

Working Paper

**Regulating Transboundary Movements
of Hazardous Wastes:
The Basel Convention and
the Effectiveness of the
Prior Informed Consent (PIC) Procedure**

Jonathan Krueger
WP-96-113
September 1996



International Institute for Applied Systems Analysis • A-2361 Laxenburg • Austria

Telephone: +43 2236 807 • Telefax: +43 2236 71313 • E-Mail: info@iiasa.ac.at

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Preface

The 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes is among the dozen most important global environmental agreements currently in force. The Basel Convention includes a system of Prior Informed Consent (PIC), which regulates trade by requiring the advance consent of importing countries before a waste shipment occurs. In this paper, Jonathan Krueger evaluates the evidence on the effectiveness of the PIC mechanism.

Of special interest to researchers and policy makers alike is Krueger's conclusion that incomplete data make it difficult to assess the influence of the PIC mechanism on the behavior of waste exporters and importers. Policy debates over international environmental agreements generally focus on the issue of their effectiveness. Yet sufficient data - the basis for a robust policy assessment - is usually lacking.

Krueger completed this analysis as a participant in IIASA's Young Scientists' Summer Program (YSSP) in the summer of 1996. While at IIASA he worked with the project on "Implementation and Effectiveness of International Environmental Commitments (IEC)." His paper allows some valuable comparisons between the PIC mechanism of the Basel Convention and a similar PIC mechanism regulating trade in hazardous chemicals and pesticides, which is examined in one of the IEC case studies.

Table of Contents

1. INTRODUCTION	1
1.1. THE TRADE IN HAZARDOUS WASTES AND INTERNATIONAL ENVIRONMENTAL POLITICS.....	2
1.2. THE BASEL CONVENTION ON THE CONTROL OF TRANSBOUNDARY MOVEMENTS OF HAZARDOUS WASTES AND THEIR DISPOSAL.....	3
2. FACTORS INFLUENCING THE DECISION TO EMPLOY THE PIC PROCEDURE IN THE BASEL CONVENTION	7
2.1. THE CONTEXT OF PIC	7
2.2. POWER, INTERESTS AND PIC.....	8
2.3. PIC <i>INTER PARES</i> ? A FUNCTIONAL APPROACH.....	11
3. THE MECHANICS OF PIC: INTENDED AND ACTUAL OPERATION	14
3.1. PIC IN THEORY	14
3.2. PIC IN PRACTICE	17
4. THE EFFECTIVENESS OF PIC: HAS IT MADE A DIFFERENCE?	21
4.1. DO STATES USE THE PIC MECHANISM?.....	21
4.2. DECISION-MAKING UNDER PIC.....	25
5. CONCLUSIONS: PIC IN THE CONTEXT OF THE INTERNATIONAL REGIME TO MANAGE TRANSBOUNDARY HAZARDOUS WASTE MOVEMENTS	27
APPENDIX	31

Abstract

One of the most contentious environmental issues recognized in the 1980s was the growth in uncontrolled transboundary movements of hazardous wastes, notably from rich, industrialized countries to developing countries that lack the administrative and technological resources to dispose of or recycle this waste safely. One response to this 'toxic trade' was the 1989 *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal*. Its key regulatory provision is the mechanism of prior informed consent (PIC) which requires that Parties not export hazardous wastes to another Party unless the 'competent authority' in the state of import has been properly informed and has consented to the trade.

This paper assesses the effectiveness of PIC. It concludes, first, that the lack of adequate data regarding the functioning of PIC limits assessments of its effectiveness. This problem is best resolved by having the data on notifications and responses flow through the Secretariat of the Basel Convention so that PIC can be monitored. Presently, the Secretariat has no ability to do this.

Second, the most recent data show that waste trade proposals to non-OECD countries are increasing and rejection rates to those proposals are decreasing. Although the causes of these trends are difficult to specify, the increasing number of proposals is of concern because of the lack of administrative and financial resources in developing countries. The validity of their 'consent' is uncertain. The issue of hazardous waste trading is not only related to the functioning of PIC, but also to the capacity of the actors involved.

Third, current controversies within the Basel Convention reconsider many of the same fundamental questions that were present when PIC was chosen as the regulatory mechanism for the Convention. The debate over the effectiveness of a ban versus the effectiveness of PIC is a sideshow to the more fundamental questions about the desirability of the trade in hazardous wastes. If this trade is desired, then a functionally complex procedure such as PIC is probably necessary. However, the ability to monitor PIC must be improved.

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Regulating Transboundary Movements of Hazardous Wastes: The Basel Convention and the Effectiveness of the Prior Informed Consent (PIC) Procedure

*Jonathan Krueger**

1. Introduction

One of the most contentious environmental issues recognized in the 1980s was the growth in uncontrolled transboundary movements of hazardous wastes. In particular, there was concern about rich, industrialized countries exporting such wastes to poor, developing countries that lacked the administrative and technological resources to dispose of or recycle this waste safely. The international community responded with an attempt to regulate this 'toxic trade' in the form of the 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal. One of the key regulatory provisions of the Convention is the mechanism of prior informed consent (PIC) which requires that Parties not export hazardous wastes to another Party unless the 'competent authority' in the importing state has been properly informed and has consented to the trade.

The purpose of this paper is to outline the functioning of the PIC mechanism in the context of the Basel Convention, as well as to assess the effectiveness of PIC as a regulatory mechanism. The introduction places the transboundary movements of hazardous wastes within the wider context of international environmental politics and outlines the key features of the Basel Convention. The second section considers why a PIC procedure was chosen by the international community to regulate the hazardous waste trade, rather than another type of regulatory mechanism; the third section outlines how the PIC procedure works in theory and in practice; the fourth section evaluates the effectiveness of PIC in terms of whether it has altered the behavior of Party states and if it has allowed for more environmentally sound decision-making in this issue area; and lastly, the conclusion discusses recent developments

* Department of International Relations, London School of Economics and Political Science, Houghton Street, London WC2A 2AE, UK. Email: j.p.krueger@lse.ac.uk.

within the international waste trade regime and considers the question of PIC being superseded by a ban on certain types of waste trading.

1.1. The Trade in Hazardous Wastes and International Environmental Politics

International awareness of the problems associated with the trade in hazardous wastes increased noticeably during the 1980s due to several factors: the increasing amounts of wastes being generated, closure of old waste disposal facilities and political opposition to the development of new ones, and the dramatically higher costs associated with the disposal of hazardous wastes in industrialized countries and thus the potential for profits made by exporting such wastes to countries with low disposal costs (i.e. developing countries).¹ Although exact figures regarding the generation and trade in hazardous wastes are quite difficult to obtain, due partly to the fact that the definition of 'hazardous' varies in different countries and regions and because there remains a substantial number of illegal waste trade operations that cannot be precisely quantified, some generally accepted figures are:

- 300-500 million tons of hazardous wastes are generated internationally each year²
- the majority of this waste (80-90 percent) is produced by OECD countries (and especially the United States), of which roughly 10-15 percent is shipped across international boundaries
- the majority of traded hazardous waste (80-90 percent) is traded amongst industrialized countries
- approximately 5.2 million tons of hazardous waste were exported by industrialized states to eastern Europe and developing countries in the period 1986-90, and 2.5 million tons exported from OECD to non-OECD countries between 1989 and March 1994

¹ Laura A. Strohm, "The Environmental Politics of the International Waste Trade," Journal of Environment and Development 2, 2 (Summer 1993): 129-53.

² These figures are taken from the following sources: OECD, The State of the Environment, 1991 (Paris: OECD, 1991); Katharina Kummer, International Management of Hazardous Wastes: The Basel Convention and Related Legal Rules (Oxford: Clarendon Press, 1995), 5-7; Christoph Hilz and John R. Ehrenfeld, "Transboundary Movements of Hazardous Wastes: A Comparative Analysis of Policy Options to Control the International Waste Trade," International Environmental Affairs 3, 1 (1991): 26-63; UNEP, Environmental Data Report 1993-94 (London: Blackwell, 1994); Greenpeace, Database of Known Hazardous Waste Exports for OECD to non-OECD Countries; and OECD, Transfrontier Movements of Hazardous Wastes: 1991 Statistics (Paris: OECD, 1994). For a more skeptical argument that hazardous waste trading is neither as 'big' nor as dangerous as is often claimed, see Mark A. Montgomery, "Reassessing the Waste Trade Crisis: What Do We Really Know?" Journal of Environment and Development 4, 1 (Winter 1995): 1-28.

- disposal costs in the late 1980s varied from a low of US \$2.50-50 per ton in Africa to \$100-2000 per ton in industrialized countries

In addition to these general trends regarding hazardous waste management, there were a number of prominent cases of international hazardous waste *mismanagement* including the voyages of the 'toxic waste ships' *Khian Sea* and *Karin B* and the dumping of Italian PCBs in a farmer's backyard in Koko, Nigeria.³ As will be discussed in section 2 of this paper, the politics of North-South waste transfers were especially important in contributing to the development of a global legal instrument. Combined with the increased concern for environmental issues that characterized public opinion in industrialized countries in the late 1980s, these elements formed the wider international context regarding the debate over controlling transboundary hazardous waste movements during the late 1980s. The apex of this debate was reached in 1989 with the establishment of the Basel Convention.

1.2. The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal

The Basel Convention was negotiated under the auspices of the United Nations Environment Programme (UNEP) between 1987 and 1989.⁴ Prior to this, in 1981, the Governing Council of UNEP mandated a group of senior government experts to determine major subject areas in need of increased cooperation in the field of international environmental law. Known as the Montevideo Programme for the Development and Periodic Review of Environmental Law, one of the conclusions of the group was that the transport, handling and disposal of toxic and dangerous wastes was a major subject area in which UNEP should prepare guidelines and principles which could lead to a global convention. In 1985, the non-binding *Cairo Guidelines and Principles for the Environmentally Sound Management of Hazardous Wastes* were published, and then approved by UNEP in June of 1987. In addition to the declared aim of ensuring the protection of human health and the environment

³ For a good popular account of the developments during this period, see Bill C. Moyers, *Global Dumping Ground: The International Traffic in Hazardous Waste* (Cambridge: The Lutterworth Press, 1991).

⁴ See Iwona Rummel-Bulska, "The Basel Convention: A Global Approach for the Management of Hazardous Wastes," *Environmental Policy and Law* 24, 1 (1994): 13-18; Kummer, *International Management of Hazardous Wastes*, 38; Willy Kempel, "Transboundary Movements of Hazardous Wastes," in Gunnar Sjöstedt, ed., *International Environmental Negotiation* (Newbury Park: SAGE Publications, 1993), 48-62; and Hilz and Ehrenfeld, "Transboundary Movements of Hazardous Wastes: A Comparative Analysis of Policy Options to Control the International Waste Trade", 26-63.

against the effects of hazardous wastes, the Cairo Guidelines also adopted the principle of prior informed consent by states of import and transit for the transborder movements of such wastes.⁵

Also in June 1987, the Governing Council of UNEP requested that the Executive Director prepare a global legal instrument to control transboundary movements of hazardous wastes. The Ad Hoc Working Group of Legal and Technical Experts charged with elaborating a global convention began their deliberations in October of 1987 and completed a total of five further meetings ending with the establishment of the Basel Convention in March, 1989.⁶ Experts from ninety-six states participated in one or more of the often contentious negotiating sessions, and representatives of over fifty international organizations and NGOs attended as observers.⁷ There are now 101 Parties to the Convention (as of March 1996), with the only significant non-Party being the United States.⁸

The objectives of the Basel Convention are to minimize the generation of hazardous wastes and to control and reduce their transboundary movements so as to protect human health and the environment. In order to achieve these objectives, the Convention contains several general obligations. For example, waste exports are prohibited to Antarctica (Art. 4.6) and to countries that have banned such imports as a national policy (Art. 4.1); additionally, waste exports to non-Parties are prohibited unless they are subject to an agreement that is equally stringent to the Basel Convention (Art. 4.5 and 11).⁹ Those hazardous waste transfers that *are* permitted under the Basel regime are subject to a mechanism of prior informed consent (PIC).

Wastes are designated as 'hazardous' if they belong to certain categories (Annex I of Basel) or contain certain characteristics (Annex III). The debate over how to determine which wastes are hazardous and which are not was a contentious one during the negotiations (due to

⁵ See Kummer, 39. Also, *Cairo Guidelines and Principles for the Environmentally Sound Management of Hazardous Wastes*, UNEP Governing Council Decision 14/30, 17 June 1987; Guideline 26(f) is the PIC clause.

⁶ These meetings took place as follows: February, 1988; June 1988; November 1988; February 1989; and March 1989.

⁷ Kummer, 40.

⁸ For a full listing of Parties and ratification dates, see the newsletter of the Secretariat of the Basel Convention, *Managing Hazardous Waste*, 8 (March 1996).

⁹ Taken together, these prohibitions on exports are sometimes referred to as the 'limited ban'. This should not be confused with the more recent ban on exports from OECD to non-OECD countries as decided in 1994 (Decision II/12) -- this will also be discussed below.

the fact that different national definitions of 'hazardous' often reflect different economic and environmental priorities) and remains contested in the on-going debates regarding wastes destined for recovery and recycling. Furthermore, hazardous wastes are to be managed in an 'environmentally sound manner' and should not be transferred unless this can be assured. The Basel Convention defines 'environmentally sound management' as "taking all practicable steps to ensure that hazardous wastes or other wastes are managed in a manner which will protect human health and the environment against the adverse effects which may result from such wastes" (Art. 2.8). Once again, however, this definition has proven to be controversial with some critics arguing that is overly vague; it is not clear, for example, whether the criteria for 'environmentally sound' is to be determined by the importing or the exporting country.¹⁰

Lastly, the Basel Convention contains provisions regarding international cooperation (Art. 10) and exchange of information (Art. 13).¹¹ Less well-developed are the terms setting out financial responsibilities (with respect to both financing of Convention activities and establishment of an emergency fund) and this is proving a hindrance to the successful functioning of the Convention.¹²

The evolution of the Basel Convention since its adoption has been described in detail elsewhere.¹³ However, the most significant recent development is the effort to ban hazardous waste exports from rich to poor countries (culminating with Decision II/12 of the Basel Convention). As will be discussed below, the developing countries wanted a global ban on the trade in hazardous waste from the beginning of the negotiations on the Basel Convention. When Basel resulted in a PIC regulatory mechanism instead of a ban, the developing countries continued to press for their preferred outcome in other fora. Directly following Basel, the EC agreed, in the context of the Lomé IV Convention, to stop exports to African, Caribbean and

¹⁰ See, for example, David J. Abrams, "Regulating the International Hazardous Waste Trade: A Proposed Global Solution," Columbia Journal of Transnational Law 28, 3 (1990): 827-31; also, Christoph Hilz and Mark Radka, "Environmental negotiation and policy: the Basel Convention on transboundary movement of hazardous wastes and their disposal," International Journal of Environment and Pollution 1, 1/2 (1991): 55-72.

¹¹ On these points, see Kummer, 73-4.

¹² See below, Section 3.2.

¹³ See especially Stroh; Montgomery; Roberto Sánchez, "International Trade in Hazardous Wastes: A Global Problem with Uneven Consequences for the Third World," Journal of Environment and Development 3, 1 (Winter 1994): 137-52; and Armin Rosencranz and Christopher L. Eldridge, "Hazardous Wastes: Basel After Rio." Environmental Policy and Law 22, 5/6 (1992): 318-22.

Pacific (ACP) states.¹⁴ Then, in 1991, the OAU signed the Bamako Convention which, although in many ways similar to Basel, banned the import of hazardous waste into the African continent.¹⁵

These developments paved the way for the 1994 decision by the Conference of Parties of the Basel Convention to ban immediately the export of hazardous wastes from OECD to non-OECD countries for final disposal and, by 1998, ban those wastes intended for recovery and recycling. This decision, originally known as Decision II/12 and then as Decision III/1 (once the ban was formally adopted as an amendment to the Convention), is currently the most controversial aspect of the Convention. More specifically, it is the decision to ban exports of wastes intended for *recovery and recycling* that is proving contentious. Because of the economic interests of certain industrialized countries, and increasingly, developing countries as well, in the maintenance of a trade in wastes for recycling, the ban may or may not be endorsed (the amendment must be ratified by two-thirds of the Parties to enter into force).¹⁶ I will return to this issue in the conclusions of this report.

¹⁴ See Kummer, 107-12; Jennifer Clapp, "Africa, NGOs and the International Toxic Waste Trade," Journal of Environment and Development 3, 2 (Summer 1994): 17-46.

¹⁵ Successful implementation of the Bamako Convention remains in serious doubt, although its influence on the international debate (in creating momentum for a ban) should not be overlooked. See Clapp, 28; Kummer, 99-107; J. Wylie Donald, "The Bamako Convention as a Solution to the Problem of Hazardous Waste Exports to Less Developed Countries," Columbia Journal of Environmental Law 17, 2 (Fall 1992): 419-58; Wordsworth Filo Jones, "The Evolution of the Bamako Convention: An African Perspective," Colorado Journal of International Environmental Law and Policy 4 (1993): 324-42.

¹⁶ The debate turns on the question of which wastes are defined as 'hazardous' for the purposes of recycling and recovery; a Technical Working Group has been assigned the task of drawing up the list of banned wastes for report to the Convention in 1997. See "Toxic waste exporters face ban," Financial Times (25 September 1995); and "Loopholes left in ban on hazardous waste exports," ENDS Report 248 (September 1995): 41. For an update on the progress of the Technical Working Group to define what is and is not included in the ban, see "Basel parties make progress on hazardous waste lists," ENDS Report 255 (April 1996): 46-7. Both Canada and Australia have noted that their support for Decision III/1 will be contingent on the results of the Technical Working Group (see Annex II and III of the Report of the Third Meeting of the Conference of the Parties to the Basel Convention, UNEP/CHW.3/34, 17 October 1995). Developing countries, specifically India and Brazil, are also voicing concerns about the economic costs of the ban (see the ENDS Reports listed above). Industry in general is extremely hostile to the ban for recycling, and characterizes it as being economically inefficient, patronizing to developing countries, and contrary to the principle of free trade; see John C. Bullock, "The Basel Convention and Trade," Paper for the Global Environment and Trade Study, 19 January 1996; and ENDS Reports listed above. A further controversy is over the question of whether or not Article 11 of the Basel Convention (which allows for trade with non-Parties as long as it is subject to an agreement that is not less 'environmentally sound' than Basel) applies to the ban.

2. Factors influencing the decision to employ the PIC procedure in the Basel Convention

The core regulatory mechanism in the Basel Convention is the prior informed consent procedure. It requires that parties export hazardous wastes only when the 'competent authority' in the importing state has been properly informed and has consented. The purpose of this section is to explain why the PIC mechanism was chosen, rather than some other form of regulation. Indeed, several other alternatives were actively considered, such as a simple notification procedure and a trade ban. It is argued that three specific factors influenced the decision to adopt PIC: (1) the larger context in which the Basel Convention negotiations and the PIC option were negotiated; (2) the distribution of power and interests among the various coalitions of actors who pushed for the different alternatives; (3) the ease of implementation (the 'functional' dimension) of PIC and the alternatives.

2.1. The context of PIC

Although the Basel Convention was negotiated under the auspices of the UNEP in the late 1980s, the issue of transboundary movements of hazardous wastes had been a concern of UNEP and other bodies (such as the EC and OECD) since the early 1980s.¹⁷ The UNEP *Cairo Guidelines* adopted the principle of PIC as early as 1985. Beginning in 1981, the OECD Waste Management Policy Group began to consider issues connected with the cross-border movements of hazardous wastes.¹⁸ Spurred on by the 'Seveso affair' of 1983 and the efforts of the EC in 1984, the OECD Council adopted a Decision and Recommendation on transfrontier movements of hazardous wastes in February, 1984 which required the prior *notification* of the 'competent authorities' before a transborder shipment could take place.¹⁹ A

¹⁷ See, for example, Rummel-Bulska, "The Basel Convention: A Global Approach for the Management of Hazardous Wastes", 13-18; Kummer, International Management of Hazardous Wastes, 38; Kempel, "Transboundary Movements of Hazardous Wastes", 48-62; Henri Smets, "Transfrontier Movements of Hazardous Wastes: An Examination of the Council Decision and Recommendation," Environmental Policy and Law 14 (1985): 16-21; and Carlo Ripa di Meana, "Hazardous Waste Shipments: Regulation within the EC," Marine Policy 14, 3 (May 1990): 271-274.

¹⁸ See Smets, 16.

¹⁹ The Decision relates to both movements between OECD member countries as well as movements involving members and other countries (although the Decision retained legal force only for those OECD member countries which adopted it); see Smets, 17-18. See also, Elli Louka, Overcoming National Barriers to International Waste Trade: A New Perspective on the Transnational Movements of Hazardous and Radioactive Wastes (Dordrecht: Graham and Trotman, 1994), 45-46. The Seveso incident was the discovery of 41 'missing' drums of topsoil contaminated with highly toxic dioxin from the 1976 explosion at the Seveso chemical plant in Italy in a barn in northern France.

1986 OECD Recommendation formally proposed prior informed consent as a necessary prerequisite for waste exports.²⁰ The EC also began to explicitly address the issue of transboundary movements of hazardous wastes with its December, 1984 Directive 84/631 to control such movements within its domain. The 1986 amendment to this directive prescribed prior notification and informed consent for movements within and outside of the Community.²¹

Thus, when negotiations began in 1987 for a *global* legal instrument to control the trade in hazardous wastes, the principle of PIC was already an important component of several other efforts to address the same problem. It should also be noted that parallel developments in the field of hazardous chemicals and pesticides would have contributed to the growing acceptance of PIC as a regulatory mechanism in international environmental relations. As early as 1977 the Governing Council of UNEP had affirmed that such chemicals should not be exported without the knowledge and ‘consent’ of appropriate authorities in the importing country.²²

2.2. Power, Interests and PIC

As in other international negotiations, key decisions are influenced by the different priorities and interests of the involved actors. Often there are divergent views even regarding what the aims of a specific agreement are. Underlying the negotiating positions of the two main protagonists at the Basel conference (the developing countries and the industrialized

²⁰ Louka, 45, n.91. It is worth noting that many of the ideas being put forward by the OECD were eventually incorporated into the Basel Convention (such as the International Waste Classification Code of 1988). In early 1989, the OECD suspended further work on this issue, awaiting the outcome of the Basel talks; it then decided to continue work only in the technical fields of hazardous waste management (including recycling) and transport. See Kummer, 161.

²¹ See Kempel, 49; Ripa di Meana, 271-274; and Louka, 45-46. Within two years of the 1986 Directive, however, only three countries had incorporated it into national regulations; see Brian Wynne, “The toxic waste trade: international regulatory issues and options,” *Third World Quarterly* 11, 3 (July 1989): 120-146.

²² Robert L. Paarlberg, “Managing Pesticide Use in Developing Countries,” in Peter M. Haas, Robert O. Keohane and Marc A. Levy, eds., *Institutions for the Earth: Sources of Effective International Environmental Protection* (Cambridge MA: The MIT Press, 1993), 317. According to Paarlberg, the phrase ‘prior informed consent’ was coined by David Bull of OXFAM. The story of PIC in relation to chemicals and pesticides is an interesting one and particularly relevant to the case of hazardous wastes. As PIC in chemicals is under the auspices of both UNEP and the FAO, it is interesting to note that PIC for chemicals and pesticides was also endorsed by the FAO (in its Code of Conduct) in November 1987 but not by UNEP’s London Guidelines (the chemicals and pesticides equivalent of the Cairo Guidelines) until May 1989, two months after the conference establishing the Basel Convention.

countries) were powerful political and economic interests that sought to employ various resources in order to influence the outcome. This section outlines the competing interests present at the Basel negotiations and considers how the power resources available to the actors were influential in determining that a PIC mechanism was chosen.

As the negotiations neared their final session in Basel in March of 1989, both the number of participants and the tone of the rhetoric continued to increase.²³ Many countries who had not participated in previous negotiating sessions became involved at the last minute. These problems were in turn exacerbated by the strict time schedule of the final conference (three days). By most accounts, the Executive Director of UNEP played an important role here in convening informal negotiations of representatives of the key conflicting viewpoints, without which there may not have been agreement on the final text by the plenary session.²⁴

Industrialized countries argued that the aim of Basel should be to manage, but not eliminate, the trade in hazardous wastes. In seeking as few restrictions as possible, they asserted that a global ban would deprive poor countries of a means to earn needed foreign currency and interrupt a legitimate and valuable trade in wastes that could be recycled. Of course the word 'value' is important here as both the profits gained by exporting wastes for recycling and recovery, and the costs avoided by exporting wastes for disposal, are very significant. According to OECD estimates, the recoverable waste trade alone was valued at US \$16 billion in 1989²⁵; when added to the growing amounts of hazardous wastes being generated in industrialized countries that face drastically increasing disposal costs at home, their economic interest in not restricting hazardous waste transfers is readily apparent.

The developing countries, on the other hand, clearly stated that the aim of Basel was to end transfers of toxic wastes (sometimes referred to as 'toxic imperialism') and thus advocated a complete and global ban. To support this position, they employed the effective moral argument that rich countries should simply not dump *their* waste in poor countries. Although it is not the largest component of hazardous waste trading, the 10-20 percent of traded hazardous waste which is transferred from North to South had a particular symbolic

²³ The number of states represented at the Working Group sessions increased from 24 at the first organizational meeting to almost 80 at the last session; see Kummer, 45. With respect to rhetoric, the Chair of the OAU reiterated at the opening session in Basel the position of the OAU that the dumping of toxic wastes on the African continent was a crime against all of Africa and its peoples; see Tolba, 207.

²⁴ Kummer, 44-45; Kempel, 52; Clapp, 26.

²⁵ Kummer, 9.

and political importance that could not be ignored and it gave developing countries leverage in their negotiating position.²⁶ Particularly damaging individual cases of hazardous waste transfers were also well publicised at the time, in large measure due to the influence of other actors (NGOs, and Greenpeace in particular) who lobbied hard to push the industrialized states into accepting more regulation.²⁷ Industry, on the other hand, was not as influential as the NGOs in the early stages.²⁸ The political pressure on industrialized countries to be seen as taking more restrictive measures against hazardous waste trading was considerable.

Moral arguments, despite their significant influence, do not alter the relative political and economic power of actors in the international system however. As with other areas of international politics, then, the large number of poor developing countries could not completely dictate terms to the powerful industrial countries. According to some commentators, the industrialized countries “used the implicit threat of continuing the status quo [that is, to oppose any new regulations] to bend the negotiations in their favour”, and this use of economic power was greatly resented by developing countries.²⁹ Moreover, as PIC was also becoming policy in the OECD and the EU, it was perhaps less difficult for industrialized countries to agree on a functionally similar principle in an *international* forum.³⁰ The PIC mechanism, which conformed to the management-oriented approach favoured by industrialized countries, was the result.

²⁶ Kempel, 49-51. See also, Cristoph Hiltz, The International Toxic Waste Trade (New York: Van Nostrand Reinhold, 1992), 150.

²⁷ Greenpeace began its waste trade campaign in 1987 and published a quarterly newsletter entitled *Waste Trade Update* (renamed *Toxic Trade Update* in 1992); it has been asserted that Greenpeace’s extensive research efforts have given it an expertise on this issue that is virtually unmatched. Furthermore, during the negotiations on the Convention, several African governments briefed Greenpeace on the proceedings of the closed meetings, much to the consternation of industrialized countries and industry. In turn, Greenpeace provided developing countries with information and knowledge about hazardous wastes. Lastly, Greenpeace linked up with other environment and development NGOs to form the International Toxic Waste Action Network (ITWAN) in order to promote the ‘global ban’ option during the negotiations. See Clapp, “Africa, NGOs, and the International Toxic Waste Trade.”

²⁸ Clapp, 29. Kempel, 51. However, with the development of the OECD to non-OECD ban, industry has taken a much more active role in the Basel process (Personal Communication, U.K. Department of the Environment, 1 April 1996).

²⁹ Hiltz and Radka, “Environmental negotiation and policy: the Basel Convention on transboundary movement of hazardous wastes and their disposal”, 67.

³⁰ See, for example, Abrams, 827.

2.3. PIC *inter pares*? A functional approach

A final consideration which led to the use of a PIC mechanism in the Basel Convention were the functional differences between PIC and the other options considered by the participants in the negotiations leading to the Convention. Three regulatory measures were considered: (1) a global ban on all transboundary movements of hazardous wastes;³¹ (2) a PIC mechanism; and (3) a simpler prior notification system.

As a *structural control*, a global ban would have been administratively simplest to implement, as all designated wastes would immediately become illegal and there would be no need to assign hazard or risk levels to different shipments, or to initiate bureaucratic procedures for processing requests for waste trading. However, it is also argued that a complete ban would be virtually impossible to monitor because it would have the effect of driving waste transfers ‘underground’ and would turn the regulation of the hazardous waste trade into a policing operation.³² As a result, the difficulties and costs of ensuring *compliance* with a ban are quite significant. Moreover, industry argued that a ban would be ‘economically inefficient’ and, naturally, preferred a management oriented approach.³³

Unlike a structural control which prevents some activity, a *process control* places conditions on the operation of that activity. Both prior informed consent and notification may be seen as process controls, with PIC being the stronger option. However, implementation of PIC is complex. There are high financial, administrative and bureaucratic costs when all proposed waste transfers have to be evaluated for risk and then monitored to the point of final disposal.³⁴ Clearly this is not only a problem for industrialized countries but “borders on the unrealistic in the case of developing countries”.³⁵ These high costs, unless fully met, are likely

³¹ The use of the term ‘ban’ in this context should not be confused with either the ‘ban’ on trade with non-parties that was part of the original Convention, nor the OECD-non-OECD ban which has developed more recently (Decision II/12). Here, the term refers to the developing country position of advocating a complete and global ban of all transboundary hazardous waste movements.

³² Montgomery, “Reassessing the Waste Trade Crisis: What Do We Really Know?”, 21.

³³ See Bullock, “The Basel Convention and International Trade.”

³⁴ Petsonk has characterized the opposition to PIC by industrialized countries as a concern that it would “generate too much paperwork”; Carol Annette Petsonk, “The Role of the United Nations Environment Programme in the Development of International Environmental Law,” American University Journal of International Law and Policy 5, 2 (1990): 351-91. As early as 1986, US industry was opposed to PIC because it was “inherently impractical, burdensome, and bureaucratic”; see Cyrus Mehri, “Prior Informed Consent: an Emerging Compromise for Hazardous Exports,” Cornell International Law Journal 21 (1988): 365-89.

³⁵ Katharina Kummer, Transboundary Movements of Hazardous Wastes at the Interface of Environment and Trade (UNEP: Environment and Trade 7, 1994): 58.

to restrict the ability of actors to achieve their goals (in this case, to control transboundary movements of hazardous wastes) with a PIC mechanism.

The last option, a simple prior notification system, where the exporter does have an obligation to inform the importer of a shipment but can then proceed without waiting for approval, would have fewer associated costs than PIC while at the same time allowing for limited regulation, and therefore monitoring, of the waste trade. However, by removing the 'consent' aspect, importing countries may be exposed to environmentally damaging transfers of hazardous wastes.

During the negotiations themselves, and consistent with their view regarding the aims of the agreement, the developing countries and NGOs supported a complete and global ban of all transboundary movements of hazardous wastes. Industrialized countries, on the other hand, were generally opposed to any measures that would place too many restrictions on their ability to trade in wastes (especially those wastes that were recyclable and had a higher economic value) and argued for a procedure of prior notification by the exporting state.³⁶ Interestingly, UNEP agreed that trade should be regulated (by PIC) rather than banned completely because in some cases it could be more environmentally sound to dispose of waste in a country other than the one where the waste originated.³⁷ Predictably, this drew criticism from the NGOs who were not pacified by the UNEP argument that the purpose of the convention was to protect the rights of developing countries to refuse waste imports.³⁸

The compromise agreed at the end of the final session was the rejection of a global ban in favour of regulation in the form of the PIC mechanism. It is difficult to determine the extent to which the functional differences between a PIC mechanism, a notification system and a ban were important *in themselves* in the final decision to use PIC (that is, to divorce

³⁶ Petsonk argues that exporting countries and industry also opposed PIC because it would run afoul of the GATT; Petsonk, 383. However, others have suggested that the question of GATT compatibility was neither raised by the participants nor by observers from the GATT in the period 1987-89 (Personal Communication, Secretariat of the Basel Convention, 17 April 1996).

³⁷ The then Executive Director of UNEP, Mostafa Tolba, has characterized this as "the debate between strict control and outright ban"; see Mostafa K. Tolba, "The global agenda and the hazardous waste challenge," *Marine Policy* 14, 3 (May 1990): 207. For a more detailed account of the various actors, strategies and issues other than PIC, see Kempel, "Transboundary Movements of Hazardous Wastes" and also Clapp, "Africa, NGOs, and the International Toxic Waste Trade," 17-46.

³⁸ A PIC mechanism theoretically respects the sovereignty of the importing state (i.e. developing countries) by giving it the 'choice' to accept or reject wastes; see Tolba, 208; Clapp, 24; and Kummer, *International Management of Hazardous Wastes*, 43.

considerations of the merits of each regulatory approach from the political and economic interests of the participating states). All approaches entail costs (either financial, administrative, or both), and PIC was the *most* functionally complex of the options. However, it was the ‘middle ground’ between a ban and notification. The decision to choose PIC in no way guaranteed that the Convention would proceed. In fact, both OAU member states (except Nigeria) and several important industrialized states (including the then West Germany, the USA and the UK) deferred signing the final text (albeit for exactly opposite reasons) which, in the words of one participant, showed “how precarious the agreed compromise was”.³⁹ The total number of states signing the Convention at the final conference was only 35 and the African states preferred at that time to create their own instrument, the Bamako Convention, which did make imports of hazardous waste from industrialized countries illegal.

In sum, the decision to employ a PIC procedure in the Basel Convention was the result of three inter-related factors: the previous endorsement of PIC as a regulatory mechanism for hazardous waste trades in other fora (OECD and EC) prior to the Basel Convention; the underlying economic and political interests of the two main coalitions at the negotiations which resulted in decision to employ PIC as a compromise procedure; and, to a lesser degree, the functional differences between PIC and the other considered alternatives. PIC may be seen as a compromise regulatory procedure reflecting both the economic interests of the North (by not instituting a ban) and the moral and political force of Southern arguments (by restricting more heavily than the ‘powerful’ would have desired).⁴⁰

³⁹ Kummer, 45.

⁴⁰ In fact, there is disagreement among observers as to whose interests the Basel Convention most closely reflected; compare the account of Kempel, p. 58 (that developing country interests prevailed) with that of Clapp, p. 26 (that the Basel outcome was ‘against the wishes’ of African governments and Greenpeace). It is suggested here that there was more ‘compromise’ to Basel than either of these two positions would allow, as the PIC procedure was functionally a ‘middle position’ between two extremes (this does not mean, of course, that either side was then satisfied with the outcome). See, for example, Abrams, “Regulating the International Hazardous Waste Trade: A Proposed Global Solution”, 823; also Mehri, 366.

3. The Mechanics of PIC: Intended and Actual Operation

The Basel Convention contains some prohibitions on waste exports, such as to Antarctica, but all waste transfers that *are* permitted must be subject to the PIC mechanism. In some cases, applying PIC has been relatively easy -- notably to countries that have banned all imports of waste. This section describes how the PIC mechanism was intended to work, and how it has actually worked in practice.

3.1. PIC in theory

The regulations governing the PIC procedure in the Basel Convention are found in Articles 6 and 7, and in Annex VA and VB. Parties to the Convention are responsible for designating at least one national 'competent authority' who is responsible for the administration of the procedure. In most cases, designated competent authorities are offices within national environment or foreign affairs departments.⁴¹ The PIC procedure applies to export states, import states and transit states who are Parties to the Basel Convention.⁴²

PIC requires the exporting state to notify the prospective states of import and transit of any intended transboundary movements of hazardous wastes. This information, provided by either the generator or exporter of the waste through the designated authority or by the state itself, must enable the states of import and transit to assess the nature and the risks of the intended movement. Annex VA specifies the type of information to be given, including, among other things, the reason for export, the nature of the wastes and the method of disposal. In order to promote standardization in this respect, the Secretariat of the Convention has prepared an implementation manual for Parties which includes draft notification forms, tips on how to fill them out, and lists of competent authorities.⁴³

The importing state must then respond in writing to the notification, and either consent to the movement, deny permission or request more information. If there is to be a transfer, the importer must confirm the existence of a contract between the exporter and the disposer which confirms the 'environmentally sound' management and disposal of the waste.⁴⁴ Copies of the

⁴¹ For the list of competent authorities registered with the Basel Convention, see the March 1996 issue of the newsletter of the Secretariat of the Basel Convention, Managing Hazardous Wastes 8 (March 1996).

⁴² The following summary is largely based on Kummer, The International Management of Hazardous Wastes, 65-70, as well as the relevant Articles of the Basel Convention.

⁴³ See UNEP/CHW.3/Inf.3, 23 June 1995. The notification form may be found in Annex I, p.25.

⁴⁴ It is worth recalling the Basel definition of 'environmentally sound', and its limitations, given in Section 1.2.

written response must also be sent to the competent authorities of all the states involved in the transaction (Art. 6.2 and 3.b) and the exporting state must not allow the transfer to begin until it has received written consent (as well as confirmation of a disposal contract).⁴⁵ Once the movement begins, furthermore, a document detailing the waste (similar to a manifest) must accompany the waste at all times. Lastly, after completion of the operation, the exporter must be informed that final disposal has taken place (Art. 6.9).

The position of transit states within the PIC procedure was a subject of controversy during the negotiations. The developing countries wanted to bestow the same powers of consent as was given to import states, whereas the industrialized states argued that this would be contrary to rights of passage as stipulated by international law. The compromise reached was that different rules apply to Party transit states and non-Party transit states. In general, Party transit states have the same ability to permit, deny or request more information regarding a proposed movement as import states, although they are also able to waive this right and allow for 'tacit consent' if they have informed the Secretariat that this is their intention (Art. 6.4). The duties of non-party transit states, on the other hand, are less clear. Due to the political differences of the participants, the wording regarding non-Party transit states is vague and only indicates that notification is required, leaving the question of consent intentionally imprecise.⁴⁶

If any of these procedures are contravened in any way, the waste shipment involved becomes 'illegal' in the context of the Convention and the environmentally sound disposal of the waste becomes the responsibility of the offending Party. For example, if the fault lies with the exporter for commencing a movement before written consent is received, then re-importation of the waste may be required. Similarly, if the importing state is the offender by having consented to a transfer that cannot be handled in an environmentally sound manner, then it becomes responsible for its safe disposal.⁴⁷

⁴⁵ However, there is no requirement for the state of export to verify the *contents* of the contract between exporter and disposer; the transaction may begin simply on the verification that the contract exists. See Kummer, 66.

⁴⁶ It has been suggested, however, that in keeping with the aims of the Convention (and the general obligation that movements involving non-Parties should be no less environmentally sound than those involving Parties) the consent obligation should also apply to non-Party transit states. See Kummer, 68-9.

⁴⁷ Article 9. For comment, see Kummer, 70-2, 219-22. A developing countries' proposal that exporting states should bear exclusive responsibility except when the importer or disposer *alone* is at fault was rejected by the industrialized countries; Kummer, 220.

Both of these scenarios, however, are limited by the question of how to *enforce* liability in the case of an illegal movement or an environmentally damaging transfer.⁴⁸ This situation is compounded by the (in)ability of the Secretariat to monitor the functioning of the PIC procedure, which is limited at best, because there is no requirement to send copies of notifications and responses to the Secretariat (unless it is believed that the environment would be harmed by a given proposal).⁴⁹ These two deficiencies (of enforcement and monitoring) are notable limitations to a fully functioning PIC system.⁵⁰

The Convention also contains obligations regarding the exchange of information (Art. 13) and international cooperation (Art. 10) which could help mitigate some of the problems mentioned above. Parties have communicated to the Secretariat information regarding national definitions of hazardous waste, regulations governing the export and import of wastes, general information regarding exports and imports (i.e. amounts of hazardous wastes transferred and, if possible, their source or destination) and other information.⁵¹ Similarly to many international environmental agreements, however, the information transmitted to the Secretariat is not complete; for example, only half the Parties supplied the information required under Articles 13 and 16 in 1993.⁵² The requirement for international cooperation was adopted in order to assist the developing countries to assess and manage hazardous waste

⁴⁸ In general, the lack of a mechanism to deal with liability (for an illegal transfer) and compensation (for a transfer that results in environmental damage) is an oft-cited weakness of Basel. However, a 'Draft Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal' is to be presented to the Fourth COP; see the January 1996 issue of Managing Hazardous Wastes, p. 2.

⁴⁹ Article 13(4) reads: "The Parties, consistent with national laws and regulations, shall ensure that copies of each notification concerning any given transboundary movement of hazardous wastes or other wastes, and the response to it, are sent to the Secretariat when a Party considers that its environment may be affected by that transboundary movement has requested that this should be done." Earlier drafts proposed by developing countries *did* oblige Parties to inform the Secretariat of all proposals, notifications and responses but this was eliminated from the final draft due to political pressure (the United States and other industrialized countries argued that this would be a highly inefficient use of the Secretariat's resources). See Abrams, 835 and also Kummer, 67. In this way, Basel contrasts with the Bamako Convention which obliges Parties to send all notifications and responses to the Secretariat (Art. 13.2.d).

⁵⁰ For suggestions as to how to improve implementation and compliance in the Basel Convention, see "Monitoring Implementation of and Compliance with the Basel Convention...", UNEP/CHW.3/Inf.5, 14 June 1995.

⁵¹ See UNEP/SBC/94/7, "Reporting and Transmission of Information Required Under the Basel Convention," Compilation of Information Received May 1992-March 1994.

⁵² Data reporting in accordance with Articles 13 and 16 (Transmission of Information and Functions of the Secretariat) for the year 1993 was completed by 48 of 83 Parties; see "Compilation of Country Fact Sheets (Based on reports from the Contracting Parties for 1993)", UNEP/CHW.3/Inf.11, 4 August 1995.

movements because their lack of technical capacity and know-how could prove to be a hurdle to the successful implementation of the Convention. Once again, however, progress in this area is slow. Specific cities in developing country regions have been selected for the 'Establishment of Regional or Sub-regional Centres for Training and Technology Transfer', but no actual training or technology transfer has yet taken place under this initiative. Similarly, the issue of establishing an Emergency Fund remains under discussion.⁵³

3.2. PIC in practice

The previous section outlined the basic mechanics of how the PIC procedure is designed to work. However, the question remains as to whether the procedure functions as it was intended to. The purpose here is to outline how PIC has worked in practice; the key problems identified relate to the competence of the 'competent authority', the potential for fraud, the situation of developing countries, and the resources of the Secretariat.

Firstly, the requirement to *designate* a competent authority to manage the PIC procedure has generally been fulfilled.⁵⁴ However, the fact that an individual or office has been designated and given the authority to manage notifications and responses regarding waste trading does not mean that they have the resources or expertise to *carry out* this duty effectively. In one case, for example, a US EPA official attempted to 'follow' notifications regarding toxic chemical shipments to Africa and found that the 'competent authorities' involved were either not in possession of the notice or had no ability to understand the implications and take appropriate action.⁵⁵

With respect to the export notification aspect of PIC, the attempt by the Secretariat to standardize the format (in the Implementation Manual) to be used by Parties is a useful feature, as noted above. However, there is no obligation to use this form -- Parties are 'requested' to use it -- and so its effectiveness is not as considerable as it could be (it is difficult to be certain that the notices were worded correctly or inspected by the appropriate authorities).⁵⁶ Notwithstanding this drawback, since exporting countries are most often

⁵³ See the January and March 1996 issues of Managing Hazardous Wastes.

⁵⁴ However, not all Parties have *informed* the Secretariat of their designated competent authority; as of March 1996, 65 competent authorities were listed from 101 Parties (Managing Hazardous Wastes 8, March 1996).

⁵⁵ See Strohm, "The Environmental Politics of the International Waste Trade," 141.

⁵⁶ See Clapp, "Africa, NGOs and the International Toxic Waste Trade", 31.

industrialized countries, their *ability* to comply with the procedure is not much at issue at least. Some observers have argued that, in addition to the information regarding the proposed shipment, exporters should also provide information regarding domestic legislation on disposal regulations in order to help the importing country assess the proposal.⁵⁷ Furthermore, there remains the possibility that a generator or exporter could attempt to falsify documents in reporting the content of the waste.⁵⁸ If such fraud is not detected by the competent authority, or if the competent authority is in collusion with the illegal activity, then the notification scheme becomes useless (however, attempts at illegal activity will likely always exist whatever the regulatory procedures as long as there are large sums of money to be made by moving hazardous wastes).

By far the greatest drawback to the PIC system in practice lies with the ability of the importing country to make an informed decision as to whether or not consent should be granted. As one participant has observed, “clearly, the successful application of the PIC system depends on a sophisticated national infrastructure”, as well as resources and expertise.⁵⁹ In cases where the importer is a developing country, problems with what constitutes proper ‘consent’ and the ability to assess the risks of importing hazardous wastes may be considerable. The ‘ethical’ argument against waste transfers from North to South is also relevant here. Should rich countries pay poor countries to accept their hazardous waste at all? How valid is the ‘consent’ of poor countries who accept large sums of badly needed foreign exchange? An oft-cited quotation involves the Trade and Tourism Minister of Guinea-Bissau who was asked why his country had agreed to receive over 15 million tons of toxic waste in return for \$600 million: he answered, “We need money.”⁶⁰ Opponents to waste

⁵⁷ Abrams, 825. This is similar to the debate regarding what regulations should govern the trade in domestically prohibited goods (DPGs).

⁵⁸ Greenpeace has documented several instances when hazardous wastes have been labeled as something else, the most notorious of which was the Koko, Nigeria case where the Italian company Jelly Wax sent almost 4,000 tons of toxic wastes under the label of substances ‘relating to the building trade’; see Jim Vallette and Heather Spalding, eds., The International Trade in Wastes: A Greenpeace Inventory (Washington DC: Greenpeace USA, 1990, 5th ed.).

⁵⁹ Kummer, 81; see also, David P. Hackett, “An Assessment of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal,” American University Journal of International Law and Policy 5, 29 (1990): 291-323.

⁶⁰ Quoted in Jim Puckett, “Disposing of the Waste Trade: Closing the Recycling Loophole,” The Ecologist 24, 2 (March/April 1994): 53-58. Guinea-Bissau eventually canceled the deal under pressure from African countries and other groups.

trading, such as Greenpeace, argue that 'consent' should not be an issue for an activity that should not take place.⁶¹

Secretariats play a significant role in the operation of an international agreement. Of course, the ability of the Secretariat to function properly depends firstly on the extent of the duties it is given by the agreement, and secondly by the resources available to conduct its activities. In the case of the Basel Convention, the Secretariat's ability to help Parties implement the PIC procedure has been limited in both ways. First, with regard to the breadth of the role assigned to the Secretariat by the Convention, it should be noted that implementation of PIC was originally designed to be ensured by *Parties* controlling private actors' involvement in transboundary movements of hazardous wastes.⁶² The ability of the Secretariat to monitor this implementation was minimized by not requiring Parties to send copies of notifications and responses to it.⁶³

Second, the Secretariat has been operating with very limited financial resources to carry out the duties that it *is* responsible for. Unpaid contributions to the *Trust Fund for the Implementation of the Basel Convention* up to 1994 were US \$347, 203; as of 31 August 1995, the total of unpaid pledges for that year was \$1,122,193 (or 51.6 percent of total pledged contributions).⁶⁴ The chronic underfinancing of Secretariat activities has been recognized by the Conference of Parties, but only full payment of pledged contributions will allow the Secretariat to be as effective as it could be. In the words of the independent consultant who reported to the third COP:

Availability of adequate financial resources is of critical importance to the effective implementation of the Basel Convention. A large number of the Parties will be unable, for the foreseeable future, to take the necessary legal, administrative, institutional, monitoring and related measures without assistance

⁶¹ See Greenpeace, *Toxic Trade Update* 7, 1 (1994).

⁶² See "Monitoring Implementation of and Compliance with the Basel Convention...", UNEP/CHW.3/Inf.5, para.8. See also, Kummer, 82.

⁶³ Additionally, the Secretariat, as designed, has been characterized as lacking the requisite independence of the Parties required to act as a "compliance control" mechanism; see "Monitoring Implementation of and Compliance with the Basel Convention...", para. 16. The questions of implementation and compliance are currently being examined by a Consultative sub-group of Legal and Technical Experts, who are to report to the Conference of Parties in 1997.

⁶⁴ See "Status of Contributions to the Basel Convention Trust Funds as at 31 August 1995", UNEP/CHW.3/Inf.13, 15 September 1995.

from the Secretariat; and such assistance cannot be provided to the extent needed without financial resources.⁶⁵

The above analysis suggests that, in theory, the PIC procedure is a good regulatory option for the control of transboundary movements of hazardous wastes. The information given by the exporting state should allow the importing state to make an environmentally sound decision regarding acceptance or rejection of the waste. In practice, however, because the most environmentally damaging waste trade takes place between countries of greatly different economic, technical and administrative capacities, the PIC mechanism functions with difficulty.⁶⁶ Other elements, such as the lack of mandate and resources available to the Secretariat to aid the implementation of PIC, also restrict the PIC mechanism from functioning exactly as designed.

⁶⁵ "Evaluation of the Effectiveness of the Basel Convention...", UNEP/CHW.3/Inf.7, para. 84. It is also considered that the Secretariat *has* done very good work given its limited resources, especially in the gathering and codifying of information and assistance given to Parties in the form of sample documents regarding notification or legislation, for example (see Section VII of the above report).

⁶⁶ It is worth recalling that the majority of transboundary movements take place between industrialized countries who have the capacity to assess and monitor wastes under a PIC procedure. However, as has been the general focus of the Basel Convention, the problem lies with the smaller amounts of waste transferred from rich to poor countries.

4. The Effectiveness of PIC: has it made a difference?

The previous section profiled some general difficulties with respect to the functioning of PIC; this section will investigate to what degree the procedure actually operates. In the same way that reliable data regarding the amount of hazardous waste produced and traded is difficult to obtain, reliable information regarding the functioning of PIC is also scarce. The best data is kept by Greenpeace and it will provide the basis for the analysis in this paper.⁶⁷ This section will (1) examine the available data regarding the acceptance-rejection rate of waste trade proposals, and (2) try to determine if following the PIC procedure allows for 'better', or more environmentally sound, decisions with regards to hazardous waste trading.

4.1. Do States Use the PIC Mechanism?

One way of assessing the effectiveness of PIC is to determine if, first of all, the procedure is actually followed and to explore whether PIC has influenced the behaviour of states wanting to trade in wastes. This section examines that issue by comparing the pre-Basel and post-Basel periods.

Outcomes of Waste Trade Proposals, 1970-1990

This period predates the Basel Convention, although PIC mechanisms for hazardous waste transfers were coming into use by the late 1980s in the OECD and EC. Even without a formalized PIC procedure, however, sovereign governments were always at liberty to refuse wastes from another country, if they were aware of a shipment. Greenpeace data for the period 1970 to 1990 categorizes 'developing' countries as those with per capita GNP of less than \$1, 840, and 'middle-income' countries as those with per capita GNP of more than \$1, 840 but without a market economy (i.e. including nations from Eastern Europe). With respect to developing countries, Greenpeace documents 103 proposals to transfer hazardous waste, 78 rejections (75 percent rejection rate) and 16 instances of waste crossing a boundary.⁶⁸ Of these 16 cases, two shipments were dumped at sea, eight were rejected after being discovered and

⁶⁷ Greenpeace data has been used by other studies as well, and UNEP cites Greenpeace statistics as reliable estimates of hazardous waste flows to developing countries. See, for example, Montgomery, "Reassessing the Waste Trade Crisis: What Do We Really Know?"; and UNEP, Environmental Data Report 1991-92.

⁶⁸ The raw data comes from the Greenpeace Inventory, The International Trade in Wastes, but was arranged by Montgomery in "Reassessing the Waste Trade Crisis".

exported back to the source, and five were shipped and dumped unsafely against the wishes of the importing government. For middle-income countries, Greenpeace documents 98 proposals and 53 rejections (55 percent rejection rate).

This data, perhaps not surprisingly, leads to conflicting interpretations. On the one hand, Greenpeace suggests that the number of *attempts* to export hazardous waste to developing countries show why it is important to ban the toxic trade rather than rely on a weak regulatory system such as PIC, which is referred to as a 'rubber stamp'.⁶⁹ Indeed, Greenpeace argues that this data only represents the 'tip of the iceberg' and that proposed international waste trade deals are increasing (see data in next section).⁷⁰ On the other hand, different reviewers of the same data suggest that PIC in fact works quite well, based on the high rate of rejections by importing states.⁷¹ Without more detailed information, it is difficult to assess the degree to which the rate of rejections was the result of properly functioning notification procedures or other factors.

Outcomes of OECD to non-OECD Waste Trade Proposals, 1989-93

This period includes the adoption (1989) and entry into force (1992) of the Basel Convention and shows a slightly different trend (see Table 1 and Fig. 1). Although it should be noted that this data is based on the OECD, non-OECD grouping (unlike the previous data set which was based on per capita GNP), there is a downward trend in the number of *rejections* by importing non-OECD countries (developing countries) at the same time that waste trade *proposals* are increasing (Fig. 2). Unlike the 1970-90 period when 75 percent of waste trade proposals to developing countries were refused, the 1989-93 period resulted in only a 20 percent refusal rate.⁷²

⁶⁹ Of course it is crucial to note that the larger goal of Greenpeace is not just to stop transborder hazardous waste transfers, but to reduce and eventually eliminate the *production* of such wastes at the source. So their support for a trade ban is only part of their larger agenda. See also, François Roelants du Vivier, "The South Musn't Be The Rubbish Tip of the North," *The Courier* 113 (January-February 1989): 2- 5.

⁷⁰ Puckett, 54.

⁷¹ See Montgomery, 10-11. Montgomery also counters the Greenpeace argument that this data only reflects the tip of the 'waste trading' iceberg.

⁷² Nevertheless, it should also be noted that despite the low rejection rate of 20 percent, 42 percent of the proposed transfer proposals actually took place; keeping aside the 22 percent of unknown cases, 11 percent were either stopped or returned to the exporter. Thus, the rejection rate figures by themselves do not accurately portray the state of waste trading (there is an equal number of unknown results).

Table 1. Results of Hazardous Waste Trade Proposals from OECD to non-OECD Countries, 1989-93 [source: authors' calculations based on: *Greenpeace Database of Known Hazardous Waste Exports from OECD to non-OECD Countries, 1989-March 1994*]*

	1989	1990	1991	1992	1993	
actual	5	16	30	155	72	278
rejected	31	41	28	25	10	135
stopped/ returned	7	18	7	27	16	75
proposed/ planned	1	3	4	13	14	35
other/ unknown/ abandoned	25	28	29	48	14	144
	69	106	98	268	126	

- total waste export schemes: 667
- # of shipments resulting in trade for disposal or recycling: 278 (41.7%)
- # of shipments rejected by importing state: 135 (20.2%)
- # of shipments stopped by exporting state or returned to exporting state: 75 (11.2%)
- # of shipments proposed/planned (without final result): 35 (5.2%)
- # of abandoned shipments or schemes with unknown/other results: 144 (21.6%)

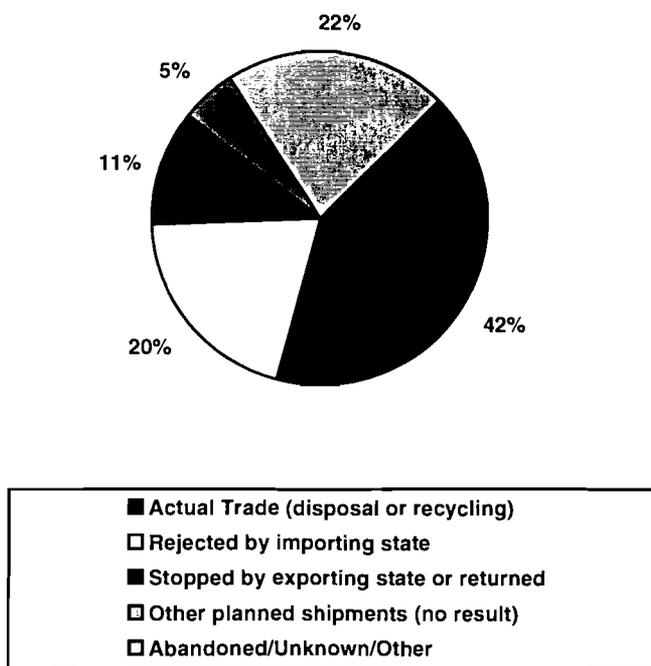
One possible explanation for this trend is that the number of waste trade proposals which claim to be for recycling or recovery have increased dramatically, and therefore importing countries are less likely to refuse wastes that have 'value' (as opposed to wastes that will simply be dumped). Greenpeace sources suggest that between 1980 and 1988, only 30 percent of all waste trade proposals were listed for 'further use' or for 'recycling'; for 1989-90, that figure had risen to 54 percent and again to 90 percent for 1993.⁷³ Another possibility is that, as the Basel Convention began to influence the behaviour of Party states in

* Because the data for the year 1994 is incomplete (only until March), it is left out of this analysis. The data in this table is used for Figures 1 and 2.

⁷³ Puckett, "Disposing of the Waste Trade", 56. This seems to be one behaviour change induced by the Convention -- an increase in the trade listed for 'further use'; of course Greenpeace contends that the number of 'sham' and 'dirty' recycling schemes show this to be an undesirable trend.

Figure 1: Results of OECD to non-OECD Hazardous Waste Schemes, 1989-93

(source: authors' calculations based on Greenpeace "Database of Known Hazardous Waste Exports from OECD to non-OECD countries, 1989-March 1994)



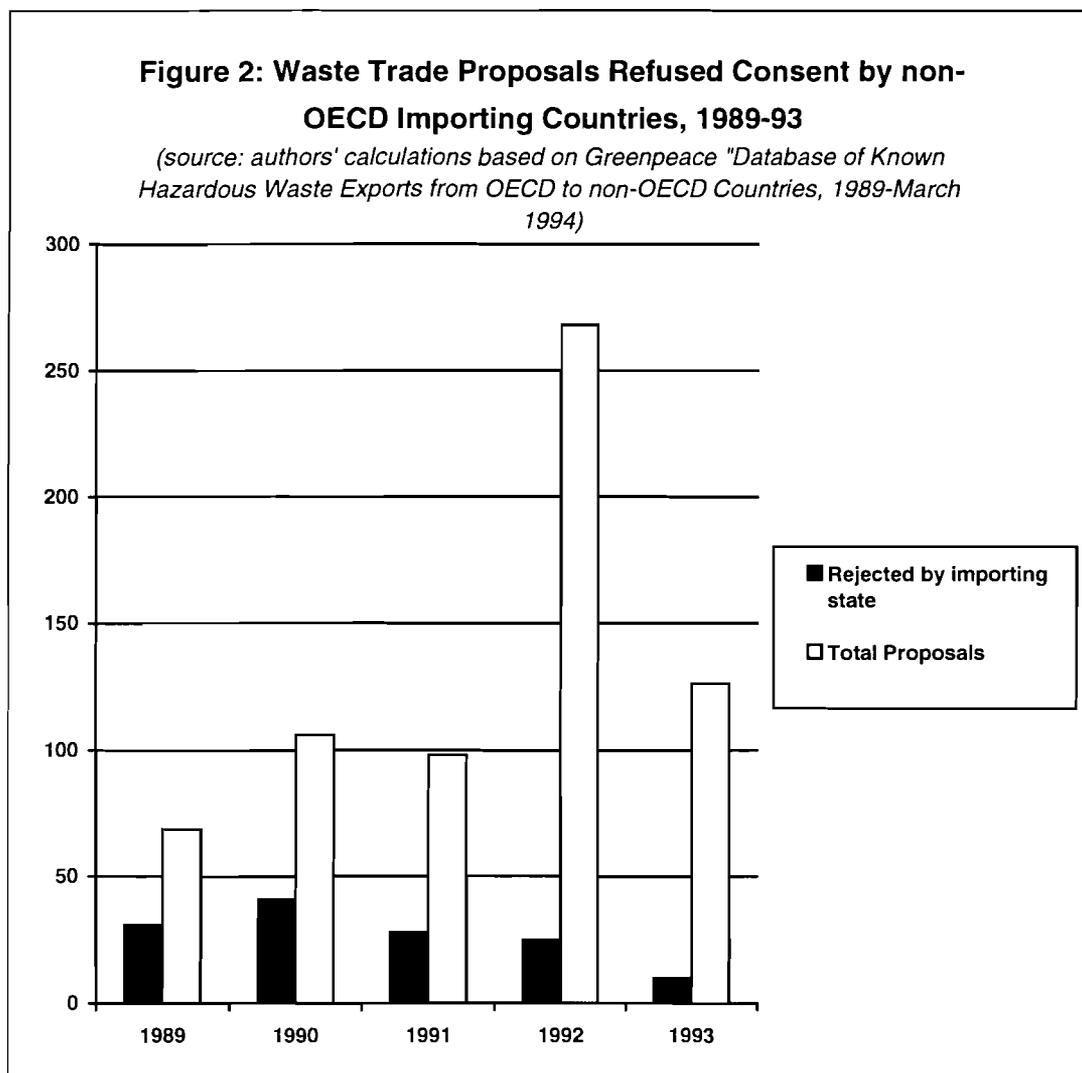
the early 1990s, the improved information that importing states were receiving allowed them to make more informed decisions, rather than rejecting proposals outright.⁷⁴ Or, as more and more countries have instituted hazardous waste import bans, the number of states that must 'accept or reject' proposals is reduced and therefore the total number of reported rejections is also reduced.⁷⁵ Wastes are then channeled to states that do not ban exports.⁷⁶ Once again,

⁷⁴ Industry has argued that consent is rare and denial the "easiest course of action"; see Bullock, "The Basel Convention and Trade".

⁷⁵ The number of countries banning hazardous waste imports just prior to the adoption of the Basel Convention in 1989 was 33; that number has now risen to over 100 (see Greenpeace, "The Basel Ban: The Pride of the Basel Convention", A Greenpeace Document Prepared for the Third Conference of Parties, September 18-22, 1995, p.1). Thus, the number of countries who would be in a position to formally reject waste trade *proposals* has dropped dramatically. However, this does not mean that wastes are never transferred illegally; see, for example, the cases documented by the Secretariat in UNEP/CHW.3/7, 12 May 1995, paras.13-21.

⁷⁶ There has been a dramatic increase in the number of proposals for trade with Eastern European countries in the 1989-94 period as they have not been as swift to implement trade bans (see Puckett, "Disposing of the Waste Trade", 54).

however, the lack of detailed information makes it difficult to explain the trend in decreasing rejections. The Basel Convention has not improved our understanding about the functioning of PIC and the state of hazardous waste trading.



4.2. Decision-making under PIC

In theory, the information given to importing states under PIC should improve decision-making. The notification document designed by the Secretariat includes most of the important details which, if listed correctly, should allow the competent authority to make an environmentally responsible decision. However, the available data does not allow for a precise explanation of *why* 20 percent of OECD to non-OECD trade proposals were rejected between 1989-93, and 75 percent rejected between 1970-90. This reinforces the need for the

Secretariat to compile information regarding all proposals and responses in order to monitor the effectiveness of the PIC procedure. As PIC currently operates under Basel, there is not even a 'response' document equivalent to the notification and movement documents prescribed for use by the Secretariat.

In many ways, however, the decision to ban waste movements from OECD to non-OECD countries (Decision II/12) reflects a belief that decision-making in developing countries is not adequately improved by PIC due to their lack of resources. The preamble to Decision II/12 states that "transboundary movements of hazardous wastes from OECD to non-OECD States have a high risk of not constituting an environmentally sound management of hazardous wastes as required by the Basel Convention". More and better information does not automatically lead to improved decision-making. In practice, there must be the capacity to analyze and process this information in a way that complies with the goals of the agreement (to protect human health and the environment). Without this, the likelihood that the PIC procedure will improve decision-making is low.

The inability of developing countries to comply with Convention requirements also hampers decision-making in industrialized, exporting countries. Austrian authorities, for example, have pointed out that when developing countries cannot fulfill basic obligations such as designation of a competent authority to implement PIC, the ability of exporting countries to comply with the Convention is hampered.⁷⁷ Moreover, despite the attempts by the Secretariat to improve the ability of developing countries to implement PIC successfully (by holding workshops and seminars, for example, or by creating 'draft model legislation for the implementation of the Basel Convention'), the Secretariat has also been hampered by its own problems (see discussion in 3.2).⁷⁸ All of these factors together suggest that, in practice, the effectiveness of the PIC procedure in improving decision-making is questionable.

⁷⁷ Personal communication, Federal Ministry for the Environment, Youth and Family, Republic of Austria (6 August 1996).

⁷⁸ See Kummer, 263. See also, "Revised Draft Model National Legislation on the Management of Hazardous Wastes and other Wastes as well as on the Control of Transboundary Movements of Hazardous Wastes", Secretariat document SBC 94/003.

5. Conclusions: PIC in the context of the international regime to manage transboundary hazardous waste movements

This paper has analyzed the functioning and effectiveness of the PIC mechanism in the context of the Basel Convention. On the basis of this analysis, three conclusions are appropriate.

Lack of Data

One recurring theme of this paper is that accurate data on the functioning of PIC is not available. This fact was recognized by the consultant who prepared a report on the effectiveness of the Basel Convention and concluded that, without better information, it would be premature to evaluate the effectiveness of the Convention so soon after its entry into force.⁷⁹ Perhaps information provided under Article 13, which requires Parties to submit data on waste generation, trade and disposal, will allow in the future for a better assessment of the state of hazardous waste trading. However, as long as the Secretariat does not receive notification and response documents, it cannot monitor how PIC actually operates. This structural flaw in the Convention greatly restricts an accurate analysis of its effectiveness. There is a significant difference in the rejection rates of the pre-Basel and post-Basel periods, but it is not clear if decreasing rejections are the result of a failure of PIC or other contextual factors such as the growing amount of waste sent for 'further use' or the increase in the number of developing countries that have banned imports.

Therefore, a minimal change required to improve -- or at least standardize -- the operation of the 'consent' mechanism would be to design a response document (equivalent to the notification and movement documents already in existence) which would be used by importing states. The form would specify what authority was responding to a given notification and indicate the reasons for accepting or rejecting it. A more significant institutional change that would also improve the data problem would be to require copies of all notifications and responses to be sent to the Secretariat. Without these changes, the Convention continues to 'fly blind' in terms of monitoring the PIC procedure. Decision II/12, which bans OECD to non-OECD trade in hazardous wastes, will limit the scope of hazardous waste trading that is subject to PIC. However, there remains other trading (such as non-

⁷⁹ See UNEP/CHW.3/Inf.7, June 1995, para.11.

OECD to non-OECD) that would still be subject to PIC but which is not adequately monitored. The need for improved information about trade is not resolved by Decision II/12.⁸⁰

Situation of Developing Countries

The most contentious aspect of the hazardous waste trade is the export of wastes from rich countries to poor ones. As with many other issue areas in international environmental politics, developing countries often lack the resources and infrastructure to implement rules and procedures required by international agreements. The UNEP report on the effectiveness of the Basel Convention states:

...while most of the developed industrial State Parties have adopted fairly elaborate legislation on most of these [implementation] issues, very few of the developing country Parties have formulated adequate legislation or suitable administrative procedures on these subjects. In fact, many of these countries still lack the necessary legal and institutional framework to effectively control and prevent the dumping of hazardous wastes on their territories.⁸¹

Given these circumstances, the PIC mechanism by itself is unlikely to be effective in improving the ability of importing states to protect human health and the environment. Recent reports list both India and China as examples of developing countries who were unable to prevent hazardous wastes from being transferred to their territories, despite a complete ban (India) and tight restrictions (China).⁸² The problem of hazardous waste trading is not only related to the functioning of PIC, but also to the capacity of the actors involved.

The Continuing Debate: Ban or PIC?

The most recent controversy within the Basel Convention is the decision to ban OECD to non-OECD transfers of hazardous wastes. For proponents of the ban, this decision has been partially inspired by the inability of the PIC mechanism to allow poorer countries to

⁸⁰ Montgomery also acknowledges the “aching need for a comprehensive, objective waste trade survey” and “further empirical research” (p.16, 20).

⁸¹ UNEP/CHW.3/Inf.7, June 1995, para.69

⁸² See “US companies accused of ‘dumping’ waste cargoes,” *Nature* 382 (8 August 1996): 484; and “India flooded by toxic wastes, says Greenpeace,” CNN Interactive (<http://cnn.com/EARTH/9607/14/india.dumping.wir/index.html>), 14 July 1996.

protect themselves from imported hazardous waste. Critics of the ban, on other hand, argue that the ban reflects political, and not environmental or economic, considerations.

In many ways, the debate regarding the ban merely reproduces many of the same disputes that existed when PIC was chosen as the core regulatory mechanism for the Convention in 1989. These concerns involve the moral, administrative and economic aspects of regulating the international hazardous waste trade. The moral argument to ban the trade of hazardous wastes has remained an important force in the development of the Basel regime. The PIC mechanism has done little to address this concern because PIC is intended to allow trade.

The economic and administrative debates today are also similar to those in 1989. When PIC was selected, advocates of a ban argued that it would be administratively easier and thus more effective. This controversy remains significant in the debate regarding the OECD to non-OECD ban.⁸³ But the real issue is whether trade should be allowed at all. The economics of the international toxic waste trade remain an influential factor in the current discussions, much as they were in the original negotiations. Although the ban may be administratively simpler to implement than PIC, this would be at the expense of a major objective that PIC was designed to preserve -- namely, the trade in hazardous wastes. Competing visions regarding the desirability of the trade remain, however. If trade is desired, then an administratively complex procedure such as PIC may be necessary.⁸⁴

Some observers argue that the available data suggests that, before Basel, importing (developing) countries rejected wastes more often than not, an economically detrimental ban is premature.⁸⁵ However, by updating this analysis to include the 1989-94 period, as is done here, it is no longer clear that rejections by importing countries are as common as before, and that substantial toxic waste trading is still taking place. The fundamental question is whether

⁸³ The UNEP report on the matter reflects this debate: "...paradoxically, while Decision II/12 significantly restricts legal traffic and thereby should help simplify verification of compliance by enhancing overall transparency regarding global transboundary movements, it is also likely to create additional incentives to engage in illegal movements of hazardous wastes." (UNEP/CHW.3/Inf.5, para. 5). It might be added that 'illegal' shipments under a ban would likely remain as unquantified as they are under PIC. However, the argument made by supporters of the ban is that by closing the recycling 'loophole', incentives are created to reduce hazardous waste generation, which in turn also reduces the need to export wastes

⁸⁴ Industry remains unhappy even with PIC, however: "...it is also necessary that the Convention ameliorate its less direct trade barriers to international trade in recyclable materials, such as the time-consuming complexity of the prior informed consent procedure..."; Bullock, "The Basel Convention and Trade".

⁸⁵ Montgomery, "Reassessing the Waste Trade Crisis", 21.

such trade is desirable. The Parties to the Basel Convention could *improve* the functioning of the PIC procedure by granting the Secretariat the ability to monitor notifications and responses under PIC, as well as increasing technical and financial support to developing countries in order to allow them to participate effectively and improve decision-making.⁸⁶

⁸⁶ This last suggestion applies equally to PIC or to a ban. Poor countries have been the subject of illegal shipments under PIC, and would likely continue to be under a ban, and so it is crucial to give them the resources and infrastructure needed to protect themselves. See Hackett, "An Assessment of the Basel Convention...", 318.

Appendix

Chronology of main events in the regulation of transboundary movements of hazardous wastes, 1981-97

- 1981 - UNEP Governing Council establishes Montevideo Programme for the Development and Periodic Review of Environmental Law to determine major subject areas in need of increased cooperation, including the transboundary movements of hazardous wastes
 - OECD Waste Management Policy Group begins investigating various issues connected with the transboundary movements of hazardous waste
- 1982 - UNEP Governing Council accepts recommendations of Montevideo Programme that it should prepare guidelines and principles which could lead to a global convention regulating transboundary movements of hazardous wastes
- 1983 - 'Seveso Affair' (discovery of 41 'missing' drums of topsoil contaminated with highly toxic dioxin from the 1976 explosion at the Seveso chemical plant in Italy in a barn in northern France)
- 1984 - EC Directive 84/631 regulating transboundary movements of toxic and dangerous wastes within the EC area using a system of prior notification
 - OECD Council Decision and Recommendation (C83/180) on Transfrontier Movements of Hazardous Wastes, including prior notification for hazardous waste exports
- 1985 - OECD Policy Conference on International Cooperation Concerning Transfrontier Movements of Hazardous Wastes recommends the elaboration of an international control system to be binding on OECD member states
 - Working Group established by UNEP GC presents the Cairo Guidelines and Principles for the Environmentally Sound Management of Hazardous Wastes (Guideline 26.F suggests the use of PIC for transboundary movements of hazardous wastes)
- 1986 - EC amendment to directive 84/631 prescribes prior notification *and* informed consent for movements of hazardous wastes within and outside the Community
 - OECD Recommendation (C86/64) proposes the use of PIC for movements to non-OECD states
- 1987 - UNEP GC approves Cairo Guidelines and requests the Executive Director to prepare a global legal instrument to control transboundary movements of hazardous wastes (June)
 - organizational meeting of Ad Hoc Working Group of Legal and Technical Experts to establish a global convention (October)

- 1988 - 3 meetings of Working Group (February, June, November)
 - discovery of Italian shipment of PCBs to Koko, Nigeria
- 1989 - 2 meetings of Working Group (February, March), and the establishment of the **Basel Convention** (March)
- 1991 - Pan-African Conference on Environment and Sustainable Development adopts Bamako Convention banning the import of hazardous wastes into the African continent
 - Lomé IV agreement between EC and ACP states enters into force (agreed to in December 1989) - bans exports of hazardous wastes from EC states to ACP states
- 1992 - Entry Into Force of Basel Convention (May)
 - First Conference of the Parties (COP) of the Basel Convention (December)
- 1994 - Second COP (March), Decision II/12 banning immediately the export of all hazardous wastes from OECD to non-OECD for final disposal and for recycling/recovery by the end of 1997
- 1995 - Third COP (September), OECD to non-OECD ban formally adopted as amendment to Basel Convention (Decision III/1)
- 1996 - Meetings of Technical Working Group on the Basel Convention
- 1997 - Fourth COP (September or October)