

**An Assessment of Citizen Submissions to the NAFTA Commission
for Environmental Cooperation**

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Though the relationship between trade and the environment is a relatively recent topic, it has generated a huge literature as well as a small number of empirical studies. Proponents of freer trade claim that higher incomes and diffusion of technology will lead to a better environment for all, whereas some environmentalists insist that freer trade will cause a “race to the bottom” as firms - and countries - with the lowest environmental standards undercut those with higher standards. Whether there is in fact a race to the bottom or instead, a “California effect”, meaning that jurisdictions with lower environmental standards will be pressured to adopt the higher standards of nearby jurisdictions has been the subject of much debate (Cloutier, 1999). It is not a debate that I will summarize in this paper.¹ Rather I will try to deal with the specific effects one of the environmental provisions of the North American Free Trade Agreement (NAFTA).

When the administrations of Prime Minister Mulroney and Presidents Bush and Salinas were negotiating the North American Free Trade Agreement, the opponents of this agreement predicted that its implementation would lead to environmental degradation throughout the continent. Mexico would continue not to enforce its own environmental laws and regulations as Mexican industries attempted to maintain their competitive advantage over their American and Canadian counterparts. American and Canadian jurisdictions would be under pressure to lower environmental standards so as to compete with the Mexicans. And Canadian and American firms would be induced to move to Mexico, where environmental standards were lower, and then

¹For a summary of the free trade/environment debate in the North American context, see Johnson and Beaulieu (1996), pp.40-47. For a good discussion of the same issue in popular terms, see Canadian International Development Agency (1995).

export goods, which could be produced more cheaply there, back to Canada and the United States. (For an excellent summary of the claims and counter-claims with respect to the possible environmental effects of NAFTA, see Commission for Environmental Cooperation, 1996.)

To counter such criticisms, the negotiators included a number of environmental provisions in the NAFTA agreement itself. The preamble to the agreement commits the parties to “strengthen the development and enforcement of environmental laws and regulations.” Though the preambles of international agreements are not legally binding, commentators have interpreted this provision to mean that the three governments agree to harmonize environmental standards in an upward direction (Lazega, 1999; Porras, undated). Article 104 of the NAFTA mentions five international environmental agreements whose terms will supersede those of the NAFTA if they conflict with it.² Chapter Seven of the NAFTA allows each of the three countries to set its own sanitary and phytosanitary standards, and Chapter Nine allows for the setting of other standards. Chapter Eleven states that governments must not lower environmental standards to attract investment, though in the absence of a test case, it remains to be seen how such a provision could be enforced (Kirton, 1996; Housman, 1994). In addition to the provisions of

²The five are the Convention on International Trade in Endangered Species, the Montreal Protocol on the Substances that Deplete the Ozone Layer, The Basel Convention on Transboundary Movement of Hazardous Wastes, a Canadian-American agreement on the transboundary movement of hazardous wastes and the Mexican-American Agreement on the environment of the border area. (Canada, DFAIT, undated)

the NAFTA itself, the United States and Mexico have negotiated a special agreement for dealing with the environmental problems of the Mexican-American land border area (Housman, 1994; Hogenboom, 1998).

However, before NAFTA could be ratified by the three governments, the United States and then Canada held elections which resulted in changes of government in January and October 1993, respectively. Bill Clinton, a Democrat, replaced, George Bush, a Republican in January 1993; Jean Chrétien, a Liberal, replaced Brian Mulroney, a Conservative, in October 1993. During the election campaigns both the Clinton and the Chrétien teams had denounced the North American Free Trade Agreement (NAFTA) negotiated by their predecessors as insufficient on several grounds, and having come to office, they felt a need to remedy these perceived shortcomings. This was especially true in the United States, where the NAFTA needed congressional approval, whereas in Canada the overwhelming Liberal majority in the House of Commons meant that approval was a formality.

As a result, the two new governments (Mexico's government did not face an election until 1994) sent their negotiators back to the negotiating table.³ They then produced two so-called, "side", in fact supplementary agreements, one dealing with labour issues and the perceived threat to Canadian and American wages and working conditions, the other dealing with environmental issues: the North American Agreement on Environmental Cooperation (NAAEC), signed on September 14, 1993 and ratified with the main agreement.

³ On these negotiations, see Tollefson (2000) and Wilson (2000).

This Agreement has five substantive parts. Parts One and Two are fairly general in nature and commit the three governments to the ideal of sustainable development, “high and continuously improving levels of environmental protection” and the transparency of the relevant domestic legal processes, among other good things. Part Three creates a tri-national Commission for Environmental Cooperation (CEC) and describes its composition and powers. Part Four requires the parties to notify one another of proposed changes in environmental measures, and Part Five creates a special dispute resolution procedure for environmental disputes (Appleton, 1994; Housman, 1994; Kirton, 1996).

Here I am primarily concerned with the CEC, which consists of three parts. There is a Council, which meets at least once a year and consists of the cabinet level official responsible for the environment in each of the three federal governments, a Secretariat, headed by an Executive Director, and located in Montreal (Canada), which administers the NAAEC and a Joint Public Advisory Committee which consists of fifteen private individuals, five from each of the three member states. Articles 14 and 15 of the NAAEC allow private groups and individuals in any one of the three member states to file a submission (in fact a complaint) alleging that one of the governments is not implementing its own environmental legislation and describe how the CEC shall deal with such complaints. The process for dealing with complaints is complex. It involves an initial review by the tri-national Secretariat (Four-Year Review, 1998). If the complaint survives this stage, the accused government has a chance to reply. If the Secretariat still finds it worthwhile to proceed, it needs the approval of the Council to publish a “factual record” which will expose the accused government’s failure to act. What is significant about this procedure is that (1) only two of the three governments need to agree to the publication of a factual record;

that a government can be outvoted, making this a supranational institution; (2) private citizens can appeal to a transnational authority, another indication of supranationalism (Four-Year Review, 1998) (3) the transnational Secretariat can determine whether or not a complaint is well-founded enough to warrant further investigation (Four-Year Review, 1998); (4) there are no sanctions more severe than the publication of a factual record.

Article 15 of the NAAEC provides for an intergovernmental dispute resolution procedure, under which governments can accuse one another of persistent failure to enforce environmental legislation. A pattern of Article 14 cases could thus become evidence for an Article 15 panel. Under Article 15, the judges are not a Secretariat or Council, but a panel of five experts in environmental law. If a government is found not to have enforced its own environmental laws and to have done so consistently, it can be fined in the case of the Canadian government, or face trade sanctions in the case of the American and Mexican governments (Housman, 1994).⁴ As of July 2001, no government has invoked this dispute resolution method.

This paper revisits the issue of “a race to the bottom” leading to the creation of “pollution havens” by examining the trade in the goods of so-called dirty industries among NAFTA countries. (On the relationship between the concepts of a “race to the bottom” and “pollution haven”, see Jacott, Reed and Winfield, 2001). The paper continues with a summary of the citizens’ submissions to the CEC, with a view to determining whether the solution conceived by the drafters of the NAAEC has contributed to the solution of the perceived problem, that is the creation of pollution havens. A last section briefly examines a new kind of migration, that of

⁴ The Canadian government insisted on fines rather than trade retaliation because it feared that retaliation might become an excuse for American protectionist measures.

environmental issues from Article 104 and the NAAEC to a new legal basis in Chapter 11 of NAFTA, the investment chapter.

Trade in the Products of Dirty Industries

There is a widespread belief that free or freer trade in goods will cause environmentally damaging industries to migrate to jurisdictions where environmental laws and regulations are lax and thus cheap to obey. This belief relies on the distinction between so-called “dirty industries” and other industries. Dirty industries have been variously defined as “forms of production which cause above average environmental stress even with the use of end of the pipe treatment.” (Janicke et al, 1997) This definition, however, is difficult, if not impossible, to operationalize. Estimates of the damage done by a belching smoke stack or the effluent of a paper bleaching facility are difficult and time consuming to produce and are likely to result in widely different calculations, depending on the purposes for which the estimate is made. Economists have, therefore, come up with another definition, which while easy to operationalize, contains more than an element of circular logic not to mention cultural bias. Dirty industries, according to this point of view, are “those incurring the highest level of pollution abatement and control expenditures in the United States.” (Low and Yeats, 1992)

The assumed migration of so-called “dirty industries” has been the subject of at least two empirical studies. Low and Yeats (1992) studied the time period from 1965 to 1988 and found that over that time period the proportion of the products of dirty industries in world trade decreased from 19 to 15% . There was, however, a shift of some 3.5% in the origin of such products; by 1988 the proportion exported from developing countries (chiefly in South East Asia) had increased by 3.5%. Abimanyu (1996), studying APEC and ASEAN, tried to determine the

extent to which liberalization of trade has contributed to an increase in trade in the products of dirty industries, which Abimanyu defines as the paper, chemical, iron and steel and non-ferrous metal industries (a somewhat less inclusive definition than that used by Low and Yeats).

Abimanyu's study, useful and original as it is, does not mention that there has been little trade liberalization within ASEAN and APEC as such, much less any attempt to create a free trade area (Mahant, 2001). What liberalization there has been has occurred on a global level, through the GATT/WTO system. Nevertheless, if the pessimists are right, one would expect there to be some migration of dirty industries to a country with lower environmental standards in case of the creation of a free trade area, perhaps even in anticipation of the creation of such an area.

Abimanyu's study did not find such evidence, though he did find some evidence of an increased tendency on the part of Thailand and Malaysia to *import* the products of dirty industries.

This paper tries to determine if there has been an increase in the trade in the products of dirty industries among NAFTA countries since the creation of NAFTA. Tables 1 to 6 give a brief summary of overall trade among the three countries compared to trade in the products of six of the so-called dirty industries. In each case, the trade in the products of the dirty industries are set at 100 for 1991 and then calculated as proportion of that base number for succeeding years. I tried to include most of the industries included by Low and Yeats, and Abimanyu, data permitting, but left out petroleum because extreme price fluctuations can make the figures misleading. The first line of each table shows the total imports or exports between the dyad in question. I then compared trade in the dirty industries, which follows, to overall trade within that dyad. This comparison is necessary in order to determine whether the growth in the trade in the products of a dirty industry is due to a "scale" effect, that is to the growth in trade overall, or to a

“composition effect”, that is to growth in the trade in that product line (Jacott, Reed and Winfield, 2001).

A brief examination of trade statistics in Tables 1-6 shows no particular trend toward increased trade in the products of dirty industries. Tables 1 and 2, showing American and Canadian imports from Mexico are the most important here. There are only two categories of dirty products which showed a significantly faster rate of growth than trade overall, pulp and paper, and paper products. While this trend may be significant in that Mexico *is* developing an industry which is known to pose many environmental hazards, it is also true that new technologies now permit the making of paper from tropical woods. So the change is due as much to changes in technology as it is to the migration of industries.

Tables 3 and 4 show Canadian exports to the US and Mexico. Some Canadians had expressed feared that under NAFTA they might become hewers of wood and drawers of water, that is that low-valued added or environmentally hazardous industries might move to Canada whereas Americans would keep the better industries for themselves. Table 3 does not show any evidence of such trends. The only group of dirty products which showed growth in trade significantly higher than trade overall was paper articles, and that growth appears to have been compensated for by a drop a drop in sales of pulp and paper. So it appears that more processing took place in Canada. As for Canadian sales to Mexico (Table 4), the quantities of most of the dirty products sold was so low that it is difficult to identify any trends. The only exception is fertilizers, where there have been unexplained variations in shipments from year to year. But even here the overall trend does not exceed the growth in trade in all goods.

As for American exports to both Mexico and Canada (Tables 5 and 6), the statistics do

not show any strong trends toward a concentration in the trade of dirty products. The only exception is mineral tars, the export of which from the US to Canada and Mexico has increased significantly since 1991. In the case of US exports to Canada, there was a steep increase the year after NAFTA was first discussed (1992), culminating in a dramatic rise over 1995-1997, the first years that NAFTA was in force. After 1997, there was a decrease, but even by 2000, the total value of the mineral tars exported from the US to Canada was more than four times what it had been in 1991. In the case of US sales to Mexico, the increase was less dramatic, but nevertheless significant, especially over the years 1995-1997.

The fact that the US may be exporting to Canada, and to a lesser extent to Mexico, hazardous wastes for treatment or storage in Canada has received some publicity in recent months. A study by a Texas think-tank claims that Mexico has increased both the rigour and the enforcement of environmental laws, particularly those which relate to the hazardous wastes, whereas the Canadian provinces, especially Ontario, Quebec and Alberta, have licensed facilities intended for the treatment of hazardous wastes from the US (Jacott, Reed and Winfield, 2001; Mittelstaedt, 2001). The former report cites two successive Ontario Ministers of the Environment as saying that NAFTA limited their ability to block the import hazardous wastes from the US.

Preliminary investment trends confirm what the trade statistics suggest.

According to the "race-to-the-bottom" hypothesis, it was feared that Canadian and especially American firms might rush to move polluting industries to Mexico, so as to avoid more stringently enforced environmental regulations in Canada and the US. If this

hypothesis holds, investment should be “expanding most rapidly in relatively pollution intensive ... sectors”. In fact, preliminary studies indicate, that

From 1993 to 1996 US FDI flows into Mexico were low in the automotive sector, steady in computers, household appliance, and textiles, but negative in chemicals (where US investment declined 47 percent over the period) and printed products..... There is thus no general tendency for US investment to flow into sectors that are relatively high polluting. (CEC, 1999)

Thus, neither trade nor preliminary investment statistics support the predictions of an increased tendency for polluting industries to locate in Mexico and export their products from that supposed pollution haven. On the other hand, there may be a trend toward the treatment and thus shipment of hazardous wastes from the US to Canada and to a lesser extent to Mexico. Such a trend would conform to Abimanyu's (1996) finding that efforts to free trade in Southeast Asia caused Thailand and Malaysia to export more of the products of dirty industries.

Citizens' Submissions to the CEC

When the Clinton and Chrétien administrations were trying to deal with a perceived problem, that, as the result of the implementation of NAFTA dirty industries would migrate to pollution havens, one of the solutions their negotiators devised was that of giving groups and individuals the opportunity to formally launch complaints about the non-enforcement of environmental laws and regulations (Tollefson, 2000; Wilson, 2000). It is the thesis of this paper that the solution devised provides an inappropriate solution to the perceived problem. The solution is likely to result in inappropriate action because the individuals and groups launching complaints are likely

to be concerned not with the basic environmental needs of the population but with post-materialist concerns such as biodiversity or genetically modified plants.

The above categorization refers to the question, sometimes discussed among environmentalists and development experts, which asks whether the protection of the environment is a basic need, necessary for health and survival, or whether it is an extra, a post-materialist concern occupying the time and attention of those who have met their basic needs. The World Commission on Environment and Development (1987), which coined the phrase “sustainable development” represents the first point of view.⁵ Ronald Inglehart, in his book *The Silent Revolution* (1977) and in his later works (Inglehart, 1990; Abramson and Inglehart, 1995) pioneered the concept of the environment as a post-materialist concern.

It remains to determine the extent to which the NAAEC’s institutional innovation of citizens’ submissions deals with basic needs or post-materialist wants. Such a distinction, though without the labels I have attached to the categories, can be found in the NAAEC itself. Article 45.2 of the NAAEC defines an environmental law as one

... the primary purpose of which is the protection of the environment, or the prevention of a danger to human life or health through

(i) the prevention, abatement, control of the release, discharge or emission of pollutants or environmental contaminants,

(ii) the control of environmentally hazardous or toxic chemicals, substances, materials and wastes, and the dissemination of information related thereto, or

(iii) the protection of wild flora or fauna, including endangered species, their habitat, and specially protected natural areas in the Party’s territory.... (North

⁵ For a discussion of the definition of sustainable development, see Ekins (1993).

American Agreement, undated)

Adopting the distinctions between environmental laws as defined in points (i) and (ii) and point (iii). I here define any environmental issue that deals directly with the pollution of or a threat to the pollution of the air, water and the food supply as one which threatens a to a basic need. All other issues, for example, those relating to biodiversity, the ozone layer, climate change or the protection of fauna or flora are classified as post-materialist. Furthermore, I assume that so-called “dirty” industries pose a threat to basic needs, whereas post-materialist environmental issues deal with more long-term effects.

Table 7 provides a summary of all the citizens' submissions received by the end of June 2001. Table 8, which follows below, summarizes the data from Table 7.

Table 8

A Summary of the Types of Submissions Received by the Commission on Environmental Cooperation, 1995-2001

Type of Issue Addressed:

Government complained of:	Basic Needs	Post-materialist	Country Total
Canada	2	8	10
Mexico	7	6	13
US	3	5	8

Government complained of:	Basic Needs	Post-materialist	Country Total
Category Total	<u>12</u>	<u>19</u>	<u>31</u>

The table confirms the expected majority of submissions of the post-materialist type, though there appears to be a trend over time toward more complaints dealing with basic needs. All the complaints received over the course of the year June 2000 to June 2001, for example, dealt with basic needs, whereas all seven of the complaints filed during the first two years, that is 1995 and 1996, were of the post-materialist type. (For details of cases over time, see Table 7.)

Interestingly, post-materialist submissions have come from all three countries, with Canada showing the largest number. Indeed, given the fact that Canada has a population less than one third that of Mexico and one-ninth that of the US, on a per capita basis Canada produced an overwhelmingly large proportion of submissions. This finding is counter-intuitive since Canadians pride themselves on their advanced environmental standards and since one would expect that Canada's large area (It is larger than the US and hence much more thinly populated.) would produce few complaints. One possible explanation for the large number of Canadian complaints is the location of the CEC's offices. They are in Montreal, and thus Canadians may be more aware of the CEC's existence than are Mexicans and Americans.

More than half the complaints alleging damage to basic needs were complaints made against the Mexican government, though the numbers are small. Of the seven complaints, six

were by Mexican groups or citizens. The seventh was by a group in California claiming that an abandoned mine near Tijuana was posing a threat to the health of people across the border in California. (SM-98-007 on Table 7) Of the remaining basic needs complaints, three complained of the actions of regional governments; (California and Quebec), and only one (SM-00-01) dealt with the actions of a specific private firm, Molybdenum S.A. There is thus no evidence of a large number of complaints against the actions of foreign firms, or even Mexican firms. Indeed, Hogenboom (1998) finds that it is public sector firms (petrochemicals, fertilizers) which have contributed the most to increasing pollution levels in parts of Mexico.

It remains to point out that the great majority of the complaints were turned back by the CEC or withdrawn after initial scrutiny. Of the 31 complaints filed, only three have made it to the stage of the ultimate sanction available to the CEC, that is the publication of a factual report outlining the accused government's failings. In two cases, it was the Mexican government. A complaint in 1996, that the Mexican government failed to enforce environmental laws when it permitted the construction of a pier in Cozumel resulted in such a factual record (SM-96-001) as did the failure of the Mexican government to prosecute a US firm which abandoned a lead smelter in Tijuana (SM 98-007) The third case was filed by a coalition of environmental and fisher groups in British Columbia. It accuses the government of Canada of not enforcing laws designed to protect fish habitat during the construction of hydro-electric dams (SEM 97-001). So of the three cases which have received the ultimate sanction, only one, that of the abandoned lead smelter, deals with basic needs.

In three other cases (SEM 98-006, 98-004 and 99-002), one directed against each of the three governments, the Secretariat has recommended but the Council has not yet adopted a

factual record. All three are of the post-materialist type. Council adoption of a secretariat recommendation is no mere formality. In the case of the Quebec hog farmers, for example (SEM 97-003), the Council voted *not* to adopt the factual report prepared by the secretariat. It remains to be seen whether the Council will be so supranational as to defy geopolitical logic and condemn the US for its failure to protect migratory birds (SM 99-002).

Thus among the six complaints which have or may yet receive the ultimate sanction, five are clearly of the post-materialist type. The pattern of Secretariat and Council action thus clearly intensifies the overall pattern, that is post-materialist submissions have been more successful than have those dealing with basic needs.

Chapter 11 and Environmental Issues

Chapter 11 of the NAFTA was meant to protect foreign investors in any of the three countries from unfair expropriations, which in this case includes the right to earn money from investment made, in accordance with accepted international rules and procedures. Some firms and their lawyers have interpreted the right to earn a profit to include the right not to be subject to some environmental regulation. As of the spring of 2001, about half of the cases brought to arbitration (or in some cases settled before arbitration) under Chapter 11 have had an environmental component. The first and widely publicized case concerned the American based Ethyl Corporation's claim that the Canadian government's ban of the gasoline additive MMT discriminated unfairly against foreign investors since it banned the import, but not the use or manufacture of the additive. The Canadian government settled before the arbitration by paying Ethyl US\$19.3 million in compensation (Dumberry 2001).

The second case was that of an American firm, Waste Management Inc., which had a

contract to clean the streets and dispose of garbage in Acapulco. When the firm did not do what it had promised, the Mexican government cancelled the contract. The firm then tried to pursue the case in both the domestic courts in Mexico and before an international tribunal. The tribunal found that it did not have jurisdiction, since the firm had chosen to take the case to courts in Mexico (Dumberry 2001).

The third case concerns Metalclad, a US firm which the Mexican government had authorized to build a hazardous waste treatment facility near the city of Guadalupe in Mexico, only to have the permit refused by the municipality. The tribunal ordered the Mexican government to pay Metalclad compensation of US \$16.685 million. Mexico tried to appeal the case to a Canadian court, but, according to the *Los Angeles Times*, has since agreed to pay a somewhat lower amount (Dumberry 2001; Sharma 2001).

The fourth case was launched by the S.D. Myers firm against the government of Canada. It claimed that the government's temporary ban on the export and treatment of PCBs deprived the firm of the right to do this work. The Tribunal found in favour of the firm with the exact amount of compensation to be decided later. In the meanwhile, the government of Canada has appealed the award to the Federal Court of Canada (Dumberry, 2001). The fifth case, which has not yet been heard, has been launched by the Canadian firm Methanex against the government of California and thus the US. The firm is contesting a California ban on the gasoline additive MTBE. Methanex does not itself produce MTBE, but produces methanol, a major ingredient of MTBE (Dumberry 2001).

The number of environmental issues raised by Chapter 11 cases has surprised most observers. Both the Canadian and American governments would like to redefine the Chapter 11 provisions to limit them to strictly investment issues. However, the Mexican government does not wish to reopen

negotiations on this chapter (Dumberry 2001).

Conclusions/Further Research

This study has not revealed any particular tendency for dirty industries to migrate to Mexico and export their products back to the US or Canada. The only exception is the export of organic chemicals from Mexico to Canada. There is, however, some indication of the increased export of dirty products from the US to Mexico and especially to Canada. Case studies such as those by Jacott, Reed and Winfield (2001) and by Canada's federal Ministry of the Environment (Mittelstaedt 2001) are beginning to explain this trend.

This brief introductory study only suggest where further research might follow. A more detailed study of trade in dirty industries is needed. Case studies of specific industries where there has been a significant increase in trade and those where there has not been such an increase would also be interesting, as would case studies of specific "dirty" industries as against the rather general categories used here. A more detailed investigation of investment trends might also be enlightening.

Direct investment trends by industry and by country would require a special data analysis from Statistics Canada. Further studies of the diffusion of technology might help to determine if there has been a "California effect", as against a race to the bottom. At the micro-level, students of business may want to do case studies of the selling, buying and investment decisions of individual firms. Such case studies would help to explain the general trends revealed in the statistics.

With respect to the citizens' submissions, further work on the intriguing trend of the initial flurry of post-materialist submissions which became a preponderance of basic needs submissions in recent years is needed.. This finding is counter-intuitive. One would surely expect basic needs to be the initial concern. This may be a field of study for sociologists. The educated upper middle classes,

whose basic needs are for the most part met, may have been the first to be aware of the CEC and the citizens complaints procedure. Publicity about the initial cases may have led others, less endowed with intellectual and financial resources, to take up further cases.

Finally, the relationship of Chapter 11 (investment) cases to environmental issues merits further investigation. To date, the two have been studied mostly in isolation, or in some cases have become the subject of polemical denunciations. The possibility exists that a firm which has been found to have acted illegally as the result of a citizens' submission and the publication of a factual record would then become the subject of sanctions by the national government, which would, one would hope, try to act in accordance with its own laws. Once the government thus prodded took action, the firm affected could then file a Chapter 11 case, claiming that the enforcement measures were depriving the firm of the right to earn money from its investment. Such a situation would provide interesting material for further study.

TABLE I

US Imports from Mexico, Select "Dirty" Products Compared to all Goods
Percentage Change, 1991-2000

Product/Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
All goods	100% (31 130) ¹	113	128	159	199	239	276	304	352	437
Fertilizers	100% (15) ¹	88	97	275	574	575	212	186	123	62
Mineral tars	100% (4) ¹	194	260	372	139	248	152	218	205	191
Paper articles	100% (128) ¹	113	111	148	203	262	336	392	426	460
Pulp and paper	100% (2) ¹	233	342	356	391	345	395	456	274	503
Ferrous metals	100% (57) ¹	80	79	85	107	106	132	108	119	116
Organic chemicals	100 (255 426) ¹	125	87	111	145	136	158	141	148	147

1. Amount in millions of US\$.

Source: http://strategis.ic.gc.ca/sc_mrkt/t/tdst/tdo/tdo.php (June 30,2001)

TABLE 2

Canadian Imports from Mexico, Select "Dirty" Products Compared to all Goods
Percentage Change, 1991-2000

Product/Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
All goods	100% (2 252) ¹	102	128	147	173	197	225	230	285	362
Fertilizers	100% (.035) ¹	0 ²	0 ²	201	257	965	158	150	5836	251
Mineral tars	0 ²	0 ²	0 ²	0 ²	0 ²	0 ²	0 ²	0 ²	0 ²	0 ²
Paper articles	100% (968) ¹	324	732	869	1161	901	1271	2064	2462	2689
Pulp and paper	0 ²	0 ²	0 ²	0 ²	0 ²	0 ²	0 ²	0 ²	0 ²	0 ²
Ferrous metals	100% (0.454) ¹	24	337	7	53	340	237	306	947	734
Organic chemicals	100 (9) ¹	114	195	292	655	642	386	292	300	219

1. Amount in millions of US\$

2. negligible quantities

Source: http://strategis.ic.gc.ca/sc_mrkti/tdst/tdo/tdo.php (June 19, 2001)

TABLE 3

Canadian Exports to US, Select "Dirty" Products Compared to all Goods
Percentage Change, 1991-2000

Product/Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
All goods	100% (95 740) ¹	109	122	140	158	171	184	190	217	253
Fertilizers	100% (833) ¹	105	110	121	119	119	135	147	1536	149
Mineral tars	100% (37) ¹	57	35	52	127	148	138	106	125	203
Paper articles	100% (680) ¹	124	156	186	257	291	322	355	391	446
Pulp and paper	100% (66)	97	105	119	166	177	191	188	169	196
Ferrous metals	100% (179) ¹	97	123	152	203	222	246	248	187	193
Organic chemicals	100 (753 785) ¹	111	114	142	196	170	171	153	169	244

1. Amount in millions of US\$.

Source: http://strategis.ic.gc.ca/sc_mrkt/tidst/tdo/tdo.php (June 19, 2001)

TABLE 4
Canadian Exports to Mexico, Select "Dirty" Products Compared to all Goods
Percentage Change, 1991-2000

Product/Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
All goods	100% (509) ¹	132	126	156	166	181	181	194	213	269
Fertilizers	100% (833) ¹	0 ²	207	164	159	42	75	67	62	184
Mineral tars	100% (31) ¹	153	99	357	0 ²	65	24	0 ²	0 ²	4
Paper articles	100% (10) ¹	17	10	19	10	14	14	28	38	90
Pulp and paper	100% (0.2) ¹	100	0 ²	0 ²	29	23	169	380	728	77
Ferrous metals	100% (1.6) ¹	0 ²	0 ²	0 ²	116	0 ²	0 ²	197	0 ²	0 ²
Organic chemicals	100 (1.56) ¹	205	121	142	118	137	144	112	139	89

1. Amount in millions of US\$

2. negligible quantities

Source: http://strategis.ic.gc.ca/sc_mrkti/tdst/tdo/tdo.php (June 19, 2001)

TABLE 5

US Exports to Mexico, Select "Dirty" Products Compared to all Goods
Percentage Change, 1991-2000

Product/Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
All goods	100% (33 277) ¹	122	125	153	139	171	215	237	262	336
Fertilizers	100% (53) ¹	149	225	283	133	280	265	274	282	300
Mineral tars	100% (23) ¹	100	133	233	411	316	411	269	272	352
Paper articles	100% (712) ¹	124	134	164	155	174	178	200	220	254
Pulp and paper	100% (113) ¹	88	84	124	167	107	138	153	146	202
Ferrous metals	100% (296 929) ¹	119	116	134	121	150	172	159	174	193
Organic chemicals	100 (740 487) ¹	115	121	144	154	164	204	192	213	276

1. Amount in millions of US\$

Source: http://strategis.ic.gc.ca/sc_mrkti/tdst/tdo/tdo.php (June 19, 2001)

TABLE 6

US Exports to Canada, Select "Dirty" Products Compared to all Goods
Percentage Change, 1991-2000

Product/Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
All goods	100% (75 424) ¹	106	117	133	146	153	177	182	192	205
Fertilizers	100% (182) ¹	96	102	98	110	128	119	131	121	163
Mineral tars	100% (9) ¹	436	591	674	1364	1047	1260	707	470	448
Paper articles	100% (2 127) ¹	106	111	120	141	142	155	157	163	170
Pulp and paper	100% (119) ¹	88	103	132	226	148	166	161	181	245
Ferrous metals	100% (146) ¹	124	158	177	186	154	173	151	142	138
Organic chemicals	100 (1 168) ¹	102	112	136	141	155	183	185	194	196

1. Amount in millions of US\$

Source: http://strategis.ic.gc.ca/sc_mrkt/tdst/tdo/tdo.php (July 8, 2001)

Table 7
List of Public Submissions made to the Commission on Environmental Cooperation
with an interpretation of their nature

Submission Number and Date	Group or Individual Making the Submission	Government Accused	Subject of Submission	Basic Needs/ Post-materialist
SEM-01-003	Mercerizados y Teñidos de Guadalajara	Mexico	During a civil trial, government disallowed a technical opinion which demonstrates the contamination of ground water	basic needs
SEM-01-002 12/04/01	anonymous	Canada	Government is not enforcing a law prohibiting the export of pesticides and toxic substances	basic needs
SEM-01-001 14/02/01	Academia Sonorense de Derechos Humanos et al	Mexico	Government did not enforce standards with respect to the establishment of landfill for hazardous materials	basic needs
SEM -00-006 09/06/00	Comision de Solidaridad y Defensa de los Derechos Humanos Asociación Civil (COSYDDHAC)	Mexico	Denial of access to environmental justice by indigenous communities in the State of Chihuahua	post-materialist
SEM-00-005 04/06/00	Academia Sonorense de Derechos Humanos Domingo Gutiérrez Mendivil	Mexico	Failure to enforce the General Law of Ecological Equilibrium and Environmental Protection with respect to the company Molybdenum S.A. de C.V.	post-materialist
SEM-00-004 (03/15/00)	David Suzuki Foundation, Greenpeace Canada, Sierra Club of British Columbia and other groups	Canada	failure to provide high levels of environmental protection	post-materialist
SEM-00-003 03/02/00	Hudson River Audubon Society of Westchester Inc. Save Our Sanctuary Committee	US	Failure to enforce the Migratory Bird Treaty Act and the Endangered Species Act of 1973	post-materialist
SEM-00-002 01/21/00	Neste Canada Inc.	US	Failure by California to enforce laws with respect to underground storage tanks with result that gasoline continues to leak into the water and soil	basic needs
SEM-00-001	Rosa Maria Escalante de	Mexico	Air pollution from the Molymex	basic needs

Submission Number and Date	Group or Individual Making the Submission	Government Accused	Subject of Submission	Basic Needs/ Post-materialist
(01/27/00)	Fernández		S.A. de C.V. plant in violation of the law regarding air quality	
SEM-99-002 (11/19/99)	Alliance for the Wild Rockies et al	US	Failure to enforce the Migratory Bird Treaty Act	post-materialist
SEM-99-001 (10/18/99)	Methanex Corporation	US	Failure by California to enforce regulations relating to water resource protection and underground storage tanks	basic needs
SEM-98-007 (10/23/98)	Environmental Health Coalition et al	Mexico	Failure to enforce environmental laws with result that abandoned lead smelter in Tijuana poses serious threat to health of community	basic needs
SEM-98-006 (10/20/98)	Grupo Ecológico Manglar A.C.	Mexico	Failure to enforce environmental laws relating to a shrimp farm in Isla del Condo	post-materialist
SEM-98-005 (07/23/98)	Academia Sonorense de Derechos Humanos et al	Mexico	Failure to enforce environmental regulations relating to a hazardous waste landfill near Hermosillo	basic needs
SEM-98-004 (06/29/98)	Sierra Club of British Columbia et al	Canada	Failure to protect fish habitat from the effects of the mining industry	post-materialist
SEM-98-003 (05/27/98)	Department of the Planet Earth et al	US	Failure to enforce laws and treaties relating to the control of airborne emissions of dioxin/furan, mercury and other toxic substances	basic needs
SEM-98-002 (10/14/97)	Hector Gregorio Ortíz Martínez	Mexico	Failure to enforce laws and procedural violations in response to a citizen's complaint relating to a lumbering operation in the state of Jalisco	post-materialist
SEM-98-001 (01/09/98)	Instituto de Derecho Ambiental	Mexico	Failure to enforce the General Law on Ecological Balance with respect to gasoline and oil run-off after explosions in	basic needs

Submission Number and Date	Group or Individual Making the Submission	Government Accused	Subject of Submission	Basic Needs/ Post-materialist
			Guadajara	
SEM-97-007 (10/10/97)	Instituto de Derecho Ambiental	Mexico	Failure to enforce environmental laws with respect to the degradation of the Lerma Santiago River-Lake Chapal Basin	post-materialist
SEM-97-006 (10/04/97)	Friends of the Oldman River	Canada	Failure to enforce habitat protection as required by the Fisheries and Canadian Environmental Assessment Act	post-materialist
SEM-97-005 (07/21/97)	Animal Alliance of Canada et al	Canada	Failure to enforce Convention on Biological Diversity	post-materialist
SEM-97-004 (05/26/97)	Canadian Environmental Defence Fund	Canada	Failure to enforce law relating to environmental assessments	post-materialist
SEM-97-003 (04/09/97)	Centre québécois du droit de l'environnement	Canada	Failure to enforce standards relating to agriculture in Quebec	basic needs
SEM-97-002 (03/15/97)	Comité pro Limpieza de Rio Magdalena	Mexico	Allegation that waste water is being discharged into the Magdalena River without prior treatment	basic needs
SEM-97-001 (04/02/97)	B.C. Aboriginal Fisheries Commission et al	Canada	Failure to protect fish habitat from damage caused by hydro-electric dams	post-materialist
SEM-96-004 (11/14/96)	Southwest Center for Biological Diversity et al	US	Failure to enforce National Environmental Policy Act with respect to operation of Fort Huachuca army base	post-materialist
SEM-96-003 (09/09/96)	Friends of the Oldman et al	Canada	Failure to enforce habitat protection sections of the Fisheries and Canadian Environmental Assessment Acts	post-materialist
SEM-96-002 (03/20/96)	Aage Tottrup	Canada	Failure to protect wetlands and fish habitat	post-materialist
SEM-96-001 (01/18/96)	Comité para la Protección de los Recursos Naturales A.C. et al	Mexico	Failure to enforce laws relating to the evaluation of the construction of a pier on the	post-materialist

Submission Number and Date	Group or Individual Making the Submission	Government Accused	Subject of Submission	Basic Needs/ Post-materialist
	.C. et al		island of Cozumel	
SEM-95-002 (08/30/95)	Sierra Club et al	US	Failure to enforce laws relating to remedies for salvage timber sales	post-materialist
SEM-95-001 (06/30/95)	Biodiversity Legal Foundation et al	US	Failure to enforce Endangered Species Act	post-materialist

Source: http://www.cec.org/citizen/guides_registryview/.cfm?varlan=english&submissions (June 25, 2001) and linked websites describing individual submissions

Source: http://strategis.ic.gc.ca/sc_mrkti/tdst/tdo/tdo.php (June 19, 2001)

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