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Protecting the Environment by Use of Fiscal Measures: Legality and Propriety

Pablo M.J. Mendes de Leon

Steven A. Mirmina

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PROTECTING THE ENVIRONMENT BY USE OF FISCAL MEASURES: LEGALITY AND PROPRIETY

PABLO M.J. MENDES DE LEON*
STEVEN A. MIRMINA**

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*. Ph.D., University of Leiden, 1992; LL.M., University of Utrecht, 1979; Director, International Institute of Air and Space Law, University of Leiden. The views expressed are the personal opinions of both authors.

** LL.M., University of Leiden 1993; J.D., University of Connecticut, 1992. Associate, Crowell & Moring, LLP, Washington, D.C. Mr. Mirmina has also worked as a consultant to the governments of the Netherlands, Poland, and Swaziland on aviation law matters.

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THIS ESSAY EXAMINES the use of fiscal measures to protect the environment from harm caused by international civil aviation. It stems from proposals from various environmental organizations calling for new taxes and charges on international civil aviation activities aimed at reducing environmental damage caused by aircraft.

The Essay contains five parts. Part I is a general introduction to the subject. Part II investigates the distinction between taxes and charges as the terms are used in this Essay and then analyzes how these measures are viewed under the Chicago Convention and bilateral air services agreements. Part III catalogs some of these taxes and charges taken at a national level. Part IV then documents and analyzes the criticisms of various international organizations, including ICAO, WTO, and ICC, and concludes by demonstrating that if and when such measures are taken, they would be better done at the global level. In conclusion, Part V offers suggestions to further the goal of environmental protection without causing unwarranted market distortions in international civil aviation, while awaiting the implementation of multinational measures.

I. INTRODUCTION

Aircraft emissions pollute the environment. It is well acknowledged, however, that in comparison to automobiles, the effect of

aviation on the environment is relatively small.¹ Aircraft contaminate the environment as their emissions directly enter sensitive areas of the atmosphere which protect the earth from the sun's rays. Some potentially toxic substances emitted by aircraft are nitrogen oxide (NO_x, water vapor, and, to a lesser extent, carbon dioxide (CO₂) which damage the earth's ozone layer and may contribute to global warming. Aviation is also harmful to the environment in indirect ways such as through pollution of ground water by deicing chemicals, the plethora of environmental issues associated with airport expansion in wetlands, and noise pollution to surrounding neighbors.

Fortunately, there are several measures governments can undertake in order to reduce the harmful effects of aviation on the environment. One recent suggestion that is beginning to garner support is to place a tax or a charge on international civil aviation. One goal of such a tax or charge is the reduction of harmful effects on the environment by making it more expensive for an airline to operate. Ideally, revenues generated from such duties would be used to research methods of reducing pollution or for cleaning the environment from damage caused by aviation. Proponents of such measures argue that airlines should pay for the environmental damage they have caused.²

This Essay will show that when these measures are taken at a global level, they are much more successful in accomplishing their stated goals than when done so from a national or regional level. Reference will also be made to unilateral measures or actions. For the purpose of the present analysis, a unilateral measure is understood to be a measure emanating either from one country or one group of countries, which affects the interests of other countries or airlines of other countries.

Global measures do not suffer from an "avoidance problem"—that is, airlines which would fly to or from countries where there is no tax to avoid payment. Additionally, at the global level, such measures have the consent of the countries

¹ "The absolute emissions by air-traffic are small in comparison to other sources. About 6% of the total global consumption of petrol is burned in aircraft. One estimates that presently about 2.6% of all anthropogenic CO₂-emissions stem from burning fuel in aircraft." PROCEEDINGS OF THE EUROPEAN AVIATION CLUB (Pablo M.J. Mendes de Leon & Steven A. Mirmina eds., 1993). See also Winter, *infra* note 42, at 139.

² In international environmental law, this is known as the "polluter pays" principle. It has been embodied in several OECD policy statements. See BIRNEY & BOYLE, *infra* note 4, at 110; Single European Act art. XXV, *infra* note 78.

affected, whereas on a national or regional basis, some or perhaps even many countries would be adversely affected. Last but not least, since aviation is a global effort, cooperation between nations must be promoted.³ Moreover, a duty to cooperate in order to mitigate the effects of environmental damages and risks is also a basic principle of environmental law and policy.⁴

These and other issues are examined in detail within. The authors suggest that while awaiting measures to be adopted at the global level, countries, rather than taking fiscal measures on a national basis, could promote minor changes in airline operations which would have substantial, tangible benefits to the global environment.

II. THE FADING DISTINCTION BETWEEN TAXES AND CHARGES

The distinction between the term *charge* and the term *tax* is not always clear because the terms are often used interchangeably. In reference to aviation, these terms are defined in a manner in accordance with international aviation organizations and most writers.⁵ For purposes of the present analysis, the terms are defined as follows:

Charges are costs assessed on aviation activities which have as their basis a "recuperation" of damage done. Thus, for pollution caused over the territory of a state,⁶ the state charges the aviation activity an amount calculated equal to that necessary to rectify damage done by the pollution or compensate those who suffer from it.

Taxes are general costs assessed on aviation activities which generate income for the taxing authority which it can use for whatever purposes desired. Thus, for pollution caused over the territory of a state, the state taxes the aviation activity some random amount, for instance, U.S. \$5.00 per passenger or U.S.

³ See, e.g., Chicago Convention on International Civil Aviation pmbl. (1944) [hereinafter Chicago Convention]. See also PABLO M.J. MENDES DE LEON, CABOTAGE IN AIR TRANSPORT REGULATION 119-20 (1992).

⁴ See PATRICIA W. BIRNEY & ALAN BOYLE, BASIC DOCUMENTS ON INTERNATIONAL LAW AND THE ENVIRONMENT 89 (1992).

⁵ See, e.g., ICAO SECRETARIAT PAPER OF THE COMMISSION ON SUSTAINABLE DEVELOPMENT, WORKING GROUPE ON FINANCE (1995); ICAO SECRETARIAT BACKGROUND INFORMATION IN CONNECTION WITH AN ENVIRONMENTAL TAX/CHARGE ON AIR TRANSPORT (1995); R.I.R. Abeyratne, *Air Transport Tax and its Consequences on Tourism*, 20 ANNALS OF TOURISM RESEARCH 450, 452-53 (1993).

⁶ For the special cases of federal states and the European Community, see *infra* parts II.C. and IV.F., respectively.

\$0.15 per liter of fuel, which the state may add to its general fund. Or, alternatively, the state may earmark the funds for a specific purpose, such as researching more environmentally friendly aircraft engines or decreasing the costs of public transportation in order to encourage public use.

It may be noted that in current practice the distinction is becoming blurred as revenues from so-called charges are going directly into government treasuries, as would a tax, rather than being used for a particular purpose to compensate harm done. Moreover, from both an international air law and an environmental point of view, the distinction is not so fundamental. At the same time, however, aviation organizations stress that charges are the superior form of assessing a financial cost on airlines to be used for environmental protection purposes.

A. THE DISTINCTION BETWEEN TAXES AND CHARGES

Charges have the specific purpose of remedying a wrong or improving a defect existing in the industry. For example, some common charges are for air traffic control, passenger handling, and ramp services in airports. Charges are calculated on a cost recovery basis in order to compensate for a particular service. There is, however, one fundamental problem regarding environmental charges, namely, the calculation of the fair and just amount.

Imagine, for example, a plane flying from Amsterdam to Milan. How much compensable damage was caused in Holland? Was there damage to Holland's air? To its water tables? To the vegetation? To the tulip crop? To the cows in the field that produce milk? Moreover, when the plane flew over a small part of Belgium's territory, how much damage was caused there? Is it compensable? If so, how does one calculate it?

Additionally, the reader knows that air pollution cannot be confined within a region or within a country's national borders. How then do we calculate air pollution over a populated city as compared to the same pollution over a sparsely populated area? Furthermore, how do we distinguish and calculate the damage done to the Dutch atmosphere versus that of Belgium, France, Germany, or Italy? One can see that determination of the costs to be compensated by the charge on aviation activities is a very difficult egg to crack.

In comparison to charges, taxes are easy to calculate. It is relatively simple: every incoming, outgoing, or transit passenger pays a flat fee for the damage that his or her use of aviation, as

opposed to other methods of transport, has caused to the environment; or, every liter of fuel burned while flying in that country's airspace is accorded a particular environmental levy to generate income for the state. The state then uses this money for whatever purpose it chooses.⁷

In evaluating what type of fiscal measures should be taken, whether globally or nationally, one must consider various factors. Politically, charges appear to be advantageous because they are compensating harm done, an idea to which no one should object. Practically, however, charges are much more difficult to implement than taxes. Governments collect taxes all the time, and they have great experience and precedent, along with the necessary infrastructure, for doing so. Charges, on the other hand, would likely require the implementation of a collection mechanism, meaning additional work for the airlines or for an organization constructed for that purpose. It is also necessary to design an accurate economic model in order to maximize the utility of either a tax or charge. Utility is maximized when the tax or charge is set at the level at which the collecting authority maximizes its profit.⁸

B. APPLICATION OF THE CHICAGO CONVENTION

The Chicago Convention states in Article 15 that charges must be applied in a nondiscriminatory fashion. One can generally divide aeronautical charges into two groups: those for the airport, comprising landing, passenger check-in, security, ramp services, and the like; and those for air navigation services, such as meteorology and air traffic control. Details of these services

⁷ The Netherlands has a special tax on CO₂ emissions, the revenue of which is used to lower the tax burden from capital and labor income. This tax is further discussed *infra* part III.B.3.

⁸ In other words, there is an inversely proportional formula which states that for every additional dollar of aviation costs, some passengers may elect another form of transportation. For two dollars more, perhaps two passengers would elect another form of transport. But for ten dollars more, it could be that more than ten passengers might elect the alternate form of transportation. There is a point then at which the gain from a tax or charge is no longer maximized, but actually decreases in value. An independent study by Avmark International concluded that a 10% increase in the cost of an airline ticket results in a 6.6% loss in traffic. See *Taxes on International Aviation: A 1996 Update*, at 2, ICC Doc. 310/466 (May 22, 1996).

are provided in the Convention's 18 Annexes, containing the Standards and Recommended Practices (SARPS).⁹

Article 15 has obvious relevance to any discussion of environmental taxes and charges. The right to use airports and related facilities of a state must be subject to uniform conditions. What must be stressed here is the last sentence of Article 15: "No fees, dues or other charges shall be imposed by any contracting State in respect solely of the rights of transit over or entry into or exit from its territory of any aircraft of a contracting State of persons or property thereon."¹⁰

It is argued that the word "solely" in the preceding sentence has legal relevance. If one would say that an environmental "fee" is not *solely* for transit over or entry into or exit from a state, then it stands to reason that an environmental levy would be permissible.

For an example of a nondiscriminatory provision, examine the following scenario: If the Netherlands desired to tax fuel stored or emitted within its territory, it would have to tax all fuel of all airlines. Thus, it could not tax only airlines of "richer" countries such as Japan Air Lines or American Airlines and then give favorable treatment to lesser developed countries, such as Air Zimbabwe. All airlines of all countries would have to be taxed without reference to nationality.

It seems that the distinction between taxes and charges is not relevant for the application of Article 15 of the Chicago Convention. This follows from the formulation of that provision, referring to the generic terms "any charges" and to "fees, dues and other charges."¹¹ The Chicago Convention does not expressly mention the term "taxes." They are deemed to be comprised by the terms referred to above.¹²

Apart from Article 15, Article 38 of the Chicago Convention concerns "departures from international standards and proce-

⁹ For example, Annex 16, Volume II contains the provisions in regard to aircraft emissions, certification of engines, and similar related details.

¹⁰ Chicago Convention, *supra* note 3, art. 15.

¹¹ *Id.*

¹² See also Council Resolution of Dec. 14, 1993, on *Taxation of Fuel, Lubricants and Other Consumable Technical Supplies When an Aircraft Registered in One State or Leased or Chartered by an Operator of That State Makes Successive Stops at Two or More Airports in One Customs Territory of Another State*, compiled in *Policies on Taxation in the Field of International Air Transport*, at 8, ICAO Doc. 8632-C/968 (1994) ("The expression 'customs and other duties' shall include import, export, excise, sales, consumption and internal duties and taxes of all kinds levied upon the fuel, lubricants and other consumable technical supplies. . .").

dures."¹³ ICAO thus uses Article 38 to review aviation-related charges for purposes of uniformity and legality. The concern of ICAO Council is that charges on air traffic will proliferate and lead to retaliatory measures.¹⁴ Article 24 which grants tax exempt status and exemptions from charges to fuel is also worthy of note and is referred to in the next section.

Thus, the Chicago Convention as well as ICAO Council's interpretation show that fiscal measures could be implemented by a state party to the Chicago Convention provided the measure is nondiscriminatory and has a specific purpose other than collecting revenue for merely passing through a state's airspace.¹⁵ Posing even stricter controls, however, are relevant clauses of bilateral air services agreements, examined below.

C. CLAUSES OF BILATERAL AIR SERVICES AGREEMENTS

One current proposal relating to aviation and the environment is the imposition of a levy on fuel.¹⁶ There are various ways to implement this levy: through taxing fuel stored, fuel consumed, or fuel emissions. The vast majority of bilateral Air Services Agreements (ASAs) contain language¹⁷ which forbids

¹³ Chicago Convention, *supra* note 3, art. 38.

¹⁴ See Heilbronn & Bonsall, *Aeronautical Charges: The Need for a More Specific Legislative Context* 4-5 (unpublished manuscript on file at the International Institute of Air and Space Law, Leiden University) (citing *Statements by the Council to Contracting States on Charges for Airports and Air Navigation Services*, at 3, 10, ICAO Doc. 9082/4 (1992) (4th ed.) (airport charges and air navigation service charges), which states that states should "(i) impose charges only for services and functions which are required for international civil aviation; and (ii) refrain from imposing charges which discriminate against international civil aviation in relation to other modes of international transport").

¹⁵ There are other conventions that partially regulate fuel or lubricants, but the Chicago Convention is the most relevant. Among the others is the *Convention Concerning Exemption from Taxation for Liquid Fuel and Lubricants in Air Traffic* (1939), but only Denmark has adhered to it, and it is consequently not in force.

¹⁶ The authors use the word "levy" to refer to both taxes and charges in a general manner.

¹⁷ Here is a representative clause:

Fuel, lubricating oils, spare parts, regular equipment and aircraft stores on board aircraft of the designated airline of one Contracting Party on arrival in the territory of the other Contracting Party, or taken on board those aircraft in that territory, and not unloaded from the aircraft without the consent of the customs authorities, if intended solely for use by or in aircraft of that airline in the operation of the agreed services shall, subject to compliance in other respects with the customs requirements of the latter Contracting Party, be exempted from customs duties, inspection fees, or similar charges imposed in the territory of the latter Contracting

levies on fuel, lubricants, spare parts, and the like which are not unloaded from an aircraft but are then re-exported to another territory on the agreed international air services.¹⁸ Thus, any proposal to levy fuel which is kept on board an airplane and not consumed by airlines of any state other than the state which imposes the levy would be contrary not only to Article 24 of the Chicago Convention but also to bilateral agreements which contain such clauses.¹⁹

Another aspect of the question then deals with fuel stored in the levying country. If fuel in transit is, in principle, not taxable, then what about fuel taken on the aircraft? In most cases, fuel introduced into an aircraft on foreign territory is also exempted from charges and taxation under exemption clauses in ASAs.²⁰ ICAO Recommendations suggest a similar practice in this respect.²¹

In the United States, the individual states may tax fuel on international flights even when the federal government may not.²² This is one of the aberrations of American federalism. Thus, although the federal government may be prevented from taking such steps, because it is party to an ASA, state governments may

Party, even though the supplies are used in or consumed by aircraft on flights in that territory.

International Air Transport Position Paper on the Application of European Community Value Added Tax on International Air Transport, at 72, IATA Doc. 6 (1990) [hereinafter *Position Paper*].

¹⁸ Remarkably, the term "customs duties, inspection fees, or similar charges" is used in the cited bilateral clause. It would therefore appear that, in the sphere of international air law, the distinction between taxes and charges has become a matter of semantics.

¹⁹ "It can be seen that any imposition of [tax] on the fuel, lubricants, spare parts and aircraft stores used by airlines in international air transport, including intra-EC air transport, would be contrary to the bilateral air transport services agreement under which these airlines operate." *Position Paper*, *supra* note 17, at 72.

²⁰ See *supra* note 17 ("taken on board") (emphasis added).

²¹ See *Policies on Taxation in the Field of International Air Transport*, at 12, ICAO Doc. 8632-C/968 (1966):

Each Contracting State shall reduce to the fullest practicable extent and make plans to eliminate as soon as its economic conditions permit all forms of taxation on the sale or use of international transport by air, including taxes on gross receipts of operators and taxes levied directly on passengers or shippers.

²² See *Wardair Canada, Inc. v. Florida Dep't of Revenue*, 477 U.S. 1, 6-7 (1986).

be permitted to do so.²³ A similar dichotomy exists in Canada vis-à-vis its provinces.

The question of whether the implementation of a tax or charge is allowed under an ASA cannot be answered without examining both the national legislation and the applicable bilateral ASA. Although the national law of a particular country may permit charging or taxing fuel stored in that country, the bilateral ASA may in fact provide for exemption from such charging or taxation. According to international law the bilateral ASA supersedes the application of national law.²⁴

In conclusion, the subject is quite complicated because different legal regimes ("Chicago," bilateral ASAs, regional, national, and local law) are competing for application. One general conclusion that may be drawn is that storing fuel on board an aircraft engaged in international service is exempt from taxation under international law. Moreover, in light of the complexity of the different applicable regimes, as well as the strength of the conduct of an environmental policy, it appears that each situation must be analyzed on a case-by-case basis.

III. NATIONAL ENVIRONMENTAL CHARGES AND TAXES ON AVIATION

The experiences of individual nations and international aviation organizations, including ICAO, regarding taxes and charges demonstrate that such levies can be impediments to the development of the aviation industry. The introduction of new taxes on aviation fuels would contradict some very important policy studies, including studies by the U.S. National Commission to Ensure a Strong Competitive Airline Industry and the European Union's Comité des Sages on Air Transport, "both of which have urged governments to provide tax relief to the air-

²³ One could question the legitimacy of this situation in light of Article 27 of the Vienna Convention on the Law of Treaties, *infra* note 24, because a bilateral ASA is qualified as a treaty under international law.

²⁴ See Vienna Convention on the Law of Treaties, May 23, 1969, art. 27, 1155 U.N.T.S. 331. "A party may not invoke the provisions of its internal law as justification for its failure to perform a treaty. This rule is without prejudice to article 46." *Id.* at 339. Article 46 refers to the exceptional case in which it is manifest that a state was incompetent to conclude the treaty pursuant to its domestic law and that violation of internal law was "manifest" and of "fundamental importance." *Id.* at 343. See generally IAN BROWNLIE, PRINCIPLES OF PUBLIC INTERNATIONAL LAW 36-38 (3d ed. 1979).

line industry."²⁵ Furthermore, there is wide agreement that, if these measures must in fact be taken, they would be best implemented on a global level. Regulatory rather than fiscal measures are preferred, preferably introduced by an international organization such as ICAO.

The starting point for an analysis of the advantages and disadvantages of charges and taxes to protect the environment from harm caused by aviation is to examine what is the current legislative situation nationally and internationally. Thus, current measures of five countries with national environmental levies are examined below as well as international measures of a similar nature.

A. ICAO'S RECOMMENDATIONS TO NATIONAL GOVERNMENTS

ICAO is aware that some states may implement measures without waiting for international action to be taken. To address this issue, the Conference on Airport and Route Facility Management (CARFM) took place in 1991. The CARFM recommended that a study be done on emission-related charges by the Committee on Aviation Environmental Protection, discussed further in Part IV.A. In the meantime, however, states which were considering the adoption of charges as a means to reduce aircraft engine emissions were advised to consider the following principles:

- a. there should be no fiscal aims behind the charges;
- b. the charges should not distort competition with other modes of transport;
- c. the charges should not prevent the efficient use of existing aircraft capacity; and
- d. the charges should be related to costs.²⁶

National experiences with regard to taxes and charges aimed at reducing emissions from civil aviation are examined below. Examination of these measures will demonstrate to the reader that many of them fail to comply with the above instructions of ICAO.

²⁵ See *The Broader Regulatory Environment: Taxation*, ICAO (1994) (presented at the Worldwide Air Transport Conference at Montreal, Nov. 23-Dec. 6, 1994).

²⁶ *Report*, at para. 86, ICAO Doc. 9579 (1991).

B. BRIEF OVERVIEW OF NATIONAL MEASURES

From a legal standpoint, national measures are easier to implement than international measures, as the latter require consensus among very different and often contradictory interests. National measures, in the present context, refer to those measures which have legal effect only within the territory of one state.²⁷

One can imagine hypothetical regulations requiring passengers on a simple domestic flight to be subject to a certain fee.²⁸ The "domestic" nature of the flight ensures that there will not be any calculation problems concerning the extent of environmental damage to one state versus damage to another state. These domestic measures are permitted under international air law if they are applied without discrimination vis-à-vis foreign operators.

This Essay will not discuss the question of transborder pollution. It could be argued that aircraft flying at high altitudes cause damage to more than one national airspace; however, at higher altitudes, it is difficult, if not impossible, to distinguish between the airspace of country A and the airspace of country B, let alone in which of these airspaces the emissions of the aircraft are causing damage.²⁹ This state of affairs gives us one more reason to suggest that the present subject be discussed at a global level.

One must note, however, that there are some drawbacks to national measures: for example, avoidance of the fee.³⁰ De-

²⁷ This starting point is based on the presumption that jurisdiction, meaning, in the present context, the competence to take and enforce legal measures, is territorial. See BROWNLIE, *supra* note 24, at 298.

²⁸ The term "domestic flight" is used to mean a flight entirely within the borders of one state, that is, without crossing any national borders during the flight, on an aircraft registered in that state. In other words, a flight from London to Hong Kong, although domestic in the sense that both are part of the United Kingdom, is not addressed by this example. For these purposes, the nationality of the passenger is irrelevant. See also Chicago Convention, *supra* note 3, art 96(b).

²⁹ See, e.g., *Trial Smelter Arbitral Tribunal Decision*, 33 AM. J. INT'L L. 182 (1939); 35 AM. J. INT'L L. 684 (1941). The arbitral tribunal awarded damages to the United States and prescribed a regime for controlling future emissions from a Canadian smelter which had caused air pollution damage. The tribunal concluded that "no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another" and that measures of control were necessary. 35 AM. J. INT'L L. 716 (1941); see also part II.A.

³⁰ See *supra* part I (discussing the avoidance problem).

pending on the level of the tax, it could be less expensive for a traveller to fly, instead of directly from point A to B in the same state, but, from point A to point B in the same state via point C, a stopping point in another country, enabling the traveller to avoid the tax on domestic flights. For present purposes, assume a flight from Paris to Marseilles, via Geneva. Two negative results follow. The first is that the tax or charge is avoided and less income is generated to combat environmental pollution. The second negative result is that in addition to the lost income, the traveller has likely caused more damage to the environment by flying via a stopping point out of his state than by taking the direct flight. This is a hypothetical example, of course, but concerns such as these must be borne in mind as one considers the use of national measures.

The following examples are given to demonstrate that national fiscal environmental measures assessed on aviation activities actually hinder both the industry and environmental protection, as compared with similar measures imposed on a global level.

1. *Sweden*

The government of Sweden imposes taxes on domestic flights based on the specific emissions of every type of aircraft. There exists a reporting mechanism requiring each airline to report the number of flights for each type of aircraft to the Department of Finance, which then collects the revenue from these emissions taxes.³¹ Sweden does have a tax on fuel, the revenues of which go directly to the general treasury.³²

Interestingly enough, Sweden plans to repeal this tax because it discriminates against Swedish airlines. Because other "Community airlines" of the European Community (EC) can fly Swedish domestic routes due to the Third Liberalization Package,³³ it places Swedish carriers at a competitive disadvantage. More-

³¹ Telephone interview with Mr. Ralph Hellstrom, Swedish CAA (Feb. 20, 1996).

³² The details of the tax are as follows. The jet A-1 fuel which is used on an average civil and commercial domestic flight (380 km) is used in the calculation. The revenue is collected by the Swedish tax department through its normal tax functions. The airlines fill in a monthly declaration reporting the flights made. The calculation of the tax, approximately, is broken down into 75% CO₂ tax and 25% fuel tax, and it generates about 200 million Swedish Crowns, or about \$29 million U.S. dollars. *Id.*

³³ See Council Directive 2408/92, 1992 O.J. (L240) 10, *infra* note 79. Unrestricted cabotage freedom is granted as of April 1, 1997.

over, Community airlines are exempted from EC harmonized excise duties on mineral oils pursuant to Directive 92/81.³⁴

2. Norway

In October of 1994, the Norwegian Parliament introduced a passenger tax on both domestic and international flights.³⁵ The purpose of the tax was to encourage the public to use trains.³⁶ Because the revenues go to the general state coffers, the airlines have no incentive to switch to environmentally friendly technology. It appears that the airlines are eager to inform their passengers that the tax is not part of the ticket price, but it is imposed by the government. The environmentalists in Norway reportedly have less lobbying influence than the airlines, as the environmentalists were seeking a seat tax in place of a passenger tax. The seat tax would tax all seats offered for sale to the public; thus, airplanes flying half empty would pay the same amount of tax as those flying full. The passenger tax is assessed only on the number of passengers flying.³⁷

3. The Netherlands

To be used only as an example of one European country with environmental economic measures,³⁸ national fiscal law of the Netherlands assesses users of products affecting the environment an environmental charge. The guiding policy is the "polluter pays" principle; however, in practice, the revenues of such

³⁴ Directive 92/81 is discussed *infra* part IV.F.

³⁵ Telephone interview with Anne Johanne Enger, Norwegian *Naturvernforbundet* (Feb. 21, 1996).

³⁶ The amount of the tax is 65 Norwegian Crowns for domestic flights and 130 Crowns for international flights. The revenue is not earmarked for environmental causes, but rather goes to the general treasury of the state. *Id.*

³⁷ Norway has just recently completed a two volume comprehensive study of transportation and its effects on the environment. NORWEGIAN MINISTRY OF FINANCE, TOWARDS MORE COST EFFECTIVE ENVIRONMENTAL POLICIES IN THE 1990S (1995); NORWEGIAN MINISTRY OF ENVIRONMENT, EVALUATION OF ENVIRONMENTAL POLICY INSTRUMENTS OF NORWAY (1995).

³⁸ The Netherlands has been actively promoting the implementation of emissions charges or taxes to protect the environment. Mrs. Jorritsma-Lebbink, Minister of Transport, Public Works and Water Management, stated the viewpoints of her country in the opening address to a conference organized by the International Institute of Air and Space Law at Leiden University. *ECAC/EU Dialogue: A Competitive European Air Transport Industry in a Global Environment*, in NOORDWIJK, July 6-7, 1995, at 11-12. Mrs. Jorritsma stated that measures in this respect should be taken on a world-wide basis. *Id.*

taxes often go to the national treasury rather than to combat the polluting activity.

Worthy of attention is the Act Concerning the Administration of the Environment, which provides for a tax on the consumption of fuel.³⁹ The Netherlands has also established an Air Pollution Fund, which is permitted by the above Act. The Fund provides compensation for damages incurred by victims of air pollution. It is comprised of annual contributions as determined by law and by other revenues.⁴⁰

4. Germany

Germany is considering several fiscal measures affecting air transport intended to contribute to the protection of the environment. The following measures are supported by the German government, either at the EU level or, preferably, in a world-wide context.⁴¹

Germany supports taxation of kerosene in order to reduce fuel consumption and CO₂ emissions. The effect would be to encourage use of cleaner modes of transportation such as railways, or to eschew travelling altogether, and instead promote the use of telecommunications.⁴²

In Europe, all other modes of transport (buses, trains, boats) are subject to the Value Added Tax, which in some countries averages out to approximately 17.5%.

³⁹ The tax is due from, *inter alia*, persons who have imported coal or gasoline into the Netherlands or who have delivered these goods to persons in the Netherlands.

⁴⁰ A representative of KLM Royal Dutch Airlines has stated that the fund is often abused by landowners near airports who seek financial compensation for "damage" caused by their proximity to a polluting source, only to later use this compensation for purposes other than protection from pollution. For example, instead of installation of sound proofing materials in the house, the money is used for redecoration purposes. Such economic externalities are beyond the scope of this Essay, but their existence should be noted by the reader.

⁴¹ See Harald Knisch & Matthias Reichmuth, *Verkehrsleistung und Luftschadstoffemissionen des Personenflugverkehrs in Deutschland von 1980 bis 2010* (1995) (unpublished draft on file with authors).

⁴² "[A]n attempt will be made to make flying more expensive compared to other forms of transportation." Gerd Winter, *On Integration of Environmental Protection into Air Transport Law: A German and EC Perspective*, 21 *AIR & SPACE L.J.* 132, 140 (1996). Member states must exempt mineral oils supplied for use as fuel for the purpose of air navigation, other than private pleasure flights, from excise duties. Council Directive 92/81/EC, art. 8, 1992 O.J. (L316) 13. This Directive is set to expire at the end of 1997, and the German government would support abolition of this exemption in an EU context. See also *infra* part IV.F.

In regard to noise charges, the German government has a system for their calculation. The Berlin airports of Tegel and Tempelhof have different standards for charging aircraft based on the noise they produce.⁴³ Operators of very quiet aircraft, meeting the latest technical developments in this field, should be rewarded, whereas operators of noisy aircraft pay more.⁴⁴

In conclusion, the German government is committed to actively supporting an implementation of stronger environmental measures in the field of air transport. In doing so, it acknowledges that international obligations must be observed.⁴⁵ The German government, like many authors, emphasizes that these measures are best taken at the global level and not by individual countries.⁴⁶ It should be noted that environmental groups exercise pressure on the government to conduct an active "green" policy.

5. *United States*

Efforts in the United States concentrate more on the collection of revenue for general governmental expenditures as opposed to environmental improvements. There was much controversy over a 4.5-cent fuel tax that would have been applied beginning in October of 1995. In 1993, the Clinton Administration granted a two-year reprieve to the U.S. aviation industry "from contributing to a deficit-cutting budget plan that imposed fuel taxes on all other industries."⁴⁷ When a tax such

⁴³ The distinction between Chapter 2 and Chapter 3 aircraft pursuant to ICAO Annex 16 to the Chicago Convention serves as a guideline for the establishment of charges in this field. Chicago Convention, *supra* note 3, annex 16. There are differentiations within the category of Chapter 3 aircraft, depending on the amount of noise produced, justifying charges proportional to the real amount of noise which is produced by the aircraft.

⁴⁴ Germany maintains its attitude of fairness and proportionality in relation to other charges as well, such as for emissions, landing, and airport charges. Germany believes that they should be proportional to the emission of environmentally harmful substances.

⁴⁵ See *supra* note 18.

⁴⁶ See *Umweltgutachten, RAT VON SACHVERSTÄNDIGEN FÜR WELTFRAGEN*, cited and discussed in Winter, *supra* note 42, at 141 (proposing a multilateral agreement on air transport charges as well as an international kerosene tax, and similar measures under the WTO or ICAO).

⁴⁷ *New Game in Town*, AIRLINE BUSINESS, Sept. 1995, at 77. See also Anthony L. Velocci, Jr., *White House, Airlines Clash Over Fuel Tax*, AVIATION WK. & SPACE TECH., Aug. 28 1995, at 20. "[T]he national debt. . . is approaching \$500 trillion, and the jet fuel tax is intended to help reduce it over time." *Id.* This tax costs the airlines \$527 million annually. *Id.* The Clinton Administration was in favor of

as this one is not earmarked for purposes of promoting aviation but rather merely adds to the general fund, there can be little hope for environmental improvement.⁴⁸

There also has been discussion of the ten percent tax on domestic passenger tickets. Although it is not of immediate relevance for fuel taxes, it is worth noting. Ironically, the federal government "accidentally" stopped collecting the tax on December 31, 1995, because of the budget deadlock. Also affected was the \$6.00 international departure charge and a 6.25% waybill tax on air cargo.⁴⁹

IV. THE POSITION OF INTERNATIONAL ORGANIZATIONS REGARDING NATIONAL MEASURES

The above discussion cataloged some national fiscal measures levied against aviation with the stated purpose of environmental protection. Major organizations advocating the interests of civil aviation have a different viewpoint. A sampling of those viewpoints is provided below.

A. ICAO AND THE 1994 WORLDWIDE AIR TRANSPORT CONFERENCE

During the Worldwide Air Transport Conference (November 23, 1994 to December 6, 1994) at the 50th Anniversary of ICAO, hope was expressed that the Committee on Aviation Environmental Protection (CAEP) would complete its study of emission-related charges.⁵⁰ Furthermore the Conference recommended

ending the deferral, while the ATA (Air Transport Association, the trade group representing major U.S. airlines) was lobbying to repeal the tax altogether. *Id.*

⁴⁸ Thus, the U.S. experience of taxing jet fuel may be used for a comparison between a tax, the income of which is used for general purposes, for instance, reducing national debt, as opposed to a charge, the income of which is used for a specific purpose, such as improvement of aircraft engines to reduce fuel consumption, described *supra* part II.

⁴⁹ One further manifestation of the Clinton Administration's desire to assess levies on international aviation was the suggestion in June 1996 to tax all internationally departing passengers a flat \$10 fee to create a "scholarship fund." *Administration Proposes \$10 Departure Tax to Fund Educational Initiative*, AVIATION DAILY, June 5, 1996, at 1. It seems that the legality of such a measure is in question in light of the Chicago Convention. *Id.* See generally Jeffrey Shane, Comments at the ABA Conference, Forum on Air and Space Law (June 5-6, 1996).

⁵⁰ *Using Charges to Achieve Reductions in Aircraft Emissions*, at 1, ICAO Doc. A31-NP/70 (July 8, 1995) (presented by Sweden) [hereinafter *Swedish Working Paper*]. Within ICAO, there is a group of states involved in the Committee on Aviation Environmental Protection (CAEP). In 1992, CAEP assumed the responsibility for a study of the effective means to reduce the adverse environmental consequences

that the "ICAO should continue to attach high priority to addressing environmental issues related to civil aviation."⁵¹

Regarding taxes, the Conference concluded that "the imposition of taxes on the sale or use of international air transport was an impediment to the sound economical and orderly development of international air transport operations."⁵² Furthermore, "taxes and user charges constitute an ever growing burden on airlines and consumers and have a negative impact on the development of the air transport industry."⁵³ It is therefore clear where ICAO stands.

With respect to the adoption of national environmental measures, ICAO's position is also unambiguous. ICAO is not in favor of additional taxes and charges. More constructively, and arguably better for the environment, ICAO proposes stricter and more harmonious regulation regarding environmental standards.⁵⁴ It asserts that considering the global nature of environmental problems of civil aviation their solutions must be addressed in a global manner. Thus, the CAEP should focus its efforts on the creation of uniform rules on aircraft noise, engine emissions, and the like.⁵⁵

Finally, in regard to environmental concerns and charges, ICAO gave its full support to integrated regulatory practices and recommended reductions in environmental burdens associated with international civil aviation by consolidating approaches to airport capacity development, similar reductions of aircraft

caused by aircraft engine emissions. *Id.* The project's scope, in particular to the Economic Analysis Subgroup (EASG), included the duty to conduct a study of "whether charges could be an effective means of reducing adverse environmental consequences of aircraft engine emissions." *Id.* at 2.

The group concluded that both charges and regulatory standards would be effective ways to reduce levels of aircraft emissions, but they could not conclude which would be preferable. The term "regulatory standards" refers to making regulations which determine the minimum or maximum amounts of aircraft emissions, such as so many parts per million of a certain pollutant. *Id.* The group reasoned that charges could stimulate airlines to change offensive behavior and to adopt new technologies. *Id.*

⁵¹ *Id.*

⁵² *Report of the Worldwide Air Transport Conference on International Air Transport Regulation*, at 36, ICAO Doc. 9644 (1994) [hereinafter *1994 WATC Report*].

⁵³ *Id.* at 35.

⁵⁴ *See Civil Aviation and the Environment*, ICAO Doc. A31-WP/39 (1995).

⁵⁵ The current policies of ICAO in regard to taxes and charges may be found in the following two documents: *Statements by the Council to Contracting States on Charges for Airports and Air Navigation Services*, ICAO Doc. 9082 (1992); and *Policies on Taxation in the Field of International Air Transport*, ICAO Doc. 8632 (1994).

emissions and source noise, careful land-use planning around airports, and other complementary operational and intermodal measures.⁵⁶

Meanwhile, several ICAO member states are calling for multi-lateral measures to protect the environment. Sweden expects a worldwide increase in gaseous emissions, including those emissions caused by air transport.⁵⁷ Sweden suggests in addition to multinational accords agreeing to reduce emissions, the implementation of "financial incentives to favour the use of less polluting aircraft."⁵⁸ The primary advantage is that a measure taken through ICAO has more impact than a unilateral measure. The Swedish position is also supported by the Netherlands.⁵⁹

B. THE UNITED NATIONS AND U.N.-RELATED ORGANIZATIONS

Other than ICAO, the United Nations has several institutions whose work relates to the environment and, therefore, indirectly to aviation. For example, the U.N. Framework Convention on Climate Change (UNFCCC) states as its ultimate objective "stabilization of greenhouse gas concentrations in the atmosphere."⁶⁰ One should note that "international aviation emissions fully fall under the umbrella of the UNFCCC."⁶¹

⁵⁶ There was support for increasing harmonized technical standards in regard to environmental regulation of air transport, such as international noise and emission standards for aircraft certification through Annex 16 of the Chicago Convention. *1994 WATC Report, supra* note 52, at 32-33. The conclusion of the conference was that stricter environmental regulation would be welcomed, provided it be accomplished through stricter regulatory measures rather than fiscal ones. *Id.* at 34.

⁵⁷ *Swedish Working Paper, supra* note 50, at 1.

⁵⁸ *Id.* The proposal could not be clearer that some action must be done *on an international level*: "[T]here is a need for action directed at reducing the overall impact of civil aviation and for ICAO to consider developing rules or guidelines regarding the possible introduction of financial incentives or charges." *Id.*

⁵⁹ "In order to prevent distortion of competition in international aviation, a global approach is advisable when considering introduction of charges." *Emissions-Related Charges*, ICAO Doc. A31-WP/80 (July 22, 1995). Therefore, the Netherlands suggests that the CAEP-study should be followed by a more extensive study that addresses the costs and benefits of specific environmental charges for reducing emission levels. *Id.*

⁶⁰ *U.N. Conference on Environment and Development: Framework Convention on Climate Changes*, 5th sess., pt. 2, art. 2 (1992) [hereinafter *UNFCCC*].

⁶¹ *Control of International Aviation Emissions*, at 2, ICAO Doc. A31-WP/86 (July 22, 1995) (presented by the Netherlands).

Thus, one could query why ICAO should be charged with the duty to limit aircraft engine emissions.⁶²

The UNFCCC, however, is not the only U.N. institution with an interest in handling the matter. Other nonaviation bodies are becoming interested in civil aviation. There are actually several viable options.⁶³

One can also imagine that other U.N. organizations, such as the U.N. Committee for Sustainable Development (UNCSD), which has discussed the International Air Transportation Tax (IATT), or the U.N. Convention on Trade and Development (UNCTAD) would have an interest in regulating charge or tax measures related to the protection of the environment from pollution by aviation. Thus, although it currently seems that ICAO is the best equipped organization to address the matter due to its expertise in aviation, there are also other U.N. bodies which might be interested in cooperative or joint efforts.

⁶² "Besides ICAO and WTO, a convention in the *UNEP framework* may be considered. This would disentangle the transport problem from the preponderant economic perspective characteristic of both ICAO and WTO. Ministers for environmental protection would then be responsible rather than the ministers for transport and/or the economy." Winter, *supra* note 42, at 141-42 (citations omitted). Not all states agree with this proposition. The Netherlands has argued that "[r]educing the adverse impact of aircraft emissions should be a primary responsibility of the international aviation industry itself. Therefore the Netherlands feels that ICAO is the most appropriate institution for controlling international aviation emissions." *Control of International Aviation Emissions*, *supra* note 61, at 2. The Netherlands argues that this also serves to prevent duplication of the work done by the Committee on Aviation Environmental Protection (CAEP). *Id.*

⁶³ Many states involved in the U.N. Economic Commission for Europe (ECE) have signed the 1990 Sofia Protocol to the 1979 *Convention on Long-Range Transboundary Air Pollution*. Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution (Oct. 10, 1990). The convention, in part, regulates emissions of sulphur dioxide, nitrogen oxides and other volatile organic compounds (VOC). These states have committed themselves to stabilize total emissions in 1994 to those of any year between 1980 and 1987. Parties to the VOC protocol have agreed to reduce emissions by 30% before the year 2000, compared to any single year between 1984 and 1990. Secondly, more than 90 states have signed the 1988 Montreal Protocol protecting the ozone layer. It has virtually halted the production of halons, which had been previously widely used in aircraft. *Id.*

Additionally, the UNFCCC has as its "ultimate objective": "To achieve . . . stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system." *UNFCCC*, *supra* note 60, art. 2. It also commits many states to decrease or limit CO₂ emissions in the year 2000 to the emission levels of 1990. *Id.* art 4.

If the present subject were addressed in a broader framework than that of the specific aviation organizations, two interrelated factors require consideration.

First, the problem of environmental damage caused by aircraft in flight in the upper layers of the airspace has a transnational character.⁶⁴ In fact, one cannot determine to what extent the airspace of country A, country B, or the airspace over the high seas has been affected. This implies uncertainty as to jurisdiction from an air law point of view: the Chicago Convention grants jurisdiction, that is, the rules to be applied, over airspace to the underlying sovereign State⁶⁵ or to ICAO over the high seas.⁶⁶

Second, the principle of proportionality should be applied in order to assess the contribution of civil aircraft, as compared with other "damaging actors," such as the manufacturing industry, road traffic, and spacecraft, to the global environment. This is justified when one proceeds from the point of view that the polluter pays.⁶⁷

In light of the transnational character of the problem, as well as of the diversity of the actors, there are arguments that should be brought to the attention of the U.N. and its specialized organizations. In such cases, it would be appropriate for ICAO to represent the aviation interests.

⁶⁴ See also *supra* part III.B.

⁶⁵ For special cases such as Taiwan, see Dr. Michael Sheng-Ti Gau, *Governmental Representation for Territories in the International Civil Aviation Organization*, ch. 4 (1996) (unpublished Ph.D dissertation, Leiden University) (on file with authors).

⁶⁶ Cf. Chicago Convention, *supra* note 3, art. 12 ("Over the high seas, the rules in force shall be those established under this Convention.").

⁶⁷ See *infra* part IV.F. The principle of proportionality is embodied in, for instance, Article V of the Convention on International Liability for Damage Caused by Space Objects, Mar. 29, 1972, 24 U.S.T. 2391, 2934:

A launching State which has paid compensation for damage shall have the right to present a claim for indemnification to the participants in the joint launching. The participants in a joint launching may conclude agreements regarding the *apportioning* among themselves of the financial obligation in respect of which they are jointly and severally liable.

Id. (emphasis added).

In our view, it could also be argued that application of the principle of proportionality follows from the general principle of good faith in international law. See Brownlie, *supra* note 24, at 19.

C. THE WORLD TRADE ORGANIZATION (GATT AND GATS)

The General Agreement on Tariffs and Trade (GATT) and the World Trade Organization (WTO) are committed to the minimization of governmental actions which inhibit or limit global trade. Several provisions ensure this commitment.

For example, the Most Favored Nation clause, Article III of GATT, states that a privilege granted to one contracting party must be awarded to all contracting parties and that imported goods must be taxed no less favorably than domestic goods. The General Agreement on Trade in Services (GATS), which is only marginally applicable to trade in air services, is not of relevance to proposed environmental fiscal measures.⁶⁸

GATT and GATS are not of direct relevance to fuel taxes. Currently air transport services are only affected sectorally by GATS; in the present case, GATS is inapplicable. This adds to the authors' contention that ICAO is the best suited international organization to address aviation related measures.

D. THE ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT (OECD)

A study published by the OECD has described some possibilities for a proposed tax, such as collection and disbursement options, policy objectives, possible participants, and probable reduction potential on greenhouse gases. Regarding unilateral fiscal measures and the environment, the study notes that any measure with less than global effect could meet with the following problems:

- Tankering of aircraft fuel: where aircraft carry extra fuel purchased in countries with lower fuel prices, that is, without fuel tax, to avoid having to refuel in a country which applies a tax. The problem is that more fuel is used and no revenue is generated.
- Goods and passenger transport to and from countries with fuel tax could be disrupted, leading to distortions in trade and associated commercial activities and tourism.
- Air freight to or from countries imposing taxes might be transported via surface to countries without tax and shipped by air

⁶⁸ Exceptions to the global free trade rule are in some cases of an environmental nature, namely the protection of life and health of humans, animals, and plants, and the conservation of exhaustible natural resources. The GATT panel decides whether or not these exceptions are applicable.

from there, increasing the costs of the goods, fuel consumption, and greenhouse gas emissions.

The study clearly states that unilateral implementation of a tax should be avoided. Such a measure may encourage airlines to tanker, would effect freight markets, and would encourage passengers to depart from neighboring countries. Moreover, if the passenger flew to the neighboring country, it would further increase deleterious environmental emissions.⁶⁹

The report continues its discussion of charges, stating that airlines acknowledge that they should be responsible for environmental costs incurred by their operations, and, thus, airlines voice less opposition to a charge as opposed to a tax.⁷⁰ Finally, the report states that even if there were universal agreement to adopt a charge on emissions, there would be wide disparity among the countries as to the level of the charge, and it cites the CO₂-energy tax in the European Union as an indication of the problems that could be faced on a global scale.⁷¹

E. THE INTERNATIONAL CHAMBER OF COMMERCE (ICC)

ICC, promoting the interests of the international business community, adopts policy statements regarding measures that affect industries throughout the world. In one report entitled *Taxes on International Aviation: The Business Traveller's View*, updated in May 1996,⁷² ICC described airline taxes as a "growing burden." In this paper, ICC stated that there were over 650 individual taxes on airlines in 200 countries, ranging from embarkation taxes to taxes for governmental concerns such as immigration, security, and agricultural inspection.⁷³ Many of these are unfortunately earmarked for what are deemed political purposes such as religious causes or revolutionary move-

⁶⁹ See OECD, COSTS OF UNILATERAL IMPLEMENTATION OF A TAX ch. 6.3, at 10. This report was the result of a joint project on national communications under the Framework Convention on Climate Change with IEA, and OECD has published Preliminary Case Studies, one of which included a review of an Aviation Fuel Tax.

⁷⁰ Regarding aircraft emissions in particular, the report concludes that there currently exists no scientific data reliable enough to determine exact emission levels of various aircraft emissions, especially in the cruise phase of flight. See *id.* at 13.

⁷¹ *Id.*

⁷² *Taxes on International Aviation: The Business Traveller's View*, ICC Doc. 310/398 (1996).

⁷³ *Id.* The report states that the 650 taxes existing in 1993 have grown to 1087. *Id.*

ments. ICC would prefer to see the revenues from the taxes used to improve air transport infrastructure.⁷⁴

Regarding environmental taxes on air transport, ICC has discussed the International Air Transportation Tax (IATT), better described as an "environmental user charge for air transport." The idea of the so-called tax is to apply the "polluter pays" principle to internalize the costs of pollution. Such a tax would act as an incentive to develop environmentally sound aircraft engines, and revenue could be generated to finance sustainable development.⁷⁵

One point ICC makes in regard to IATT is that there are no current "global taxes," and states would need to yield some sovereignty in the tax collection role. It is suggested that IATA or ICAO might have a role to play in administering such a system.⁷⁶ As an alternative to IATT, ICC suggests that it may be more pragmatic to pursue the harmonization of domestic environmental taxes with national governments donating the revenues to a global fund which addresses environmental problems, disbursed by, for instance, the Global Environmental Facility (GEF). The report concludes with six recommendations in which ICC clearly states its opposition to taxes on international air transport as well as its justifications for its opposition.⁷⁷

F. THE EUROPEAN UNION AND EUROPEAN ORGANIZATIONS

For those readers not familiar with the air law of the European Community (EC),⁷⁸ a brief overview is provided. The EC's

⁷⁴ *Id.* at 3-4. In this document, ICC also argues against using the airlines as tax collectors. Furthermore, transparency in air transport sales and services is encouraged so that the traveller knows what he is getting for his money, as opposed to "add-on" taxes. *Id.* at 4. ICC respects that tax levies, "particularly those directed to improving the air transport infrastructure, may be justified." *Id.* at 3. It asserts however, that those ticket taxes which do not satisfy the needs of air transport should be eliminated. *Id.*

⁷⁵ The tax base for IATT could be the quantity of pollution emissions, as opposed to the consumption of source (fuel) or the volume of transport (passengers or freight). Using the quantity of pollution emissions as the basis, the polluters are taxed proportionally and those airlines with "clean" technology pay less tax. ICC states, however, that in reality there may not be much airlines can do at the present to curb their emissions and thus pollution may not be reduced. For a response to the last concern, see *infra* part V.

⁷⁶ *U.N. Commission on Sustainable Development—Proposed User Charge on Air Transport*, at 35-38, ICC Doc. 310/445 (Aug. 17, 1995).

⁷⁷ *Id.*

⁷⁸ The nomenclature concerning the European Union (EU), and, as a component of the EU, the European Community (EC), is confusing. For the sake of

Third Package of Aviation Liberalization measures has opened the territory of the European Union into one Community aviation market.⁷⁹ The bilateral ASAs between the member states still regulate the international aviation situation, insofar as there are no Community measures taken. This is not the case for the taxation duties and charges clauses of the bilateral ASAs.

EC environmental policy objectives are to protect and improve the quality of the environment; to contribute towards protecting human health; and to ensure a rational utilization of natural resources. The polluter pays principle has been laid down in the Treaty.⁸⁰

EC member states have committed themselves to the harmonization of national legislation concerning turnover taxes, excise duties, and other forms of indirect taxation to the extent that such harmonization is necessary to ensure the establishment and the functioning of the internal market. The results of intra-EC tax harmonization have, however, been rather modest. The main reason for the lack of success is that the issue of harmonization of taxation is part of the establishment of the European Monetary Union (EMU). The EMU has been scheduled to start in 1999 for those EC member states who satisfy the requirements for participation.

Noteworthy, however, is Council Directive 92/81/EEC, which exempts air carriers from payment of excise duties on fuel

clarity, a brief overview is given. The European Economic Community (EEC) was established by the Treaty of Rome (1957), also referred to as the EEC Treaty. The EEC Treaty was amended in 1986 by the Single European Act (SEA). In 1992, the Treaty of Maastricht was signed, creating the EU. The Treaty of Maastricht is also referred to as the EU Treaty. It amended and expanded the scope of the EEC Treaty of 1957, as amended in 1986, and entered into force on November 1, 1993. The EU Treaty has transformed and renamed the EEC into the European Community. An increasing number of noneconomic matters are dealt with by the Community. Thus, the EEC Treaty became the EC Treaty. The EC Treaty is part of and embodied in the EU Treaty. The EC is one of the three Communities of the EU, the other two being the European Coal and Steel Community (ECSC) and the European Atomic Energy Community (EAEC). In the present context, the EC is the competent body.

⁷⁹ The three main liberalization regulations are as follows: Council Regulation 2407/92 on Licensing of Air Carriers, 1992 O.J. (L240) 1; Council Regulation 2408/92 on Access to Community Air Carriers to Intra-Community Air Routes, 1992 O.J. (L240) 8; and Council Regulation 2409/92 on Fares and Rates for Air Services, 1992 O.J. (L240) 15. See JOHN BALFOUR, *EUROPEAN COMMUNITY AIR LAW* (1995).

⁸⁰ Cf. Treaty Establishing the European Economic Community, Mar. 25, 1957, art. 130(r), 298 U.N.T.S. 11 [hereinafter EC Treaty].

within Europe.⁸¹ As this Directive is set to expire in 1997, some governments are reevaluating its importance.⁸²

The EU is proposing a CO₂-energy tax in the form of a Directive.⁸³ The purposes of the tax are to promote energy conservation and to reduce carbon dioxide emissions. Within the European Union, a member state may take measures to protect the environment, for example, by taxing fuel for its national airlines on domestic flights.⁸⁴ Of course, any state implementing such an environmental tax could harm its air carriers' competitive position. This is exactly what happened in Sweden.⁸⁵ Hence, there is a preference, if not a legal obligation or at least a policy objective, for Community-wide, if not global, measures such as the Directive mentioned above.

Finally, the supply of fuel to aircraft consumed by airlines on international routes is exempt from the Value Added Tax (VAT). On such routes, however, airlines are entitled to deduct the VAT from the cost price as international air services are considered as exports.

In the European Civil Aviation Conference (ECAC) there have been several measures regarding the protection of the environment, including programs aimed at curtailing aircraft noise, air, and water pollution and miscellaneous chemical pollution. But in regard to actual environmental charges on airlines, "ECAC has not yet taken up any work in this field of activity."⁸⁶ However, in the ECAC policy statement recently

⁸¹ See Council Directive 9281/EEC, art. 8 § 1, 1992 O.J. (L316) 12, 13-14. Article 189 of the EC Treaty explains that a Directive is an instruction to a member state from the European Community that requires a certain measure be taken. See EC Treaty, *supra* note 80, at 78-79. Unlike a regulation which spells out exactly what all member states must do uniformly to adopt a measure, a directive basically explains the broader principles of what a measure should do but leaves to the discretion of the member state exactly how such a measure should be implemented. Thus, it is binding in the result to be achieved, but the member state can choose the form and method to achieve it.

⁸² Germany is one such state. See *supra* part III.B.4.

⁸³ See EUR. COMM'N DOC. (COM(95)172(def)) (1995).

⁸⁴ The reason that a state may take such a measure, as opposed to waiting for Community action, can be explained by the subsidiarity principle, which provides that regulation should be implemented at the lowest level of appropriate governmental authority. Traditionally, states have been permitted to take measures protecting the public health, which includes the environment.

⁸⁵ See *supra* part IV.A.

⁸⁶ Letter from R. Benjamin, Executive Secretary, ECAC, to Pablo M.J. Mendes de Leon (Oct. 13, 1995) (on file at the *International Institute of Air and Space Law*, Leiden University).

presented at the 31st ICAO Assembly, the ECAC recommended the "feasibility of new or toughened ICAO engine emission standards consistent with emerging understanding of environmental need" ⁸⁷

To conclude this part of the analysis, it can be stated that the major international organizations dealing with international civil aviation oppose unilateral taxes and charges to protect the environment. From the United Nations to the World Trade Organization, OECD, and ICC, these bodies have analyzed their use and concluded that global measures are more appropriate tools to regulate aviation and the environment.⁸⁸ Therefore, why would a state continue to take such initiatives without waiting for global consent?

G. THE PREFERABILITY OF GLOBAL MEASURES TO UNILATERAL MEASURES

In response to the previous question, speed is one very noteworthy factor. Achieving global consensus on international issues is always difficult, but in regards to the environment, there are different standards and different motivations for all countries concerned.⁸⁹ The European experience is a perfect example of this phenomenon. Moreover, unilateral measures, may lead to a future global consensus, as was the case with the Japanese initiative in waiving Warsaw liability limits leading to the Kuala Lumpur IATA Inter-Carrier Agreement on Passenger Liability, adopted at IATA general meeting last year.⁹⁰ Additionally, international measures may be more difficult to adapt to local situations.⁹¹

⁸⁷ ECAC *Environmental Policy Statement*, at 12, ICAO Ass. Res. 31 (1995).

⁸⁸ The special case of the EU, in light of its supra-national competences, is not included here.

⁸⁹ For example, during the Worldwide Air Transport Conference (Nov. 23-Dec. 6, 1994) many African and Arab countries opposed imposition of taxes and charges to benefit the environment. Their airlines and governments argue that they cannot afford to take these environmental measures. Of course, those in favor of environmental protection would say that the African and Arab countries cannot afford not to take such environmental measures.

⁹⁰ For an analysis of arguments advocating some of the benefits of, and limits to, unilateral measures, see Steven A. Mirmina, *Global Unilateralism—An Analysis of Unilateral Trade Measures to Protect the Global Environment* (1993) (unpublished LL.M. thesis, Leiden University).

⁹¹ For example, an international measure may demand that the Netherlands comply to a certain standard, whereas, it may be more appropriate to apply a minimum standard to Dutch territory in Europe that is different from the overseas territories of the Netherlands, namely Aruba and the Antilles.

Another political difficulty avoided by the introduction of national measures is that of the disbursement of revenues collected.⁹² On the national level, a state is much better suited to determine which of its airports or airlines needs the most support or assistance in regard to environmental matters.

That being said, the shortcomings of unilateral measures must be investigated. The head of the Association of European Airlines (AEA) has examined several U.S. taxes and charges, some of which were environmentally justified.⁹³ He first addressed USTTA (United States Travel and Tourism Administration) facilitation fee, aimed at generating income to promote tourism. This "user fee" was assessed on foreign tourists arriving by airline or cruise ship.⁹⁴ Mr. Neumeister also criticized regional, that is, state and local, taxes imposed on top of federal taxes, such as the New York State and New York City plans to tax food and drink purchased by airlines, the City's plan to tax fuel purchases, and California's introduction of agricultural inspection fees above and beyond the APHIS (Animal and Plant Health Inspection Service) fee.⁹⁵

Thus, based on the above situations, two conclusions can be drawn regarding national aviation charges and taxes to protect the environment. The first is that national and, *a fortiori*, local measures will be unpopular and may contain an element of abuse, for example, California's additional agricultural inspection charge. Secondly, the industry, as can be expected, will op-

⁹² For example, ICC has stated that the GEF may be the appropriate body for collection of the International Air Transportation Tax, see *supra* part IV.E. There are many experts who would argue that ICAO is a body better suited to do so, and moreover, that it could prove very difficult to decide which countries should actually be granted the revenue therefrom.

⁹³ Karl-Heinz Neumeister, Taxation/Cost Increases—Implications for the Air Transport Industry, Address Before the Commission on Transport of ICC (Nov. 13, 1991) (transcript on file with the *Journal of Air Law and Commerce*).

⁹⁴ From a legal, practical, and domestic political point of view, the charge was very acceptable. But from an international policy standpoint, it was quite unpopular. Next, Neumeister commented on the APHIS User Fee (Animal and Plant Health Inspection Service) which has the noble purpose of providing for agricultural quarantines and inspection services for passengers arriving in the United States and on PFCs (Passenger Facility Charges), which permit airports to collect revenues for airport development projects. He argued that such measures restrain airlines from operating efficiently. *Id.* at 8-9.

⁹⁵ Mr. Neumeister referred to these taxes and charges as "a widespread disease and the list of victims is growing longer. There seems to be no medicine against it." *Id.* at 9. Desiring to avoid accusations of impartiality, the speaker later criticized a number of existing European charges in Germany, Finland, and at the Community level. *Id.* at 9-10.

pose any additional costs imposed, a fact which suggests that charges or taxes imposed at a global level may be the best solution, providing assurances that no entity (*i.e.*, state or airline) is treated better or worse than another.

V. SUGGESTIONS FOR FURTHERING ENVIRONMENTAL PROTECTION WHILE AWAITING THE IMPLEMENTATION OF MULTILATERAL MEASURES

This study has shown that unilateral taxes and charges assessed on international civil aviation to protect the environment are, in the long run, not the most effective means of achieving these goals.⁹⁶ Therefore, what measures may a state or an airline take to protect the environment and avoid accusations of unilateral actions? Some suggestions follow.

The foremost suggestion repeated is the call for stricter ICAO regulations. The utilization of global measures and increase in minimum standards is a regulatory measure that has met with few objections. Such measures do nothing to make the playing field unfair and, moreover, they affect all players equally. Industry and government support this approach, and it should be investigated further.

Another approach not covered in this analysis is one that can be referred to as a "tradable permit" scheme. Such a scheme, which could be linked through bilateral ASAs to traffic rights

⁹⁶ History has shown that the addition of new taxes on any commodity or service, be it air transport, fuel, or passenger tickets, or any item of public consumption, is generally found to be unpopular. The American Revolution began when the British implemented a poll tax and ignited into full revolution when Britain placed a tax on tea.

On January 15, 1996, Boutros Boutros-Ghali, Secretary General of the United Nations, suggested taxing all airline tickets U.S. \$1.50 to finance the U.N., which is suffering from budgetary constraints. Interview with British Broadcasting Corporation (BBC television broadcast, Jan. 1996).

However, Assembly Resolution A29-18 of the International Civil Aviation Organization urged Member States to follow ICAO policy contained in Document 8632 and therefore not "impose taxes on the sale or use of international air transport since it was recognized that *such taxes are an economic impediment to the development and expansion of international travel and trade.*" *Report of the Worldwide Air Transport Conference*, at 35, ICAO Doc. 9644 (1994) (emphasis added).

There seems to be a contradiction, therefore, between those organizations or states which want to tax air transport believing that it has enough extra income to support external causes and the air transport organizations themselves, which believe they have tightened the collective belts more than they can bear. No one would state that protection of the environment is not a noble cause. Funding that protection is the issue.

upon renegotiation of bilateral agreements, could be structured something like the following. All airlines of a state would be granted a certain amount of "pollution rights." What they would not utilize could be sold to other airlines. They could not, however, pollute more than their share or more than the shares which they purchase without paying some "penalty." In time, the emissions limits could be decreased, encouraging both reductions in emissions as well as protecting the environment.

A third approach, not linked to taxing aviation, is the environmental "covenant," in which companies can promise their consumers that they are using the most environmentally friendly technologies and techniques. Passengers can thus elect to fly on airline A, a polluter airline, for less money or airline B, a "green" airline, which abides by "environmental covenants" for a somewhat higher price.

Fourth, there are many proposals, at least in the United States, to initiate a "free flight" program. Leaving apart issues related to safety, including security, military concerns, and congestion, this system could also be implemented in Europe. Free flight or the National Route Program permits the pilot or navigator of an aircraft to choose his own flight plan. Existing flight plans currently in use are often not the shortest possible route and sometimes involve quite substantial deviations from the optimal route.⁹⁷ Furthermore, a general reduction of bottlenecks in ATC would greatly contribute to reductions in emissions. It has been well documented in Europe that having thirty-two different Air Traffic Control systems has led to many delays and congestion, especially at some airports such as London's Heathrow Airport.

What else can be done? To begin with, airlines and aircraft manufacturers can take some initiatives as well. As they find alternatives to fuel consumption, they would save money. Some ideas include: using only one engine to taxi on the runway rather than four; using electricity at the gate rather than engine-generated power; and most importantly, reduction in hours flown.

⁹⁷ At the American Bar Association meeting in June 1995, John Montgomery, Manager of the Environmental Department of American Airlines, demonstrated that if free flight saved three percent of an airline's actual flight time, it would reduce aircraft emissions much more significantly than the CAEP's proposed 16% reduction in NO_x emissions (summary of presentation on file with the *Journal of Air Law and Commerce*).

As ICAO and other bodies have stated all along, the incentives to reduce pollution should come from national governments. Thus, rather than taxing a particular activity such as aviation, states should provide incentives to industry. Industries or sectors that practice beneficial environmental measures could receive tax benefits, be permitted to purchase land at a reduced cost, or could receive benefits for research and development. This idea does not involve direct expenditures for the environment, but does promote environmental awareness and indirectly benefits everyone.

Thus, considering all factors, it appears that stricter regulatory measures to protect the environment must be taken at the global level. Short of that, such measures are not, in the long run, effective. If steps must be taken, however, at a state or regional level, it is submitted that national governments observe the principles of nondiscrimination and proportionality in assessing a levy. However, initiatives, when not taken at the global level, can best be adopted by the airline industry itself. This Essay has provided several options to protect the global environment from damage caused by civil aviation much more effective than the assessment of fiscal measures.

