp. Dasgupta (1993, p. 292ff.).

[16] For US industry, Jaffe et al. (1995) examined over one hundred studies on the potential effects of environmental regulations. They found little evidence that environmental regulations have large adverse effects on competitiveness. A number of other studies support this conclusion. See for example Adams (1997); OECD (1997b) and Nordström/Vaughan (1999).

[17] Cp. Kettlewell (1992, p. 437 ff.).

as the polluters. One major global environmental problem are emissions from energy production and consumption which contribute to the global problem of climate change. The Earth's atmosphere is a global common. It is characterised by a lack of property rights, by benefits which are not confined to a single country, and by global external effects. Climate change is a reciprocal environmental problem to which every country contributes and by which every nation can be affected to varying degrees.[18] No single polluter can be held entirely responsible. Also, if policy measures aim at protecting this global common no one country can be excluded from the benefits. This situation leads to the well-known free-rider problem. This also leads to a prisoner's dilemma, and if only national interests were maximised, the global worst case scenario of no co-operation in climate policy could result.[19] Thus, an optimal climate change policy would be that every polluting country took over the responsibility for emissions stemming from its territory.

The PPP can be regarded as a standard of international law which provides the basis for state responsibility if a state fails to apply domestically an internationally-agreed due care standard. These standards could either be laid down in a Multilateral Environmental Agreement (MEA) or lie within the jurisdiction of Customary International Law.[20] Transfrontier pollution is dealt with in the *Rules of International Law Applicable to Transfrontier Pollution*.[21] Furthermore, the OECD *Principles Concerning Transfrontier Pollution* from 1974 state that each country should treat its domestic polluters in the same way – regardless of whether the impact of the pollution occurs within its borders or outside.[22] The *Trail-Smelter*-Case between Canada and the United States in the 1930s is the first historical example showing that this principle of state responsibility ("national PPP") could be used in cases of transfrontier pollution.[23] The PPP is also part of several other international agreements (see section 2.2.1).[24]

A first best policy to fight *global* environmental problems would be an internalisation at a global level, taking into account all spill-over effects. An energy policy on a supra-

---

[18] Cp. Krumm (1996, p. 5).

[19] Cp. e.g. Fudenberg/Tirole (1991), Heister (1997).

[20] Cp. Wolfrum/Langenfeld (1998, p. 128 ff.).

[21] These are also called the *Montreal-Rules* and were adopted in 1982 in Montreal at the 60th Conference of the International Law Association.

[22] OECD (1974).

[23] Cp. for example Kettlewell (1992, p. 438) for details on the *Trail-Smelter*-Case.

[24] See OECD (2001b, p. 3 and 7, footnotes 17 and 18).

national level aiming at reducing greenhouse gas (GHG-)emissions according to the PPP – and taking into account the Rio principle of common and differentiated responsibilities – is part of the Kyoto-Protocol (1997). Nevertheless, in order to achieve the goals of such a multilateral agreement, the policy instruments would still have to be implemented at the national or EU level. Moreover, recent problems to agree on the Kyoto-Protocol amendments, and the complete withdrawal of the US in 2001 have made clear once more the conflict of interest, the different judgement and the different risk aversion within the group of industrialised countries, who are the major emitting countries, as well as between industrialised countries and the developing countries. However, there are some countries acting as forerunners. The European Union and especially Germany play such a role in international climate change policy.[25]

Germany has included the reduction of GHG-emissions from its territory as a central policy goal in its energy policy.[26] This is expressed in several laws:

- the *Ecological Tax Reform* (ETR) (see chapter 5);
- the *Renewable Energies Act (Erneuerbare-Energien-Gesetz*, EEG) and the *Co-Generation Act (Kraft-Wärme-Kopplungsgesetz*, KWKG). They use price guarantees as their main policy instrument (these are dealt with in chapter 6);
- the *Großfeuerungsanlagenverordnung* (GFAVO). It sets emission standards for sulphur dioxide (SO_2), nitrogen oxide (NO_x), dust, carbon monoxide, fluorides and chlorides in large combustion plants based on coal, oil and natural gas;
- the *Energieverbrauchskennzeichnungsgesetz* (EnVKG) and the *Energieverbrauchskennzeichnungsverordung* (EnVKVO). They include rules concerning energy consumption in the use of products and labelling requirements;
- the Energy Conservation Act (*Energieeinsparungsgesetz*, EnEG) and the Energy Conservation Ordinance (*Energieeinsparverordnung*, EnEV), which deal with energy and the insulation of buildings;

---

[25] E.g. the European Union is aiming at an implementation of an emission trading system within its member states, and highlights its role as a forerunner (cf. Green Paper on greenhouse gas emissions trading within the European Union, COM(2000)87). Furthermore, the EU presented at the World Summit on Sustainable Development in Johannesburg (August 2002) a declaration on the promotion of renewable energy. Cp. http://europa.eu.int/comm/environment/wssd/press_documents_en.html.

[26] Cp. *Bundesministerium für Wirtschaft und Technologie*: http://www.bmwi.de/Homepage/Politikfelder/Energiepolitik/Energiepolitik1.jsp.

- the *Law on the Energy Industry (Energiewirtschaftsgesetz, EnWG)*. It lays down the regulation of electricity and gas supplies – it is not primarily concerned with environmental goals.

In order to make such national policies most effective, it is also necessary to harmonise efforts internationally. In such a process, the PPP could be an important principle to prevent conflicts between trade and environmental policies.[27] The WTO rules do not contain any references to the PPP. Actually, the WTO is concerned with establishing and enforcing rules facilitating international trade. Nevertheless, instruments that are used to implement the PPP, i.e. command and control policies, labelling, taxes, and subsidies are subject to WTO law. If these are applied without negative trade effects, it is possible to follow the PPP on a national level within the legal framework of the WTO. We will consider each of those instruments in the following chapters.

3 Command and Control Policies

3.1 Definition

Command and control policies are still the most widely used instrument in environmental policy. The term “command and control” refers to laws and regulations on environmental standards. Non-compliance with these standards usually results in sanctions.[28]

There are two types of measures available within the framework of command and control policies: prohibitions and commandments. Both are political measures linked to the PPP, because the costs of fulfilling a standard are borne by the polluter. Prohibitions are the strongest instrument used to achieve environmental goals. They are used either to ban toxic or hazardous material completely or to enable immediate measures to prevent risks to human health. Potential victims of pollution are protected to the highest possible degree. Commandments regulate emissions through rules fixed in law, in order to obtain a certain level of emissions. They can regulate the emissions directly (emission standards) or indirectly through process and production methods (PPM) (production standards). Also, the composition of the product itself (product standards) can be controlled by laws and regulations concerning, for example, their content of harmful substances.

---

[27] Cp. Westin (1997, p. 57 f.).

[28] Cp. Faure (1998, p. 453).

Traditionally, command and control policies are regarded as being effective, easy to manage, relatively simple to impose and broadly accepted by the population.[29] However, from a welfare economic point of view they are inefficient, because the policy goal will not be obtained at minimum cost for society. Especially, monitoring and other transaction costs of their implementation may be high. Also, emission standards do not provide an incentive to reduce emissions below the levels fixed by law nor do they require the polluter to pay for residual pollution. Hence, commandments enforce the weak or standard PPP (see chapter 2.2). Only prohibitions are consistent with the strong PPP, because they do not allow for residual damages. During the last decade the use of market-oriented policy instruments (like taxes and information tools) has increased, but command and control measures are still the predominant policy tool.

Another environmental policy instrument is the environmental tort law. It constitutes an independent instrument which has its own characteristics. However, under a WTO perspective, environmental tort law can be subordinated under command and control measures because of the standards foreseen in the law (the "due care standards"). If the party accused of an environmental damage can prove to have applied these standards it cannot be held liable. The burden of proof lies generally with the party suffering the damage. In this chapter, we analyse standards at a more general level without special reference to environmental tort law, because if there were to be a dispute it would be very likely that the WTO compatibility would be examined on the basis of the "due care standard" foreseen by law or case law.

3.2 Application in Germany

German environmental policy has a long tradition in using command and control measures. For the regulation of energy production and consumption the following of the laws we have listed in section 2.3 are relevant:

- Großfeuerungsanlagenverordnung (GFAVO),
- Energieeinsparungsgesetz (EnEG),
- Energieeinsparverordnung (EnEV),
- Energieverbrauchskennzeichnungsgesetz (EnVKG),

[29] Cp. Wicke (1993, p. 201 f.).

- Energieverbrauchskennzeichnungsverordnung (EnVKV).

They all use standards to regulate emissions from energy consumption or from energy production.

3.3 Potential Conflicts with WTO Law

Potential conflicts of national command and control energy policies with WTO law could arise from the type of standard used and the way the standard is applied to foreign products. If a regulation is not found to be designed in a way as to protect domestic products, there is no conflict with WTO rules.

In principle, the WTO approach is that every country is free to protect its population through *product* and *product-related standards*, if these standards are not applied in a discriminatory manner against foreign suppliers. This means that a foreign product can be rejected at the border only, if this type of product is domestically forbidden as well. In principle, the same rules applies to *non-product related standards* on processes and production methods (PPMs). However, these standards do not constitute a characteristic of a product according to WTO interpretation of term "like products" (see box below). As a consequence a country can determine such domestic standards for domestic producers, but their application as a *standard* to distinguish domestic from imported goods is in general not part of the "like product" concept under WTO rules.

From a purely environmentalist perspective the logic behind the current WTO approach could be seen as flawed. If emissions, e.g. from power generation, damage a global common in the production process but not in the form of a final product (see chapter 2.3), non-product related instruments, such as production standards or taxes, are the only measure available to protect the environment. On this ground, some authors[30] argue that even unilaterally applied standards with extraterritorial effects (e.g. standards prescribed by an importing country exclusively for production processes abroad) could be justified if an exporting country is not internalising the external costs of production, and that such standards could be justified through the preamble of the Agreement on Technical Barriers to Trade (TBT Agreement) and through the Article XX (b) or (g) GATT (on Article XX GATT see box below and chapter 7). This may also be supported

[30] Cf. Wofford (2000, p. 583 f) and Kulessa/Schwaab (1999, p. 27).

through the decision of the WTO Appellate Body in the *Shrimp-Turtle*-Case[31] (see Annex).

However, we believe that given the complexities of the international system, a multilateral approach is the only way to advance climate change policies in the field of energy-related emissions. The general exception from GATT rules under Article XX should provide scope for multilateral environmental agreements (MEAs) like the Kyoto-Protocol, but not to unilateral action on non-product related standards. The relationship between WTO rules and specific trade obligations set out in MEAs, however, is not clearly defined. It is subject to negotiations in the forthcoming WTO trade round.[32] At least 11 MEAs[33] contain trade-related measures. To allow for environmental trade measures based on non-product-related PPMs under WTO law, a specific reference in WTO rules to obligations under MEAs seems to be the appropriate, i.e. multilateral way.

---

[31] WTO Appellate Body (1998a) USA – Import Prohibition on certain Shrimp and Shrimp Products. Cp. Charnovitz (2002, p. 95f.). See Annex.

[32] This is part of the Doha Mandate on Trade and Environment as declared at the 4th WTO Ministerial Conference in Doha, November 2001. The Cartagena Protocol is the only MEA so far, which makes a clear statement on its status vis-à-vis the WTO in its preamble: "... trade and environment agreements should be mutually supportive with a view to achieving sustainable development, [...], the above recital is not intended to subordinate this Protocol to other international agreements, [...]" Cp. Cartagena Protocol on Biosafety to the Convention on Biological Diversity (2000).

[33] They include: the Montreal Protocol (1987); the Convention on International Trade in Endangered Species (1973); the Basel Convention (1989); the International Plant Protection Convention (1951, 1979, 1997); the UN Fish Stock Agreement (1995); the International Tropical Timber Agreement (1994); the International Commission for the Conservation of Atlantic Tunas (1966); the Convention on the Conservation on Antarctic Living Marine Resources (1980); the Cartagena Protocol on Biosafety; the Stockholm Convention on Persistent Organic Pollutants (2001) and the Rotterdam Convention (1998). See Althammer/Dröge (2002) and Biermann (2001).

Box: A Primer on WTO Rules on Standards and "Like Products"

Basic Principles

The WTO trade regime relies on several basic principles. The most relevant for our study are the most-favoured nation principle in Article I (1) GATT and the national treatment principle in Article III (4) GATT.

Article I (1) GATT states that

> *"[…], any advantage, favour, privilege or immunity granted by any contracting party to any product originating in or destined for any other country shall be accorded immediately and unconditionally to the like product originating in or destined for the territories of all other contracting parties."*

Article III (4) GATT states that

> *"The products of the territory of any contracting party imported into the territory of any other contracting party shall be accorded treatment no less favourable than that accorded to like products of national origin in respect of all laws, regulations and requirements affecting their internal sale, offering for sale, purchase, transportation, distribution or use. […]"*

Standards and Technical Regulations

There are three kinds of standards, which distinguish a product under WTO law:

- First, *product standards*, which determine certain characteristics of a product during its consumption.
- Second, *product-related standards*, which address those characteristics of a good that are determined by its production and are incorporated into the product.
- Third, *non-product-related* standards, which are related to the production methods used but not to the good itself.

The latter two are both standards on processes and production methods (PPM), but they are sometimes treated differently under WTO law.

A definition of standards and technical regulations is included in the Agreement on Technical Barriers to Trade (TBT Agreement), a special side agreement to the GATT. Both definitions (Annex 1.1 and 1.2 TBT Agreement) include PPM as criteria for the differentiation of products. However, neither definition makes it clear, whether non-product-related standards are subject to TBT rules. Based on the negotiation history of the TBT Agreement and on the panel rulings on "like products"[1], several studies conclude that non-product-related criteria are not standards that are allowed to distinguish products as being "unlike" under the TBT Agreement and GATT[2]. Nevertheless, as the *Asbestos*-Case (see Annex) implies, national law can distinguish products based on PPMs and apply the same distinction to imports. Only if there is discrimination of imports due to this approach, these standards are not compatible with WTO Law.[3]

The Term "like products"

The term "like products" is included in Article III GATT and other WTO rules on trade in goods, occurs sixteen times throughout the GATT texts. The term was never clearly defined. In 1970, the Working Party on border tax adjustments recommended a case-by-case examination of problems arising from the interpretation of this term.[4] It defined four criteria for the "likeness" of products:

(i) *the properties, nature and quality of the products;*

(ii) *the end-uses of the products;*

(iii) *consumers´ tastes and habits; and*

(iv) *the tariff classification of the products.* [5]

These criteria were also used in the most recent ruling concerning "likeness", the *Asbestos*-Case (Canada – France, 2001, see Annex[6]). The Appellate Body pronounced that the evidence on each of the four criteria should be examined and then weighed together with any other evidence in order to determine whether a product could be regarded as "like".[7] Further, according to the Appellate Body, other criteria might be added to the analysis whether two products are "like" or not.[8]

Exemptions from Basic Principles

Exemptions from the basic principles can be made for "*measures necessary* [...] *for the protection of human, animal or plant life or health, or the environment* [...]", which must not lead to "*arbitrary or unjustifiable*" discrimination between countries (Preamble of the TBT Agreement). A similar exception is stated in Article XX GATT: members are allowed to take "*measures necessary* [...] *for the protection of human, animal or plant life or health, or the environment* [...]", which must not lead to "*arbitrary or unjustifiable*" discrimination between countries.[9]

---

[1] Cp. WTO – Alcoholic Beverages (1996).

[2] Cp. Michaelowa (1997); Chang (1997); Droege (2001).

[3] Cp. Howse/Tuerk (2001, p. 289).

[4] Cp. BISD 18S/97, para. 18.

[5] Cp. BISD 18S/97, para. 18 and Report of the Appellate Body (WTO-Appellate Body) in *EC – Measures Affecting Asbestos and Asbestos Containing Products* WT/DS135/AB/R, 12 March 2001, para. 101.

[6] Cp. WTO-Appellate Body (2001).

[7] In the Asbestos-Case another important evidence was that toxicity is "*a defining aspect of the physical properties*" of asbestos fibres. See World Trade Institute (2001, p. 7); Shaw/Schwartz (2002, p. 150).

[8] Cp. WTO-Appellate Body (2001, para. 102).

[9] References to Article XX can be found in several disputes in the Annex to this paper.

3.4 Conclusions and Policy Options

Command and control policy measures follow the PPP and comprise prohibitions and commandments. The main instruments in Germany are emission standards. The application of standards on the national level does not conflict with WTO law as long as it does not discriminate against imported like products.

The regulation of processes and production methods (PPMs) which addresses the polluters will remain an important instrument for future energy and climate policies. The *Shrimp-Turtle*- and *the Asbestos*-Case indicate that standards on PPMs are not *per se* illegal under WTO law, but rather that this legality depends on whether a PPM-standard is based on an environmental rationale and whether its implementation is in line with the basic requirements of the WTO law.[34] Unilateral standards on PPMs that discriminate for example between electricity imports from single countries based on energy generation (e.g. solar or nuclear energy) currently seem not to be compatible with WTO regulations. The rationale is that international trade rules should be as transparent and as multilaterally accepted as possible, and that different process-related standards could run counter to the world trading system, since they would force exporters to produce according to different national standards which constitute a non-tariff trade barrier.

If it is deemed necessary to take action in this regard, consensus should be reached in the context of an MEA. A specific reference in WTO rules to obligations under MEAs seems to be the only appropriate, i.e. multilateral, way to allow for environmental trade measures based on *non-product-related* standards on PPMs under WTO law, especially under Article XX GATT (see also chapter 7). Although the Kyoto-Protocol does not address any trade obligations so far, it could be the potential MEA dealing with energy-related non-product related PPMs. The mandate of the Doha Ministerial Declaration includes already negotiations on the extent to which the WTO takes into account specific trade obligations from MEAs.

[34] Cp. also Charnovitz (2002, p. 110).

4 Labelling and Certification

4.1 Definitions

Labelling, proof of origin and green certificates for electricity play an increasing role in national energy policy due to the existence of two separate trends. First, the need to reduce greenhouse gas emissions is becoming increasingly important. One way of achieving this is to increase the share of renewable energy sources in overall energy production. Labelling and certification both help to identify and to promote these energy sources.

Second, electricity markets were liberalised at both national and international levels during the last decade. This has led, on the one hand, to a concentration of national suppliers and networks through mergers and acquisitions, and, on the other hand, to increasing competition at the European and international level. As a result of this, consumers now need more information to be able to choose between the different electricity suppliers available. Moreover, the environmental activities of foreign suppliers are more difficult to control (e.g. suppliers from CIS countries rely heavily on nuclear power generation). Thus, national energy policy has to deal with changing conditions and its instruments have to be accordingly adjusted.

If producers wish to use a label or to be awarded a certificate, they have to reduce the negative environmental impacts of their activities and bear the full cost of reducing their externalities. Thus, the weak PPP is applied in all cases where producers have to identify, make transparent and reduce the specific environmental features of generating electricity. Implementing “green” energy labelling at a national level requires a clear procedure based on the registration and control of producers´ activities. The control problems increase if the labelling of imported power has to be considered too.

Ecological Labelling

Ecological labels are an information tool, which helps buyers and suppliers distinguish products according to their impact on the environment. They are either based on a broad life-cycle-analysis or on selected criteria. In contrast to command and control policies, labels are market-oriented instruments. When talking about *ecological labelling,* we refer to “*the use of labels in order to inform consumers that a product is determined by a third party to be environmentally more friendly relative to other products in the same category*” as defined by the UNCTAD (1994). The International Organization for Standardization (ISO) distinguishes between three different types of ecological labels,

but only *type I* matches the UNCTAD definition: "*Type I is the eco-seal awarded as a license and based on a labelling programme*".[35]

Most labelling programmes are voluntary and firms are free to participate if they wish to do so. It is important for the purposes of trade law analysis to distinguish between *voluntary* and *compulsory* labels (see table 1). Moreover, voluntary labels can comprise three categories: they can be either governmental (like Blue Angel, Germany), or private (like Green Seal, USA), or quasi-governmental[36] (like Nordic Swan, Sweden).

	governmental	**private**
compulsory	- *Proof of Origin for Electricity* (Austria) - *Energy Guide* (USA) - *Energieverbrauchskenn-zeichnung* (Germany)	---
voluntary	- *Blauer Engel* (Germany) - *Nordic Swan* (Sweden)	- *Green Seal* (USA)

Table 1: Examples of different types of labels

Compulsory labels are command and control measures. They require that certain standards and regulations are met by producers. Otherwise the label will not be granted and a producer is denied market access. *Voluntary* labels leave it up to each individual producer as to whether he wants to meet the ecological criteria for a specific programme and to use the label for marketing purposes.

Labels can provide important information on both production processes and direct product characteristics. In many cases, ecological programmes attempt to apply life-cycle-analyses (LCA), which are designed to include all possible information on a product's environmental impacts from "cradle to grave", e.g. generation of inputs, pro-

[35] Type II is the self-declaration claim made by producers, importers, and retailers on products and services, type III is the report card label, which gives information according to fixed indices, similar to general consumer information on product packages. Cited from OECD (1997c, p. 9 f).

[36] The EPA (Environmental Protection Agency, US) labels mixed schemes involving governmental agencies and NGOs as "quasi-governmental"; for more examples cp. WTO-CTE 2000.

duction processes, waste disposal, disposal of the product after its use. Most schemes, however, simply pick out certain environmental effects from production, since in many areas a complete life-cycle assessment is difficult and expensive to conduct.[37] The use of labelling schemes is currently increasing in both developed and developing countries. The co-ordination of national governmental labelling programmes is undertaken within the Global Ecolabelling Network (GEN), which was founded in 1994 and had 24 member countries by 2000.

Labelling "Green" Electricity

There is an ongoing debate on the criteria that should be used when setting up a labelling programme for “green” electricity. These labels could also contribute to creating a market for *tradable green certificates* (see below). Labelling programmes regard the energy generation process as a characteristic of the product (here: electricity) itself. The criteria for “green” production, i.e. production based on renewable resources, could include:

- the reduction of green house gas emissions,
- resource intensity,
- processes and procedures related to the set-up of new capacities (the impact of producing solar cells, the construction of hydropower stations, etc.).

Such criteria could be applied using quotas, for example the share of new high-tech power stations in the overall production of a regular supplier; or by using a range of environmental criteria, like the local ecological impact of specific power stations, e.g. hydrostations.

Proof of Origin

Proof of origin is based on compulsory domestic regulations and is *not* based on an ecological programme. In the energy sector, the first steps have already been taken to provide information to consumers via proof of origin, e.g. in Austria. Energy producers and network operators are obliged by law to state the primary energy sources of electric power for their customers on invoices or other documents.[38]

---

[37] Mullet (1997, p. 383).

[38] In 2001 Austria made it compulsory for electricity traders to declare the source of electricity on every invoice. Cp. §45 of the *Elektrizitäts- und Organisationsgesetzes* (ElWOG) http://www.global2000.at/pages/strommascherl.htm

Green Certificates

Green certificates are a special tool, which is still in its infancy.[39] They are awarded to "green" generators (e.g. wind or solar energy producers) in proportion to their production. "Green" producers sell their electricity at market rates and receive the certificates separately. The design of green certificates can include

- information about the type, location and point in time of power generation;
- that the certificates are made tradable across suppliers and across national borders.

The demand for "green" electricity certification arises from national obligations for domestic energy producers to fulfil quotas for renewable energy provision. Electricity producers who are obliged by law to produce part of their supply using "green" sources can meet this obligation in the short run by obtaining the green certificates from producers using renewable energy sources.[40]

A Europe-wide system of tradable green certificates, the Renewable Energy Certificate System (RECS), has been under construction since 1998. The participants are members from European energy companies, governments and energy consultants. RECS currently tests whether and how a system of tradable certificates within Europe would work.[41]

4.2 Application in Germany

The labelling and certification of energy, especially electricity, according to its origin and production is a new approach. The German electricity market was liberalised in 1998, enabling consumers to choose between different suppliers. Consumers can also choose between different “packages”, with varying flat rates and pricing structures. Following the demand for more information on the origin of electricity, the product range is now also being differentiated according to the origin of electricity. As part of

---

[39] At present, only the Netherlands have implemented a renewable certificate scheme with trading on the national level and some voluntary cross-border exchanges. Cp. http://www.platts.com.

[40] It is an open issue how "green" electricity imports should be taken into account in a country´s GHG-balance under the Kyoto-Protocol.

[41] Cp. http://www.platts.com/features/greencertificates and http://www.recs.org.

this process, labelling schemes have become increasingly important for supplying information on "green" electricity – stemming from renewable sources like water, sun or wind. As electricity is a homogenous good that does not incorporate any characteristics of its production method, control and certification are needed to create separate markets for electricity from different sources.

Ecological labelling has been part of Germany's environmental policy since the late 1970s, when Germany was the first country to introduce a governmental eco-label, the Blue Angel (1977). The scheme has been continuously improved and broadened and still serves as an example for other countries´ eco-labelling projects. In the Blue Angel scheme, energy efficiency has always been a criterion for judging the environmental impact of different products. Several labelling initiatives by *non-governmental* organisations exist.[42] They all aim at creating a market for clearly identifiable "green" electricity. They also include electricity from block-type thermal power stations and other stations with combined heat and power generation (*Kraft-Wärme-Kopplung* - KWK), both of which also use non-renewable sources like coal or gas, but in a more efficient way.

Mandatory labelling of energy consumption can be found in the German *Energieverbrauchskennzeichnungsgesetz* (EnVKG, *Law on Labelling and Limits of Energy Consumption*). It stipulates that additional information has to be provided by producers on the consumption of energy and other resources as well as CO_2-emissions for all technical devices and vehicles. Germany also has to comply with the EU directive 2001/77/EC (27.9.2001) which stipulates that EU-members shall ensure that *guarantees of origin* for traded electricity from renewable energy sources can be issued on request. These proof of origin certificates are compulsory and have to be introduced by 2003 in all EU member countries.

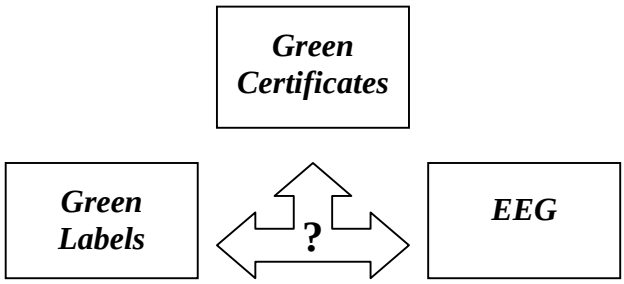
At present Germany does not have a *green certification* system in place. Support mechanisms from the *Renewable Energies Act (EEG)* have instead been used to foster the production of renewable energy. This law guarantees a minimum price per unit of power from renewable sources and allows this electricity to be distributed via the regular energy network.[43] The relationship between current German support measures

---

[42] Examples are "*Grünstrom"* of the *Institut für angewandte Ökologie e.V., Grüner Strom Label* by *EUROSOLAR, BUND, NABU;" Gütezeichen für Ökostrom"* of the *Öko-Instituts/Bremer Energie Konsens*.

[43] Regular power suppliers and networks are forced to distribute this "green" energy and the extra costs of supporting these technologies are born by consumers (who are charged 0.1 €/kWh extra for all

for renewable power generation and green certification must be clearly defined for the event that RECS leads to a Europe-wide implementation of a market for tradable green certificates.



4.3 Potential Conflicts with WTO Law

The purpose of WTO law is to provide a framework for the conduct of international trade. Therefore, to discuss the potential conflicts of labels and certificates with WTO law, one first has to look at the trade-related impacts of eco-labels, proof of origin and green certificates. Trade effects can be caused by tariffs or other barriers (e.g. quotas or regulations) for foreign firms, which make market entry more costly and foreign products less competitive. Negative trade effects can also result, because consumers in the domestic market shift their demand from unlabelled to labelled goods. The following barriers to foreign companies are relevant.

- **Information:** Access for foreign producers to information on *voluntary eco-labelling schemes, proofs of origin* and *tradable green certificates* in their target markets can be a problem.

- **Standards**: Regulations like *proof of origin* requirements for specific products could be applied to domestic and to foreign products in a discriminatory way, e.g. by asking foreign suppliers to meet higher *labelling* standards than domestic suppliers. These barriers can also be indirect. One example is that a label will

---

electricity). An example of how the share of specific "green" energy can be calculated is given in Öko-Mitteilungen (1999, p. 7). See also chapter 6.

only be awarded if specific processes and production methods (PPMs) based on domestic conditions are met - which in effect excludes foreign firms.[44]

- **Participation:** Foreign firms can face direct barriers to market access, e.g. if a *labelling* or a *green certification* scheme explicitly excludes foreign producers.

Labelling

The relevant WTO rules for labelling can be found in the TBT Agreement and in the GATT.[45] The latter is a general framework, but the TBT Agreement regulates standards and other technical barriers to trade and therefore has to be considered first. The TBT Agreement states that WTO members are supposed to co-ordinate the introduction and application of national standards and technical rules at an international level. Moreover, a system of mutual information and consultation exists so as to support the transparency of national measures.

In order to investigate the compatibility of *ecological labels* and *other labels* with WTO law, several distinctions have to be made. First of all, eco-labelling programmes need to be *governmental*, as WTO rules are only applicable to those national policies affecting international trade.[46] Private non-governmental voluntary labelling initiatives cannot be directly addressed via WTO mechanisms, because trade distortion alone does not automatically lead to measures under WTO law. Such conflicts are an issue for bilateral consultation instead.

Second, as mentioned above there are *voluntary* and *mandatory* labelling schemes. Voluntary programmes and their criteria are regarded as *standards* according to the TBT Agreement, while mandatory labels fall under the category of *technical regulations*.[47]

---

[44] This can cause severe barriers to market access, especially for firms from developing countries. Industrial countries´ production standards are not usually relevant for some countries either due to different environmental conditions or due to the actual production technologies.

[45] See also box chapter 3.

[46] Cp. Buck/Verheyen (2001, p. 15).

[47] Definitions: A *technical regulation* is a "*Document which lays down product characteristics or their related processes and production methods, including the applicable administrative provisions, with which compliance is mandatory. It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method.*" (Annex 1.1 to the TBT Agreement).

A *standard* is a "*Document approved by a recognized body, that provides, for common and repeated use, rules, guidelines or characteristics for products or related processes and production methods, with which*

Third, it is important to note that the "labelling requirements" mentioned in the legal text do not refer to labels which are based on specific programmes. Declaring a product as environmentally-friendly can result from three different but interrelated grounds: *product criteria* (i.e. consumption externalities), *product-related criteria* (i.e. consumption externalities stemming from the production of a good), and *non-product-related criteria* (i.e. production externalities not incorporated in the final product). These categories are subject to different treatment under WTO law as stated above (see box chapter 3). Non-product-related issues are especially relevant for life-cycle analyses. Several studies conclude that non-product-related criteria found in ecological labelling programmes are not included in the standards permitted to distinguish products under the TBT Agreement.[48] This conclusion is based on the negotiation history of the TBT Agreement and on the panel rulings on the term “like products”.[49]

Mandatory labels are technical regulations – regardless of the product to which the labelling applies. Mandatory labelling of the process and production method is therefore subject to TBT rules.[50] These rules state that technical regulations must involve "treatment no less favourable than that accorded to like products of national origin" (Article 2.1 TBT Agreement) and that there should not be "unnecessary obstacles to international trade" (Article 2.2 TBT Agreement). This would mean for "proofs of origin for energy suppliers" that domestic labelling requirements must not discriminate against foreign suppliers.

The investigation into voluntary ecological labelling has to go beyond the TBT Agreement. Do basic GATT-rules (see box chapter 3) apply to those ecological labelling programmes, which are not covered by the TBT Agreement? In the Tuna-Dolphin conflict (see Annex), Mexico used Article I GATT (the most-favoured nation principle) because it felt discriminated by the US “Dolphin-safe” label. The GATT-panel[51] however rejected this claim on the ground that the label was granted irrespective of the

---

compliance is not mandatory. It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method." (Annex 1.2 to the TBT Agreement).

The explanatory note to Annex 1.2 states that "*For the purpose of this Agreement standards are defined as voluntary and technical regulations as mandatory documents.*"

48 Cp. Michaelowa (1997); Chang (1997); Droege (2001).

49 See also box in chapter 3 and Annex.

50 See footnote 47.

51 GATT - Tuna Panel (1991): United States Restrictions on Imports of Tuna.

country of origin of the canned tuna.[52] Thus, whether or not a voluntary eco-label contradicts the most-favoured-nation principle depends on whether or not one country helps another country to gain advantages from selling the labelled product.[53] Therefore the information given by a label on the production method (non-product-related PPM) is not relevant for the most-favoured-nation clause.

There have been no explicit statements to date by WTO dispute settlement bodies on Article III (4) (the national treatment principle) with respect to trade effects of non-product-related labelling criteria. Decisions, however, have been made on the likeness of products (in the *Alcoholic-Beverages*-Case and the *Asbestos*-Case – see Annex). In general, identical goods produced with different methods are regarded as being "like products". Labels which are designed to differentiate goods using the PPMs would therefore not automatically lead to a differentiation in WTO terms. However, this does not generate a conflict as long as domestic and foreign like products, as a group, are not treated differently.[54] In other words, a PPM-based label must not be designed as a protectionist tool. Thus, future conflicts among WTO members could be possible owing to labels granted under the condition that a product had been produced using a certain environmentally friendly technology, which is not required in the same manner for domestic like products. Such a conflict could be observed when tropical timber became subject to a national label in Austria in 1992, which required sustainable forestry as production method. Malaysia felt discriminated by this mandatory label (see Annex) and claimed that application of the criterion "sustainable forestry" is not in accordance with Article III (4), because the forestry method used is not a characteristic of the wood itself, it this method not an international standard and it is not applied to other types of wood. However, no ruling was made by the panel as Austria and Malaysia managed to find a settlement.[55]

There are more points in Article III (4) that need to be examined. First, national treatment requires that every good that is imported is accorded the same treatment as like products from domestic producers with respect to the conditions of competition. This covers all laws and obligations, but not consumer behaviour. If consumers refuse to buy

---

[52] Cp. Altemöller 1998, p. 254; Chang (1997, p. 150).

[53] Cp. Chang (1997, p. 151); Tietje (1995, p. 142). The panel did not agree that the stated influence of the US-government on application of dolphin-safe products existed and therefore could not find that obstruction of the most-favoured nation principle had taken place. Labelling criteria were fixed under the Dolphin Protection Consumer Information Act (DPCIA).

[54] Cp. Howse/Tuerk (2001, p. 289).

[55] Cp. Mullet (1997, p. 393); Sucharipa-Behrmann (1994, p. 56).

a product, because the country of origin does not apply a certain production method, discrimination takes place, but Article III (4) is not applicable. Second, Article III (4) also prescribes that equal treatment should comprise "... all laws, regulations and requirements affecting their internal sale, offering for sale, purchase...". According to Chang (1997, p. 153) and Tietje (1995, p. 140) the term 'affecting' has been interpreted very broadly and this term has created scope for non-compliance with national treatment obligations under Article III (4) for labels that help to discriminate foreign products based on non-product related PPMs.

Nevertheless, even if GATT basic principles were violated, one can always fall back on the general exemptions in Article XX GATT (for details see chapter 7). As there has been no conflict over ecological labelling so far, the relevance for Article XX GATT has not yet been investigated.

It can be concluded from a legal point of view that a clear statement on the legality of “green” electricity labelling under WTO rules is not possible. As already mentioned, all labelling initiatives in Germany regard the way in which energy is produced as a characteristic of electricity itself. If such initiatives were enacted under public German law, as opposed to by purely private initiatives, other countries would be able to challenge them based on the TBT Agreement or general GATT principles. If no WTO member lodges a complaint with the WTO dispute settlement bodies, the WTO will not intervene. Moreover, Germany’s WTO membership is integrated into the European Union’s WTO membership. This means that it would be important for future initiatives to introduce governmental eco-labelling – which could include labelling of imported electricity – to be further harmonised within the EU. If non-EU-imports from WTO members are subject to labelling, exporters could draw on WTO law in order to block labels that negatively affect their energy exports (which is particularly likely for electricity from foreign nuclear power stations). However, the probability of a dispute under WTO law also depends on the nature of a particular labelling scheme. Conflict is most likely if a government introduces a mandatory label that in effect regulates market access for foreign producers.

The EU-wide introduction of proofs of origin for energy from renewable resources (EU directive 2001/77/EC) is a mandatory label and thus a *technical regulation* according to WTO law. This treatment is independent from the subject of the label, i.e. a proof of origin can be demanded for any production method. The requirement to supply a proof of origin conforms with WTO law as long as there is no discrimination against electricity suppliers from other WTO member countries.

Green Certificates

No green certificate trading system exists at present and thus, this instrument cannot be investigated under WTO law in greater detail. However, some preliminary considerations can be made. The first question would be whether green certificates should be regarded as "goods" (or "commodities" or "products") under the GATT 1994 or as a "service" under the General Agreement on Trade in Services (GATS 1994). Green certificates are derivatives of the product "electricity" from renewable sources. A warranted amount (proportion) of green electricity is subject to trading, but the physical power is sold and distributed separately. Electricity itself is not classified as a commodity[56] , however, this does not help clarify how green certificates should be classified.

If one assumes that tradable green certificates can be treated as *products* under the GATT, the basic principles for trade in goods apply: Most-Favoured-Nation Treatment and National Treatment (see box in chapter 3). The trade in services is defined in Article I of the GATS. There are four modes of supply: cross-border supply, consumption abroad, commercial presence and the temporary movement of natural persons.[57] The approach to the liberalisation of services in the GATS is based on a list of commitments in specific sectors. If a country does not put a sector on this list, it is not willing to negotiate on any of the four foreseen modes of market access for this specific topic. Energy supply and related issues such as green certificates are currently not listed by any WTO member. If trade in green certificates were to be listed under GATS, basic trade principles - as under the GATT - would apply: Most-Favoured-Nation Treatment (Article II GATS), Market Access (Article XVI) and National Treatment (Article XVII) for "like services" of any other member country.

Under both, GATT or GATS rules, it is relevant how the certificate trading systems regulates the access for foreign and domestic competitors. The compliance with WTO rules depends on the existence of quantitative restrictions on trade for foreign sellers of certificates and on domestic market access regulations that are applied in a discriminatory way against providers from different countries. Therefore, either the mutual recognition of national certificates and their underlying criteria for renewable energy sources,

---

56 Cp. GATT Analytical Index (1994) cited in Botchway (2001, p.11)

57 Cp. Article I: 2 (a) to (d) GATS.

or the harmonisation of national systems are needed, if the design of a national and international system for tradable green certificates is to comply with WTO rules.

4.4 Conclusions and Policy Options

Labelling and certification are market-based instruments which help to inform consumers and other interested parties about the environmental impacts of a product. They follow the weak PPP. These tools are becoming popular in German national energy policy and with private actors in order to distinguish otherwise homogenous electricity according to the production method used. One goal is to foster renewable power generation by establishing and broadening markets for "green" electricity also across national borders.

In our investigation of labels and green certificates under WTO law, we found that a clear distinction has to be made between labels based on labelling programmes and mere proofs of origin. There is no reference to ecological labelling in WTO law as such. Its compatibility depends instead on the TBT Agreement, which deals with standards and technical regulations, and on the basic principles of the GATT. Mandatory labels are fully covered by WTO law and their application is allowed as long as there is no discrimination against foreign suppliers. It is however not clear whether voluntary labels with specific emphasis on non-product related processes and production methods are covered by WTO rules. A clarification would only be possible if a complaint was lodged with the dispute settlement bodies. In any case, each country can apply labelling programmes that contain standards on PPMs to the degree it feels necessary. In doing so it has to keep in mind that there is scope for conflict under WTO law if other WTO members feel discriminated. Currently, such conflict would depend on the legal interpretation of non-product related standards and their validity to distinguish otherwise "like" products.

In order to achieve compliance of *ecological labels* with international trade rules, it would be useful to follow the WTO approach, which strives for the international coordination of standards across its member countries. Although the WTO is not necessarily the best institution to proceed with international labelling initiatives, its *Code of Good Practice for the Preparation, Adoption and Application of Standards* (included in the TBT Agreement) could be a guideline. International coordination of energy labelling and certification would also be important from the environmental policy point of view, because it would lead to greater transparency in electricity production using renewable energy sources. Therefore, it should be aimed at finding criteria for an international “green single subject label” for energy production methods. This measure should go

hand-in-hand with negotiating energy production standards at the international level (see also chapter 3.4).

Green certificates represent amounts of electricity from renewable sources. Their trading within and across borders is not yet fully implemented. A trading system which goes along with WTO rules would have to apply the WTO principles of non-discrimination and most-favoured-nation treatment. This could be achieved best by aiming at harmonisation or mutual recognition of green certificates awarded to producers from different countries.

5 Taxes

5.1 Definition

Economic theory differentiates between ecological taxes (or charges) on production or consumption and taxes (or charges) on pollution. The taxation of emissions was first introduced by Pigou (see also chapter 2). As there are high information requirements with respect to the optimal level of pollution, today's ecological taxes are generally based on the Price-Standard-Approach (PSA). This assumes that the desired level of environmental quality is determined in the political process. Both approaches – the Pigouvian approach as well as the PSA – correspond to the strong PPP.

With respect to energy policy, one can differentiate between a tax on primary energy consumption and a tax on final energy. The former is more preferable, because it creates incentives for improving energy efficiency at all levels of the energy transformation process. However, without international harmonisation, the introduction of such a tax on primary energy would be difficult to realise, because domestic final energy could be easily substituted by imported final energy.[58]

In general, taxation is also widely seen as a cost-effective instrument for reducing carbon dioxide emissions – some even see a potential for energy taxes becoming the main pillar of fiscal systems in the 21st century.[59] Energy taxes allow for the inclusion of the long-term costs of climate change into the price system and thus balance the

[58] Cp. Bach et al. (2002, p. 804).

[59] Cp. Barker (1997, p. 239).

private costs of carbon dioxide emissions with the environmental and social costs of global warming. A number of countries, mainly in northern Europe, have already implemented energy or carbon taxes in the context of broader ecological tax reforms.

5.2 Application in Germany

In 1999, the *First Step Toward an Ecological Tax Reform Act* came into force in Germany. The *Ecological Tax Reform* (ETR) has two objectives: first, lowering energy consumption and improving energy efficiency, which could eventually lead to a reduction in greenhouse gas emissions, and second, redistributing tax revenues to the social security system, which could lead to more employment.[60]

As a first step, the government increased the existing tax on gasoline, heating fuel, diesel fuel, and natural gas and introduced a new tax on electricity. There is, however, no environmental tax on coal which is the most CO_2-intensive primary energy source. With the Law of Continuation of the Ecological Tax Reform further fourth step of the ETR followed and tax increases for gasoline and electricity are fixed for the years 2000 to 2003. The government also allowed compensations and reductions for some groups (see chapter 6.2).[61] Energy from renewable sources is exempt from the ecological tax, as long as it is either used by the producer himself or is supplied to an electricity grid that is exclusively fed by renewable sources.

5.3 Implementation Problems of Environmental Taxes

In many cases, the introduction of environmental taxes has faced substantial resistance from industry, which has often resulted in adjustment measures such as special exemptions or rebates for certain sectors.[62] In many countries, the domestic opposition to the introduction of energy taxes is based on the perception that energy taxes would affect the international competitiveness of national industries. A tax would equal a relative disadvantage vis-à-vis foreign manufacturers who were not subject to a similar tax. In addition, price differentials caused by differing taxation schemes in different countries could thwart the environmental purpose for which the tax was introduced in the first

---

[60] This corresponds to the concept of the “double-dividend” (cf. Kohlhaas 2000). For a simulation study see Bach et al. (2002).

[61] Cp. OECD/IEA (2001, p. 85) and BMF (2001, p. 25).

[62] Cp. OECD (2001a).

place. National industries' fear of losing competitiveness due to national energy or carbon taxes can be observed in many cases. Whether a loss in competitiveness can be empirically supported, or whether it is merely based on the perception of the potential "victims" of a tax proposal, energy taxation is seen as a major threat to domestic industries, and it has triggered strong political opposition to national governments in the past and is likely to continue to do so in the future.[63] Political pressure from industry could generally obstruct the environmental policy efforts of national governments and thus become a serious danger for climate protection strategies.[64]

Different options are available for national governments to offset these – real or perceived – competitive impacts caused by energy taxes. A properly designed and internationally agreed upon border tax adjustment (BTA) could offset competitive burdens without undermining the environmental objective of reducing carbon dioxide emissions.[65] This instrument and its eligibility under WTO law will be discussed in detail in the following.

5.4 Border Tax Adjustment

5.4.1 Definition

Border tax adjustments have traditionally been motivated by economic reasons, but not by ecological problems. This is reflected in the design of most rules on border tax adjustment. In the late 1960s, discussions on border tax adjustment arose within the trade committee of the OECD and the GATT on the harmonisation of indirect taxes in the European Economic Community and in other OECD countries, and the resulting wider use of border tax adjustments.[66] Consequently, GATT established a Working

---

[63] Finland provides a good example. As the first country ever to introduce a carbon tax, Finland did not grant any tax reductions or exemptions to industry until concerns about competitiveness forced the government to change its tax scheme (see Teir 1999). These concerns also accompanied the introduction of the German ETR (see e.g. Krebs/Reiche 1999).

[64] In some cases, strong opposition from industry leads to the complete failure of energy tax proposals. The US BTU tax, Australia's "Greenhouse Levy" and New Zealand's proposal for a "Low Level Carbon Charge" are examples for the impediment of climate change policy by industry (see e.g. Baron 1997).

[65] See footnote 91, the *DISC*-Case, which is an example for the harmonisation problem.

[66] Dam (1970, p.213).

Party on Border Tax Adjustments in 1968[67] to address the questions posed by this trend. The Working Party concluded its discussions with a final report in 1970.[68]

Theoretically, there are two concepts for where to levy a tax on traded goods. First, the *destination* principle[69] stipulates that goods should be taxed in the country of consumption. Each country is allowed to choose its own domestic tax regime, and products from all countries are still able to compete in the international market. The universal – that is, internationally harmonised – application of the destination principle thus levels out the competitive basis for all countries: exported or imported products are neither exposed to double taxation, nor do they compete on different competitive terms arising from different national tax levels. The second principle is the *origin* principle, which requires that products are taxed in the country of production. If the origin principle were internationally accepted and taxes were harmonised, border tax adjustments would not be necessary. As a simple rule, one could state that, under the destination principle, taxes do not follow goods, whereas under the origin principle, taxes follow the goods.[70]

The Working Party opted for the first alternative, defining border tax adjustments as: "*any fiscal measures which put into effect, in whole or in part, the destination principle (i.e. which enable exported products to be relieved of some or all of the tax charged in the exporting country in respect of similar domestic products sold to consumers on the home market and which enable imports sold to consumers to be charged with some or all of the tax charged in the importing country in respect of similar domestic products)*".[71] This definition of BTA still represents the prevailing view within the WTO system.[72]

A BTA on traded goods is consistent with the PPP if the imported (or exported) product was not taxed in its country of origin, while the same BTA would be inconsistent with the PPP if the imported (or exported) good already bears the external costs. Thus, there are two cases in which a BTA would undermine an efficient environmental policy using the PPP: either if the BTA would lead to no environmental taxation at all or to double taxation.

---

[67] GATT Document L/3009, 17 May 1968.

[68] GATT Document L/3464, 2 December 1970, published as BISD 18S/97.

[69] See for example Jackson (1989).

[70] Cp. Demaret/Stewardson (1994, p. 6).

[71] Cp. BISD 18S/97, para. 4.

[72] Cp. WTO-CTE (1997a, para. 28).

5.4.2 Application

Border tax adjustments in general have been applied since the late 18th century in the United States.[73] In the 19th century, rules for the use of border tax adjustments were internationally agreed to prevent the protectionist use of this instrument. Adjustments were also included in the negotiating process of the GATT as well as that of the European Economic Community. At present, there are tax schemes that adjust for excise taxes on products such as cigarettes or alcohol. In most value-added tax schemes, the border adjustment is used to impose taxes on these type of products regardless of where they were produced. Examples of border tax adjustments with an environmental aspect can be found in the *Superfund tax scheme* and the *Ozone Depleting Chemicals tax scheme*, both enacted in the United States.

The *Superfund tax* was introduced in the United States in 1986. The *United States Superfund Amendments and Reauthorization Act* stipulated a set of different income and excise taxes, including a petroleum product excise tax, a corporate income tax surcharge, and an excise tax on certain chemicals used as inputs for the processing of chemical derivative products.[74] The revenue from this tax was used to clean up the toxic waste disposal related to such chemicals. The tax was imposed on the domestic use of feedstock chemicals and was remitted if they were exported. On the import side, the tax was collected at the point of first sale or use by the importer. Since the tax was collected on the first domestic sale or use, exports that where not exported via an intermediate domestic distributor did not require an explicit BTA.[75] The final chemical products were not separately taxed. Products from outside the United States that were made from the listed chemicals were, in the sense of a border tax adjustment, taxed at a relatively modest rate of up to US$ 5 per ton, which corresponded in its effect to the internal tax imposed on the domestic feedstock chemicals.[76] The importer had to provide information on the use of the listed chemical in the imported product's production process. The BTA was then calculated on the tax that would have been paid, if the product had

---

[73] Cp. Demaret/Stewardson (1994, p. 7).

[74] See also Cook (1996).

[75] Cp. Hoerner (1998, p. 9).

[76] Cp. for a detailed discussion, see Brack et al. (2000, p. 77).

been produced in the United States.[77] However, the BTA on prior-stage inputs was limited to those primary products which had a relatively large share – at least 50 percent – of taxable chemicals in their production process. Three important aspects related to the *Superfund tax* were challenged before a GATT panel (see Annex).[78] First, the adjustment was made on a prior-stage production input and not on the final end product itself, and second, the tax adjustment was calculated in a distinct way. Third, the European Community argued that the *Superfund tax* imposed by the United States is inconsistent with the PPP, since the products exported by the EC to the US were already charged at their place of production. The GATT panel decision in the *Superfund*-Case evaded this issue concerning the PPP by stating that: "*the General Agreement's rules on tax adjustments* (...) *give the contracting party the possibility to follow the polluter-pays principle, but they do not oblige to do so.*"[79]

Hence, the GATT panel only examined whether the tax was imposed directly or indirectly; since the US imposed the tax directly, it was considered to be eligible for a BTA.[80] Following this decision, a panel would only consider *how* a tax is applied, not for *which* political purpose. Additionally, the *Superfund*-Case dealt with inputs that were physically incorporated in the product, while energy is consumed during the production process. This makes the case of energy more complicated (see section 5.4.3 below).

The US *Ozone Depleting Chemicals (ODC) Tax* was introduced to implement the Montreal Protocol on Substances that Deplete the Ozone Layer.[81] Similar to the Superfund tax, the ODC tax was an excise tax on certain ozone-depleting chemicals. The ODC tax was levied on a vast number of ozone depleting chemicals, mainly CFCs, HCFCs and halon gases. The rates were designed to be in proportion to the ozone depleting potential of the respective substances, and were also subject to phase-in rates and exceptions of various kinds.[82] Like the Superfund tax, the *ODC tax* was collected at the point of first sale or use and represented a tax on the domestic consumption of these

---

[77] If these data were not provided, the tax was calculated according to the predominant production method employed in the United States. In the case of substances where no such regulation on predominant production methods had been defined, a flat rate was applied.

[78] Report of the GATT Panel *United States: Taxes on Petroleum and Certain Imported Substances*, 17 June 1987. BISD 34S/136.

[79] GATT-Panel (1987, point 5.2.3 to 5.2.7)

[80] Cp. Pitschas (1995, p. 492)

[81] Cp. Brack et al. (2000, p. 78-9).

[82] Cp. Hoerner (1998, p. 11).

chemicals, either directly or indirectly through the consumption of products which were manufactured using the ODCs. Hence, on top of the tax adjustment paid on the import or export, the BTA was also applied to products that contained or were produced with the respective ODC . In most cases, the Secretary of the Treasury defined a *de minimis floor* for the BTA, which determined the minimum amount of a substance used in the production process.[83] Like the *Superfund tax,* the *ODC tax* scheme used the predominant production method approach in those cases where no information about the amount of ODC used in the production process was available. Furthermore, the *ODC tax* applied to substances used in the production process that were not physically incorporated in the final product. Under the current regulations ODCs are considered to be used in the production of an imported product, if they are "physically incorporated into the product, released into the air in the process of manufacturing the product, or used in the manufacture of the product and the cost of the ODC is properly allocable to the product."[84]

The border tax adjustment of the *ODC tax* was quite effective in protecting the domestic ODC industry from foreign competitors, while also allowing a gradual phasing-out of ODCs in US industry. It established the importance of border tax adjustments in the context of taxes with an environmental purpose.[85] So far, no country has claimed that adjustment of taxes on ODCs when imported to the United States violates GATT or WTO regulations.[86]

5.4.3 Border Tax Adjustments Under WTO Law

When analysing WTO law on border tax adjustments, one needs to consider different provisions and principles of the WTO framework, since different rules apply for imports and exports, and no regulations specifically deal with border tax adjustments. A core principle for the assessment of the legality of environmentally-related border tax adjustments under WTO law is the national treatment principle (Article III, see box in

---

[83] Cp. Hoerner (1998, p. 11).

[84] Cp. Hoerner (1998, p. 12).

[85] Cp. Brack et al. (2000, p. 79).

[86] This, as Hoerner remarks, is naturally not conclusive (1998, p.12 fn 41), because the tax on embodied ODCs is usually rather small compared to the price of the traded good. Nevertheless, the absence of any formal complaints shows that the introduction of the BTA mechanism within the ODC tax scheme did not raise any serious resistance from other GATT members.

chapter 3).[87] On the export side, Article XVI GATT prohibits subsidies for exported products and therefore also needs to be considered. Moreover, Article VI GATT, some provisions of the 1947 and 1994 Agreements on Subsidies and Countervailing Measures (ASCM), as well as the preamble of the 1994 Marrakech Agreement[88] and Article XX GATT, the general exceptions clause, are also relevant.

A number of possible systems for border tax adjustment are clearly not acceptable under WTO law. First, direct taxes – that is, taxes on the producer, such as income taxes or social welfare charges – are not eligible for adjustment under the GATT, whereas indirect taxes – that is, taxes on products – are eligible. This distinction between direct and indirect taxation, which follows from the prevailing destination principle in the WTO system, has been generally accepted as the basis for GATT/WTO provisions on border tax adjustments with respect to both imports and exports.[89] Thus, only indirect taxes are eligible for adjustment in accordance with the destination principle. This is embodied in different GATT/WTO provisions and has also been confirmed by a GATT panel in the context of the US Domestic International Sales Corporations (DISC) legislation in the 1970s.

For example, Article III (1) GATT explicitly refers to products, when stating that internal taxes and charges *"…should not be applied to imported or domestic products so as to afford protection to domestic production.*" This means governments may impose charges on imported products, which are not in excess of those imposed on domestic products as long as this does not result in the protection of the domestic products. Article XVI (4) GATT prohibits subsidies for products for export, which result "*in the sale of such product for export at a price lower than the comparable price charged for the like product to buyers in the domestic market.*" Article VI (4) GATT allows a party to impose countervailing duties on the imported product equivalent to the subsidy granted by the exporter. However, Article VI (4) prohibits countervailing measures resulting from the remission of indirect taxes on an exported product stating that "*taxes borne by the like product when destined for consumption in the country of origin or*

---

87 See also Article II GATT for the issue of the direct versus the indirect taxation of products.

88 The preamble establishes that WTO members must shape their economic activities in a way that allows "for the optimal use of the world's resources in accordance with the objectives of sustainable development, seeking both to protect and preserve the environment and to enhance the means for doing so in a manner consistent with their respective needs and concerns at different levels of economic development." This criterion could be of importance when assessing the eligibility of border tax adjustments which aim to protect a global environmental good, such as the climate.

89 Cp. WTO-CTE (1997a, para. 31); Dam (1970); BISD 18S/97, para. 8; See also Demaret/Stewardson (1994, p. 16).

exportation, or by reason to the refund of such duties or taxes" shall not be subject to countervailing duties.

The GATT does not clearly define to which taxes this applies. Article III (2) GATT mentions taxes that are "applied to" products and Article VI (4) mentions taxes that are "borne by" products. A Working Party Report on Article XVI (4)[90], which considered the term "subsidy", and the 1970 Working Party on border tax adjustment supported the interpretation that direct taxes and social security charges are not considered as being "borne by" or "applied to" products. The same applies to the 1979 and 1994 ASCM. This reasoning was reinforced by the GATT panel in the *US DISC legislation*- Case.[91]

World trade law prohibits border tax adjustments not only for direct taxation, but also for some forms of indirect taxation. The eligibility of indirect taxes for adjustment remains unclear, in particular, in the case of indirect taxes that are indirectly applied to end products. This method of taxation includes input or process related "prior-stage" taxes on physical inputs, on energy or on other parts of the production process. The 1970 Working Party on border tax adjustment, which examined such process-related taxes, could not reach a consensus, stating that "*taxes occultes*" – including taxes on advertising, energy, machinery and transport – could not be categorised clearly, which meant their eligibility for border tax adjustments could not be determined.[92]

Article II (2) GATT only refers to taxes applied "*directly or indirectly*" to the product, which in principle does not exclude inputs at different stages of the production process. Article II (2) (a) further states that "... *a charge equivalent to an internal tax imposed consistently with the provisions of paragraph 2 of Article III in respect of the like domestic product or in respect of an article from which the imported product has been manufactured in whole or in part*". The use of the word "article" may indicate that the indirect tax is construed as being restricted to products that are physically incorporated into the final product. However, the provision does not answer the question clearly.

---

[90] Cp. Report of the 1960 Working Party Report on Article XVI (4), 19 November 1960, BISD 9S/185.

[91] The *DISC*-Case, 2 November 1976, BISD 23S/98 (1977). US producers had claimed that the introduction of a comprehensive system of indirect taxes in the European Communities allowed their member states to make more border tax adjustments. This, so the argument of the US producers, would create a competitive disadvantage for them, since the United States had a tax system that was based on direct taxation rather than on indirect taxation. Therefore, the US DISC legislation of 1971 introduced a partial exemption for direct taxes on exported products. It followed a dispute, initiated by the European Economic Community. One finding in the *DISC*-Case was that the US legislation granted a subsidy to export and therefore contradicted GATT rules. This can be seen as a further confirmation of the ineligibility of direct taxes for border adjustment.

[92] Cp. BISD 18S/97, para. 15 a.

Article VI (4) with its wording “borne by products” is as equally vague concerning exports as Article II (2).

The interpretation of measures related to prior-stage inputs and processes or production methods (PPM) can also be explored in related panel decisions. The US *Superfund tax* (see chapter 5.4.2) was a prior-stage specific tax on listed chemicals, which were used as inputs for the further production of chemical derivatives. The panel report decided that taxes on “materials” that were used for the manufacture of domestic products may be taken into account when imposing border tax adjustments on imported like products. The panel did not, however, indicate whether the chemicals were physically incorporated in the final product in any recognisable way.

The 1979 SCM Code is also relevant for border tax adjustments on exports and refers in paragraph (g) of its Annex to “*the exemption or remission in respect of the production and distribution of exported products of indirect taxes*”, which is generally permitted. The remission of prior-stage cumulative taxes on goods or services used in the production of products is, as stated in paragraph (h), only permitted if the taxes are levied on goods that are physically incorporated in the exported product. It remains unclear whether energy taxes fall under the provision for prior-stage cumulative taxes. The 1994 ASCM slightly changed the impetus behind these provisions. Under Annex II ASCM it is now allowed that countries remit taxes on exports, if the taxes are prior-stage cumulative indirect taxes on inputs. Footnote 61 defines these inputs as “*physically incorporated, energy, fuels and oil used in the production process and catalysts which are consumed in the course of their use to obtain the exported product*.” This seems to change how the eligibility of energy taxes for border tax adjustments can be interpreted and may point to the conclusion that an indirect tax on an production input would be eligible for adjustment, if the inputs included energy, fuels or oil that were used or consumed in the production process.[93] However, whether footnote 61 clearly allows for BTA on energy is subject to ongoing discussions.[94]

A related question is whether countries have the right to tailor taxes in a way that distinguishes between different environmental impacts of energy generation, e.g. electricity produced with renewable sources versus electricity produced with coal or oil. The compatibility of such a policy with WTO law depends on how the concept of a like product is interpreted (see box chapter 3). The 1970 Working Party on border tax

---

[93] See also Demaret/Stewardson (1994, p. 31).

[94] Cp. WTO-CTE (1995), Demaret/Stewardson (1994, p. 29 ff).

adjustments was not able to find a clear definition. The four criteria it set up for the "likeness" of products could lead one to argue that two very similar products produced in differing ways are different products.[95] Recent case law has shed new light on this question. First, it seems that the term "like product" should include products with similar qualities or serving substantially identical end uses, and that consumer habits provide no grounds for differentiating between products. This was upheld in the *Japan-Alcohol*-Case of 1987[96], in which the European Communities challenged (under Article III GATT) a Japanese law that imposed different taxes on various types of alcoholic beverages, with most of the Japanese products falling in categories with low taxation. Second, it appears that in determining whether products are "like", one has to consider not only the characteristics of the products in question, but also whether they are differentiated for protectionist purposes. This argument could be seen as a step towards a stricter examination of the environmental motives behind a measure.[97]

Serious conflicts with WTO rules arise if a tax is tailored using non-product related PPM[98], as could be the case in energy production. It may then be necessary to rely on Article XX GATT (see discussion in chapter 7). Then, if energy from different origins is regarded as a like product, taxes on the production of energy which take into account the impact on climate change, could be justified under Article XX GATT, as long as they are not applied in a discriminatory manner.[99]

5.4.4 The Appropriate Border Tax Adjustment Level

US experiences with the *Superfund* and *ODC tax* show that it is possible to administer a tax on production inputs. However, it remains difficult to collect the relevant data for the process-based calculation of a border tax adjustment, i.e. tracing the proper amount of taxed input in the production process in the respective country of origin. This applies in particular for energy taxes, as energy is used for a large number – if not for all –

---

[95] Cp. Demaret/Stewardson (1994, p. 34).

[96] Report of the Panel, Japan: Customs Duties, Taxes and Labelling Practices on Imported Wines and Alcoholic Beverages, 10 November 1987, BISD 34S/83, see Annex.

[97] See the *US-Alcohol*-Case of 1992, in which Canada challenged a US law that taxed beer and wine produced by small and certain local producers in a different way to larger producers. Report of the Panel, United States: Measures Affecting Alcoholic and Malt Beverages, 19 June 1992.

[98] For example, if a different tax rate is applied to a domestic product produced with clean energy and to the "same" imported product using energy produced by a PPM that contributes to climate change.

[99] See chapeau Article XX GATT.

products. It would be complex and difficult to administer border tax adjustments that rebated the tax on fuels used to produce exported goods and that imposed a corresponding charge on the carbon embodied in imports.

The optimal solution would be to make an adjustment redundant in the first place. The harmonisation of environmental prior-stage taxes across countries and the subsequent universal application of the origin principle would eliminate the need for border tax adjustments. This, however, would require extensive international co-operation and a largely internationally harmonised approach for energy policy. In the current political situation, such a development seems very unlikely, although the Kyoto-Protocol can be regarded as a first step. Another option would be to integrate a system for the internationally standardised certification of production processes into the International Organization for Standardization (ISO).

Another way to deal with this problem would be to limit the number of products that are subject to a border tax adjustment to a manageable level. A range of a few selected energy-intensive products with a correspondingly limited number of production methods would make it easier to administer the adjustment process.[100] One approach to the problem would be to use an "energy-added tax" method, similar to the invoice method for value-added tax that is used in many countries throughout Europe:[101] a tax imposed on fuels or on the electricity used in the production process could be stated on the invoices of domestic manufacturers. These statements would then be presented to the tax authority in order to receive a rebate for exported products. The "predominant national method" approach seems to be a feasible and WTO-compatible approach, if the necessary information on the production process of an import is limited or is simply not provided by the exporter. The panel in the *US Superfund-C*ase found this method to be consistent with GATT law.[102]

5.5 Conclusions and Policy Options

The introduction of environmental taxes has faced substantial resistance from industry in many countries, frequently resulting in adjustment measures such as special exemp-

---

[100] See for example Hoerner/Muller (1997); Brack et al. (2000).

[101] Cp. Hoerner/Muller (1997, p. 165).

[102] It only rejected the 5 per cent flat tax that was imposed on unlisted substances, arguing that this imposed a higher tax on imports than on like domestic products.

tions or rebates for certain sectors. This chapter analysed border tax adjustments which could offset the potentially competitive disadvantage without watering down the environmental objective of reducing carbon dioxide emissions.

Whether border tax adjustments for energy taxes are permitted under world trade law is not entirely clear. We can, however, identify a number of conceivable systems for border tax adjustments which are definitely *not* acceptable under WTO law. *Direct* taxes are clearly not eligible for adjustment under GATT, whereas *indirect taxes* are eligible. This distinction between direct and indirect taxation, which follows on from the prevailing destination principle in the WTO system, has been generally accepted as a basis for WTO provisions on border tax adjustments. The eligibility of indirect taxes for adjustment remains unclear when *indirect taxes* are *indirectly* applied to end products. This is particularly relevant for energy as an input that is no longer physically present in the final product.

The 1994 ASCM includes the provision that a country is allowed to remit taxes on exports for prior-stage cumulative indirect taxes on inputs "physically incorporated, energy, fuels and oil used in the production process". This may point to the conclusion that energy taxes would in general be eligible for border tax adjustment.

In order to avoid that BTA contradicts the PPP, there are at least two possibilities. Ideally, governments would agree on similar climate and energy policies, for example uniform carbon taxes, which would make border tax adjustments unnecessary. However, this first best option seems to be difficult to implement in the near future, and therefore it should be aimed at in the mid- and long-term. Second, the PPP could be integrated in WTO rules on BTA.[103] For this option, Westin (1997) suggests to introduce some guiding principles, in order to provide a framework for future panel-decisions concerning BTA for environmental taxes: "*taxes should neither be doubled nor avoided entirely*"; and "*there should be no rebate of taxes that protect the global commons*".[104]

In any case, much will depend on actual state practice, as this is crucial in determining the interpretation of the treaties, as well as on decisions by the WTO dispute settlement mechanism.[105] Given the importance of the issue for world trade and the remaining

---

[103] Cp. Westin (1997, p. 204 f.); Pitschas (1995, p. 499); Helm (1995, p. 104).

[104] Cp. Westin (1997, p. 205).

[105] Despite limited case law and somewhat ambiguous treaty law, it seems that if Europe embarked on a carefully designed strategy of energy tax adjustments at the border vis-à-vis non-European industrialised

ambiguity in WTO law, it would be desirable for governments to initiate a process to reach a multilateral understanding on the permissibility of border tax adjustments for energy taxation and also for other inputs that are not physically incorporated in the final product. The PPP would be a helpful tool, if agreement on its integration into the WTO rules could be reached. Further analyses and discussion is needed in order to find international agreement on how to proceed in this direction.

6 Subsidies

6.1 Definition

Definitions of subsidies abound. Lawyers, politicians, the government, lobbyists or economists use different definitions which are tailored to a specific purpose.[106] In our analysis we follow the economic perspective, which defines a subsidy, in a broad sense, as a an economic benefit received by a private agent from public funds at no cost or below the costs of producing the benefit. In a more narrow sense, subsidies can be understood as financial assistance (e.g. direct payments, tax exemptions) from the government to the private sector. All economic definitions of subsidies have one common characteristic: a benefit is conferred from the public to the private sector.[107] Subsidies have long been used to regulate the economy as well as to promote national policies. All countries use subsidies as a policy instrument. However, as the term 'subsidy' carries a negative connotation, it is less and less applied in official descriptions.

As a general rule, a subsidy is not compatible with the idea of making polluters pay for environmental damage. However, if firms cannot bear additional costs to protect the environment, policymakers do not tend to let enterprises go bankrupt but rather use subsidies to finance new abatement technologies, which help to further the PPP in the long run. Moreover, if properly designed and applied, subsidies may contribute to an

---

countries, there is a fair chance that European governments would prevail if these tax adjustments were challenged by other WTO members before the WTO dispute settlement system. Cp. Biermann/Brohm (2003).

[106] See BMF (2001a, p. 11). From an environmental point of view, for example, it could be argued, that all negative external effects, which are not internalised, should be regarded as a subsidy for economic agents. This approach, however, lacks measures of quantification and evaluation. See BMF (2001b, p. 38)

[107] Cp. Ewringmann/Thöne (2002, p. 10-12)

improvement of the environment.[108] Hence, the *political* definitions of the PPP used by the OECD[109] and the European Union (Article 175 (5) European Treaty) state that because of other policy goals subsidies may be temporarily permitted. Such policy goals could be the reduction of unemployment, the promotion of small and medium-size enterprises (SME), and the implementation of an environmental standard, which goes beyond the existing command-and-control standards on national levels.[110]

Environmental subsidies allowed by the OECD Guiding Principles must be limited both in scope and time. Since 2001, the European Commission prohibits subsidies which help to implement higher environmental standards. The Commission argues that enterprises have already had time to adapt to the PPP[111] since the *5th Environmental Action Programme* became part of European law in 1993.[112] Exceptions now can only be made for SMEs, which face particular problems in responding to environmental standards or to provide incentives to firms to meet national environmental standards, which are stricter than EU standards.[113] Additionally, the Commission allows for tax exemptions[114] in the energy sector, if such exemptions are limited in time and are necessary for the implementation of an ecological tax system within a member country.[115] Furthermore, the Commission allows state aids, which seek to support renewable energy sources and combined heat and power generation (*Kraft-Wärme-Kopplung*).[116]

Subsidies for renewable energy are one way of reducing GHG emissions. However, the reduction of subsidies for fossil fuels and oils, especially coal, would also be an important mechanism.[117] As empirical estimates show, the removal of fossil fuels subsidies in the US alone could lead to an 18 % reduction of global carbon dioxide emissions.[118]

---

[108] See Kim (2001) for a detailed discussion.

[109] Cp. OECD (1974, Annex II).

[110] Cp. OECD (2001b, p. 11); European Commission (2001, p. 6).

[111] Cp. European Commission (2001, p. 6).

[112] Cp. European Commission (1993).

[113] The first of these exceptions is limited to a period of three years.

[114] Tax exemptions are considered to be subsidies by Article 87 of the EU-Treaty.

[115] Cp. European Commission (2001, Point 23, p. 6).

[116] Cp. European Commission (2001, Point 24, p. 6).

[117] Cp. Buck/Verheyen (2001, p. 20 f.) and The Economist, July 6th-12th 2002.

[118] J. Lash as cited in Buck/Verheyen (2001, p. 20).

6.2 Application in Germany

In Germany, the consumers and producers of energy are supported through direct payments, price guarantees, and tax exemptions. The *Renewable Energies Act* (*Erneuerbare-Energien-Gesetz, EEG*), which entered into force in April 2000, introduced a system of financial aid for power generation from renewable energy sources. The EEG aims at achieving a 12% share for electricity produced from renewable energy sources by 2010. The Act provides price guarantees for the producers of renewable energy, like hydrodynamic power, landfill gas, firedamp, sewage gas, biomass energy, geothermal energy, wind energy, and solar radiation energy. Grid operators are compelled by law to connect their electricity generation installations to the energy produced by these renewable energy sources and to remunerate the producers using the prices fixed in §§ 4 to 8 EEG. The additional costs have to be borne by the grid operators and will, at least in the long run, be passed on to consumers. The European Court of Justice found the EEG not to be a subsidisation in the sense of European law, since there was no involvement of the state and private and public enterprises are treated equally.[119] However, as we shall see in section 6.3 the price support mechanisms in the EEG might be relevant in the context of the WTO definition of a subsidy.

Similarly, the *Co-Generation Act* (*Kraft-Wärme-Kopplungsgesetz, KWKG*) is a law promoting the use of the combined energy production of heat and power. The KWKG stipulates guaranteed prices for electricity to be paid by the grid operators to the energy producers of heat and power. The *New Co-Generation Act*, which entered into force on 1st April 2002, protects the existing combined heat and power energy production plants.

Furthermore, the German Ecological Tax reform (ETR, see chapter 5.2) includes a series of tax reductions, partly as pressure groups had complained about the burden and continue to do so. The German government decided to reduce this burden from the ETR – beside others – for energy-intensive sectors, high energy-efficient power generation and public transport. Exemptions from the taxes on petroleum products, which were already in effect before the ETR entered into force, were prolonged (e.g. for transport by air and ship). As a result now mainly private households, the retail sector, the road transport sector, service companies, public institutions and small enterprises pay the full ecological tax rate. The variety of exemptions may lower the effect of structural change

[119] Cp. ECJ (2001).

in favour of the less energy-intensive sectors.[120] The ETR also provides funds for subsidies for energy production plants based on renewable energy sources. In 2002, these transfers sole amounted to 200 million Euro.[121]

To sum up, the EEG and KWKG use price guarantees and the ETR uses tax reductions and financial transfers as main instruments to achieve national energy policy goals. The next section addresses the question whether these measures may lead to a potential conflict with WTO law.

6.3 Potential Conflicts with WTO Law

In principle, the WTO law follows a "non-subsidization" approach, although there are detailed rules on the different kinds of national subsidies. These rules include Article XVI GATT and the ASCM.[122] Article XVI (1) GATT states that in cases of subsidisation, including income or price supports, "*which operate[s] directly or indirectly to increase exports of any product form, or to reduce imports of any product into, its territory"*, the contracting parties must be notified. According to the ASCM a subsidy can either be a benefit-conferring *financial contribution* from public funds or a benefit-conferring *price or income support.*

The legal definition of a subsidy (ASCM, Article 1) reads as follows:

> *For the purpose of this Agreement, a subsidy shall be deemed to exist if:*
>
> *(a)(1) there is a financial contribution by a government or any public body within the territory of a Member (referred to in this Agreement as "government"), i.e. where:*
>
> *(i) a government practice involves a direct transfer of funds (e.g. grants, loans, and equity infusion), potential direct transfers of funds or liabilities (e.g. loan guarantees);*
>
> *(ii) government revenue that is otherwise due is foregone or not collected (e.g. fiscal incentives such as tax credits);*

---

[120] Bach et al. (2002, p. 811)

[121] Cp. BMU (2002, p. 15).

[122] The ASCM was negotiated in the framework of the Uruguay Round. It is binding for all member states. Its predecessor – the Tokyo Round Subsidies Code – was plurilateral in character and only binding for OECD members (excluding Mexico and Ireland) and 12 advanced developing countries. See Zampetti (1995) p. 10).

(iii) a government provides goods or services other than general infra-structure, or purchases goods;

(iv) a government makes payments to a funding mechanism, or entrusts or directs a private body to carry out one or more of the type of functions illustrated in (i) to (iii) above which would normally be vested in the government and the practice, in no real sense, differs from practices normally followed by governments;

or

(a)(2) there is any form of income or price support in the sense of Article XVI of GATT 1994;

and

(b) a benefit is thereby conferred.

According to the ASCM, subsidies can be classified into three categories:

- prohibited subsidies,
- actionable subsidies,
- non-actionable subsidies.

In order to facilitate the classification of subsidies, a distinction between "specific" and "non-specific" subsidies is introduced in Article 2 ASCM. Subsidies are considered *specific*, if they are formally or actually targeted at certain specific enterprises, at groups of enterprises, at industries, or at enterprises in a certain region. If a subsidy, as defined in Article 1, is specific according to the provisions of Article 2, it is either prohibited or actionable. According to Article 3, prohibited subsidies are non-agricultural subsidies based, in law or in fact, on export performance, or subsidies contingent, in law or in fact, upon the use of domestic over imported goods. Actionable subsidies, as defined in Article 5 and 6, are specific subsidies which cause "*adverse effects to the interests of other Members*" either

- by injuring the domestic industry of another Member; or
- by nullifying or impairing the benefits accruing, directly or indirectly, to other Members of the GATT; or
- by seriously prejudicing the interests of another Member.

The latter case may arise if the subsidy displaces or hinders imports of like products into the member market where the subsidisation takes place (Article 6).

All other subsidies are *non-specific*. Non-specific subsidies, if duly notified, are non-actionable (Article 8). They cannot be challenged under the WTO dispute settlement mechanism and are not subject to countervailing measures. However, if a non-actionable subsidy (as defined in Article 8.2) causes *"serious adverse effects to the domestic industry"* of a member state which are *"difficult to repair*" (Article 9.1), member states are expected to negotiate a mutually satisfactory solution. If no such solution can be found, the case can be referred to the Committee on Subsidies (Article 9.3).

In general, environmental subsidies were regarded as non-actionable subsidies during the Uruguay Round.[123] Nevertheless, the exemption for environmental subsidies, which had been agreed upon and was part of the ASCM (Article 8.2(c)) until 1999, has not been renewed. The OECD interprets this as "*an indication that current environmental subsidies have little effect on international trade*".[124] Even if environmental subsidies may fall under the category of actionable subsides, there are possible exemptions, e.g. the application of border tax adjustments (see chapter 5) including the remission of tax on exported goods.[125]

The issue to be addressed is whether the German price guarantees for producers of renewable energy (EEG and KWK laws) have to be regarded as a subsidy at all. This would be the case, if the three criteria legally defining a subsidy are satisfied:

1) There must be a financial contribution by government or any form of income or price support (satisfying the conditions specified in Article 1.1(a)(1) or 1.1(a)(2) ASCM).

2) A benefit has to be conferred (Article 1.1(b)).

3) The measure must be specific (Article 2).

ad 1) In order to qualify for a subsidy according to Article 1.1(a)(1), a financial contribution by a government is required. However, the payments to electricity producers using renewable sources are a financial contribution by the grid operators and not by the government. Thus, the EEG and the KWKG do not meet the requirement of Article 1

[123] Cp. OECD (2001b, p. 13).

[124] Cp. OECD (2001b, p. 14).

[125] Cp. OECD (2001b, p. 14).

(a) (1) first sentence. This judgement is in line with the recent ruling of the panel on *United States - measures treating export restraints as subsidies*[126]. The report argues (WT/DS194/R, 2001, par. 8.38) that "… by introducing the notion of a financial contribution, the drafters [of the ASCM] foreclosed the possibility of the treatment of *any* government action that resulted in a benefit as a subsidy." McGovern (2002) comes to a similar conclusion: "The requirement of a financial contribution reflects an intention not to include in the notion of subsidy all governmental measures conferring benefits."[127]

The measures of the EEG, however, might still be considered an income or price support under 1.1(a)(2) ASCM. According to McGovern (2002) the definition of income or price supports have not received much attention. Only in 1960, a GATT panel pronounced that a loss to the government must be given, i.e. a guaranteed price paid by a government for a product would be a subsidy within the terms of Article XVI.[128] Grave (2001) arrives at a similar conclusion. He argues that the contracting parties of the GATT 1947 assumed that income and price support requires the use of government resources.[129] However, the price guarantees under the EEG and KWKG are not granted to producers by the government. Rather, the government forces two independent private actors to strike a deal at predetermined prices, if certain conditions prevail. Therefore the German approach to promote renewable energy production does not fall under the WTO definition of subsidies according to Article 1 (a)(2) ASCM.

We may therefore conclude, that the provisions in the EEG and the KWKG for supporting power generation from renewable energy sources do not meet the criteria for a subsidy as specified in Article 1.1(a)(1) or (2).

Notwithstanding such considerations Slotboom (2002) argues, that the German way of supporting renewable energy generation is very likely to fulfil the five criteria of Article 1(a)(1)(iv). He claims that

a) "the government entrusts or directs" (in the EEG and KWKG),

b) "a private body" (the producers of conventional energy),

c) "to carry out one or more of the type of functions illustrated in (i) to (iii) [of Article 1 (a)(1)]" (buying electricity at higher than the real economic value),

---

[126] Cp. WT/DS194/R, 2001, par. 8.65.

[127] Cp. McGovern (2002, p. 11.31-3 (issue 12)).

[128] Cp. McGovern (2002, p 11.34).

[129] Cp. Grave (2001, p. 252).

d) "which would normally be vested in the government and"

e) "the practice, in no real sense, differs from practices normally followed by governments" (promoting the use of renewable sources of energy through buying electricity for a higher than the real economic value is an activity normally vested in the government (see d) and the practice does not differ from practices normally followed by governments (see e)).

Slotboom (2002, pp. 539-40) concludes that government measures such as those applied in the EEG and KWKG "would most likely be considered potentially prohibited or actionable subsidies within the meaning of the SCM agreement."

With respect to Slotbooms conclusions several points are worth noting. First, it is unclear why the subsidy should be considered potentially prohibited. Even in the event that the German price guarantees for renewable energy would be found to constitute a subsidy under WTO law, it is unclear whether they would be regarded as *specific* subsidies under the ASCM (Article 1 and 2 ASCM)[130]. (). Specific subsidies can either be prohibited or actionable. As these subsidies are neither based on export performance nor contingent upon the use of domestic over imported goods, they are not prohibited (Art. 3 ASCM). Second, subsidies would become actionable if they injured the domestic industry of another WTO Member (Art 5 ASCM). It is unlikely that the present level of international trade in renewable energy will cause such damage. Third, promoting the use of renewable energy sources through buying electricity for a higher than the economic value is an activity which is normally *not* vested in the government. Fourth and most important, there is no financial contribution from government or any public body within the territory of a member state. As we have shown above, not all government measures conferring benefits are considered a subsidy.

These arguments point to the conclusion that Slotboom's judgement should be treated with due care and that the price guarantees under the EEG and KWKG should not be considered a subsidy under WTO law.[131]

---

[130] See point 3) on specificity below.

[131] The European Court of Justice (ECJ) has found the EEG not to be a state aid under European law (cp. ECJ 2001). However, this does not mean that the provisions of the EEG will not be considered subsidies under WTO rules. "While the ECJ found that State aid necessarily involves a transfer of State resources, and hence in practice a charge on the public account, the WTO dispute organs took the view that subsidies always consist of financial contribution by the government, but that this financial contribution does not to have to involve a charge on the public account. [...] in this respect WTO rules on subsidies trigger disciplines more easily than the EC rules on State aid." Cp. Slotboom (2002, p. 540).

ad 2) In order to qualify for a subsidy according to Article 1.1(b) a governmental measure requires that "a benefit is thereby conferred". There is no definition of the term benefit in the ASCM or any other WTO agreement.[132] WTO past rulings indicate that a benefit exists when the measure by the government makes the recipient 'better off' than otherwise, i.e. as determined by the marketplace.[133] In the case of the EEG and KWKG a benefit is conferred to the recipient because the producers of energy from renewable sources have the choice between either selling their output at market prices determined by supply and demand or supplying their output to the grid operators which are required to remunerate the price fixed by law. If the fixed price paid by the grid operators is *higher* then the market price, and the producers chose to sell their electricity at the fixed price, then they receive a benefit, as they are better off than determined by the market-place. If the price paid by the grid operators is *lower* then the price achievable on the market, then producers will most likely sell their electricity at prevailing market rates and receive no compensation under the EEG. If, nevertheless, producers would sell their electricity to the grid operators below the market rate, then they would not receive a benefit. Based on the assumption that producers want to maximise their payoffs, we may safely assume that the vast majority will prefer to sell at the highest possible price and therefore will receive a benefit under the EEG.

ad 3) According to Article 2.1 (a) ASCM specificity requires that the measure of the government is granted selectively in law or in fact to an enterprise or industry or group of enterprises or industries (referred to in the ASCM as "certain enterprises")[134]. Article 16.1 ASCM defines an industry as the domestic producers as a whole of the like products.[135] It seems obvious that the producers of energy from renewable sources should be considered an industry and that therefore the funding under the EEG and KWKG should be considered specific. However, Article 2.1 (b) ASCM specifies an exception to this rule relevant in this case. If the legislation, on which the granting authority bases its operations, establishes objective criteria or conditions governing the eligibility for, and the amount of, a subsidy, and as the eligibility is automatic and the criteria and conditions are strictly adhered to, specificity shall not exist according to Article 2.1 (b) ASCM. These conditions are certainly satisfied by the EEG and KWKG

---

[132] Cp. Grave (2001, p. 170).

[133] Cf. McGovern (2002, p.11.31-5) and Benitah (2001, p. 214-218).

[134] See also Sánchez Rydelski (2001, p. 215 – 218).

[135] See also Grave (2001, p. 192).

and render the financial support therefore non-specific. However, Article 2.1 (c) ASCM specifies an exception to this exception (or a counter-exception)[136] which might also be relevant in this case. “If, notwithstanding any appearance of non-specificity resulting from the application of the principles laid down in subparagraphs (a) and (b), there are reasons to believe that the subsidy may in fact be specific, other factors may be considered.” Among the factors listed in the next sentence are the predominant use by certain enterprises and the granting of disproportionately large amounts of subsidy to certain enterprises. It can be argued that this is the case for the EEG and the KWKG. Although even private households are eligible to benefit from the financial compensation specified in the EEG, disproportionately large amounts of the financial flow may go to enterprises. Obviously this judgement depends on the definition of the term “disproportionately large amounts”. In our view, Article 2.1 ASCM leaves substantial room for interpretation when applied to the EEG and KWKG. Hence, it is difficult to judge whether a WTO ruling on this case would come up with the verdict that specificity prevails.

Hence, in the case of the EEG and the KWKG only one of the three conditions necessary to establish the existence of a subsidy is satisfied, namely the conferring of a benefit. The requirement of a financial contribution is not met, and it is unclear, whether specificity prevails in this case. Therefore the price support schemes under the EEG and KWKG cannot be classified as subsidies under WTO law. Unlike the price guarantees, the financial transfers and tax exemptions under the ETR must be considered subsidies according to Art. 1 ASCM. They are specific subsidies, as they are targeted to groups of enterprises and/or to industries. As they are not based on export performance or the use of domestic over imported goods, they are not prohibited. They may, however, be actionable, if they cause an adverse effect to the interests of other members as specified in Art. 5 ASCM. Whether such an adverse effect exists cannot be determined precisely within the framework of this study. Presently, it seems unlikely that the financial transfers and tax exemptions under the ETR will harm other member states` industries.

So far, no complaints have been made by WTO members about German price guarantees and financial transfers for renewable energy or about the tax exemptions under the ETR. It seems unlikely that this will happen in the near future because trade in electricity from renewable sources is low has to date only a small share in overall German electricity production. Moreover, the support provided by the EEG, KWKG and ETR is not directed at exports or imports, but at the production methods used by

---

[136] See Grave (2001, pp.191f).

domestic firms. Potential conflicts could arise, if electricity imports of renewable origin put competitive pressure on the German market for electricity from renewable sources and on grid operators, or, if an over-capacity existed, which would lead to electricity exportation. In the latter case, the financial transfers could constitute an actionable subsidy according to Art. 5 ASCM. However, it is likely that trade in "green" electricity in the near future will take place within the EU or between the EU and accession countries and therefore the appropriate level for the clarification of these conflicts would be the European Union and not the WTO.

6.4 Conclusions and Policy Options

A subsidy can be defined in a broad sense as an economic benefit received by a private agent from public funds. Subsidies are not compatible with the PPP, however, they are regarded by policy-makers as a temporary tool in order to apply the PPP in the long run. The WTO definition of a subsidy is regulated in Article XVI GATT and in the ASCM and comprises direct subsidisation (financial contribution) and income or price support. In any case, a benefit has to be conferred and the subsidy must be specific. Prohibited are all subsidies that are based on export performance or contingent upon the use of domestic over imported goods.

As we have shown the German price guarantees for electricity from renewable energy in the EEG and in the KWKG cannot be considered as subsidies under WTO law, as there is no financial contribution from the government involved. Even in the unlikely event that they would be considered a subsidy, they would be regarded as non-actionable, unless a WTO member could prove serious adverse effects to the domestic industry which are difficult to repair. Hence, the current national support for renewable energy production is unlikely to cause trade conflicts at the WTO level in the near future. These findings suggest, that there is no need to change this national energy policy approach because of current WTO rules.

Furthermore, it is also unlikely that the tax exemptions under the ETR will be challenged in a WTO dispute in the near future. This kind of subsidies were considered to be non-actionable up until 1999. However, a dispute could arise in the future, if tax exemptions under the ETR increase and a WTO member feels they injure its domestic industry. This could, for instance, become relevant if policy makers gave in to the pressure of interest groups and decided higher tax exemptions for energy-intensive industries under the ETR. In order to avoid a conflict with WTO law the best policy

option is not to allow any specific subsidies, i.e. not to grant certain industries lower tax rates or exemptions from taxes under the ETR or at least to reduce them substantially.

7 Trade-relevant Environmental Policies Under Article XX GATT

If certain national policy instruments as laid out in chapters 3 to 6, were held inconsistent with WTO provisions, governments could still take recourse to the general exception clause in Article XX GATT. This would be, in a sense, a second recourse for the European Union, its member states and other actors who might wish to enact, for example, border tax adjustments to safeguard their environmental tax schemes. Given the need to maintain a rule-based trading system, it is preferable to refrain from such a reliance on Article XX and instead to devise environmental policies that are consistent with the core provisions of WTO law. As shown above, many available options do not require recourse to Article XX.

However, if certain trade-relevant environmental policies should be found useful for a country or coalition of countries, but should be held – for example by a WTO dispute settlement panel – to be in violation of Article III or other relevant provisions, the country concerned could defend itself by arguing that the measure would be justified under Article XX. The country would have to sustain a claim that its measure was either "*necessary to protect human, animal or plant life or health*"[137] or was "*relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption*."[138] Also, a measure must not "*be applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail*" according to the chapeau of Article XX GATT.

The scope of these provisions has been analysed at great length in academic literature.[139] A central distinction needs to be made between those trade measures that are enacted unilaterally, and those that are required by a multilateral environmental

---

[137] GATT, Article XX (b).

[138] GATT, Article XX (g).

[139] See World Trade Organization (1998). Cf. e.g. for German language studies Althammer et al. (2001); Sandhövel (1998); Helm (1995); Altemöller (1998); Kulessa (1996); Diem (1996); Knorr (1997). See Althammer et al. (2001) for a review of the English-language literature.

agreement.[140] There are various options for a reform of Article XX that would assist in delineating unilateral and multilateral action, including a proposal for a Declaration of Interpretation of Article XX through the WTO assembly.[141] Even if this clear distinction existed, the issue remains whether trade-relevant environmental policies – especially in the context of national energy policy – would be defined as a unilateral measure or as a measure covered by a multilateral environmental agreement.

Neither the 1992 UN Framework Convention on Climate Change nor its 1997 Kyoto-Protocol (which has not yet entered into force) explicitly require or endorse border tax adjustments or other specific trade-relevant policies. Parties are obliged, however, to enact policies and measures to achieve the ultimate objective of the climate convention, while at the same time maintaining an open trading system. The legal interpretation would require recourse to the actual practice of parties as an indication of states' *opinio juris* on the admissibility of border tax adjustments, because of the ambiguity in the legal provisions, and also because neither the convention, the protocol, nor decisions by the parties have addressed the issue of border tax adjustment or other trade-relevant environmental policies in any sufficient detail.

Hence, it seems that if a sufficiently large number of states enacted similar trade-relevant environmental policies in order to protect the climate, instead of these schemes being seen as a violation of GATT, they could still be justified by Article XX GATT, since they would have been enacted with the purpose of implementing a multilateral environmental agreement. In view of the increasing number of countries in the European Union (and also in central and eastern Europe and Asia) that have implemented carbon or energy taxes in the course of the international climate negotiations over the past decade, such an interpretation could well be defended.142 This interpretation would be further strengthened, if the parties involved in the climate convention, and subsequently in its protocol, would adopt a decision to this effect.

---

[140] Here, we differ to some extend from the ruling of the WTO Appellate Body in *Shrimp/Turtle* (WTO Appellate Body 1998a). See Biermann (2001) for an extended argument on *Shrimp/Turtle*. Cf. also with different assessments Cone (1999); Howse (1998); Jones (1998).

[141] Cp. Althammer et al. (2001) and Biermann (2001).

[142] So far, 12 OECD and central and eastern European countries have implemented carbon and/or energy taxes (OECD (2001) see also Tews/ Busch (2002) as well as Oberthür/ Tänzler (2002). Among these countries there are 9 (out of the 15) EU member states with Ireland having additionally announced to implement a greenhouse gas tax in 2002.

8 Final Remarks

This paper analyses the relationship between national energy policy instruments, the PPP and WTO rules with particular emphasis on German energy policy. Our main finding is that national environmental policy instruments for the implementation of the PPP generally do not infringe upon WTO rules if properly designed and applied. In particular, German energy laws, which aim at reducing greenhouse gases, are compatible with international trade law. Command and control policies as well as labels do not discriminate against foreign suppliers. The price guarantees for the producers of energy from renewable sources should not be considered as subsidies under WTO law. Clearly, the financial transfers and tax exemptions under the Ecological Tax Reform must be considered subsidies according to Art. 1 ASCM. It is unlikely, though, that these provisions will be challenged by WTO members in the near future.

As non-discriminatory national taxes are generally allowed under WTO law, a conflict might only arise if border tax adjustments were introduced. Although indirect taxes are in general eligible for BTA, direct taxes are not. Energy taxes fall under the heading of indirect taxes; currently it is ambiguous, whether a border tax adjustment on energy is compatible with WTO rules. Our analysis, however, leads to the conclusion that this would be permissible. Furthermore, there is a conflict between BTA and the polluter pays principle, if BTA would nullify taxation of externalities or would lead to double taxation. In this case, the PPP could provide a guiding principle for future WTO panel-decisions concerning BTA for environmental taxes.

It is important to note, that even if national energy policy measures were to be found incompatible with specific WTO rules, they could be allowed as an exception under Article XX (b) or (g) GATT, if they complied with the prerequisites stipulated. However, instead of claiming these exceptions for unilateral policy measures, countries should find solutions for global environmental problems through multilateral agreement. The extent to which the WTO takes into account specific trade obligations from multilateral environmental agreements will be the subject to negotiations in the forthcoming trade round.

References

Adams, J. (1997): *Environmental Policy and Competitiveness in a Global Economy: Conceptual Issues and a Review of the Empirical Evidence*; Globalisation and the Environment: Preliminary Perspectives, edited by OECD. Paris: OECD.

Adams, M. (1989): *Das 'Verursacherprinzip' als Leerformel*; Juristenzeitung 17/1989, 787-789.

Altemöller, F. (1998): *Handel und Umwelt im Recht der Welthandelsorganisation WTO. Umweltrelevante Streitfälle in der Spruchpraxis zu Artikel III und Artikel XX GATT*, Frankfurt am Main.

Althammer, W.; Biermann, F.; Dröge, S.; Kohlhaas, M. (2001): *Handelsliberalisierung kontra Umweltschutz? Ansätze für eine Stärkung umweltpolitischer Ziele in der Welthandelsordnung*; Berlin: Analytica.

Althammer, W.; Dröge, S. (2003): *International Trade and the Environment: the Real Conflicts*; in: Rauscher, M. et al. (Eds.): Environmental Policy in an International Perspective; Dordrecht: Kluwer (forthcoming).

Anderson, M. S.; Liefferink, D. (Eds.) (1997): *European Environmental Policy: The Pioneers*; Manchester: Manchester University Press.

Anderson, M. S.; Sprenger, R. U. (Eds.) (2000): *Market-based Instruments for Environmental Management*; Cheltenham: Edward Elgar.

Bach, S.; Bork, C.; Ehrenheim, V.; Kohlhaas, M.; Lutz, C.; Meyer, B.; Praetorius, B.; Schumacher, K.; Welsch, H. (2001): *Die ökologische Steuerreform in Deutschland Eine modellgestützte Analyse ihrer Wirkungen auf Wirtschaft und Umwelt*; German Institute for Economic Research (DIW), Berlin.

Bach, S.; Kohlhaas, M.; Meyer, B.; Praetorius, B.; Welsch, H. (2002): *The effects of environmental fiscal reform in Germany: a simulation study*; Energy Policy, 30, 803-811

Barde, J.-P. (1999): *Environmental Taxes in OECD Countries: An Overview';* in Environmental Taxes: Recent Developments in China and OECD Countries, edited by OECD, 19-50, Paris: OECD.

Barker, T. (1997): *Limits of the Tax Approach for Mitigating Global Warming*; in: Jürgen Hacker; Arthur Pelchen (Eds.): Goals and Economic Instruments for the Achievement of Global Warming Mitigation in Europe: Proceedings of the EU Advanced Study Course held in Berlin, Germany, July 1997, Dordrecht, Boston, London: Kluwer, 239-251

Baron, R. (1997): *Carbon and Energy Taxes in OECD Countries*; in: Jürgen Hacker, Arthur Pelchen (Eds.): Goals and Economic Instruments for the Achievement of Global Warming Mitigation in Europe: Proceedings of the EU Advanced Study Course held in Berlin, Germany, July 1997, Dordrecht: Kluwer, 207-229.

Baumol, W. J.; Oates, W.E. (1993): *The Theory of Environmental Policy*; Cambridge: Cambridge University Press.

Benitah, M. (2001): *The Law of Subsidies under the GATT/WTO System*; Dordrecht: Kluwer Law International.

Biermann, F. (2000): *Mehrseitige Umweltübereinkommen im GATT/WTO-Recht;* Archiv des Völkerrechts 38, 4, 455-504.

Biermann, F. (2001): *The rising tide of green unilateralism in world trade law: Options for reconciling the emerging North-South conflict*; Journal of World Trade, 35, 3 (June), 421 – 448.

Biermann, F.; Brohm, R. (2003): *Implementing the Kyoto Protocol Without the United States: The Strategic Role of Energy Tax Adjustments at the Border.* Global Governance Working Paper No 5. Potsdam, Berlin, Oldenburg

BISD – Basic Instruments and Selected Documents (GATT/WTO) (1997): *Decisions, Reports, etc. of the 16th and 17th Sessions. Review Pursuant to Article XVI:5.* Geneva.

BMF – Bundesministerium der Finanzen (2001a): *Achtzehnter Subventionsbericht. Bericht der Bundesregierung über die Entwicklung der Finanzhilfen des Bundes und der Steuervergünstigungen für die Jahre 1999 – 2002*; Berlin.

BMF – Bundesministerium der Finanzen (2001b): Monatsbericht des BMF, Oktober 2001. Berlin.

BMU – Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit (Ed.) (2002): *Entwicklung der Erneuerbaren Energien – aktueller Sachstand*; Umweltpolitik des BMU. Berlin.

BMWi - Bundesministerium für Wirtschaft (1997): *Energiepreise als Standortfaktor für die deutsche Wirtschaft*; Study of the German Institute for Economic Research (DIW Berlin), Berlin: BMWi.

Bonus, H. (1986): *Eine Lanze für den 'Wasserpfennig' – Wider die Vulgärform des Verursacherprinzips*; Wirtschaftsdienst 1986/IX, 451-455.

Bonus, H. (1996): *Institutionen und Institutionelle Ökonomik: Anwendungen für die Umweltpolitik*; in: Gawel, E. (Ed.): Institutionelle Probleme der Umweltpolitik, Zeitschrift für angewandte Umweltforschung; Sonderheft 8; 26-41.

Brack, D.; Grubb, M.; Windram, C. (2000): *International Trade and Climate Change Policies*; London: Earthscan.

Buck, M.; Verheyen, R. (2001): *International Trade Law and Climate Change – A Positive Way Forward;* FES-Analyse Ökologische Marktwirtschaft, Juli 2001.

De Búrca, G.; Scott, J. (2001): *The EU and the WTO: Legal and Constitutional Issues*; Oxford: Hart Publishing.

Cansier, D. (1996): *Umweltökonomie*; Stuttgart.

Chang, S. W. (1997): *GATTing a Green Trade Barrier Eco-Labelling and the WTO Agreement on Technical Barriers to Trade*, Journal of World Trade, 31, 1, 137-159.

Charnovitz, S. (2002): *The Law of Environmental "PPMs" in the WTO: Debunking the Myth of Illegality;* The Yale Journal of International Law, 27, 59, 59-110.

Coase, R. H. (1960): *The Problem of Social Cost*; Journal of Law and Economics, 3, 1-44.

Cone, S. (1999): *The Appellate Body, the Protection of Sea Turtles and the Technique of ›Completing the Analysis‹*; Journal of World Trade, 33, 51-61.

Cook, E. (Ed.) (1996): Ozone Protection in the US: Elements of Success.

Dam, K. W. (1970): *The GATT: Law and International Economic Organization*; Chicago: University of Chicago Press.

Dasgupta, P. (1993): *An Inquiry into Well-Being and Destitution*; Clarendon Press.; Oxford

Demaret, P.; Stewardson, R. (1994): *Border Tax Adjustments under GATT and EC Law and General Implications for Environmental Taxes*; Journal of World Trade, 28, 4, 5-65.

Dente, B. (Ed.). (1995): *Environmental Policy in Search of New Instruments*; Dordrecht: Kluwer.

Diem, A. (1996): *Freihandel und Umweltschutz in GATT und WTO*, Baden-Baden.

Dröge, S. (2001): *Ecological Labelling and the World Trade Organization*; Aussenwirtschaft, 56, 1, 99-122.

Dunoff, J. (1992): *Reconciling International Trade with Preservation of the Global Commons. Can We Prosper and Protect?*, Washington and Lee Law Review, 49, 1407-1454.

Dutschke, M.; Michaelowa, A. (1998): *Issues and Open Questions of Greenhouse Gas Emission Trading under the Kyoto Protocol* (HWWA-Report 68), Hamburg: HWWA-Institut für Wirtschaftsforschung.

EEA – European Energy Association (1996): *Environmental Taxes: Implementation and Environmental Effectiveness* (=Environmental Issues Series No.1), Copenhagen: EEA.

EEA (2000): *Environmental Taxes: Recent Developments in Tools for Integration* (=Environmental Issues Series No.18), Copenhagen: EEA.

Endres, A. (1994): *Umweltökonomie. Eine Einführung*; Darmstadt.

European Commission (2000): *Green Paper on greenhouse gas emissions trading within the European Union*, COM(2000)87.

European Commission (2001): *Community guidelines on state aid for environmental protection*; Official Journal of the European Communities No. C037; 03/02/2001; 0003-0015.

European Council (1993): *Resolution of the Council and the Representatives of the Governments of the Member States, meeting within the Council of 1 February 1993 on a Community programme of policy and action in relation to the environment and sustainable development*; Official Journal of the European Communities No. C 138; 05/17/93; 0007-0098.

European Council (2002): *Proposal for a Directive of the European Parliament and of the Council establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC,* Working Document ENV/02/8.

ECJ – European Court of Justice (2001): Case C-379/98 from March 13, 2001.

Ewringmann, D.; Thöne, M. (2002): *Die Europäische Beihilfenaufsicht im Umweltschutz. Darstellung und Kritik des neuen Gemeinschaftsrahmens;* Umweltbundesamt (Ed.).

Fauchald, O. C. (1998): *Environmental taxes and trade discrimination*, London: Kluwer Law

Faure, M. G. (1998): *Environmental Regulation*; Maastricht University; Chap. 2300; 443-520.

Farber, D. A.; Hudec, R. E (1996): *GATT Legal Restraints on Domestic Environmental Regulations*; Bhagwati, J.; Hudec, R.E. (Eds.): Fair Trade and Harmonization. Prerequisites for Free Trade?, Vol. 2, Legal Analysis, Edited by Cambridge, London, 59-95.

Feess, E. (1994): *Umweltökonomie und Umweltpolitik*; Second Edition.

Fudenberg, D.; Tirole, J. (1991): *Game Theory*; MIT Press.; Cambridge Mass.

GEN - Global Ecolabelling Network (1998): *GEN Annual Meeting 1998*, GENews, Issue No. 6, Japan Environmental Association, Tokyo.

GATT refers to GATT (1994).

GATT (1947): General Agreement on Tariffs and Trade 1947; (30.10.1947), Version 1.3.1969.

GATT (1994): General Agreement on Tariffs and Trade. Annex 1A to the Final Act Embodying the Results of the Uruguay Round. Marrakesh, 15 April 1994 (includes GATT (1947) as well as amendments, side agreements and one protocol). Geneva.

GATT Tuna Panel (1991): *United States – Restrictions on Imports of Tuna*; Report of the Panel, 30 ILM 1594 (1991).

GATT-Tuna Panel (1994): *United States – Restrictions on Imports of Tuna*; Report of the Panel, 33 ILM 839 (1994).

Grave, C. (2001): *Der Begriff der Subvention im WTO-Übereinkommen über Subventionen und Ausgleichsmaßnahmen; Berlin: Duncker & Humblot.*

Heister, J. (1997): *Der internationale CO_2-Vertrag. Strategien zur Stabilisierung multilateraler Kooperation zwischen souveränen Staaten*, Tübingen.

Helm, C. (1995): *Sind Freihandel und Umweltschutz vereinbar?*, Berlin.

Hoerner, A. J.; Muller, F. (1996): *Carbon Taxes for Climate Protection in a Competitive World*; Paper prepared for the Swiss Federal Office for Foreign Economic Affairs at the Environmental Tax Program of the Center for Global Change, University of Maryland at College Park.

Hoerner, J. A.; Muller, F. (1997): *Compatibility of Offsets with International Trade Rules*; Elke Staehelin-Witt and Hansjörg Blöchliger (Eds.). Ökologisch orientierte Steuerreformen. Die fiskal- und aussenwirtschaftlichspolitischen Aspekte. Bern, Stuttgart, Wien: Haupt, 235-253.

Hoerner, Andrew J. (1998): *The Role of Border Tax Adjustments in Environmental Taxation: Theory and U.S. Experience.* Working Paper, presented at the International Workshop on Market Based Instruments and International Trade of the

Institute for Environmental Studies Amsterdam, 19 March 1998. Available at: www.sustainableeconomy.org/bta.pdf.

Howse, R. (1998): *The Turtles Panel: Another Environmental Disaster in Geneva*; Journal of World Trade 32, 73-100.

Howse, R.; Tuerk, E. (2001): *The WTO Impact on Internal Regulations - A Case Study of the Canada-EC Asbestos Dispute*. In: De Búrca, G.; Scott, J.: *The EU and the WTO: Legal and Constitutional Issues*. Oxford. 283-328

IPCC – International Panel on Climate Change (2001): *Third Assessment Report – Climate Change 2001*.

ISO – International Standardization Organization (1999): *Environmental labels and declarations - Type I environmental labelling - Principles and procedures*, 1st edition ISO 14024, reference no. ISO 14024:1999(E).

Jackson, J. H. (1989): *The World Trading System: Law and Policy of International Economic Relations*; Cambridge, Mass.: MIT Press.

Jaffe, A. B.; Peterson, S. R.; Portney, P. R.; Stavins, R. N. (1995): *Environmental Regulation and the Competitiveness of U.S. Manufacturing: What Does the Evidence Tell us?*; Journal of Economic Literature, 33, 1, 132-163.

Jha, V.; Zarrilli, S. (1994): *Eco-Labelling Initiatives as Potential Barriers to Trade*; Organisation for Economic Co-Operation and Development (Eds.), Life-Cycle Management and Trade, Paris, 64-76.

Jones, K. (1998): *Trade Policy and the Environment: The Search for an Institutional Framework*; Aussenwirtschaft, 53, 409-434.

Kettlewell, U. (1992): *The Answer to Global Pollution? A Critical Examination of the Problems and Potential of the Polluter Pays Principle*; Colorado Journal of International Environmental Law and Policy, 34, 6, 429-478

Kim, H.-J. (2000): *Subsidy, polluter pays principle and financial assistance among countries*, Journal of World Trade, 34, 6, 115-141.

Kingsbury, B. (1994): *The Tuna-Dolphin Controversy, the World Trade Organization, and the Liberal Project to Reconceptualize International Law*; Yearbook on International Environmental Law, 5, 1-40.

Knorr, A. (1997): *Umweltschutz, nachhaltige Entwicklung und Freihandel: WTO und NAFTA im Vergleich*; Stuttgart.

Kohlhaas, M. (2000): *The German Ecological Tax Reform*; American Institute for Contemporary German Studies; The Johns Hopkins University; Economic Studies Program Series, Vol. 6.

Krebs, C.; Reiche, D. (1999): *Der Einstieg in die Ökologische Steuerreform: Aufstieg, Restriktion und Durchsetzung eines umweltpolitischen Themas*; Frankfurt: Peter Lang.

Krumm, R. (1996): *Internationale Umweltpolitik: Eine Analyse aus umweltökonomischer Sich;* Berlin.

Kulessa, M. (1996): *Umweltpolitik in einer offenen Volkswirtschaft. Zum Spannungsverhältnis von Freihandel und Umweltschutz*; Baden-Baden.

Kulessa, M. E.; Schwaab, J. A. (1999): *Implikationen der Globalisierung für die Umweltpolitik*; Beiträge zur Wirtschaftsforschung, Nr. 60, Johannes Gutenberg Universität Mainz.

Lindgaard, K. (1997): *Environmental Law, Environmental Globalization, and Sustainable Techno-Economic Evolution*; Tylecote, A. (Ed.): "Environment, technology and economic growth: the challenge to sustainable development", 1997, 132-155.

Mankiw, G. (1998): *Principles of Economics*, Dryden Press, Fort Worth.

McGovern, E. (2002): *International Trade Regulation*, Exeter: Globefield Press, looseleaf, issue 13.

Michaelowa, A. (1997): *Trade and Labelling of Timber and Timber Products*, Aussenwirtschaft, 52, 4, 561-581.

Mullett, G. (1997): ISO 14000: *Harmonizing Environmental Standards and Certification Procedures Worldwide*; Minnesota Journal of Global Trade, 6 , 379-400.

Murray, P. C. (1997): *The international environmental management standard, ISO 14000: a nontariff-barrier or a step to an emerging global environmental policy?*; University of Pennsylvania Journal of International Economic Law, 18, 2, 577-615.

Nordström, H.; Vaughan, S. (1999): *Trade and Environment*; WTO-Secretariat Special Studies 4; Geneva

Oberthür, S.; Tänzler, D. (2002): *International Regimes as a Trigger of Policy Diffusion: The Development of Climate Policies in the European Union*; Frank Biermann, Rainer Brohm and Klaus Dingwerth, (Eds.). Proceedings of the 2001 Berlin Conference on the Human Dimensions of Global Environmental Change, Potsdam: Potsdam Institute for Climate Impact Research, in press.

OECD (1972): *Recommendation of the Council on Guiding Principles Concerning International Economic Aspects of Environmental Policies*, May, Council Document No. C(72)128. Paris: OECD.

OECD (1974): *Recommendation of the Council on Principles Concerning Transfrontier Pollution, 14th November 1974*, C(74)2241, Paris: OECD

OECD (1992): *The Polluter-Pays Principle – OECD Analyses and Recommendations*; Environment Directorate; OECD/GD(92)81, Paris: OECD.

OECD (1995): *Environment Principles and Concepts*; OECD Working Papers, Vol. 3, No. 84, Paris: OECD.

OECD (1996): *Implementation Strategies for Environmental Taxes*; Paris: OECD.

OECD (1997a.): *Environmental Taxes and Green Tax Reform*; Paris: OECD.

OECD (1997b): *Economic Globalization and the Environment*; Paris: OECD.

OECD (1997c): *Eco-Labelling: Actual Effects of Selected Programmes*; OECD/GD(97)105, Paris: OECD.

OECD (1998): *International Emissions Trading under the Kyoto Protocol*; Paris: OECD.

OECD (1999): *Environmental Taxes. Recent Developments in China and OECD Countries*; Paris: OECD.

OECD (2001): *Environmentally Related Taxes in OECD Countries. Issues and Strategies*; Paris: OECD

OECD (2001b): *The Polluter-Pays Principle as it relates to International Trade. A Preliminary Study*; COM/ENV/TD(2001)44, Paris: OECD

OECD and International Energy Agency IEA (2001): *Dealing with Climate Change. Policies and measures in IEA Member Countries.* Paris: OECD

Öko-Mitteilungen (1999): *Informationen aus dem Institut für angewandte Ökologie e.V.*, No. 3+4.

Ottman, J. (1998): *The debate over eco-seals: Is self-certification enough?*; Marketing News, 32, 5, 7-9

Pearson, C. S. (1994): *Testing the System: GATT + PPP = ?*; Cornell International Law Journal, 27, 553-575

Pigou, A. C. (1932): *The Economics of Welfare*; 4th edition, Macmillan, London

Pitschas, C. (1995): *GATT/WTO Rules for Border Tax Adjustments and the Proposed European Directive Introducing a Tax on Carbon Dioxide Emissions and Energy*; Georgia Journal of International and Comparative Law, 24, 479-500.

Rawls, J. (1975): *A Theory of Justice*; Harvard University Press., Cambridge.

Rege, V. (1994): *GATT Law and Environment-Related Issues Affecting the Trade of Developing Countries*; Journal of World Trade, 23, 1, 95-169.

Sánchez Rydelski, M. (2001): *EG und WTO Antisubventionsrecht*, Baden-Baden: Nomos Verlagsgesellschaft.

Sandhövel, A. (1998): *Strategien für ein Miteinander von Umweltordnung und Welthandelsordnung*; Zeitschrift für angewandte Umweltforschung, 11, 496-508.

Sandhövel, A. (1994): *Marktorientierte Instrumente der Umweltpolitik: die Durchsetzbarkeit von Mengen- und Preislösungen am Beispiel der Abfallpolitik*; Opladen: Westdeutscher Verlag.

Schlagenhof, M. (1995): *Trade Measures Based on Environmental Processes and Production Methods*; Journal of World Trade, 29, 6, 123-155.

Simonis, U. E. (1996): *Der beste Weg einer globalen Umweltpolitik. Steuern, 'gemeinsame Umsetzung' oder Zertifikate?*; Universitas 51: 598, 304-317.

Shaw, S.; Schwartz, R. (2002): *Trade and Environment in the WTO. State of Play*; Journal of World Trade, 36, 1, 129-154.

Slotboom, M (2002): *Subsidies in WTO Law and in EC Law – Broad and Narrow Definitions*. Journal of World Trade, 36, 3, 517-542.

Stevens, C. (1994): *Interpreting the Polluter Pays Principle in the Trade and Environment Context*; Cornell International Law Journal, 27, 577-590.

Sturm, A.; Wackernagel M.; Müller, K. (2000): *The Winners and Losers in Global Competition. Why Eco-Efficiency Reinforces Competitiveness: A Study of 44 Nations*. Chur, Zürich: Rüegger.

Sucharipa-Behrmann, L. (1994): *Eco-Labelling Approaches for Tropical Timber: The Austrian Experience*; OECD: Life-Cycle Management and Trade, Paris, 55-58.

TBT Agreement (1994): Agreement on Technical Barriers to Trade, Annex 1A of Final Act Embodying the Results of the Uruguay Round. Marrakesh, 15. April 1994

Teir, G. (1999): *Environmental Energy Taxes: The Experience of Finland*; OECD, Environmental Taxes. Recent Developments in China and OECD Countries. Paris: OECD, 303-308.

Tews, K.; Busch, P.-O. (2002): *Global Governance by Diffusion? Potentials and Restrictions for Environmental Policy Diffusion*; Frank Biermann, Rainer Brohm and Klaus Dingwerth. eds. Proceedings of the 2001 Berlin Conference on the Human Dimensions of Global Environmental Change, Potsdam: Potsdam Institute for Climate Impact Research, in press.

Trabold, H. (1995): *Die internationale Wettbewerbsfähigkeit einer Volkswirtschaft*; Vierteljahrshefte zur Wirtschaftsforschung, 2, 169-185.

UNCTAD (1994): *Eco-labelling and market opportunities for environmentally friendly products*; Report of the UNCTAD secretariat (TD/B/WG.6/2), Geneva.

UNCTAD (1995): *Trade, Environment and Development, Aspects of Establishing and Operating Eco-Labelling Programmes*; Report of the UNCTAD secretariat (TD/B/WG.6/5), Geneva.

Wallace, D. (1995): *Environmental Policy and Industrial Innovation. Strategies in Europe, the USA and Japan*; London: Earthscan.

Westin, R. A. (1997): *Environmental Tax Initiatives and Multilateral Trade Agreements : Dangerous Collisions*; The Hague, London, Boston

Wicke, L. (1993): *Umweltökonomie: Eine praxisorientierte Einführung*; 4th Edition, Munich.

Wofford, C. (2000): *A greener future at the WTO: The Refinement of WTO Jurisprudence on Environmental Exceptions to GATT*; Harvard Environmental Law Review, 24, 563-592.

Wolfrum, R.; Langenfeld, C. (1998): *Umweltschutz durch internationales Haftungsrecht*; Umweltbundesamt (Eds.), Berichte 7/98, Berlin.

WTO-Alcoholic Beverages Panel (1996): *Report of the Panel, Japan - Taxes on Alcoholic Beverages* (WT/DS8/R, WT/DS10/R, WT/DS11/R), 11.7. 1996.

WTO-Appellate Body (1998): *EU Measures Concerning Meat and Meat Products (Hormones)*; Report of the Appellate Body AB-1997-4 (WT/DS26/AB/R, WT/DS48/AB/R, 16. Januar 1998).

WTO-Appellate Body (1998a): *United States - Import Prohibition of Certain Shrimp and Shrimp Products*; Report of the Appellate Body AB-1998-4 (WT/DS58/AB/R vom 12. Oktober 1998, 38 *ILM* 118 (1999)).

WTO-Appellate Body (2001): *EC – Measures Affecting Asbestos and Asbestos Containing Products*; WT/DS135/AB/R, 12 March 2001.

WTO-Committee on Trade and Environment CTE (1995): *Negotiating History of Footnote 61 of the Agreement on Subsidies and Countervailing Measures*; Note by the Secretariat, WT/CTE/W/16.

WTO-CTE (1997), Bulletin No. 18, (PRESS/TE/018).

WTO-CTE (1997a): *Taxes and Charges for Environmental Purposes-Border Tax Adjustment*; Note by the Secretariat, 2 May 1997. WTO Document WT/CTE/W/47.

WTO-CTE (1998), Bulletin No. 23, (PRESS/TE/023).

WTO-CTE (1999), Bulletin No. 28, (PRESS/TE/028).

WTO-CTE (2000): *Information Relevant to the Consideration of the Market Access Effects of Eco-Labelling Schemes*; Note by the Secretariat; 29 June 2000; WT/CTE/W/150.

WTO (1998): *GATT/WTO Dispute Settlement Practice Relating to Article XX, Paragraphs (b), (d) and (g) of GATT*; Note by the Secretariat, WTO Doc WT/CTE/W/53/Rev. 1 of 26 October 1998.

Zampetti (1995): *The Uruguay Round Agreement on Subsidies – A Forward-Looking Assessment*; Journal of World Trade, 29, 4, 5-29.

Ziesing, H.-J. (2002): *Internationale Klimaschutzpolitik vor großen Herausforderungen*. Wochenbericht Nr. 34/2002, 555-568. DIW Berlin (German Institute for Economic Research).

Annex:

RELEVANT DISPUTES WITH AND WITHOUT OFFICIAL DISPUTE SETTLEMENT UNDER GATT/WTO

***ALCOHOLIC-BEVERAGES-CASE* (1987)**	
GATT-Panel: **Japan – Customs Duties, Taxes and Labelling Practices on Imported Wines and Alcoholic Beverages** BISD 34S/83, 10 November 1987	
Parties	European Economic Community (EEC) vs. Japan
Third Parties	Argentina, Austria, Australia, Canada, Chile, Finland, New Zealand, the United States, Yugoslavia
Background	- The 1940 Japanese Liquor Tax Law differentiated between 9 categories of alcoholic beverages, each of which is taxed at a different tax rate. The EEC argued that the Japan Liquor Tax system violates Art. III:1 and Art. III:2 GATT by discriminating between imported and domestic goods. Furthermore, the EEC considered Japanese labelling to be in conflict with the requirements of Art. IX:6 GATT.
Main Topics	Art. III:1 and 2 GATT, Art. IX:6 GATT ("origin marking")
Main Findings	- The panel found the Japanese liquor tax scheme to be inconsistent with the obligations of Art. III:2. - It concluded that shochu and vodka are like products and that Japan, by taxing the latter in excess of the former, is in violation of its obligations under Art. III:2, first sentence. It argued that shochu, whisky, brandy, rum, and other liquors are "directly competitive or substitutable products." - The Panel pointed out that the term "like product" should include, for example, products with similar qualities or serving substantially identical end uses. - The Panel furthermore found that the tax differentiation had a protective affect. Thus, it emphasised the importance of considering not only the characteristics of the products in question, but also whether they are differentiated for protectionist purposes.

***SUPERFUND-CASE* (1987)**	
GATT-Panel: **United States – Taxes on Petroleum and Certain Imported Substances** BISD 34S/136, 17 June 1987	
Parties	Canada, European Economic Community (EEC), Mexico vs. United States (US)
Third Parties	Argentina, Australia, Chile, Colombia, Indonesia, Kuwait, Malaysia, Nigeria, Norway
Background	- The 1986 *US Superfund Amendments and Reauthorization Act* re-authorized a programme for cleaning up hazardous waste sites and dealing with public health problems caused by hazardous waste. The following taxes were imposed (or re-imposed): - *Tax on petroleum*: imports of crude oil, crude oil condensates, natural gasoline, refined and residual oil, and certain liquid hydrocarbon products were taxed at a higher rate than domestic products (imports at 11.7 cents a barrel and domestic products at 8.2 cents a barrel). Canada, the EEC and Mexico stated that the differing treatment of imported and domestic products violated Art. III:2 GATT. The US argued that the tax difference was so small, that it had virtually no commercial effects and could therefore not cause nullification or impairment as described in Art. XXIII GATT (§ 3.1.1-3.1.12) - A *Tax on certain chemicals* was re-imposed ("feedstock chemicals"). - *Tax on certain imported substances*: the amount of tax imposed on imported substances equals in principle the amount imposed on US products. The EC argued that the Border Tax Adjustment (BTA) on imports and exports was inconsistent with the environmental purpose of the Superfund Act. Firstly, the pollution of imported products occurred outside the US territory, and the tax should therefore be applied in the country of origin. Secondly, products exported from the US should not be exempted from taxation at the border, because the pollution occurred in the US. (§ 3.2.7) Furthermore, the EEC pointed to the conflict between the Polluter Pays Principle (PPP) as recommended by the OECD in order to avoid trade distortions and the BTA imposed by the Superfund Act: a chemical exported from the US to the EEC was not subject to any tax, while a chemical exported by the EEC to the US was taxed twice (§ 3.2.8). The US argued that the PPP had not been adopted by the GATT and should therefore not enter in the Panel's consideration of the BTA.
Main Topics	Polluter Pays Principle (PPP), Border Tax Adjustment (BTA), Art. III:2 GATT ("like products")
Main Findings	- *Tax on petroleum*: the Panel concluded that the tax was inconsistent with Art. III:2 GATT: although the products concerned (crude oil, crude oil condensates, natural gasoline and others) were found to be "like products" as described in Art. III:2, they are taxed differently. These products are "like", because they are identical or to all extents and purposes serve the same end-

	use (§ 5.1.1). Hence, the tax also constitutes a potential case for nullification and impairment. - *Tax on certain imported substances*: the Panel first examined whether this tax was eligible for BTA. Since the tax on certain imported substances is a tax that is directly imposed on products, the Panel concluded that it was eligible for a BTA, independent of the political purpose of the tax (§ 5.2.4). The Panel ruled on the argument concerning the PPP that under GATT rules BTA "*give the contracting party (...) the possibility to follow the Polluter-Pays Principle, but they do not oblige it to do so.*" (§ 5.2.5) Hence, the Panel did not examine the consistency of the Superfund Act's environmental purposes with the PPP. The tax on certain imported substances was found to be eligible for a BTA and to be consistent with the requirements of Art. III:2 GATT.

***TUNA-DOLPHIN-CASE I* (1991)**	
GATT-Panel: **United States – Restrictions on Imports of Tuna** Report of the Panel, 30 ILM 1594 (1991)	
Parties	Mexico vs. United States (US)
Third Parties	Australia, Canada, Chile, Colombia, Costa Rica, the European Communities, India, Indonesia, Japan, Korea, New Zealand, Nicaragua, Norway, Peru, the Philippines, Senegal, Singapore, Tanzania, Thailand, Tunisia, Venezuela
Background	- In 1988, an amendment to the 1972 US Marine Mammal Protection Act (MMPA) banned imports of tuna harvested by a method called "purse-seining", which results in killings of marine mammals in excess of US standards. - *Import ban*: the US banned imports of Mexican tuna because Mexico had not taken steps to reduce the number of Eastern Tropical Pacific (ETP) dolphins killed each year due to tuna fishing. Mexico appealed to the GATT arguing that the US ban violates Art. XI and Art. XIII GATT. - *Labelling*: the Dolphin Protection Consumer Information Act (DPCIA) stated that producers, importers, exporters, distributors, or sellers of tuna products could only include a "Dolphin Safe" label, if the tuna were harvested in a manner that was not harmful to dolphins. Therefore, tuna caught by purse-seine vessels in the ETP or tuna caught at sea using drift net fishing could not be labelled as dolphin safe.
Main Topics	Art. XI GATT, Art. III:4 GATT ("*product*" vs. "*process*" related measures), Art. XX(b) GATT ("necessary"), and Art. XX (g) GATT ("relating to" and "primarily aimed at" test), extrajurisdictional application, labelling
Main Findings	- *Art. XI GATT*: the Panel found that the US ban violates Art. XI GATT in adopting quantitative restrictions on imports. The United States in turn used GATT's Article III:4 to argue that the restrictions were internal regulations. This argument was rejected by the Panel on the grounds that Article III restrictions could only to be applied to "*products*" and not the "*processes*" in which products were produced. Thus, the Panel concluded that Article III:4 was not relevant. - *Art. XX (b) GATT*: the Panel concluded that Art. XX (b) GATT only applies to measures within the jurisdiction of the importing country (§ 5.26,). Furthermore the Panel stated that the US ban violates the "*necessary*" condition, there are other measures that protect dolphins and distort trade to a lesser extent.(§ 5.27, 5.28). - *Art. XX (g) GATT*: the Panel stated that the US ban violates the "*primarily aimed at such a conservation*" condition set out by a former Panel decision when interpreting the "relating to" condition in Art. XX (g) GATT, because of the discriminatory manner in which the United States implemented the measure. The US linked the maximum incidental-dolphin-taking rate which Mexico had to meet during a particular period to be able to export tuna to the US to the rate recorded for US fishermen during the same period. Conse-

	quently, the Mexican authorities did not know whether, at a given point of time, their policies conformed to the United States' dolphin protection standards. - Furthermore, the panel found that the US labelling of "Dolphin Free" tuna did not conform to GATT standards. However, the case was solved bilaterally between the United States and Mexico. - The Panel ruling was never adopted by the General Council (mainly due to political reasons relating to NAFTA consultations).

***TUNA-DOLPHIN-CASE II* (1994)**	
GATT-Panel: **United States – Restrictions on Imports of Tuna** Report of the Panel, 33 ILM 839 (1994)	
Parties	European Economic Community (EEC) and the Netherlands vs. United States (US)
Third Parties	Australia, Canada, Colombia, Costa Rica, El Salvador, Japan, New Zealand, Thailand, Venezuela
Background	- While the *Tuna-Dolphin*-Case I dealt with a US primary embargo on Mexican tuna caught using purse-seine nets that accidentally trapped a large number of dolphins, the *Tuna-Dolphin*-Case II centred on a US secondary embargo against countries who re-exported tuna from nations under the US primary embargo.
Main Topics	Art. XI GATT, Art. III:4 GATT ("*product*" vs. "*process*" related measures), Art. XX(b) GATT ("necessary"), and Art. XX (g) GATT ("relating to" and "primarily aimed at" test), extrajurisdictional application, labelling
Main Findings	- *Art. III and XI GATT*: the Panel upheld the previous Panel's conclusion in the *Tuna-Dolphin*-Case I and stated that Art. III was not applicable, because the embargo distinguishes between harvesting practices that do not have any impact on the "*inherent character of tuna as a product*" (§ 5.9). Hence, the US ban were found to be inconsistent with Art. XI:1. - *Art. XX (g) GATT*: the Panel noted that dolphins are an "exhaustible resource" as described in Art. XX (g) GATT (§ 5.13). Furthermore, the Panel reversed the finding of the Panel in the *Tuna-Dolphin*-Case I that Art. XX (g) GATT can only to be applied to natural resources located within its territory. Hence the Panel found that the measures fall within those covered by Art. XX (g) GATT (§ 5.20); therefore an extrajurisdictional application could be justified. However, the Panel upheld the finding of the previous Panel concerning the "*relating to*" condition (and the "*primarily aimed at*"-test), and stated that "*measures taken so as to force other countries to change their policies (...) could not be primarily aimed either at either the conservation of an exhaustible resource, or at rendering effective restrictions on domestic production or consumption" (§ 5.27).* - *Art. XX (b) GATT*: the Panel first stated that the protection of dolphins fell within the scope of Art. XX (b) GATT and that—in accordance with Art. XX (g)—this protection is not limited to domestic territory. However, as in the previous ruling, the Panel found that "*measures taken so as to force other countries to change their policies (...) could not be considered "necessary" for the protection of animal life or health in the sense of Article XX (b).*" (§ 5.39)

***TAXES-ON-AUTOMOBILES-CASE* (1994)**	
GATT-Panel: **United States – Taxes on Automobiles** Report of the Panel, DS31/R, 29 September 1994	
Parties	European Community (EC) vs. United States (US)
Third Parties	Australia, Japan, Sweden
Background	- The Corporate Average Fuel Economy (CAFE) regulations, the gas guzzler tax, and the luxury tax applying to cars the US were challenged by the EC who complained that these measures were inconsistent with Art. III and could not be justified under Art. XX(g) or (d). The US considered these measures consistent with GATT. - *Luxury Tax*: n 1990, the US Omnibus Budget Reconciliation Act imposed a retail tax on certain luxury products, amounting to 10 % of the retail price over a fixed threshold value. After the establishment of the Panel, only passenger vehicles remained subject the tax, with an increased threshold of $32,000. - *Gas Guzzler Tax*: he US impose a tax on the sale by the manufacturer (including importer) of each automobile model low fuel economy. The tax applied to the sale of automobiles attaining less than 22.5 miles per gallon (mpg). The legislation the tax according to the fuel economy. - *CAFE Regulation*: he regulation requires the average fuel economy for passenger cars manufactured or sold by any importer not to fall below 27.5 mpg. Companies that were both importers and domestic manufacturers had to calculate average fuel economy for imported passenger automobiles and for those manufactured domestically.
Main Topics	"like products" under Art. III:2, Art. XX(g) GATT
Main Findings	- Both the luxury tax and the gas guzzler tax were found consistent with Art. III:2 GATT. The Panel states that an "imported automobile whose model type fuel economy was less than 22.5 mpg was not "like" an (...) domestic automobile whose model type fuel economy was above 22.5 mpg" (§ 5.32). - The Panel found the CAFE regulation to be inconsistent with Art. III:4 GATT because the separate foreign fleet accounting system discriminated against foreign cars, and the fleet averaging differentiated between imported and domestic cars on the basis of factors relating to control or ownership of producers or importers, rather than on the basis of factors directly related to the products as such. Similarly, the Panel found that separate foreign fleet accounting was not justified under Article XX(g); it did not on the consistency of the fleet averaging method with Art. XX(g). The Panel also found that the CAFE regulation could not be justified under Article XX(d) GATT.

***SHRIMP-TURTLE-CASE* (1998)**	
WTO-Appellate Body: **United States – Import Prohibition of Certain Shrimp and Shrimp Products** Report of the Appellate Body AB-1998-4 (WT/DS58/AB/R; 12 October 1998, 38 ILM 118 (1999))	
Parties	United States (US) vs. India, Malaysia, Pakistan, Thailand
Third Parties	Australia, Ecuador, European Community (EC), Hong Kong, China, Mexico, Nigeria
Background	- The United States regulation from 1987 following on from the 1973 Endangered Species Act requires all US shrimp trawlers to use '*Turtle Excluder Devices'* (TEDs) or tow-time restriction in areas where turtles are in particular danger due to shrimp harvesting. - Section 609(b)(1) of Public Law No. 101-162 from 1989 imposes a ban on shrimps harvested with methods that may endanger turtles; section 609(b)(2) states that this ban shall not apply to certified nations. Certification is granted if a nation uses a regulatory programme similar to that in place in the US and if the average rate of the accidental capture of turtles is comparable to that for US trawlers. These requirements are met if a foreign nation uses a TED comparable to those used in the US. - India, Pakistan, Thailand and Malaysia claimed that section 609 constitutes a violation of Art. XI:1 GATT; the US argued that the ban meets the requirements of Art. XX GATT. The Panel finding from May 1998 (WT/DS58/R) stated that the US import ban is inconsistent with Art. XI:1 and cannot be justified under Art. XX(g) GATT (and, if Art. XX(g) does not apply, then under Art. XX(b) as well)
Main Topics	Scope of Art. XX GATT, definition of "exhaustible natural resources" and "relating to" in Art. XX(g), Chapeau of Art. XX
Main Findings	- Definition of "*natural exhaustible resource*s"(§ 127-134): despite Malaysia arguing that turtles are living creatures and that the case could only be judged under Art. XX(b) GATT, the AB finds that Art. XX(G) is not limited to "non-living" natural resources. Further, the AB states that "exhaustible" and "renewable" resources are not mutually exclusive. Also, sea turtles' migration routes pass through waters under US jurisdiction. Hence, the protection of sea turtles falls under Art. XX(g) GATT. - The AB finds that section 609 is a measure "*relating to the conservation*" of an exhaustible natural resource within the meaning of Art. XX(g) GATT. (§ 135-145): - *Chapeau of Art. XX GATT* (§ 146-186): the AB finds that Section 609 has been applied by the US "*in a manner which constitutes arbitrary and unjustifiable discrimination between Members of the WTO, contrary to the requirements of the chapeau of Article XX*." (§186). "*Unjustified discrimination*", because the US regulation requires foreign nations to adopt "*essentially the same*" – and not merely comparable – policy as applied in the US (§ 161-164). Also, the US did not negotiate "*seriously*" with all WTO Members (§ 172), and did not treat all countries applying for certification equally (§175). "*Arbitrary discrimination*",

	because the application of the US regulation is rigid and inflexible and because the certification process lacks transparency and predictability (§ 177-181). - Thus, the ban under section 609 fails to meet the requirements of the Chapeau of Art. XX GATT and is unjustified, even if the requirements of Art. XX(g) GATT are met. - The AB opens the way for active extraterritorial measures which protect exhaustible natural resources, if the territory of the country imposing the measure is somehow concerned ("migratory species"). - The measures on which the ban is based are non-product-related PPM (the use or non-use of TED will not be physically incorporated in the final shrimp product). Through the Shrimp-Turtle decision, the AB allowed – in contrast to the TBT Agreement and Art. III GATT – the distinction between products based upon non-product-related PPM Standards in the context of Art. XX GATT.

***ASBESTOS-CASE* (2001)**	
WTO-Appellate Body: **EC – Measures Affecting Asbestos and Asbestos Containing Products** Report of the Appellate Body WT/DS135/AB/R, 12th March 2001	
Parties	Canada vs. European Community (EC) (both appellant and appellee)
Third Parties	Brazil, United States (US), Zimbabwe
Relevant Background	- In 1996, France adopted a decree banning PVA, cellulose and glass ("PCG asbestos") asbestos fibres, with certain exceptions for chrysotile asbestos fibres ("white asbestos"). Canada, one of the major exporting countries of asbestos, claimed that the French decree violates Art. III:4 and Art. XI GATT and Art. 2.1, 2.2 , 2.4 and 2.8 of the TBT Agreement. - A previous panel decision stated that the French ban violated Art III:4 GATT, but is justifiable under Art. XX(b) GATT. Also, the panel found that the TBT Agreement does not apply to the ban, stating that the French decree is not a "technical regulation" in the sense of the TBT Agreement
Main Topics	Definition of "technical regulation" under Annex 1.1 TBT Agreement (and definition of "product characteristics"), Art. III GATT and definition of "like products", Art. XX(b) GATT
Main Findings	- *The French ban is a technical regulation in the sense of the TBT Agreement* (§ 75, 76), but the AB found that it could not examine whether the French decree violates the TBT Agreement due to a lack of information. While considering whether the ban does or does not constitute a technical regulation, the AB has provided a definition of "product characteristics". This can include: objective definable features, qualities, attributes and other distinguishing marks, as "composition, size, shape, colour, texture, hardness, tensile, tensile length, flammability, conductivity, density or viscosity" (§ 67). - *The products "chrysotile asbestos" and "PCG asbestos" are not "like products"* in the sense of Art. III:4 GATT (§ 132). In § 100, the AB states that the interpretation of "like" in Art. III:4 is broader than that in Art. III:2, and the relevant issue is whether the concerned products are in a "competitive relationship". Furthermore, the AB points out that the decision as to whether a product is "like" or "unlike" another product must be made on a case-by-case basis using four general criteria: (1) the properties, nature and quality of the products; (2) the end-uses of the products; (3) consumers' tastes and habits; and (4) the tariff classification of the products (§101). However, these may not be the only relevant criteria (§ 102). For instance the AB used the criteria of "toxicity" in the *Asbestos*-Case to determine whether chrysotile asbestos and PCG asbestos could be considered like products. It also highlighted the role of the "risk" associated with the product by stating that risk is a "defining aspect of the physical properties of chrysotile asbestos fibres" (§§ 113-116). Finally, the AB stated that chrysotile asbestos and PCG asbestos are physically very different from one another, and that it is on the complaining party's responsibility (Canada) to show that the two products are in a competitive relationship. But Canada failed to prove the existence of such a relationship. Hence, the AB concluded that the French ban on asbestos is consistent with Art. III:4 GATT (§

	148). - *The French ban is consistent with Art. XX(b) GATT*, because it is "necessary to protect human life or health" and does not violate the conditions of the chapeau of Art. XX GATT.

***TROPICAL-TIMBER-CASE* (1992-1993)**	
The conflict was solved bilaterally without GATT dispute settlement (Cp. Sucharipa-Behrmann (1994)).	
Parties	Austria vs. Malaysia and Indonesia (represented by ASEAN)
Background	- In 1992 Austria adopted the "*Federal Law for the labelling of tropical timber products and for the creation of a quality mark for timber and timber products from sustainable exploitation*", which provided for a mandatory ecological label on tropical timber and tropical timber products. - The Law provided for a voluntary quality mark for timber and timber products from sustainable forest exploitation. The permission to carry such a quality mark were issued by the Austrian Ministry for Environment, Youth and Family upon application, if certain specified conditions are met.
Topics	Art. I GATT, Art. III GATT, Eco-labelling
Issues	- Malaysia argued in a communication to the GATT that the Austrian regulation constitutes a discriminatory, unjustifiable and unnecessary non-tariff trade barrier, violating Art. I and III of the GATT, because the Austrian law singles out tropical timber without requiring mandatory labelling for temperate timber. - Malaysia also argued that the quality mark were not based on internationally agreed upon standards on sustainable forest management. - Austria, though defending the law against protectionist intentions, decided to rescind the regulation on tropical timber labelling in 1993 in order to safeguard the option for discussion with developing countries. Austria only maintained the voluntary quality mark for all kinds of timber and timber products from sustainable forest management.