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Final Report

The *Hazardous Waste (Regulation of Exports and Imports) Act 1989*

A National Competition Policy Review

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Abbreviations

ACCC	Australian Competition and Consumer Commission
ARA	Australian Refined Alloys Pty Ltd
Basel Convention	*Basel Convention on the Control of the Transboundary Movements of Hazardous Waste and their Disposal*
BDW	Blake Dawson Waldron
BIE	Bureau of Industry Economics
cl.	clause
CoAG	Council of Australian Governments
CPA	*Competition Principles Agreement*
CRC	Co-operative Research Centre
EA	Environment Australia
EC	European Community
EEC	European Economic Community
ESD	ecologically sustainable development
ESM	environmentally sound management
EWMESS	Environmental waste management equipment, systems and services
GDP	gross domestic product
HWA	*Hazardous Waste (Regulation of Exports and Imports) Act 1989*
IC	Industry Commission
ILZSG	International Lead Zinc Study Group
ME	marginal expenditure
MEA	multi-lateral environmental agreement
MRP	marginal revenue product
NCC	National Competition Council
NCP	National Competition Policy
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure

NGO	non-government organisation
NPI	National Pollution Inventory
NSW	New South Wales
OD Regulations	*OECD Decision Regulations*
OECD	Organisation for Economic Co-operation and Development
PC	Productivity Commission
PCB	poly chlorinated biphenyl
POP	persistent organic pollutant
PRG	Policy Reference Group
s.	section
ss.	sections
sub-cl.	sub-clause
sub-s.	sub-section
ULAB	used lead acid batteries
UNCTAD	United Nations Conference on Trade and Development
UNEP	United Nations Environment Programme
US	United States
Waigani Convention	*Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement and Management of Hazardous Wastes within the South Pacific Region*
WGWMP	Working Group on Waste Management Policy
WTO	World Trading Organisation

Preface

This report has been prepared on behalf of Environment Australia but does not necessarily represent the views of Environment Australia or the Commonwealth Government.

The Review Team, drawn from The Allen Consulting Group, wishes to thank all those parties who took the time to participate in the industry roundtables and prepare written submissions.

Summary and Overview

As part of the Commonwealth's commitments under National Competition Policy (NCP), the *Hazardous Waste (Regulation of Exports and Imports) Act 1989* (the *HWA*) and its related subordinate legislation have been referred to a Taskforce of Officials for evaluation. The Allen Consulting Group was engaged to conduct the review under the direction and guidance of the Taskforce.

This review follows the principle laid down in sub-clause 5(1) of the inter-governmental *Competition Principles Agreement* (*CPA*) which states that legislation or regulation should not restrict competition unless it can be demonstrated that:

- the benefits of the restriction to the community as a whole outweigh the costs; and
- the objectives of the legislation can only be achieved by restricting competition.

This review has been conducted in line with the Terms of Reference which are included in Appendix A.

1.1 Scope of the Review

This Review considers the *HWA* and the five regulations made under the *HWA*. These are:

- *Hazardous Waste (Regulation of Exports and Imports) (Fees) Regulations 1990*;
- *Hazardous Waste (Regulation of Exports and Imports) (OECD Decision) Regulations 1996*;
- *Hazardous Waste (Regulation of Exports and Imports) Regulations 1996*;
- *Hazardous Waste (Regulation of Exports and Imports) Waigani Convention Regulations 1999*; and
- *Hazardous Waste (Regulation of Exports and Imports) Decision IV/9 Regulations 1999*.

The *HWA* and regulations implement Australia's international obligations under three instruments:

- *Basel Convention on the Control of the Transboundary Movements of Hazardous Wastes and their Disposal*;
- *OECD Decision C(92)39/FINAL*, concerning the control of transfrontier movements of wastes destined for recovery operations; and

- *Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement and Management of Hazardous Wastes within the South Pacific Region* (the *Waigani Convention*).

A central issue is how NCP principles should be applied to domestic legislation that has, as its objective, the implementation of obligations arising under international law. In applying these principles, this review is, in a strict sense, limited to the terms of the legislation. The review does not set out to consider whether Australia should accept, or have accepted, the obligations in relation to international trade in hazardous waste. Nevertheless, it is often difficult to separate the one from the other and for that reason, the review also includes an examination of the *Basel Convention*.

1.2 Why Regulate the Transboundary Movement of Hazardous Wastes?

The problem of hazardous waste has often been addressed by exporting the hazardous waste to developing countries, although this has been criticised by the environmental community as being tantamount to 'eco-dumping'. Concerns have arisen primarily because many developing countries do not have the expertise, technology and/or the facilities to process the waste in an environmentally safe manner.

As noted by Lipman:

> "Disposal of wastes through landfill has led to the pollution of surface and groundwaters, to land contamination, and consequential exposure of entire communities to the dangerous effects of highly toxic chemicals. Many industrialised countries have adopted the short-sighted method of solving their domestic problem by exporting toxic wastes to Third World countries."
>
> Lipman, "The Convention on the Control of Transboundary Movements and Disposal of Hazardous Wastes and Australia's Waste Management Strategy" (1990) *Environmental and Planning Law Journal* 283 at 283.

In this light, the regulation of the transboundary movement of hazardous wastes can be seen as an important step in the protection of the environment and human health, and a response to the following market failures:

- negative social and environmental externalities — the objective is to internalise negative impacts on third parties associated with the transport of hazardous waste. This is particularly important when the trade is with countries with poorly defined property rights systems;
- public goods — the natural environment exhibits, to varying degrees, the characteristics of public goods — it is non–excludable (ie, people cannot be stopped from using it) and non–rivalrous (ie, the environment is not used up with use). The values that society places on environmental public good characteristics are many and varied, are often difficult to quantify, and are not able to be (or are poorly) reflected in the market system. Hence, they may not be adequately incorporated in private environmental preservation decisions without government involvement; and

- information asymmetries — to a lesser extent, buyers and sellers may not have the same knowledge about the harm associated with the transport and/or recovery/disposal of hazardous waste. This type of market failure is likely to be particularly pertinent when buyers are developing countries who are unaware of the quality, composition and/or effects on human health and the environment of particular shipments of hazardous waste.

It is important to note that there is also a strong equity rationale that sits in tandem with these market failure rationales. That is, regulation is justified on the basis that it is not appropriate for developed countries to shift their hazardous waste problems onto countries which may lack the capacity to manage waste in an environmentally sustainable manner.

1.3 Australia's International Obligations with Respect to the Transboundary Movement of hazardous Waste

In the 1970s and 1980s governments throughout the world began to realise the existence of the market failures identified in section 1.1 and that indiscriminate and uncontrolled international traffic in hazardous wastes could lead to adverse consequences for human health and the environment.

In response to these concerns the international community developed the *Basel Convention on the Control of the Transboundary Movements of Hazardous Waste and their Disposal* (the *Basel Convention*) so as to establish a framework for promoting safe transportation and recovery of such wastes across national boundaries.

In 1989 Australia signed the *Basel Convention*. Australia ratified the *Convention* on 5 February 1992, and it came into force on 5 May 1992. As of 12 January 2001 there were 142 countries that had become Parties to the *Convention*.

The Second Reading Speech for the *Hazardous Waste (Regulation of Exports and Imports) Amendment Bill 1996* states:

> "The Basel Convention is the primary international instrument under which trade in hazardous waste is controlled. It is the set of rules for this trade on which Australia and the many other countries which are parties to the Convention have agreed. As virtually all of Australia's trading partners are either parties to the Convention or parties to similar sets of rules established by the OECD, it is in Australia's trade interests, as well as within our international obligations, to abide by these rules."
>
> Second Reading Speech for the *Hazardous Waste (Regulation of Exports and Imports) Amendment Bill 1996*, p.2.

Under the *Convention*, Australia is obliged to:

- minimise the generation of hazardous waste;
- ensure adequate disposal facilities are available;
- control and reduce international movements of hazardous waste;
- ensure environmentally sound management of wastes; and
- prevent and punish illegal traffic.

Under Article 11 of the *Basel Convention*, Parties to the *Convention* may enter into bilateral, regional or multilateral agreements or arrangements with non-Parties, provided these agreements or arrangements conform to the environmentally sound management of such wastes as required by the *Convention*. Australia is a signatory to two such multilateral agreements, only one of which is currently in force — the *Organisation for Economic Cooperation and Development Control System (OECD)*.[1] The OECD has special rules for shipments of waste for recovery purposes. The rules mean that waste can be shipped between OECD countries, even if they are not Parties to the *Convention*.

1.4 Incorporation of Australia's International Obligations into the *HWA*

Under the *HWA* (as amended in 1996), a permit is required for the transboundary movement (ie, import or export) of hazardous waste. The Minister for the Environment will only issue permits where it can be demonstrated that the wastes will be managed in an environmentally sound manner in the country of import.[2] Exporting hazardous waste without a permit is an offence subject to a fine of up to $1 million or imprisonment for up to five years.

The *HWA* and associated regulations can be viewed as having two essential characteristics:

- entry prohibitions — the *HWA* and associated regulations contain four prohibitions on market participation (ie, the *HWA*'s permit arrangements do not apply). The prohibitions address: the transboundary movement of hazardous waste to Antarctica; and the transboundary movement of hazardous waste between Australia and countries that are not parties to the *Convention* (this is not an absolute prohibition as Article 11 of the *Convention* provides for exemptions). In effect, these prohibitions may stop the participation of firms in particular hazardous waste markets.

  In addition, the *HWA* and associated regulations impose prohibitions (that exceed Australia's obligations under the *Basel Convention*) on exports for final disposal and imports for final disposal; and

- permit restrictions — the *HWA* and its regulations establish a permit scheme for those hazardous waste dealings that are not unconditionally prohibited. There are requirements that must be met before a firm can participate in the transboundary movement of hazardous wastes. However even if the requirements under the *HWA* are met, the Minister may, under a number of situations, decide not to grant the permit, including a situation where the Minister thinks that it is not in the public interest to grant the permit. In addition, there are ongoing obligations attached to a permit; most significantly, these include a duty to re-

[1] The other multilateral agreement is the *Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement and Management of Hazardous Wastes within the South Pacific Region* (the *Waigani Convention*).

[2] It should be noted that only one Basel Export Permit has been granted to a developing country — for the export of 60 tonnes of paragoethite to South Africa — since the amendments to the *HWA* came into force in December 1996.

import,[3] and restrictions on the transport of waste (eg, once a person is issued with an export permit the holder must not export the waste to the destination country if it passes through a third country without a transit permit).

Legal advice from Blake Dawson Waldron (BDW) suggests that, in general, the *HWA* meets Australia's international obligations. Where the *HWA* substantively exceeds Australia's obligations this is noted and the merits of such a deviation are explicitly considered (see Chapters Five and Six).[4]

1.5 The Impact of the *HWA*

Ideally a cost benefit analysis of the *HWA* would involve an estimate of the total economic, health and environmental costs and benefits associated with the restrictions generated by the *HWA*. However an assessment of the costs and benefits is particularly difficult in the case of the *HWA* for a number of reasons:

- the physical quantities of transboundary movements of hazardous wastes are not known, let alone a valuation of their total economic and environmental costs and benefits;
- it is difficult to identify and quantify indicators to measure environmental costs and benefits;
- many of the costs and benefits associated with the *HWA*'s operation accrue to the wider international community; and
- there is a substantial degree of uncertainty surrounding the long term effects of particular hazardous materials.

These limitations have been acknowledged by the OECD.[5] As a result, the following observations are drawn from the available data, observations by stakeholders and by the application of standard economic theory.

1.5.1 Hazardous Waste Production and Movement

Transboundary movements of hazardous wastes have declined …

A clear consequence of the *Basel Convention* and the *HWA* is a decline in the transboundary movement of hazardous wastes to developing countries. For example:

[3] When a transboundary movement of hazardous waste cannot be completed in accordance with the terms of the export permit, the exporters are required to ensure that the wastes in question are taken back into the state of export by the exporters.

[4] In a number of circumstances the *HWA* technically exceeds (ie, goes beyond) Australia's international obligations, but in ways that have little or no substantive impact. These circumstances are outlined in the legal advice obtained by the Review Team which is provided as an attachment in Appendix D.

[5] Organisation for Economic Co-operation and Development, *Trade Measures in Multilateral Environmental Agreements*, OECD, Paris, 1999, p.134.

> "The Convention's great achievement is that the abuses it was designed to address have largely disappeared. We no longer have the shipment of quantities of hazardous wastes in large quantities from developed countries to other countries ill-equipped to manage it in an environmental sound manner. The control required by the Convention, and the large number of parties to it, mean that this practice is now tightly controlled."
>
> Australian Government, *Fifth Meeting of the Conference of the Parties to the Basel Convention, Australian Plenary Statement*, December 1999.

… but the production of hazardous wastes continues to rise

Although statistical information on the generation of hazardous wastes is piecemeal, the available data, "does not suggest that less waste is being generated at this stage".[6]

This suggests that the broader objective of the *Basel Convention* — to minimise the generation of hazardous wastes — has not yet been achieved.

1.5.2 The Impact on Industry

Disposal and recovery costs have increased for many Australian firms …

The *HWA* has increased the cost of hazardous waste disposal and recovery for Australian firms that previously exported hazardous waste because:

- if firms continue to export hazardous waste then they bear the added compliance costs (ie, permit fees, costs associated with filling in the necessary forms, and costs associated with time spent waiting for permits); and
- if firms which previously exported hazardous waste no-longer do so — either because the fees are too high or they are prohibited from exporting — then the only legal alternative tends to be more expensive domestic disposal and/or recovery options.

… which has provided an opportunity for the development of Australian disposal and recovery facilities …

The restriction on the export of hazardous waste has created an opportunity for the development of local hazardous waste disposal and recovery facilities. In a number of cases this opportunity has been seized upon and new disposal and recovery operations have begun in Australia. This has provided an employment benefit to the Australian community.

… but there are impediments to the establishment of adequate disposal and recovery facilities …

Australia's small size and distance from other OECD countries has limited the development of disposal and recycling facilities. A number of parties suggested that the development of further recycling facilities is hampered by:

- a lack of information about the generation of hazardous wastes — ie, it is difficult for people who may be interested in establishing recovery or disposal facilities to identify the scale of any potential market; and
- restrictions in the *HWA* which limit the importation of hazardous waste into Australia.

… and where facilities exist there are major concerns about the degree of competition

A persistent concern from domestic waste merchants is that there is insufficient competition in the recovery of hazardous wastes in Australia. The upshot of these concerns is that the price of hazardous waste for recovery is depressed (to the detriment of the merchants) and as a result there is insufficient incentive to shift hazardous wastes from landfill to recovery (to the detriment of the environment).

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[6] Productivity Commission submission, p.5.

The impact on industry overseas is mixed

The *HWA* has clear ramifications for overseas companies:

- countries that have sectors that rely on hazardous waste as inputs are likely to see a decrease in activity due to a reduction in transboundary waste movements; and
- merchants and recyclers in non-OECD hazardous waste importing countries are likely to see a decline in business while merchants and recyclers in OECD countries are likely to see an increase in business.

1.5.3 Environmental and Related Impacts

This NCP review of the *HWA* is unusual as far as NCP reviews are concerned because the major beneficiaries for whom the legislation was passed are the residents of overseas countries and the environment generally. The importance of this characteristic was emphasised by a number of stakeholders:

> "Benefits that accrue to overseas jurisdictions must be acknowledged as part of the Australian public interest. ESD principles include social equity and intergenerational equity, neither of which is restricted by national borders. Adverse toxic impacts are also not restricted by country borders, as we all live in a global environment. This is particularly relevant for transport of persistent bioaccumulative substances."
>
> National Toxic Network submission, p.3.

Developing countries have been clear environmental winners from the HWA …

The *HWA* has largely stopped the flow of hazardous waste from Australia to developing countries.[7] Given the widespread concerns about certain disposal and recycling methods employed throughout most of the developing world, the reduction in hazardous waste flows is likely to have a significantly positive impact upon the environment and human health in developing countries (even if this beneficial outcome is especially felt in localised regions within countries).

… but the impact on the Australian environment has likely been negative …

While there are a number of domestic environmental benefits,[8] there are a number of concerns regarding the *HWA*'s impact upon the environment generally, and the Australian environment in particular:

- anecdotal evidence suggests that restrictions on the export of hazardous waste have resulted in an increase in wastes in legal and illegal storage (to varying degrees of safety) and in landfill;
- even where hazardous waste has been disposed of or reclaimed in Australia, there may have been facilities overseas which would have done the job in a more environmentally appropriate manner; and
- the lack of domestic competition with respect to recycling has reduced the collection rates of hazardous waste and stockpiles spread across the country.

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[7] There will always be unscrupulous operators or cases of inadvertent breaches of the *HWA* as evidenced by illegal shipments that have been detected from time to time.

[8] These may include: risk reduction through tracking of movements and controls imposed on storage, transportation and packaging of hazardous wastes; and controls imposed on hazardous waste imports to ensure that they cannot be dumped or brought into Australia if there are no facilities that can adequately deal with them.

1.6 Issues Needing to be Addressed

The ability of this review to recommend fundamental reform is constrained by Australia's commitments under the *Basel Convention* and associated treaties. However, in certain cases, the *Convention*'s requirements provide Parties with the flexibility to interpret their obligations as they see fit. In these instances there are a number of administrative and legislative concerns that are evident with respect to the generation and transboundary movement of hazardous waste, and should be addressed in compliance with Australia's international obligations.

The HWA and the Regulations are extremely complex

The *HWA* and the associated regulations are extremely complex to understand. This imposes a resource burden on:

- EA — as a result of the legislative complexity significant resources are devoted to the production of explanatory material; and
- industry — a common complaint of industry is that the obligations are difficult to determine.

While somewhat cosmetic, the redrafting of the *HWA* and associated regulations could reduce the need for the preparation of voluminous explanatory documents by EA, and should reduce the compliance burden on businesses.[9]

Differing fee levels for Basel and Special (export) Permits create a trade distortion

Fees for export permits are currently set to cost recover. While cost-recovery is an admirable goal, there may be circumstances when it is inappropriate: export permits under the *HWA* are one such example.

There is a significant difference in the fee level for initial Basel Export Permits (ie, $4,440) and initial Special Export Permits ($480). This difference is currently justified on the basis that the costs involved in undertaking assessments and ensuring compliance with the prior notification and consent arrangements are far more onerous for non-OECD exports in comparison to OECD exports.

This fee differential is a significant barrier to trade with non-OECD countries because the fee level is material in comparison with the value of the shipments (many wastes are of a low value).

In some circumstances export permits may be perceived as unduly short

Parties with established export track records were dismayed at the need to reapply for export permits on such a frequent basis, particularly when supporting documents remain valid from the previous permit. An alternative strategy is to allow for longer permits where the party has a suitable record of compliance with the *HWA* and any issued permits.

The regulation of hazardous waste is unnecessarily costly because of differing approaches between the Commonwealth and the states and territories

A significant concern amongst many industry participants related to how the Commonwealth and the states and territories interrelate. Issues raised include:

- different definitions as to what is hazardous waste. While the National Environment Protection Measure (NEPM)[10] was meant to streamline

[9] See McKinley, "Keeping It Simple: Making Regulators Write In Plain Language" (1998) 21(4) *Regulation* 30. McKinley even goes so far as to use a rewrite of US hazardous waste laws as an example of effective plain language.

[10] Movement of controlled waste between States and Territories NEPM.

cross-border domestic hazardous waste movements, different states have diverged from the common standard to create differential definitions as to what constitutes hazardous waste. This multiplicity of definitions is confusing for industry and imposes an extra administrative burden as firms have to develop handling processes and procedures to deal with handling around Australia; and

- alternative interpretations as to environmentally sound management. When assessing the environmental suitability of recycling and disposal facilities in Australia, EA contacts state environmental agencies and asks whether or not there are any outstanding complaints against the particular facility. The concern is that different states and territories have differing enforcement and monitoring standards and hence there is likely to be differing standards applied to applicants seeking a *HWA* permit.

The Review Team considers these legitimate concerns but notes the problems associated with resolving them in a federal system.

The penalties associated with the contravention of the HWA may be perceived as being unduly low

The *HWA* provides for fines of up to $1 million for contraventions of the *HWA* and its associated regulations. While the Review Team considers that the penalty level is possibly too low to provide a deterrent in some circumstances, with only one conviction for contravening the *HWA* it is difficult to make definitive statements with respect to the level of deterrence provided by the *HWA*.

The system of prior notification and consent is an undue paper burden that ignores developments in electronic lodgement and communication

The current permit system is heavily paper-dependent, with parties required to fill out multiple forms in duplicate. This paper emphasis is largely a result of requirements of overseas countries.

Acknowledging that reform of international practices is often slow and necessarily results in compromises, Australia should push for greater international acceptance of electronic lodgement and tracking for prior notification and consent documents.

There is a lack of reliable public information about the volume and nature of hazardous waste generated in Australia and exported

An ongoing problem is the lack of reliable published information about the volume and nature of hazardous waste generated in Australia and exported. As a result:

- it is difficult for the Commonwealth to assess the impact of the *HWA* and formulate policy; and
- the hazardous waste recycling and disposal industry lacks adequate information upon which to base investment decisions. This lack of information is a barrier to industry development.

There are two approaches that will go some way to rectifying this information deficiency:

- EA should publish details of actual hazardous waste movements rather than permitted (and hence overstated) movements; and
- serious consideration should be given to including hazardous waste in the National Pollutant Inventory (NPI).

Standards referenced in the HWA and its associated regulations

The review terms of reference state that, "there should be explicit assessment of the suitability and impact of any standards referenced in the legislation, and justification of their retention if they remain as referenced

standards".[11] There are no explicit standards referenced in the *HWA* or its associated regulations.[12]

1.7 Recommendations

The following recommendations stem from the analysis in this report.[13]

RECOMMENDATION ONE

Consideration should be given to whether hazardous wastes should be prescribed so as not to include household wastes (which are defined as 'other wastes' in the Basel Convention).

RECOMMENDATION TWO

The HWA should be amended to exclude from the definition of hazardous wastes those wastes which derive from the normal operations of a ship, the discharge of which is covered by another international instrument.

RECOMMENDATION THREE

Consideration should be given to whether, in deciding to grant a permit, explicit reference should be made to:

- *in the case of export permits — the degree of competition in the domestic market; and*
- *in the case of import permits — whether imports are necessary to achieve critical mass and/or a reasonable degree of competition in the domestic recovery market.*

RECOMMENDATION FOUR

The Hazardous Waste (Regulation of Exports and Imports) (OECD Decision) Regulations should be amended to bring them into line with the OECD Decision provisions whereby once a competent authority has notified the OECD Secretariat of a decision to not raise objections over certain types of shipments notification must still be provided to that country but the 30 day objection period is waived.

RECOMMENDATION FIVE

Existing pre-approval mechanisms appear to have limited industry understanding, and in any case appear to be less effective than would be hoped. To the degree possible Environment Australia should seek to encourage the uptake of pre-approval domestically and abroad and should encourage overseas Parties to ensure that pre-approval provides a meaningful reduction in the administrative costs of the HWA and the Basel Convention generally.

RECOMMENDATION SIX

Fees for permits should be reviewed so that, in addition to being based on cost recovery principles, their relative levels do not unnecessarily distort the decision to send hazardous waste to either Basel or OECD destinations.

RECOMMENDATION SEVEN

While it is administratively convenient to establish default insurance requirements, applicants should be free to make the case for lower insurance obligations.

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[11] See Appendix A.

[12] As to why standards are competitive and regulatory reform concern see Commonwealth Interdepartmental Committee (IDC) on Quasi-regulation, *Grey-Letter Law*, Office of Regulation Review, Canberra, 1997.

[13] Throughout the report the Review Team has also made a number of 'observations' where no recommendation is required or possible. To varying degrees these observations are reflected in the summary presented in sections 1.4 and 1.5.

RECOMMENDATION EIGHT

It should be made clear to applicants that insurance may be able to be held by parties other than the applicant. The applicant would be required to demonstrate that appropriate insurance is held at every stage of the shipment.

RECOMMENDATION NINE

Environment Australia should continue to take steps to encourage overseas Parties to accept electronic documentation as part of the HWA notification and consent procedures.

RECOMMENDATION TEN

Environment Australia should be required to publish information about the actual (ie, in comparison to permitted) shipments of hazardous waste.

1.8 Report Structure

The remainder of this report is structured into the following five parts:

- Part A (Chapters One and Two) — provides an overview of NCP and the Australian hazardous waste industry;
- Part B (Chapters Three and Four) — discusses the *Basel Convention* and Australia's international obligations as well the regulatory framework in Australia. This part includes an assessment as to whether or not Australia's international obligations can be said to provide a net benefit to the community as a whole;
- Part C (Chapters Five and Six) — in many instances the *Convention's* requirements are discretionary in nature, providing Paries with the flexibility to interpret their obligations as they see fit. Part C therefore identifies competitive restrictions in the *HWA* (where it exceeds the requirements of the *Basel Convention*) and the impacts associated with these restrictions. Reform options are considered where appropriate;
- Part D (Chapter Seven) — considers issues and options raised by stakeholders during the review which are outside the scope of this review; and
- Part E (Appendices) — provide details of the review's consultation, the terms of reference and sources used in this report.

A

Part A — Background to the Review

This Part provides an overview of NCP and the Australian hazardous waste industry.

Chapter One

National Competition Policy and Good Regulatory Design

This review is being conducted as part of the Commonwealth's commitments under National Competition Policy (NCP). In order to provide some context, this chapter explains NCP's origins and some of the key principles underlying NCP.

1.1 Development of the 'Competition Test'

The inaugural Council of Australian Governments (CoAG) meeting commissioned the 'Hilmer Committee' to conduct an inquiry into the development of a more nationally focused approach to competition policy. The *Hilmer Report*[14] was presented to CoAG in August 1993.

The *Hilmer Report* described regulation by all levels of government as the greatest impediment to enhanced competition in many key sectors of the economy. It did, however, recognise that there may be a need for some government regulation when market failures occur. As a result, the *Hilmer Report* recommended:

- the reform of regulation that unjustifiably restricts competition; and
- that any restriction on competition that is to remain must be clearly demonstrated to be in the public interest.

At the April 1995 CoAG meeting, the Commonwealth, State and Territory Governments all agreed to implement a national competition reform agenda based on the *Hilmer Report*'s recommendations. As a result, all governments signed the inter-governmental *Competition Principles Agreement* (*CPA*), committing themselves to ensuring that new and existing legislation does not impose undue competitive restrictions:

> "The guiding principle is that legislation (including Acts, enactments, Ordinances or regulations) should not restrict competition unless it can be demonstrated that:
>
> a) the benefits of the restriction to the community as a whole outweigh the costs; and
>
> b) the objectives of the legislation can only be achieved by restricting competition."
>
> *Competition Principles Agreement*, sub-cl.5(1).

The sub–cl.5(1) test — the competition test — is intended to establish whether particular restrictions on competition remain necessary, through an assessment of the costs and benefits of current and alternative means of achieving policy objectives.

[14] The Independent Committee of Inquiry, *National Competition Policy*, AGPS, Canberra, 1993.

As the competition test is built on the presumption that restrictions to competitive economic behaviour impose costs on the community, *the burden of proof is on those who wish to retain restrictions to establish the public interest case for the retention (or enactment) of legislation which restricts competition.*

1.2 The 'Public Interest Test'

NCP acknowledges that competition is not an end in itself. That is, while the introduction of competition will generally deliver benefits to the consumer, there are situations where community welfare will be better served by not effecting particular competition reforms. That is, competition is to be implemented to the extent that the benefits that will be realised from competition outweigh the costs.

The *CPA* provides for considerations other than strictly economic criteria in assessing public benefit. Sub-clause 1(3) of the *CPA* sets out the circumstances in which the weighing up process is called for, and also some of the factors which need to be taken into account in making the decision:

> "Without limiting the matters that may be taken into account, where this Agreement calls:
>
> (a) for the benefits of a particular policy or course of action to be balanced against the costs of the policy or course of action; or
>
> (b) for the merits or appropriateness of a particular policy or course of action to be determined; or
>
> (c) for an assessment of the most effective means of achieving a policy objective;
>
> the following matters shall, where relevant, be taken into account:
>
> (a) government legislation and policies relating to ecologically sustainable development;
>
> (b) social welfare and equity considerations, including community service obligations;
>
> (c) government legislation and policies relating to matters such as occupational health and safety, industrial relations and access and equity;
>
> (d) economic and regional development, including employment and investment growth;
>
> (e) the interests of consumers generally or of a class of consumers;
>
> (f) the competitiveness of Australian businesses; and
>
> (g) the efficient allocation of resources."

The National Competition Council (NCC) has stated that:

> "A central feature of the National Competition Policy is its focus on competition reform 'in the public interest'. In this respect, the guiding principle is that competition, in general, will promote community welfare by increasing national income through encouraging improvements in efficiency. …

> The aim in applying s.1(3) is to assess any special treatment in a transparent and consistent manner, with the benefits and costs of particular anti-competitive behaviour subject to public scrutiny."
>
> National Competition Council, *Considering the Public Interest under the National Competition Policy*, AGPS, Melbourne, 1996, pp.2 & 8-9.

The NCC emphasises that sub-cl.1(3) is not exclusive or prescriptive. Rather, it provides a list of indicative factors a government could look at in considering the benefits and costs of particular actions, while not excluding consideration of any other matters in assessing the public interest.[15]

> "it needs to be emphasised that the NCP legislation review program is not about deregulation for deregulation's sake, nor that it allows no room for (so-called) non-economic considerations, and nor that it sees no role for government. …
>
> Rather, the NCP legislation review program is about:
>
> — ensuring that, where government does regulate, that regulation is necessary, effective and well designed;
>
> — ensuring that regulation is not used to prop up the incomes and conditions of vested interest groups, at the expense of the rest of us; and
>
> — replacing the 'maximum visible regulation' of the past with 'minimum effective regulation', which can pass the test of 'net public benefit'.
>
> So we are talking about reorienting and refining, rather than rejecting, the regulatory role of government."
>
> Cope, "National Competition Policy: Rationale, Scope and Progress, and Some Implications for the ACT and the Role of Government" at the *ACT Department of Urban Services' Summer Seminar Series*, Canberra, 20 March 1998, p.17. Emphasis in original.

This review will consider issues raised in a manner consistent with this broad approach to NCP.

[15] This broad approach was re-affirmed in the House of Representatives Standing Committee on Financial Institutions and Public Administration, C*ultivating Competition: Report of the Inquiry Into Aspects of the National Competition Policy Reform Package*, AGPS, Canberra, June, 1997, p.10.

Chapter Two

The Hazardous Waste Industry

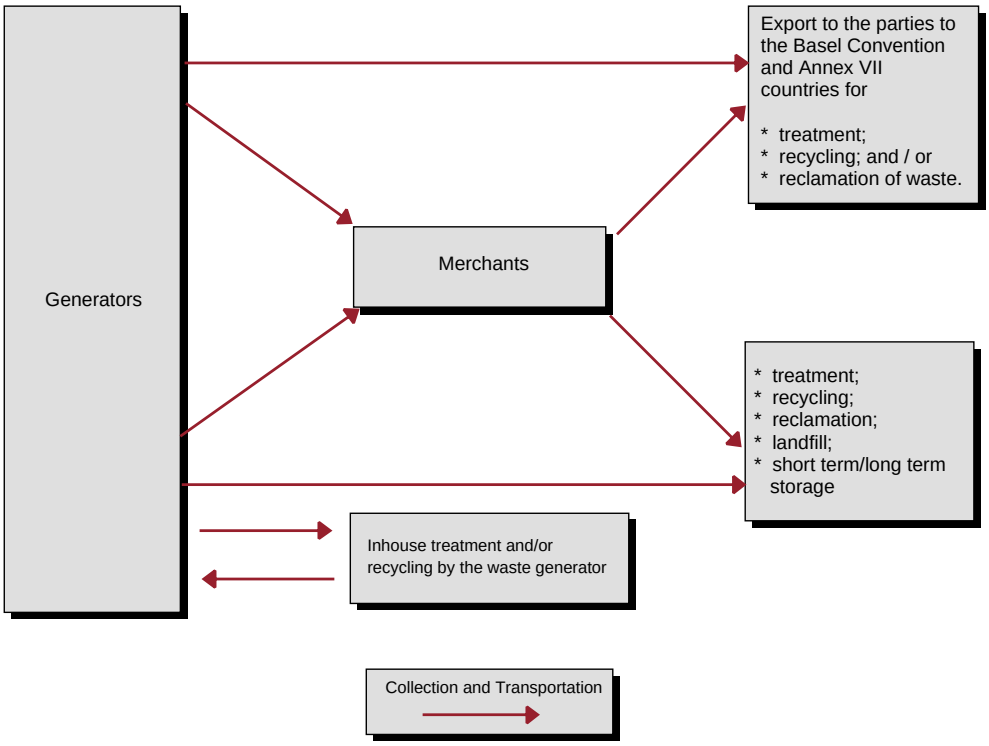
In order to determine the impact of the *Hazardous Waste (Regulation of Exports and Imports) Act 1989* (the *HWA*) it is essential to have an understanding of the shape and scope of the Australian hazardous waste industry.

2.1 Industry Participants

As shown in Figure 2.1, the generation, movement and disposal/recovery of hazardous waste involves a broad range of firms including businesses engaged in the production, transportation, buying and selling, treatment, storage and/or recycling or reclamation of hazardous waste.

Figure 2.1

HAZARDOUS WASTE FLOWS



Source: The Allen Consulting Group

The hazardous waste industry participants can be classified into the following categories:

- generators of hazardous waste — the bulk of hazardous waste comes from the manufacturing sector (predominantly industrial and commercial activities) and from community services (mainly laboratories and hospitals). Other more minor generators include car repair workshops, dry cleaning services, fast food stores, food processing

plants, chemical, paint and plastics manufacturers, clothing and textile manufacturers and dental surgeries;

- transporters of waste — the collection and transportation of hazardous waste is a critical stage in ensuring that hazardous waste is handled in an environmentally sound manner. Transport from the generator to the treatment facility is frequently carried out by individual transport professionals, however in many cases the generators and/or merchants will also undertake this task. The domestic transport of hazardous waste is regulated under the Dangerous Goods Code with the most common form of transport, particularly for drummed and paletted waste, being by road with bulk waste generally moved by rail. In Australia the majority of metropolitan areas have established manifest systems which track and record the transport of hazardous wastes from the generator to the treatment facility. Cross border transport of hazardous waste is controlled under the National Environment Protection Measure (NEPM), whereby all such waste movements must be approved by the environmental protection authority in the Australian jurisdiction to which the waste is to be consigned;

- waste management merchants — hazardous waste management merchants act as the middle men between the generators of hazardous waste and the businesses involved in the treatment, storage and/or recycling or reclamation of hazardous waste. They match supply and demand for individual wastes and in doing so increase the potential for the treatment, recycling and/or reclamation of hazardous waste in an environmentally sound manner. Merchants commonly perform more than one function in the industry. Many merchants are also generators or transporters of hazardous waste, benefiting from the strong information asymmetries present in the industries. Those merchants who are not affiliated with either a generator or transporter, are generally small business operators who may be subject to large pressures from other industry participants;

- treatment and processing of wastes — hazardous wastes are often treated to reduce hazards and prepare them for reuse, recycling, energy recovery, storage or consignment to landfill. Treatment technologies include biological treatment, distillation, chemical fixation, solidification and immobilisation;

- recyclers of wastes — as trends in the generation of hazardous waste continue to escalate world governments are under increasing pressures to protect the environment. Consequently, recycling has become a rapidly growing sector of the hazardous waste industry. This is evidenced by the fact that a total 1.5 million tonnes of recyclables were owned and sold by waste management businesses and organisations within Australia in 1996-97; and

- community and environmental interest groups — these non-profit organisations play a significant role in the hazardous waste industry. Their primary aim is to increase public awareness of environmental and community issues through education. They are often seen as the voice of the people and are largely responsible for bringing environmental issues into the public arena.

These organisations have been identified as major players in the hazardous waste industry. However many more organisations that interact with the identified industry participants above, may not consider themselves to be

involved in the hazardous waste industry. For example, this may be because they are involved in other industries but generate hazardous waste as a by-product of activity.

2.2 The Scale of Hazardous Waste Production

At present data on the Australian hazardous waste industry is extremely limited.[16] There are a number of factors that contribute to the lack of comprehensive and reliable statistics:

- the definitions of hazardous waste reflect the hazardous waste management systems in each region and are not necessarily limited to controlled substances as defined under the *Basel Convention*;
- changes in regulation could lead to changes in the level of industrial waste being defined as hazardous waste. In this situation, the recognition of additional materials as hazardous would lead to a statistical rather than actual growth in the reported level of hazardous waste generated; and
- the information on hazardous waste generated excludes hazardous waste processed on site.[17]

In addition, the hazardous waste industry is often subsumed by the broader waste industry. This lack of clarity is considered to be a large cause of concern because, "the 'broader' (multi-national) waste industry frequently 'accommodates' waste of a kind which ought to be isolated at a higher level of security than that provided by companies".[18]

Noting these limitations, Figure 2.2 sets out the available time-series statistics on the generation of hazardous waste in some Australian regions. The information suggests that while the level of identified hazardous waste generated in Sydney and Victoria has continued to increase since the introduction of the *Basel Convention*, generation appears to have begun to fall in South Australia. However, as these statistics can not be directly compared it is difficult to determine or forecast any national industry trends.

[16] The Review Team notes that there have been attempts by the Co-operative Research Centre (CRC) for Waste Management and Pollution Control Limited (on behalf of Environment Australia) to form an Australia Waste Database. This site has not been updated since 1 October 1998 and contains data from four cities (not states) for the early 1990s — the majority of which predates the *Basel Convention* — see www.civeng.unsw.edu.au/Water/awdb/repawd.htm (accessed 5 October 2000).

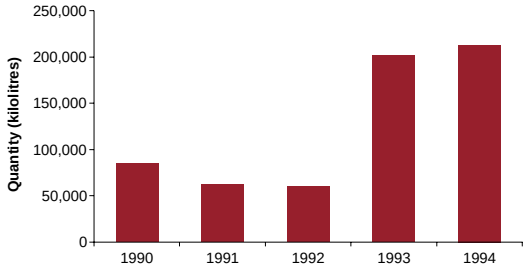
[17] Productivity Commission submission, p.1.

[18] Friends of the Earth submission, p.2.

Figure 2.2

HAZARDOUS WASTE GENERATION — SELECTED AREAS AND JURISDICTIONS

Sydney

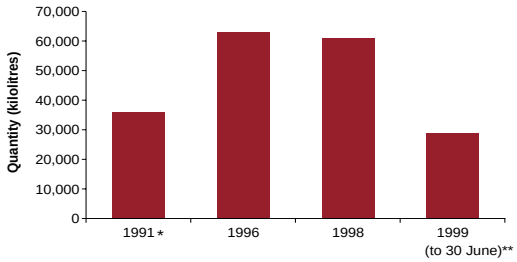


Source: CRC for Waste Management and Pollution Control, *AWD Hazardous Waste Report*, Australia Waste Data Base at http://www.civeng.unsw.edu.au/Water/awdb/repawd.htm (accessed 5 October 2000).

Victoria

Source: Hazardous Waste Consultative Committee, *Final Report*, Melbourne, 2000, p.4.

South Australia



Source: Department of Environment and Heritage South Australia. *Waste Management in South Australia: Background Paper*, Adelaide, 2000, p.9.

* Data not recorded for medical waste in 1991.

** Figures to end of June 1999 do not necessarily indicate half the years total because some waste are not generated evenly through the year.

Note: the definitions of hazardous waste reflect the hazardous waste management systems is each region and are therefore not comparable.

2.3 Transboundary Movement of Hazardous Waste

While there are now significant controls, trade in hazardous waste remains a major business. The Organisation for Economic Co-operation and development (OECD) estimates that 1.7 million tonnes of hazardous wastes are exported from OECD countries each year.[19] This trade has a substantial dollar value and provides significant raw material input in the OECD area and supports many jobs.

Australia also utilises trade in hazardous wastes. Export opportunities in hazardous waste are a valuable market for a limited number of Australian businesses. The ability to trade in various dross and skim materials, metal residues and other materials helps to sustain demand and encourage scrap merchants to collect and market these wastes, boosting recovery and recycling. The import of these materials acts as a competitive spur to keeping domestic prices down. Furthermore, some industries in Australia provide specialist services that require imports of hazardous materials as input.

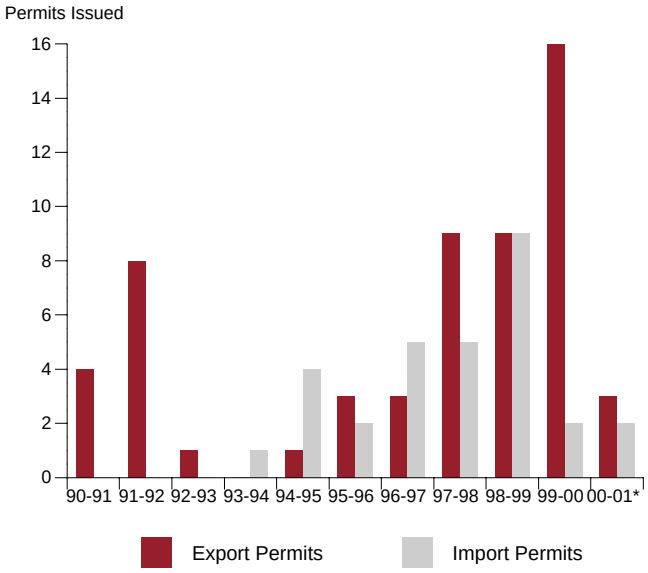
[19] See Secretariat of the *Basel Convention, Transboundary Movement of Hazardous Wastes and Other Wastes in 1997*, obtained from http://www.basel.int.

Environment Australia (EA) has long been aware of the economic importance of trade in hazardous waste. This recognition combined with the absence of reliable data detailing international trade in hazardous waste acted as an impetus for a comprehensive study that was carried out in 1993-94.[20] In undertaking the study the consultants conducted an extensive review of over one hundred and twenty organisations in an aim to quantify current Australian trade in hazardous waste for recovery, as defined in the OECD red and amber lists, in terms of monetary value and volume. The study identified $120.7 million in annual exports and $8.5 million in imports of materials that were included on the OECD amber list. Exports worth $22 million (18 percent) and imports worth $4.3 million (51 percent) were traded with countries other than Europe, USA, Japan or New Zealand, mainly India, China and other Asian Countries. Non-ferrous metal-bearing materials, especially lead and copper residues, constituted the bulk of exports, and were destined primarily to Japan, Germany and Canada.

Figure 2.3 indicates the number of hazardous waste export and import permits issued by the Minister since 1990.

Figure 2.3

EXPORT AND IMPORT PERMITS GRANTED BY THE MINISTER FOR THE ENVIRONMENT AND HERITAGE



Note: Data in 2000-01 is through to 8 September 2000.
Source: Department of the Environment and Heritage Annual Report, *Annual Report on the Operation of the Hazardous Waste (Regulation of Exports and Imports) Act 1989*, AGPS, Canberra.

Prior to 1996 there were limited number of permits issued under the *Basel Convention*. This is due to a number of reasons including the fact that:

- from the entry into force of the *HWA* in 1989 until the *Basel Convention* came into effect in May 1992, export permits were issued for hazardous wastes intended for final disposal operations as it was

[20] See Thompson Environmental Services, ACIL Economics & Policy Pty Ltd & Ian Booth and Associates, *Assessment of Australian Trade in Hazardous Wastes for Recovery*, A report to CEPA, February 1994.

understood at that time that this was the limit of the *Basel Convention* controls;

- after the *Basel Convention* entered into force in 1992, it soon became clear that the *HWA* did not fully implement Australia's obligations under the *Convention*. In particular, the *Act* only regulated transboundary movement of hazardous waste intended for final disposal, but not wastes intended for recycling/reprocessing operations. As a result, trade in these recyclable wastes did not require a permit under the *Act*, which may be seen as problematic under the *Convention*'s obligations. Very few export permits were issued for wastes intended for final disposal during this period; and
- this situation was rectified when the amended *HWA* entered into force in December 1996 and the current process for the administration of permits was put into place.

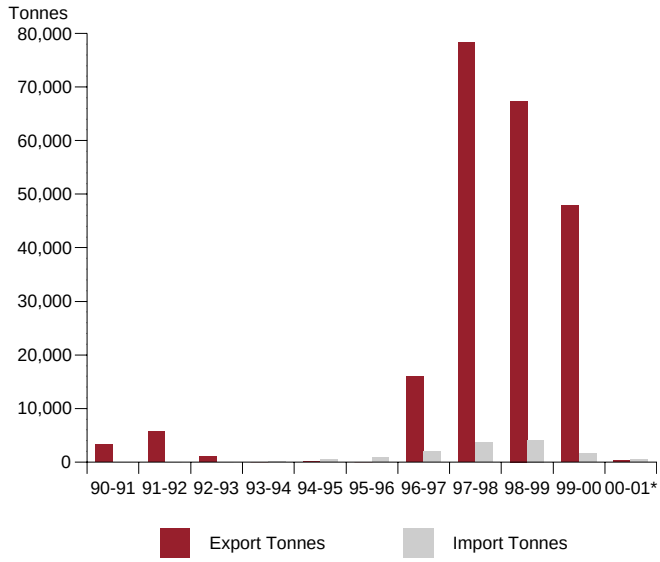
The number of permits issued since 1996 have been relatively steady and translate into *approved* trade volumes shown in Figure 2.4. Since 1996-97 Australia's trade has been dominated by the export of:

- spent pot linings;
- lead dross;
- used lead-acid batteries; and
- battery scrap;

to countries including Italy, Belgium, New Zealand and the United Kingdom.

Figure 2.4

AUSTRALIAN EXPORT AND IMPORT OF HAZARDOUS WASTES



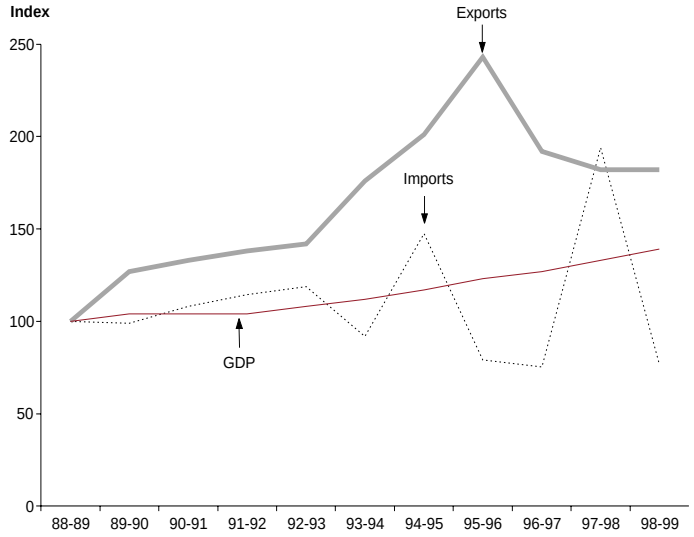
Note: Data in 2000-01 is through to 8 September 2000.
Source: Department of the Environment and Heritage Annual Report, *Annual Report on the Operation of the Hazardous Waste (Regulation of Exports and Imports) Act 1989*, AGPS, Canberra.

While approval is given by EA for the specified trade volumes shown in Figure 2.4, it is estimated that only approximately two thirds of this volume is actually traded each year.

As an alternative measure, Figure 2.5 set out the Productivity Commission's (PC's) estimated trends in the export and import of selected hazardous waste materials.[21] Administrative records of import and export approvals granted under the *HWA* were used as well as international trade statistics.[22]

Figure 2.5

TRENDS IN THE VOLUME OF AUSTRALIAN IMPORTS AND EXPORTS OF SELECTED HAZARDOUS WASTE MATERIALS



Note: 'Index' represents relative changes since 1988-99.
Source: Data supplied by Productivity Commission – see submission p.4.

As shown in Figure 2.5 Australia's import and export volumes for selected materials increased ahead of gross domestic product (GDP) from the late 1980s to the mid-1990s. There was a clear trend decline in export volumes from 1995-96 after a temporary, but very sharp rise. The import series became more erratic from 1992-93, with two substantial one-off increases occurring.[23]

As OECD and United Nations Environment Programme (UNEP) documents consistently show,[24] Australia's disclosure of its trade in hazardous waste has been less than complete to international bodies such as the OECD and UNEP.[25] However by comparing Australia's exports in Figure 2.4 to world exports, Table 2.1 appears to suggest that Australia's trade in hazardous wastes in 1997-98 was relatively small (less than 3.5 percent of the world total).

[21] These trends were compared on the basis of an index, using 1988-89 as the base year.

[22] However because of changes in approval requirements over the 1990s, these records do not provide an appropriate indicator of the transboundary flows of hazardous wastes. For example, prior to 12 December 1996 permits were not required for the transboundary movements of hazardous wastes for recycling and reprocessing.

[23] In its submission, the PC states that the one-off rise in imports in 1994-95 was mainly due to the import into Australia of metals for secondary recovery from OECD countries and India (OECD hazardous waste item AB010, trade item 2610). The second increase — in 1997-98 — was due to higher imports of the same material from the OECD area.

[24] See: UNEP, *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, Compilation Part II: Reporting and Transmission of Information under the Basel Convention for the Year 1997*, UNEP, Geneva, November 1999; and OECD, *OECD Environmental Data: Compendium 1999*, OECD, Paris, 1999.

[25] This criticism can also be made with respect to a range of other countries. Australia is taking steps to improve its international reporting of hazardous waste flows.

Table 2.1

HAZARDOUS WASTES EXPORTED (METRIC TONNES)

	For Disposal		*For Recycling*		*Unspecified or Mixed*		*TOTAL*	
	1997	*1998*	*1997*	*1998*	*1997*	*1998*	*1997*	*1998*
Among OECD Countries	409,500	403,256	1,288,000	2,849,741	15,000	122,962	1,712,500	3,375,959
From non-OECD to OECD Countries	56,400	19,905	49,300	135,829	309,100	18,441	414,800	174,175
From OECD to non-OECD Countries	0	0	900	493,094	800	5,311	1,700	498,405
Among non-OECD Countries	3,800	10	4,200	21,688	20,000	44,485	28,000	66,183
TOTAL	*469,700*	*423,171*	*1,342,400*	*3,500,352*	*344,900*	*191,199*	*2,157,000*	*4,114,722*

Note: Australia's export volumes are not included in these 1997 figures.
Source: Secretariat of the Basel Convention, *Transboundary Movement of Hazardous Wastes and Other Wastes,* obtained from http://www.basel.int.

However, this benign view may understate Australia's role in the international trade in hazardous wastes:

- as the Minister will only issue permits for final disposal under exceptional circumstances, all permits issued in recent years have only been for recycling and/or reclamation purposes; and
- Australia is a major mineral exporting country and the mineral processing industry is also export oriented. Because of the relatively small size of the domestic market, Australian firms therefore have to send dross, residues and other hazardous wastes overseas to ensure they are treated in an environmentally sound and efficient manner.

B

Part B — The Regulation of Transboundary Movements of Hazardous Waste

This Part discusses the rationale for regulating the transboundary movement of hazardous wastes, outlines and assesses the net impact of the *Basel Convention* and related international agreements, and explains the Australian regulatory framework for transboundary movement of hazardous wastes.

Chapter Three

The *Basel Convention* and Related International Obligations

This chapter provides an overview and assessment of the international treaties that shape the manner in which Australia regulates the transboundary movement of hazardous waste.

3.1 Treaties Regulating Hazardous Wastes Imports and Exports

In the 1970s and 1980s governments throughout the world began to realise that indiscriminate and uncontrolled international traffic in hazardous wastes could lead to adverse consequences for human health and the environment. While there are no reliable figures, it is estimated that at the time between 1.5 and two million tonnes of hazardous wastes were crossing developed country frontiers every year. About half of this quantity was destined for 'final' disposal and the remaining half for recovery operations. In addition, there were many hundreds of reported transfers of potentially hazardous wastes from developed to developing countries where institutional and physical infrastructure to cope with related threats were weak. More and more outcries were raised against waste traffic that imposed risks of severe environmental and health damage.

Sustained concern over trade-related environmental accidents and incidents (see Box 3.1) led to the development of a broader international response to trade in hazardous waste in the form of two major international agreements — the *Basel Convention* and the *Decision of the Council of the Organisation for Economic Co-operation and Development*. These agreements are outlined in the following sections.

Box 3.1

INCIDENTS INVOLVING THE TRANSBOUNDARY MOVEMENT OF HAZARDOUS WASTES

The *Khian Sea*

Beginning in 1986, the cargo ship *Khian Sea* spent nearly two years at sea searching for a disposal site for its 14,000 tonne cargo of incinerator ash (containing lead and cadmium elements) from Philadelphia. Nearly 4,000 tonnes of the ash were dumped on a beach in Haiti (having been labelled as soil fertiliser) and, after being denied access to several other ports, the ship changed its name twice and then dumped the remainder of the ash somewhere between the Suez Canal and Singapore. Around 2,000 tonnes of the ash are finally being returned to the US and there are plans to clean up the dump site.

The *Karin-B*

In 1987, the Italian firms Jelly Wax and Ecomar sent almost 4,000 tonnes of PCB-contaminated waste to Koko, Nigeria, under the label of substances 'relating to the building trade', where they were stored in a farmer's backyard for a small fee. The barrels containing the wastes, stored without precautions, began to leak before authorities discovered the problem. Many of the cleanup workers had no gloves and several were hospitalised. The Italian government was forced to remove the waste and the Nigerian government threatened the death penalty to anyone caught trading in hazardous wastes. The ship commissioned to transport the wastes out of Nigeria, the *Karin-B*, was then denied entry to several ports in Europe until Italy finally accepted their return.

Other Examples

In 1991-92, Albania received toxic chemicals and pesticides from Germany — banned in the European Community (EC) since 1983 — under the guise of humanitarian aid for Albania's agricultural sector. In 1996, a German company was found to have shipped 560 tonnes of mixed plastic waste (partly contaminated with chemicals and outdated medicine) to Beirut that was declared to be plastic raw material for industrial production. In both cases the wastes were returned to Germany.

Source: Adapted from Krueger, International Trade and the Basel Convention, Earthscan Publications, London, 1999.

3.1.1 The Basel Convention

The *Basel Convention* aims to protect the environment and human health from the improper disposal of hazardous wastes. It has three key objectives:

- to minimise the generation of hazardous wastes;
- to ensure the availability of adequate disposal facilities for the environmentally sound management of hazardous wastes; and
- to reduce transboundary movements of hazardous wastes to a minimum consistent with their environmentally sound and efficient management.[26]

The *Convention* places obligations on countries that are party to it to:

- minimise generation of hazardous waste;
- ensure adequate disposal facilities are available;
- control and reduce international movements of hazardous waste;
- ensure environmentally sound management of wastes; and
- prevent and punish illegal traffic.

Under the *Convention*, transboundary movements of hazardous wastes can take place only upon prior written notification by the State of export to the competent authorities of the States of import and transit (if appropriate). Each shipment of hazardous waste must be accompanied by a movement document from the point at which a transboundary movement begins to the point of disposal.

Transboundary movements to developing countries can take place if the state of export does not have the capability of managing or disposing of the hazardous waste in an environmentally sound manner.

The Third Conference of *Basel Convention* Parties in 1995 agreed to ban movements of hazardous wastes from developed country Parties (listed in Annex VII of the *Convention* and currently comprising OECD members, the EC and Liechtenstein) to developing country Parties (all other Parties). The ban was immediate for trade destined for final disposal. Trade destined for recycling and reprocessing operations was to be phased out and prohibited by 31 December 1997. Although adopted, the ban has not been ratified by the number of Parties required to bring it into effect and therefore is not yet part of the *Basel Convention*. Moreover, it would only become part of Australia's international obligations if it entered into force and Australia decided to ratify it.

3.1.2 Multilateral, Regional and Bilateral Agreements Made Under Article 11 of the Basel Convention

Under Article 11 of the *Basel Convention*, Parties to the *Convention* may enter into bilateral, regional or multilateral agreements or arrangements with non-Parties provided these agreements or arrangements conform to the

[26] See Article 4 of the *Basel Convention*. A further objective which is commonly cited, but which does not form an obligation under Article 4 of the *Convention*, is to dispose of hazardous waste as close as possible to their source of generation.

environmentally sound management of such wastes as required by the *Convention*. Australia is a signatory to two such multilateral agreements:

- the *Organisation for Economic Cooperation and Development Control System* — the OECD has special rules for shipments of waste for recovery purposes. The rules mean that waste can be shipped between OECD countries, even if they are not Parties to the *Convention*.

  When negotiations began on the *Basel Convention*, substantial work had already been carried out on the issue of controlling movements of hazardous wastes by the European Economic Community (EEC) and the Organisation for Economic Co-operation and Development (OECD). Indeed the OECD had already prohibited member countries from exporting hazardous wastes to non-OECD countries without their consent as of 1986, and by 1988 had developed and adopted definitions for 'waste' and 'disposal', lists of wastes to be controlled and hazard characteristics. In 1992, the OECD adopted more refined lists with streamlined rules and procedures for controlling movements of wastes. These lists included wastes to be controlled, which were classified into two lists (red and amber — differentiating between the perceived degree of hazard) and wastes that were not to be controlled, which were allocated to the green list. This Decision know as *Council Decision C(92)39/FINAL* is considered to be an Article 11 arrangement under the *Basel Convention*; and

- the *Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement and Management of Hazardous Wastes within the South Pacific Region* (the *Waigani Convention*) — as few countries in the South Pacific Region are Parties to the *Basel Convention*, it was agreed in August 1993 to develop a regional convention on hazardous waste that would be compatible with the *Basel Convention*, but would deal with the specific concerns of the region. This *Convention*, will come into force after ten participating countries ratify the *Convention* (it is currently ratified by seven countries).[27] Once in force, it will ban the import of all hazardous and radioactive wastes into all 'Forum Island Countries'[28] while allowing Australia to receive hazardous wastes exported from South Pacific Forum Island countries which are not Parties to the *Basel Convention*.[29]

3.2 Rationalising Australia's International Obligations

The following sections consider the rationale(s) underpinning the *Basel Convention* and the other hazardous waste related conventions to which Australia is committed.

3.2.1 A 'Market Failure' Approach

The Commonwealth, State and Territory governments have publicly agreed that government interventions in markets should *generally* be restricted to

[27] Australia ratified the *Waigani Convention* on 17 August 1998.

[28] They are defined as the Members of the South Pacific Forum (24 countries) other than Australia and New Zealand.

[29] As the *Waigani Convention* has not entered into force its impacts have not been explicitly considered in this Paper.

situations of market failure and that each regulatory regime should be targeted on the relevant market failure or failures.[30]

Market failure is best described in the negative — it can be said that a market failure exists when there is a significant deviation in outcomes from those which would occur under perfect competition.

The situations under which market failures may arise are discussed in the following sections.[31]

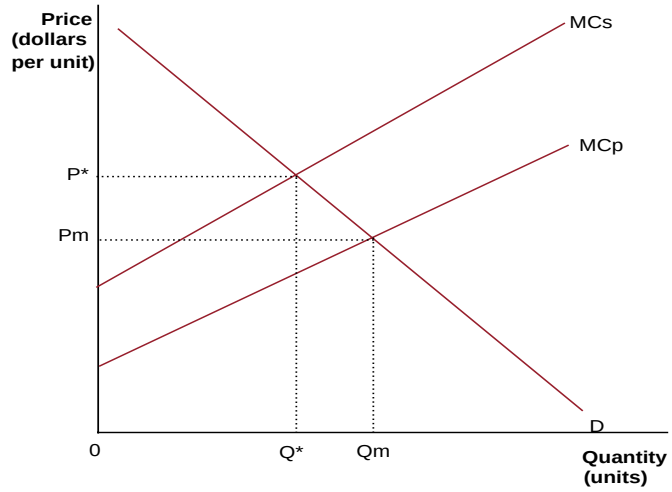
Externalities

Externalities are positive or negative impacts of market transactions which are not reflected in prices, and so lead to non-optimal levels of production and consumption. Pollution is commonly cited as a negative externality (because third parties suffer from its production) and education is often cited as an example of a positive externality (because third parties can benefit from another person's increased knowledge).

The steel industry provides a representative example of a negative externality (see Figure 3.1). Steel production inevitably involves producing pollution and wastes as well as steel. The demand for steel is shown by the demand curve (D) and the private marginal cost of producing steel (exclusive of pollution control and environmental damage) is depicted as MC_P. Because society considers both the cost of pollution and the cost of producing the steel, the social marginal cost function (MC_S) includes both the private and social costs. The difference between MC_S and MC_P at any quantity of production is the value of the externality.

Figure 3.1

EXTERNALITIES AND NON-OPTIMAL LEVELS OF PRODUCTION



Source: Derived from Tietenberg, *Environmental and Natural Resource Economics*, *Third Edition*, HarperCollins Publishers, New York, 1992.

[30] Council of Australian Governments, *Report of Task Force on Other Issues in the Reform of Government Trading Enterprises*, released as part of the first CoAG communique, 1991, p.22.

[31] See Cooter & Ulen, *Law and Economics*, Third Edition, Addison-Wesley, Sydney, 2000, pp.40-43.

If the steel industry faced no outside control on its emission levels, it would seek to produce Q_M at P_M. That choice, is clearly not efficient, since the optimal production level (once including external costs) is at Q* for P*.

Public Goods

Public goods have two characteristics — they are

- non-excludable — ie, people who have purchased the good cannot stop others from using it; and
- non-rivalrous — ie, the good is not used up with use.

Therefore public goods will tend to be under produced. Common examples include aspects of the natural environment and national defence.

Natural Monopolies

Natural monopolies arise where the costs of establishment, resources or infrastructure mean that setting up competition is socially wasteful. Because a natural monopoly is socially optimal but not necessarily in the interests of all players in the market, governments may decide to regulate in the public interest.

Information Asymmetries

If consumers do not have accurate information about market prices or product quality, the market system will not operate efficiently. This lack of information may give producers an incentive to supply too much of some products and too little of others. In other cases, some consumers may not buy a product even though they would benefit from doing so, while other consumers buy products that leave them worse off.

Relevant Market Failures — Summary

While almost all markets deviate from the model of perfect competition — where there are many buyers and sellers, and the goods or services sold are homogeneous — the deviations are not normally so significant to threaten the underlying principles of competition.

However, in this case, possible market failures that the *HWA* seeks to address may include those arising from:

- negative social and environmental externalities — while parties that decide to move hazardous wastes around the world do so on the basis that the personal benefits exceed the personal costs, such decisions often fail to adequately account for social benefits and costs (ie, costs and benefits affecting third parties). For example, while a decision may be made to dispose of waste in a developing country, little consideration may be given to the longer-term consequences of possible inappropriate disposal methods (eg, ground-water pollution, etc). This potential problem is exacerbated when, as is often the case with respect to developing countries, there is not a well-defined system of property rights and

hence there is little incentive for environmental resources to be managed in an efficient manner;[32]

- public goods — typically, the environment exhibits, to varying degrees, the characteristics of public goods. The values that society places on environmental public good characteristics are many and varied, are often difficult to quantify, and are not able to be (or are poorly) reflected in the market system. Hence, they are not adequately incorporated in environmental preservation decisions; and
- information asymmetries — to a lesser extent, buyers and sellers may not have the same knowledge about the harm associated with the transport and/or recovery/disposal of hazardous waste. This type of market failure is likely to be particularly pertinent when buyers are developing countries who are unaware of the quality, composition and/or effects on human health and the environment of particular shipments of hazardous waste.[33]

3.2.2 Non-Market Failure Rationalisations

Governments also regulate to achieve broader objectives that may or may not be related to market failures. The achievement of these objectives is often perceived by the community to be a benefit of the regulatory regime.

Some public policy reasons why governments have tended to regulate or intervene in markets include the protection of consumers, employees and the environment — this is intended to overcome problems of externalities and imperfect information in the market place. This objective may or may not be related to market failures.

Furthermore, a number of parties to the review explicitly or implicitly suggested that an appropriate objective should be the concept of ecologically sustainable development (ESD):

> "The generation of hazardous waste conflicts with the principles of 'Ecologically Sustainable Development' to which all Australian governments committed themselves in 1992, yet no action to phase-out the generation of hazardous waste is contemplated."
>
> Friends of the Earth submission, p.1.

A description of ESD is provided in Box 3.2 (next page).

It is important to stress that ESD is not solely focused on environmental issues which seek to retard development. Rather, while ESD tends to be viewed as an environmental concept, it acknowledges that development is

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[32] Property rights are a set of rules that establish the legal owner of a resource and specify the ways in which the resource may be used. The two major types of property rights' specifications are:

- *common property* — is by definition owner by society at large. No individual may appropriate such a resource solely for his or her own use; and
- *private property* — is directly owned by individuals who have, within prevailing legal strictures, some say over how the resource is used.

[33] In certain cases the long run effects on human health and the environment are still largely unknown.

necessary to support the community and is in the community's interests, but that development should be in a sustainable framework.[34]

Box 3.2

ESD — GOAL, CORE OBJECTIVES AND GUIDING PRINCIPLES

"The Goal is:

Development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends.

The Core Objective is:

- to enhance individual and community well–being and welfare by following a path of economic development that safeguards the welfare of future generations
- to provide for equity within and between generations
- to protect biological diversity and maintain essential ecological processes and life–support systems

The Guiding Principles are:

- decision making processes should effectively integrate both long and short–term economic, environmental social and equity considerations
- where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation
- the global dimension of environmental reasons of actions and policies should be recognised and considered
- the need to develop a strong, growing and diversified economy which can enhance the capacity for environmental protection should be recognised
- the need to maintain and enhance international competitiveness in an environmentally sound manner should be recognised
- cost effective and flexible policy instruments should be adopted, such as improved valuation, pricing and incentive mechanisms
- decisions and actions should provide for broad community involvement on issues which affect them.

These guiding principles and core objectives need to be considered as a package. No objective or principle should predominate over the others. A balanced approach is required that takes into account all these objectives and principles to pursue the goal of ESD."

Source: *National Strategy For Ecologically Sustainable Development*, December 1992, pp.8-9.

3.3 Costs and Benefits of *Basel* in Particular Circumstances

This section considers costs and benefits generated by the *Basel Convention* and its adoption by Australia.

3.3.1 Participation in Policy Making Frameworks

The major benefit to Australia in joining other nations in prohibiting the transboundary movements of *Basel Convention* wastes through its membership of the *Basel Convention* is that Australia is able to participate in shaping the debate on the global movement of hazardous waste. As virtually all of Australia's trading partners are either parties to the *Convention* or parties to similar sets of rules established by the OECD, it is Australia's trade interests, as well as within out international obligations, to abide by these rules.

[34] The importance of sustainable development is increasingly being understood by the business community — see Bourne, "Why Sustainable Development is a Top Priority" (2000) 2(1) *BCA Papers* 48.

The consequence of not participating in the *Convention* would be that arrangements would likely be made that are a detriment to Australia's long-term interests. This point was made by Smith (acting for the Minister for Environment and Heritage in the House of Representatives) in the second reading speech for the 1996 amendments. He noted that:

> "as virtually all of Australia's trading partners are either parties to the convention or parties to similar sets of rules established by the OECD, it is in Australia's trade interests, as well as within our international obligations, to abide by these rules. [For instance, if Australia was not to adopt the Basel Convention's list of wastes it] would inevitably lead to Australia once again being at odds with the convention and the views of our trading partners on what constitutes hazardous waste under the convention. This would risk not only a breach of our international obligations but could well lead to shipments … rejected at foreign ports to the embarrassment, cost and inconvenience of all."

3.3.2 Export of Hazardous Waste for Final Disposal

The *Basel Convention* restricts the ability of Australian firms to export hazardous wastes for final disposal. This has both negative and positive impacts as discussed in the following sections.

Impacts on Australia

Price and Quantity Impacts

By placing restrictions on the export of hazardous waste for final disposal, the *Basel Convention* has contributed to the global reduction in the transboundary movement of hazardous waste:

> "The Convention's great achievement is that the abuses it was designed to address have largely disappeared. We no longer have the shipment of quantities of hazardous wastes in large quantities from developed countries to other countries ill-equipped to manage it in an environmental sound manner. The control required by the Convention, and the large number of parties to it, mean that this practice is now tightly controlled."
>
> Australian Government, *Fifth Meeting of the Conference of the Parties to the Basel Convention, Australian Plenary Statement,* December 1999.

These restrictions effectively mean that domestic disposal is more heavily relied upon.

Domestic disposal in countries where standards are high is generally more expensive than disposal in countries that have lower environmental standards. For example, it has been reported that some toxic wastes have been shipped from certain developed countries to some countries in Africa and elsewhere for the purposes of dumping the waste — in some cases the dumping costs are under $5 per tonne, and no more than about $50 per tonne in most cases. It is estimated that the potential savings from wastes exported for land disposal elsewhere are on average about $250 per tonne.[35]

Economic theory therefore suggests that an increase in domestic disposal rates will result in an increase in the demand for storage, recycling and

[35] See Long, "Economic Aspects of Transport and Disposal of Hazardous Wastes" (1990) 14(3) *Marine Policy International Journal* 198.

disposal services in Australia. The resulting impact will be an increase in the price paid for these services.[36]

In addition, as hazardous waste is generally a by-product of producing another good or service, an increase in waste disposal costs[37] will lead to a contraction in output. Any contraction in hazardous waste generating output should also result in a decrease in hazardous waste production.

Unfortunately though, the available data suggests that production has not decreased. Industry representatives suggested that this is because:

- waste is going into unsustainable long-term storage; and
- some waste is (illegally) being put into landfill because the prices charged for landfill do not reflect the full costs of disposal.[38]

Environment and Human Health

The improper handling and disposal of hazardous wastes can affect human health and the environment through leakage of toxins into ground water, soil, waterways and the atmosphere. The environmental and health effects can be:

- immediate — such as on-site human exposure to toxins in the waste; or
- long term — contaminated waste leaches into groundwater or soil and then into the food chain.

The export of hazardous waste is a sensitive, ongoing, community issue, and the inability for a nation to appropriately deal with hazardous waste leads to great community concern (both nationally and internationally). Community concern over:

- the exporting of waste to other countries for final disposal stems from the potential for hazardous waste from developed countries to be 'dumped' on developing countries which may not have adequate controls to prevent risk to workers and the environment (this is in light of the growing recognition of global responsibilities and the consequences of global inaction in environmental matters); and
- the importing of hazardous waste for final disposal stems from a concern of having others' waste dumped locally. Environment Australia claims that the importing of hazardous wastes from the Pacific Islands to help deal with their waste management might be seen in a more favourable light (and is hence dealt with under the *Waigani Convention*).

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[36] In the longer term there may be an increase in the availability of disposal facilities or development of technologies to enable recycling which may ease the price pressure.

[37] Which ultimately falls upon the industries that produce hazardous waste and the consumers of primary materials.

[38] When setting prices for disposal it is essential that landfill prices and acceptance criteria are set in such a way as to ensure that prices reflect real environmental costs — see Campbell, Parliamentary Secretary to the Ministers for the Environment, Sport and Territories and Local Government, *Keynote Address to the Third National Hazardous and Solid Waste Convention*, Sydney Convention & Exhibition Centre, Darling Harbour, 27 May 1996. Subsidising legal disposal of hazardous waste lowers the cost of the pollution generating activity, thus distorting relative prices in the output market and increasing the quantity of hazardous wastes that need to be disposed of in the first place — see Nowell and Shogren, "Challenging the Enforcement of Environmental Regulation" (1994) 6(3) *Journal of Regulatory Economics* 265.

Despite these concerns, restrictions placed on the export of hazardous waste for final disposal under the *Basel Convention* has increased the risk of damage to the domestic environment and human health. This is because Australia must now either dispose of the waste in an environmentally sound manner (such as landfill), or develop technologies to recover, recycle or reuse the waste. As there are strict guidelines associated with the final disposal of hazardous waste,[39] and there is a lead-time required for the development of environmentally sound recycling facilities, hazardous wastes that may have been previously exported for final disposal are often stockpiled awaiting the development of environmentally sound management facilities or, even worse, dumped illegally. This argument is given support by Tredi Australia Pty Ltd who noted in their submission that there is:

> "a clear benefit to Australia where the ongoing environmental risks associated with storage of a wastestream are eliminated by implementing a timely offshore disposal option. In this regard we highlight the decision of the Regional Councils consortium in New Zealand who conducted an international tender in 1999 to manage the disposal of 150 tonnes of waste agrochemicals. After considering proposals for onshore and offshore treatment including Australian based technologies, and determining not to tolerate the risks of continued storage, the councils contracted Tredi to ship the stockpile to Europe for safe disposal by high temperature incineration."
>
> Tredi Australia Pty Ltd submission, p.4.

Evidence shows that there is a clear tradeoff between raising the cost of legal disposal and the amount of illegal disposal, and hence environmental damage that is observed.[40] For example, Sigman estimates that a US ban on used oil disposal — requiring that used oil be recycled or reused — will result in 34 percent of the waste previously disposed legally being illegally dumped.[41] Since illegal dumping is likely to be more environmentally detrimental than the previous method of legal disposal, one cannot say *a priori* whether a ban is socially beneficial.

In addition, an increase in the disposal of hazardous waste will lead to an increase in demand for disposal sites. Some community groups are concerned that any increase in disposal sites reduces the availability of potentially productive land (eg, for farming) and increases the risks of environmental contamination:

> "Landfills are technically incapable of securing long-lived hazardous waste indefinitely, irrespective of what kind of liner system has been installed… USEPA evidence proves conclusively that all liner systems eventually leak, and any authority still permitting landfilling of putrescible, industrial and hazardous waste wilfully ignores the evidence."
>
> Friends of the Earth submission, p.3.

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[39] For example, Australian jurisdictions generally restrict the disposal of wastes containing more than one percent oil (as petroleum hydrocarbons greater than C9) to secure landfill — see Environment Australia's Hazardous Waste Technical Group, *Assessment of Environmentally Sound Manage of Hazardous Waste Destined for Recovery Operations in Non-OECD Countries*, Advisory Paper 99/1, AGPS, Canberra, 1999, p.10.

[40] For example, see: Fullerton & Kinnaman, "Garbage, Recycling, and Illicit Burning or Dumping" (1995) 29 *Journal of Environmental Economics and Management* 78; Sullivan, "Policy Options for Toxics Disposal: Laissez-Faire, Subsidization, and Enforcement" (1987) 14 *Journal of Environmental Economics and Management* 58; and Sigman, "Midnight Dumping: Public Policies and Illegal Disposal of Used Oil" (1998) 29(1*) RAND Journal of Economics* 157.

[41] Sigman, "Midnight Dumping: Public Policies and Illegal Disposal of Used Oil" (1998) 29(1) *RAND Journal of Economics* 157.

Furthermore, increased landfill usage means that more landfill sites will be needed over time.[42]

Industry Development

Prior to the *Basel Convention* coming into force, it was possible to export hazardous waste for final disposal, often for a significantly lower cost than that of domestic disposal, but since 1992 Australian firms have been required to find environmentally sound ways of disposing of their own wastes. As this has generally involved paying higher prices for treatment and/or final disposal, there is an increasing incentive to recover/recycle as much material, energy, etc from the wastes as possible. In short, the *Convention* has acted as a stimulus for the development of technologies to facilitate the recovery/recycling of hazardous wastes.

While not strictly a *Basel* issue, at least one stakeholder referred to trade restrictions with respect to persistent organic pollutants (POPs)[43] as comparable to the impact of restrictions on the transboundary movement of hazardous wastes generally:

> "ELI Eco Logic has benefited from the prohibition on exports of POPs. We would not have been able to establish a commercial operation in Australia without such a ban on exports. Materials that we are currently processing were previously exported to Europe for incineration. This practice would still be one of the preferred disposal options for waste holders if it were still allowed by the Australian government. Australia's stance on export of such wastes, and its stance on not wanting waste incinerators established in Australia, has allowed several unique technologies to establish commercial footholds in Australia. This is in contrast to almost every other country in the world, where 'in-country' incineration or export for incineration is generally the 'preferred' option (note that non-government organisations such as Greenpeace strongly oppose any form of incineration of POPs). As such Australia has been able to establish 'greener' and more globally environmentally acceptable solutions to its POP problem."
>
> ELI Eco Logic Australia Pty Ltd submission, p.3.

However these types of benefits have been disputed by various stakeholders who claim that restrictions have not delivered the capacity building that was expected.[44] One reason may be the combination of a relatively uneconomic flow of domestic materials and the lack of any imports to supplement operations. For example, as emphasised by Tredi, Australia currently has access to a number of unique commercial POP destruction technologies, each of which requires a certain base-load throughput to stay economically viable:

> "Allowing the import of specified quantities of POPs for destruction in Australia would allow these companies (who had the vision to set up these ventures, and in many cases have invested huge sums into commercialising their technologies) to work on the basis of having a secure baseline of business. Specific importation of POPs would benefit these various technologies, allowing them to remain in business for a longer period to handle the dwindling stocks of Australia's own POPs.

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[42] See Wright, *Independent Public Assessment — Landfill Capacity and Demand*, State Government of New South Wales, Sydney, 2000.

[43] POPs are a particularly hazardous family of wastes that do not readily break down in the environment.

[44] See Tredi Australia Pty Ltd submission, p.4.

> … the time is fast approaching when there will be insufficient bulk waste to keep all of the POP destruction facilities fully utilised. It is conceivable then that one or more of the technologies will cease its operation, reducing the depth and breadth of Australia's POP destruction capability and experience. This would occur progressively until there are no facilities left that can operate viably."
>
> du Plessis, *PCB Waste Import — Discussion Paper*, 20 July 1999 cited in ELI Eco Logic Pty Ltd submission, pp.7&9.

With countries required to take responsibility for the domestic disposal of locally generated hazardous waste there is a growing realisation that there are also a number of opportunities available to firms through research, development and innovation. As the level of hazardous waste generated continues to grow, firms which develop the technology to either minimise the generation of hazardous waste or recycle hazardous waste previously destined for final disposal will almost certainly enjoy a distinct competitive advantage.

Impacts on Overseas Countries

Prices

Like Australia, OECD countries are obliged under the OECD Council Decision C(90)178/FINAL to dispose of their wastes domestically where possible. Similarly *Basel* Parties are obliged to ensure that transboundary movements only occur if the state of export does not have the technical capacity and necessary facilities, capacity or suitable disposal sites to dispose of the wastes in an environmentally sound manner.

In a number of instances this has increased the cost of disposal (provided it is in an environmentally sound manner) and the cost of producing the primary material. However, faced with increasing disposal costs, increasing waste generation, and dwindling capacity and sites for final disposal, countries are slowly beginning to discover recycling as an imperative waste management option. This frequently signals a market opportunity for remaining recycling industries, as well as developers of recycling technologies.

Environment and Human Health

The *Basel Convention* has substantially reduced the risk of illegal dumping or sham recycling of hazardous wastes in developing countries.

The benefits of this reduction can be seen by looking at the recycling of used lead acid batteries (ULABs) and the problems that can be forgone if there are restrictions placed on their movement to countries that lack the technical ability to handle ULABs in an environmentally appropriate manner.

Information and data collated by the International Lead Zinc Study Group (ILZSG) and the United Nations Conference on Trade and Development (UNCTAD) suggests that approximately 50 percent — approximately one million — ULABs are either:

- reconditioned or smeltered in the informal unlicensed and unregulated sector — this is most likely to occur in developing countries. For example, throughout the major cities of the Philippines there are

thousands of small battery reconditioners. They typically occupy small shops located along main city roadways with street access and are usually found amongst other shops selling a variety of provisions, fast foods, and domestic and consumer goods; or

- dumped and lost to the environment.

The most immediate problem is the disposal of diluted sulfuric acid because it is common practice for reconditioners to 'dump' the acid down the street drain or allow it to percolate into the soil at the rear of the premises.[45] Acid that is allowed to percolate into the ground at the rear of the battery reconditioners shop will render the surrounding soil infertile and probably contaminate the groundwater. Acid tipped into the stream and rivers will, depending on the extent of the dilution, lower the pH of the water and adversely affect the local ecosystem. Sulfuric acid will also attack and dissolve most concrete mixtures and mortar.

Once the components of the batteries have been separated the most likely scenario is that the lead plates are then sold to small licensed smelters. Once the metallic lead in the battery grids has been melted and cast into ingots of unrefined lead, the melting pot or kettle is emptied ready for the next batch. However, "The waste tipped from the pot will be in the form of a heavy slag or residue with a lead content of over 90%. The most likely destination for this waste material is the river, the rear of the dwelling housing or some remote part of the countryside."[46]

These battery reconditioners also pose a risk to human health as the majority are located in busy streets and adjacent to other general food stores including outdoor 'fast food' vendors and shopping districts. The risks to health are further increased with many personnel in battery reconditioning shops failing to wear any protective clothing.

> "Personnel working in the reconditioning shops were not wearing any protective clothing, gloves or safety goggles. Some of the personnel working the shops wore only shorts, no shirts or shoes, and other who were wearing tee shirts wore only sandals on their feet."
>
> UNCTAD, *A Review of the Options for Restructuring the Secondary Lead Acid Battery Industry, in Particular the Smaller Battery Recyclers and Secondary Lead Smelters and the Informal Sector, with a View to Enhancing Their Environmental Performance and Improving Health Standards,* Geneva, p.12.

Industry Development

The urgency to safely manage disposal of hazardous waste, and eventually move towards cleaner production methods, is an issue for developed, newly developed and developing countries alike.

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[45] UNCTAD, *A Review of the Options for Restructuring the Secondary Lead Acid Battery Industry, in Particular the Smaller Battery Recyclers and Secondary Lead Smelters and the Informal Sector, with a View to Enhancing Their Environmental Performance and Improving Health Standards,* Geneva, p.4.

[46] UNCTAD, *Requirements for Environmentally Sound and Economically Viable Management of Lead as Important Natural Resource and Hazardous Waste in the Wake of Trade Restrictions on Secondary Lead by Decision III/1 of the Basel Convention: The Case of Used Lead-Acid Batteries in the Philippines, Geneva,* 1999, p.8.

The first case is with respect to developed countries, In countries that have chosen to prohibit exports of hazardous waste for final disposal, hazardous waste generators have been required to dispose of their waste domestically. It has been claimed that this has provided a direct stimulus for the development of recycling technologies and the move to cleaner production:

> "Regulations and charges in OECD countries on waste management has in part been designed to create an economic incentive to reduce waste at the source and to recycle wastes. By raising the costs of disposing of waste at the source, firms face an incentive to produce less waste, or produce wastes that are less hazardous to handle, through cleaner production processes for example. The same logic can be extended to restrictions on transfrontier waste movements: restricting access to one more of the alternative disposal options increases the pressures for waste generation in industrialized countries to be minimized at its source."
>
> Organisation for Economic Co-operation and Development, *Trade Measures in the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal*, OECD, Paris, 1999, p.8.

The second case is with respect to newly developing countries. Most newly developing countries have experienced economic development through the rapid growth of large industrial sectors which are the major source of hazardous waste streams. However, as countries reach a specific level of economic development many firms begin to form strong partnerships with technologically advanced firms from the OECD. These partnerships appear to have been the impetus behind the development of technological capabilities and the skills needed to capitalise on opportunities in hazardous waste management and recycling in international markets. This move is highlighted by the following example:

> **"**Buzzelli: Historically, our businesses have focused on the environment from a defensive, product stewardship standpoint. About three years ago, we started a structural change by trying to get our businesses to do an opportunity analysis on the environment. … They now ask, 'Is there a real environmental opportunity here?' Often there is, and we can modify the product to take advantage of it.
>
> In Brazil, for instance, we developed new technology for making polystyrene foam cups and other products. Instead of using CFCs as a blowing agent, we now use CO2. We decided to licence that technology. We also founded, and own, a subsidiary that remediates other people's sites — a whole new business for us.
>
> Why did we get into that? Some time ago, we took a step back and realized that we were in the hazardous waste business. We are a generator, a transporter, and a disposer, and we think we know how to do these things well. Maybe other people will think so too. Why not turn this into a commercial opportunity? And so today we have a rapidly growing enterprise."
>
> Avila & Whitehead, "What is Environmental Strategy? An Interview with Dow Chemical CEO and Chairman, Frank P. Popoff, and Vice-President, Environment, Health & Safety, David T. Buzzelli" (1993) 4 *The McKinsey Quarterly* 53, available at http://www.mckinseyquarterly.com (accessed 12 September 2000).

The third case is with respect to developing countries. Many developing countries are characterised by lower health standards and low life expectancy. The general absence of a well-developed industrial sector means that there is little hazardous waste to be disposed of and in most instances there is no recycling sector.

The economic development efforts of the developing countries have been directed towards an increasing interest in industrialisation. This is because there is the general belief that industrialisation will eventually lead to an enhanced economy, an increase in a country's gross national product, and an associated enhancement of the general quality of life in a region. But accompanying this effort of industrialisation is the generation of several types of wastes that mimic what has happened in the developed countries, except that in the case of the developing countries there is no technology, support and of course machinery in place to effectively manage such wastes.

> "Developing and newly industrialized countries are already facing a number of social, political, economic and technological impediments to the evolution of environmentally sound waste management programmes…To achieve sustainable and self-reliant programmes, care must be taken to ensure that national capacities are developed and strengthened, existing technologies are modified and new technologies and management strategies are generated to suit local and regional circumstances (eg, political, geographic, climatic, social, cultural and economic characteristics). It is not sufficient to simply transfer technologies and strategies from the 'North' to the South' and expect to realise lasting benefits."
>
> International Maritime Office, *Global Waste Survey: Final Report*, IMO, London, 1995, p.3, as reported in Kreuger, *International Trade and the Basel Convention*, 1999, Earthscan Publications Ltd, London, p.84.

In addition there is often an absence of specific national legislation and enforcement policies governing the generation, storage, treatment and disposal of hazardous wastes. Populations are therefore ultimately put at risk, and the benefits derived from the projected economic growth are — possibly — latently destroyed, or at least partially offset by the health and environmental hazards created by these economic activities.

The restrictions placed on the export of hazardous waste for final disposal purposes has the additional benefit of avoiding the economic costs associated with the damage caused by hazardous wastes from developed countries. In particular the costs of cleaning up old and contaminated waste sites can be costly for local authorities, a factor that is magnified if the wastes are located in poor communities without the proper resources and know-how to properly manage the waste.[47]

Therefore, by banning the import of hazardous waste for final disposal from developing countries,[48] governments of newly developed and developing countries are taking steps towards preventing damage from hazardous waste rather than having to fix a potentially dangerous situation. This allows financial resources to be devoted towards long-term policy goals such as socio-economic development.

Summary

The broad impact of the restriction on the export of hazardous waste for final disposal is summarised in Table 3.1.

[47] Strohm, "The Environmental Politics of the International Waste Trade" (1993) 2(2) *Journal of Environment and Development* 6.

[48] Under the *Basel Convention* Parties are required to prohibit the export of hazardous waste to countries which have prohibited the import of such wastes.

Table 3.1

SUMMARY OF THE IMPACTS OF THE *BASEL CONVENTION*

Impact Upon …	*Description*
Domestic hazardous waste producers	Increased disposal costs raise costs for the production of primary (upstream) goods and services. There is an expectation that this will provide an incentive to switch to less waste producing methods, but there is little evidence of this having occurred.
Domestic merchants	Significantly reduced revenue as transboundary movements are curtailed.
Domestic disposal services	Increased demand, leading to the establishment of a range of new facilities.
Domestic environmental and human health Impacts	Thought to be negative at this stage. The inability to export the hazardous waste means that waste that would have otherwise gone overseas is now disposed of in Australia. The concern is that the disposal, in some circumstances, may be less than best practice — ie, going into landfill — and hence degrades the environment and poses a risk to human health.
Overseas importers of hazardous waste for disposal	Significant decline in revenues and a loss of employment (unless wastes can be sourced from non-Basel countries).
Overseas environmental impacts	Beneficial due to a reduction in the dumping of hazardous waste. However, without avenues to permit the export and subsequent environmentally sound management of waste, there is the potential for continued environmental damage.

Source: The Allen Consulting Group

It is important to note that Table 3.1 outlines the impacts to date. Over time it may be that Table 3.1 provides a distorted view as the more expensive disposal causes domestic producers to switch to less waste producing methods. At present, however, there is little or no evidence of such a broad shift in producer attitudes.

3.3.3 Export of Hazardous Wastes for Recovery

The *Basel Convention* places restrictions on the transboundary movement of hazardous waste for recovery purposes — which includes recycling, reclamation, direct re-use or alternative uses. Put simply, the export of hazardous waste for recovery purposes is only permitted if shipments take place between countries that are Parties to the *Basel Convention*, member countries of the OECD,[49] or if an Article 11 arrangement is in place (eg, the *Waigani Convention*).

The majority of transboundary movements occur because the exporting country has failed to develop sufficient disposal facilities to treat the different kinds of hazardous waste and/or the costs of domestic recovery are overly prohibitive. Variations in cost structures between Australia and trading partners can generally be traced back to a variety of factors including different stages of technological advancement, different treatment facilities, environmental standards and capacity constraints. It is capacity constraints that may even lead to, or cause, waste exportation when environmentally sound management procedures have been provided in Australia.

[49] Under the OECD regulations shipments to non-OECD countries are not prohibited but may only take place under exceptional circumstances.

Impacts on Australia

Export Prices and Quantities

With a large export oriented mineral and mineral processing industry and a relatively small domestic market, Australian firms regularly have to export dross, residues and other hazardous wastes to ensure they are treated in an environmentally sound and efficient manner. The restrictions placed on these exports by the *Basel Convention*, in effect, impact on the mineral and mineral processing industries.

Economic theory suggests that these restrictions may result in a decrease in demand for at least some wastes and a subsequent decrease in the world price of these wastes — which would lead to:

- an increase in the amount of hazardous waste recycled in Australia;
- a decrease in Australian exports of hazardous waste; and
- a decrease in the amount of hazardous waste collected for recycling.

Environment and Human Health

Any transport of hazardous waste involves risks — risks of spillage, risks of damage to the environment and human health. This remains undisputed and has been emphasised in submissions. For example, "it is difficult to remain convinced that every transboundary movement of hazardous waste could possibly occur without environmental impact in either the dispatching or the receiving country."[50]

As Australia is a significant distance from a number of technologically advanced recycling facilities (which are generally located in European countries), any export will involve a significant amount of transportation (both domestically and internationally) and obviously a degree of environmental risk. However, as Australia generates relatively large amounts of wastes with a low degree of hazard it is generally agreed that the risks associated with transport are low.

Without sufficient domestic capacity, export for recovery purposes is considered to be beneficial in certain circumstances, particularly when it minimises or avoids environmental risk. This argument is supported by the OECD:

> "Recycling across national boundaries will be environmentally beneficial in certain cases, for example, when there are economies of scale so that a shared facility is available for a group of countries, obviating the need for either technologically inferior processes domestically, final disposal or longer-distance shipments. In this context, increased movements of hazardous wastes could signify preferred environmental outcomes if they are shipped for environmentally superior management ..."
>
> Organisation for Economic Co-operation and Development, *Trade Measures in the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal*, OECD, Paris, 1998, p.32.

Industry has also questioned:

[50] Friends of the Earth submission, p.5.

> "whether it is safe, efficient, environmentally justifiable and in the Australian public interest to allow stockpiles of hazardous wastes to be developed in order to maintain a long term commercial opportunity to local waste treatment facilities, particularly if the more difficult wastestreams which represent greater environmental risk while awaiting treatment, are getting pushed to the back of the queue.
>
> We believe that because of technical difficulties with developing new technologies, the waste treatment industry has tended to select the easier wastestreams for treatment, and avoided the more difficult wastestreams."
>
> Tredi Australia Pty Ltd submission, p.3.

As Australia already has a high level of disposal to landfill, the export of hazardous waste for recovery will relieve pressure on disposal sites by reducing the amount of waste going to landfill:

> "In general terms, environmentally sound recycling has a positive contribution to make to sustainable development in terms of reducing pressure of virgin materials and by avoiding environmental problems associated with disposal of the hazardous wastes."
>
> Organisation for Economic Co-operation and Development, *Trade Measures in the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal*, OECD, 1998, Paris, p.32.

This is of particular concern given the expected increase in uncollected hazardous waste in Australia, resulting from an expected decrease in world prices.

Industry Development

Export opportunities in hazardous waste are a valuable market for a limited number of Australian businesses. The ability to trade in various dross and skim materials, spent pot linings, metal residues and other materials helps to sustain demand and encourage scrap merchants to collect and market these wastes, boosting recovery and recycling levels. The import of these materials acts as a competitive spur to keeping domestic prices down. Furthermore, some industries in Australia provide specialist services that require imports of hazardous materials as input.

In theory the opening up of trade barriers potentially allows Australian industry to benefit through increased levels of expertise relating to the treatment and/or recycling of hazardous wastes, while developing technologically advanced and economical facilities. Unfortunately though, many small businesses — which are the majority of businesses in the industry — find it difficult to access information relating to new technologies and management practices.

In addition, the continued importation of hazardous waste for recovery purposes enables industry to access sufficient material to enable recycling facilities to operate at a capacity level that is economically feasible. Without sufficient capacity many facilities may not be economically feasible and therefore may not be developed:

> "Recycling operations, to be economically viable, must often operate above a minimum capacity to effectively achieve the required economy of scale. It is often the case that there are insufficient materials available domestically to sustain the operation of environmentally sound recycling facilities and that economies of scale can be reached through import."
>
> Organisation for Economic Co-operation and Development, *Trade Measures in the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal*, OECD, 1998, Paris, p.32.

Unfortunately though, the export of hazardous waste has the undesired effect of relieving pressure on generators to 'deal with' their wastes as close to the source of generation as possible.

International Competitiveness

Although the *Basel* system creates a number of administrative costs (see Chapter Six), there is a growing concern over the range of other costs resulting from the *Basel Convention*. This has been highlighted by the Industry Commission (IC) which has argued that:

> "export controls imposed a range of costs through their distortionary impact on prices as well as through the delays imposed on companies in gaining necessary approvals, the increased uncertainty placed on trading partners and the resources they tied up in setting, monitoring and enforcing the regulations."
>
> Industry Commission, *Mining and Minerals Processing in Australia — Volume 1*, AGPS, Canberra, 1991.

This issue appears to be subject to debate with Porter and van der Linde arguing that, "strict environmental regulation can be fully consistent with competitiveness".[51]

Impacts on OECD Countries

Prices and Quantities

Within OECD countries, it is anticipated that supply of many recyclable hazardous wastes would generally be unresponsive to the market price as they are by-products from extraction, processing and manufacturing operations. As Australian export levels are relatively small by world standards, it is also unlikely that they would exert any influence on world prices.

However, multi-country restrictions on the export of hazardous waste for recovery to countries that do not have the capacity to deal with the wastes in an environmentally sound manner would be expected to increase the supply of hazardous waste in OECD countries and hence lead to a decrease in the price paid for the waste.

Economic theory suggests that:

- there is likely to be an increase in the amount of hazardous waste recycled;

---

[51] Porter and van der Linde, "Toward a New Conception of the Environment-Competitiveness Relationship" (1995) 9(4) *Journal of Economic Perspectives* 97 at 105. Also see Porter and van der Linde, "Green and Competitive: Ending the Stalemate" (September-October 1995) *Harvard Business Review* 120.

- a fall in the amount of hazardous waste supplied domestically; and
- an increase in the amount imported.

As a result, domestic scrap metal merchants are expected to experience a decline in welfare and recyclers are expected to experience an increase in welfare. This increase in the welfare of recyclers is at the expense of local scrap metal merchants and other OECD scrap metal merchants.

Environment and Human Health

Without a sufficient volume of material to enable a waste recovery plant to operate at a capacity level that is economically feasible, recycling facilities may find it more economical to discontinue operation. Therefore by exporting hazardous waste for recovery purposes, Australia is helping to ensure that such facilities have sufficient waste flow-through so as to avoid any stockpiling, long-term storage or disposal of potentially valuable materials.

In addition, by recycling potentially valuable substances that would otherwise be discarded, recycling can slow down the depletion of natural resources and reduce the quantity and hazard of wastes going into final disposal. Provided that the country of destination has environmentally sound facilities that are at least equivalent to Australia's, the export of hazardous wastes for recycling can ultimately lead to an overall reduction of pollution.

Industry Development

Although Australia's exports remain relatively small by world standards, it is possible that recycling activity in OECD countries may increase minimally. However, if supply is greater than demand for recyclable hazardous wastes within OECD countries then some stockpiling or disposal may occur, potentially causing its own environmental problems if conducted in an unsound manner.

More importantly though, OECD recyclers could become more competitive at the expense of non-OECD recyclers as the volume of material they handle increases due the diversion of exports to the OECD's internal market.

Impacts on Non-OECD Countries

Prices and Quantities

There is expected to be increases in the price of secondary and possibly primary materials in non-OECD countries. These effects would lead to flow-on price rises and a potential competitive disadvantage for user industries in non-OECD countries. In the longer run however, supply of recyclable hazardous wastes is likely to increase as generation increases in line with industrialisation, and as collection rates for recyclable materials increase in response to higher market prices.

Environment and Human Health

For developing countries that have already banned the importation of hazardous wastes, the 'prior notification and consent procedure' contained

in Article 6 of the *Convention* reaffirms these countries own commitment to protect their domestic environment from risks associated with hazardous wastes.

> "We feel that it is right to protect developing countries from the risk of accepting other people's wastes on the basis of less environmentally acceptable solutions — ie incineration, burial, etc. In this respect the Basel Convention, and Waigani Treaty, are serving a proper role. There is a global obligation that all countries have to protect the environment for all people's of the world. The attraction to developing countries of short term gains at the expense of a long term environmental cost are likely to be issues not given much consideration in that particular developing country. The controls provided for by the Basel Convention are therefore relevant and justified."
>
> ELI Eco Logic Australia Pty Ltd submission, p.2.

As many developing and rapidly developing countries lack the expertise to assess the actual and potential risks associated with many forms of hazardous waste, there is a distinct need to proceed with caution. If recycling operations are not executed in an environmentally sound manner, there is the potential for permanent, irreversible damage to the environment and human health. for example, the OECD notes that, "Recycling operations however can also be very damaging to health and the environment in the absence of worker protection and adequate environmental safeguards."[52]

In addition, a relative shift between secondary and primary materials brought about by a decrease in recyclable materials, would be expected to lead to increased use of primary materials, the extraction and processing of which may also cause health and environmental damage (and still leave the problem of environmentally sound management unresolved).

Industry Development

Many firms from newly developing countries have successfully made significant developments in high-technology sectors not only by investing in both human and physical resources but also by forming partnerships with more technologically advanced firms from developed countries. Anecdotal evidence suggests that these partnerships have helped firms in those countries to build the technological capabilities and skills need to penetrate international recycling markets.

As illustrated in Box 3.3 non-OECD countries tend to rely heavily on trade in secondary materials to provide access to valuable resources. Consequently, the trade restrictions imposed by the *Basel Convention* are likely to have detrimental effects on local industries, and place partnerships with firms from developed countries at risk.[53]

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[52] Organisation for Economic Co-operation and Development, *Trade Measures in the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal*, OECD, 1998, Paris, p.32.

[53] For example, as new non-OECD recycling projects become less attractive to investors, this may significantly limit the level and pace of future technological advancement in these countries.

Box 3.3

THE IMPORTANCE OF SECONDARY AND RECYCLABLE MATERIAL IN NON-OECD COUNTRIES — USED LEAD ACID BATTERIES (ULABS)

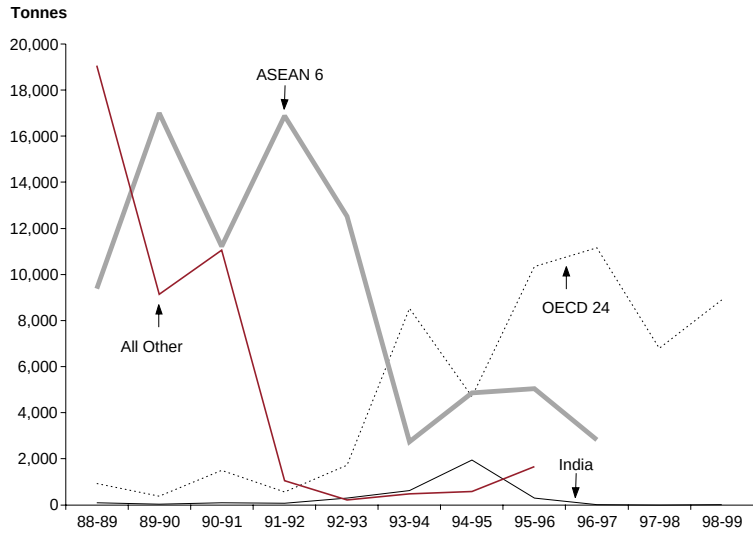
Some developing countries source a significant proportion of their lead requirements from imported used lead acid batteries (ULABs). In both India and The Philippines, for example, imported battery scrap accounted for about 60 to 70 percent of lead consumption in the early 1990s. However, the increased demand for lead in developing countries in South-East Asia (due to the need for batteries for cars and motorcycles, telecommunications and computer equipment) and the inability of their industries to source ULABs from OECD countries, suggests that either this new demand will need to be met by domestic supplies that either this new demand will need to be met by domestic supplies or by imports from non-OECD countries. A preliminary study by UNCTAD suggests that if the Philippine secondary lead smelter can no make up for the loss of ULABs normally sourced from OECD countries (which have been required to meet the feedstock requirements of their battery recycling), the plant may need to close if the government take no preventative measures. This scenario could also lead to an increase in the 'informal' recycling sector (backyard recyclers who operate with few health and environmental controls), a situation that would have negative health and environmental effects.

Source: Adapted from Krueger, *International Trade and the Basel Convention*, Earthscan Publications, London, 1999. See also — UNCTAD, *An Integrated and Multi-Stakeholder Approach to Sound and Cost-Effective Management of Environmental and Occupational Health Risks of Recycling of Hazardous Waste: the Case of Used Lead-Acid Batteries in India and the Philippines,* 1998.

As an example, the PC has also provided evidence to suggest that the *Basel Convention* has influenced the level and destination of exports of ULABs. As shown in Figure 3.2 exports of used lead acid batteries for recycling and recovery to the Association of South East Asian Nations (ASEAN) 6 countries[54] have declined dramatically since 1992-93. At the same time, exports of the same items to the OECD have increased substantially.

Figure 3.2

EXPORTS OF WASTE AND SCRAP PRIMARY CELLS (INCLUDING LEAD ACID BATTERY WASTE)



Source: Data supplied by Productivity Commission — see submission, p.5.

Consequently, it has also been argued that the *Basel Convention* has fundamentally altered the economics of the recycling and related industries

[54] The ASEAN economies grouped together for the analysis were the members of the ASEAN in 1992, when the *Basel Convention* came into force — Indonesia, Malaysia, Philippines, Thailand, Singapore and Brunei Darussalam.

in non-OECD countries. As noted in an analysis of the implications of a ban on trade in non-ferrous metals for recycling:

> "The relatively high costs of primary metal production and the availability of growing volumes of scrap and residues have lead to the development of strong secondary metal industries in both industrialised and developing areas of the world. For developing countries, non-ferrous metals recovered from scrap and residues are valuable and cost effective alternatives to primary ores and concentrates. The capital costs of secondary metal plants are substantially lower than the capital costs of primary non-ferrous metal producing plants. Secondary metal recovery can be undertaken in large scale or small scale operations whereas primary metal production requires large scale operations. Secondary metal recovery allows developing countries to begin recovery activity at a modest level and increase the sizes of their operations as non-ferrous metal consumption increases with rises in income per person. Also, in general, secondary metal processing plants are more labor intensive than primary metal processing plants. Accordingly, it could be argued that developing countries have an advantage in non-ferrous metal recycling and recovery.
>
> Currently secondary metal recovery is a major source of non-ferrous metals for industry in many developing countries. For example India, the world's largest consumer of zinc ash and residues uses almost 30,000 tonnes a year, most of it imported."
>
> Bureau of Industry Economics, *Implications of a Ban on Trade in Non-ferrous Metals for Recycling,* Report 95/18, AGPS, Canberra, 1995, p.24.

Economic Development and Trade

One of the arguments against trade in hazardous waste is that trade is detrimental to the environmental quality of receiving nations, particularly if they are developing nations without the proper infrastructure to assure the environmentally sound management of these wastes. However, this argument usually ignores whether such trade will result in foreign investment in the developing countries with subsequent economic growth and environmental improvement.

Contrary to widespread assumption, empirical studies have demonstrated that environmental degradation in developing countries is caused primarily by local, low-technology economic activities and by low per capita income, not by advanced sector or transnational investment. Further, such investments have, on the whole, maintained higher environmental protection standards than host governments require and/or practice and the investments do not seek environmental costs differences as to where to locate activities. In short, such investment does not seek 'pollution havens'.[55]

Summary

The *Basel Convention* permits the export of hazardous waste for recovery purposes — which includes recycling, reclamation, direct re-use or alternative uses — providing shipments take place between countries that

[55] See Bailey, *Advanced Sector Direct Foreign Investment and Environmental Protection in the Third World: A Note on Sources,* 1992, Report prepared for the Trade and Environment Committee of the National Advisory Council on Environmental Policy and Technology of the Environmental Protection Agency (United States).

are Parties to the *Basel Convention*, member countries of the OECD,[56] or if an Article 11 arrangement is in place (eg, the *Waigani Convention*).

As shown in Table 3.2, the impacts associated with the regulation of hazardous waste flows for recovery purposes varies depending upon the status of the trading partner (eg, whether or not an OECD/*Basel* country), and whether or not the country was an importer or exporter of hazardous waste.

Table 3.2

SUMMARY OF THE IMPACTS OF THE *BASEL CONVENTION*

Country	Group	Major Impact
Australia and other OECD exporting countries	Waste merchants	Decrease in activity
	Recyclers	Increase in activity. This may only be temporary if it is difficult to source sufficient supply (ie, in the event that the HWA is a barrier to the importation of hazardous waste)
	Community	Increase in environmental costs
OECD importing countries	Waste merchants	Decrease in activity
	Recyclers	Increase in activity
	Community	Decrease in environmental costs
Non-OECD importing countries	Waste merchants	Increase in activity
	Recyclers	Decrease in activity
	Community	Decrease in environmental costs

Source: Derived from Bureau of Industry Economics, *Implications of a Ban on Exports of Used Lead Acid Batteries,* Occasional Paper 31, AGPS, Canberra, 1995, p.17.

To the extent that the community in non-OECD/*Basel* countries benefit from the significant reduction in hazardous waste imports the *Basel Convention* can be seen as a clear success.

However, the major concern is that this is at the expense of the Australian environment — restrictions on the export of hazardous wastes for recovery purposes may lead to increased disposal in Australia. This concern will be reduced to the extent that the reduced ability to export hazardous waste and higher domestic disposal costs will encourage:

- the development of new recycling facilities; and
- encourage firms that produce hazardous waste to change production processes so as to reduce their hazardous waste output and save money.

3.3.4 When There is Constrained Availability of Domestic Facilities for Recovery Purposes

It is claimed that, by placing restrictions on the transboundary movements of hazardous waste, the *Basel Convention* provides an incentive and opportunity for Australian businesses to develop facilities capable of

[56] Under the OECD regulations shipments to non-OECD countries are not prohibited but may only take place under exceptional circumstances.

recycling both domestically and foreign-generated hazardous waste, and for recycling and low-waste industries to expand market share.

To some extent this is true; a number of companies have demonstrated that they can match — or better — overseas companies in reducing environmental impacts and achieving cost reductions. For example:

> "Premier Plating electroplates over 3 million items a year with chrome, copper, gold, nickel, tin and zinc. Before implementing cleaner production, the company sent 108,000 litres of sludge to the tip every year. The company now recycles 90% of the effluent water within the plant, regenerates many of the chemicals used and send only 18,000 litres of sludge to the tip."
>
> Campbell, Parliamentary Secretary to the Ministers for the Environment, Sport and Territories and Local Government, *Keynote Address to the Third National Hazardous and Solid Waste Convention*, Sydney Convention & Exhibition Centre, Darling Harbour, 27 May 1996.

However, although a number of industries are relatively advanced there may be insufficient domestic capacity to encourage the development of facilities to recover/recycle particular hazardous wastes. This lack of domestic competition may mean that prices are suppressed to a level at which collection of hazardous waste is no longer economically viable and/or overseas companies can offer higher prices for hazardous waste for recycling.

This section identifies some concerns about the state of competition in recycling, and addresses a range of impediments and concerns about the reliance placed on domestic recycling by the *Basel Convention.*

The Potential for Anti-Competitive Conduct by Recyclers

Some recyclers face little or no domestic competition as a direct result of the *Basel Convention* obligation to treat wastes as close to source of generation as possible. This creates the potential for incumbent domestic recyclers to exert unilateral market power. For example, when purchasing hazardous waste for inputs recyclers may be able to limit the amount of hazardous wastes received or suppress the prices[57] offered for hazardous waste to the point where it is only just economically viable for scrap merchants to collect the waste.

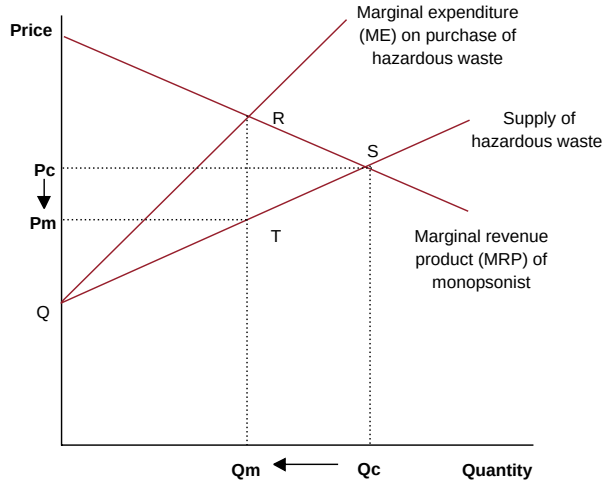
Figure 3.3 illustrates the behaviour of a buyer with market power (ie, a monopsonist). If the firm is operating in a competitive market it will purchase the quantity of hazardous waste where supply equals the marginal revenue product (MRP)[58] — ie, at quantity *Qc* and price *Pc*.

[57] A fall in price lowers the profit margin on the collection of hazardous waste and consequently decreases the supply of hazardous waste for recycling. Without a sufficient supply of recyclable materials, potential competitors may decide it is uneconomical to enter the market. This behaviour therefore has the potential to entrench the monopoly position of the incumbent.

[58] MRP is also known as the monopsonist's demand curve and represents the additional revenue received when the monopsonist purchases the hazardous waste and sells it as recycled material.

Figure 3.3

MARKET POWER IN PURCHASING



Source: The Allen Consulting Group

Although the monopsonist faces a supply curve for hazardous waste, its market power enables it make decisions based on the marginal expense of purchasing hazardous waste (ME). Therefore, the firm purchases the quantity at which ME equals MRP — *Qm* — but because of its market power only pays suppliers *Pm*.

The implications for economic welfare include a reduction in the suppliers' surplus from QPcS to QPmT. Part of this reduction is transferred to the monopsonist (represented by the area PcSTPm).

A significant number of stakeholders — particularly lead acid battery merchants — argued that lead recyclers display behaviour consistent with a unilateral market power hypothesis. For example:

> "The only 2 battery recycling facilities in Australia are located in Victoria and New South Wales. They are running at capacity and are reluctant to buy scrap batteries from the West, placing quotas on selected dealers. Their price per tonne delivered to their works barely covers handling, packing and transport costs — which are all becoming dearer by the week. Also the fact that that you are carting hazardous waste across the continent through three or four different states. I can only see this arrangement becoming unworkable in the not so distant future."
>
> Dodd & Dodd Pty Ltd submission, p.1.

The merchants argued that there is insufficient capacity to process the constant stream of ULABs, let alone the ever-increasing stockpile of batteries. Anecdotal evidence suggests that it is possible that this lack of capacity combined with controls on the export of ULABs has contributed to the fall in prices received by used battery collectors and the increasing amount of ULABs going into storage, landfill, illegal dumps or generally lying around the countryside.

While standard competition theory supports the merchants' concerns, there is an equally plausible alternative explanation for the fall in the price of ULABs. Given that a large percentage of recyclable material is traded on world spot markets, it is likely that any fall in price paid for recyclable

materials is, to a degree, influenced by world prices — see Box 3.4 for a more comprehensive discussion.

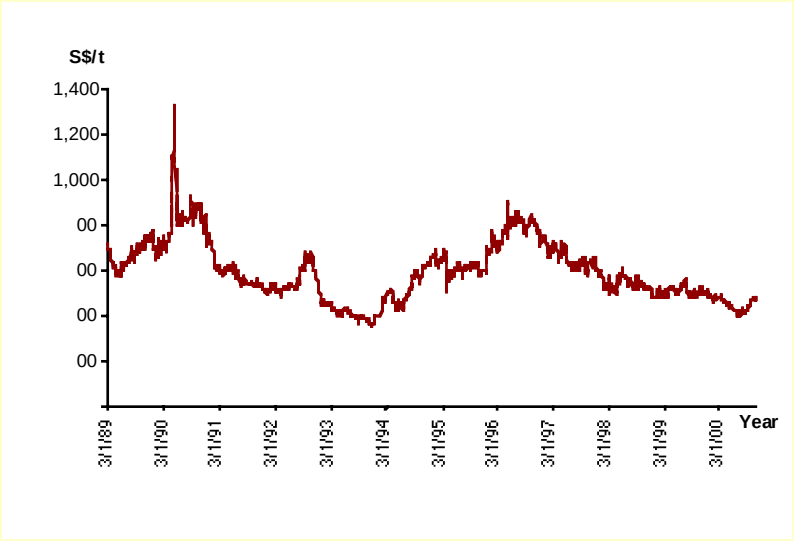
Box 3.4

AN ALTERNATIVE HYPOTHESIS — THE PRICE OF WORLD LEAD

Secondary lead is regarded as a substitute for primary refined lead, and is obtained by recycling ULABs and lead scrap in special secondary smelters. ULABs are a very important recyclable hazardous waste in Australia as they contain approximately 65 percent lead that is recoverable in secondary smelters.

The demand for Australia's ULABs by domestic recyclers depends on the price offered for ULABs and the price of refined lead. When the price of refined lead falls the quantity of primary lead demanded increases. Since refined lead obtained from secondary smelters is regarded as a substitute for refined lead obtained from primary smelters, the decrease in the price of refined lead causes recycling to become less profitable and there is a decrease in the demand for ULABs.

Given the falling international price for lead over the past four years it is likely that the decrease in the price offered to scrap merchants for ULABs may be a direct result of this trend.



Source: Stakeholder discussions, lead price data from the London Metals Exchange and submissions.

There is also a risk that a less than competitive industry will provide an opportunity for collusive behaviour. Given the recent success of the Australian Competition and Consumer Commission (ACCC) in investigating alleged attempted market sharing by Simsmetal — see Box 3.5 — this risk appears real.

Box 3.5

ACCC ACTION IN THE SOUTH AUSTRALIAN STEEL SCRAP MARKET

On February 1998 the ACCC instituted proceedings in the Federal Court against Simsmetal Limited, alleging attempted market sharing and misuse of market power in the South Australian steel scrap market.. The ACCC also alleged that two of Simsmetal's senior employees aided and abetted Simsmetal in the misuse of its market power. The charges relating to the misuse of market power were later withdrawn by the ACCC.

The ACCC alleged that during 1995 a senior employee, on Simsmetal's behalf, attempted on two occasions to make an anti-competitive arrangement with one of Sims' much smaller competitors in South Australia. One of the principal provisions of the attempted arrangement was that Sims and the competitor would not compete for each other's clients.

Simsmetal is one of the largest scrap metal dealers in the world having operations all over Australia, North America, Great Britain and elsewhere. The smaller competitor who is a sole trader, had carved a niche in the local South Australian market that involved supplying foundries with scrap steel. Despite the great disparity in size, the small competitor was the second largest supplier of scrap steel to Adelaide foundries behind Sims.

In June 2000 the Federal Court found Simsmetal guilty of attempting to make a contract, arrangement, or arrive at an understanding, which if successful, would have contained exclusionary provisions in contravention of s45(2)(a)(i) of the *Trade Practices Act 1974* . Simsmetal was subsequently fined $2 million.

Source: *ACCC v Simsmetal Ltd* [2000] FAC 818 (unreported, 20 June 2000); and Lieberman, *Address to the Business Reform Agenda*, Sydney Marriott Hotel, 8 May 1998.

Associated Impacts and Concerns

Anti-competitive conduct like that identified above has a number of possible impacts as discussed in the following sections.

Industry Development

While it is acknowledged that the restrictions on the export of hazardous waste have created opportunities for the development of local hazardous waste disposal and recovery facilities, Australia's small size and distance from other OECD countries will continue to limit the development of disposal and recycling facilities.

A number of parties have suggested that the development of further recycling facilities is hampered by a lack of information about the generation of hazardous wastes — ie, it is difficult for people who may be interested in establishing recovery or disposal facilities to identify the scale of any potential market.

Another concern is that the lack of access to a sufficient flow of material may prove to be a barrier to the development of sustainable competitive recycling industries and possibly even the technologies to recycle hazardous waste.

> "Under it's obligations under the *Basel Convention*, Australia is not ensuring that adequate disposal facilities are available. By not being prepared to tackle the issue of hazardous waste imports into Australia, it is knowingly allowing those technologies that presently exist here to close by it's lack of action in implementing the NAB [National Advisory Board] Management Plans and then not supporting the minimum level of imports to keep them going…
>
> ELI Eco Logic Australia Pty Ltd submission, p.2.

While in theory restrictions on imports are less onerous and should be relatively easy to administer, there is considerable community interest associated with the generation, transport and treatment of hazardous waste. As emphasised, many stakeholders are strongly opposed to the import of waste labelled 'toxic' or 'hazardous'.

> "There is going to be genuine concern in the local (and possibly broader) community with the importation of any 'toxic' or 'hazardous' waste into Australia. The 'not-in-my-back-yard' sentiment is a real issue and the West Australian community are highly sensitised at present to 'waste import' as a result of the PANGEA proposal for the import of radioactive waste burial in outback WA."
>
> du Plessis, *PCB Waste Import — Discussion Paper*, 20 July 1999 cited in ELI Eco Logic Pty Ltd submission, p.11.

In addition, community and environmental organisations continue to demonstrate their unrelenting dedication to protecting the environment.[59]

However, if trade barriers are established for reasons other than environmental protection then Australia runs the risk of significantly impeding the international competitiveness of industry:

> "it is clear that Eco Logic and others who participate in the treatment of POPs in Australia are wasting their time even thinking about waste imports or exports. Whilst the permitting system is open to them, it is not an option! This in it's own right represents a significant competitive issues, but one that cuts both ways."
>
> ELI Eco Logic Australia Pty Ltd submission, p.1.

Reduced Recycling

Recycling is not an end in itself, but will be conducted as long as there is an economic incentive. This incentive is the price differential between secondary and primary sources.[60]

Without a sufficient price offered for hazardous waste it may become unprofitable for scrap merchants to collect hazardous waste for recycling. Unless exporting is an available option, the only alternative is for the waste to go into storage, landfill or illegal dumps. This appears to be a particular problem with respect to ULABs:

> "the volume of batteries is spread over enormous distances. If the difficulty is high in collecting scrap batteries in Perth Metro what must it be like in the outback – Impossible! A huge proportion of W.A.'s batteries end up in land fill! The environment needs help.
>
> Western Australia given its meagre population and vastness will not cope with the recycling of hazardous waste — eventually all batteries will end up as landfill and this is not far away."
>
> Dodd & Dodd Pty Ltd submission, p.1

With the potential for increases in the rate of hazardous waste disposal there are obviously significant concerns over environmental damage. These concerns are exacerbated by the fact that more hazardous waste goes to landfill in Australia than in many other countries.[61] An example of the increased flows to landfill that occur while waiting for the development of domestic facilities is provided in Box 3.6.

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[59] See The Kurri/Weston Concerned Citizens submission.

[60] The consequences of a lack of downstream competition on recycling has been acknowledged in other reviews — Bureau of Industry Economics, *Plastics Recycling: Economic Issues and Implications*, Research Report 61, AGPS, Canberra, pp.56-59.

[61] Campbell, Parliamentary Secretary to the Ministers for the Environment, Sport and Territories and Local Government, *Keynote Address to the Third National Hazardous and Solid Waste Convention*, Sydney Convention & Exhibition Centre, Darling Harbour, 27 May 1996.

Box 3.6

CONCERNS OVER DOMESTIC RECYCLING FACILITIES — BRASS DROSS

Brass Dross (which consists of approximately 60 percent brass nuggets and 40 percent fines) was previously exported for recovery to a number of countries including the US and Switzerland. Almost all of the dross was recovered at these overseas facilities.

After the definition of hazardous waste was extended, brass dross was included in this definition and was subject to permit controls.

After three years a domestic facility was established to recover the brass from the nuggets. However the remaining fines were not recovered and are instead disposed into landfill.

Source: The Allen Consulting Group through confidential consultation with stakeholders

Even when domestic recycling facilities exist, it is possible that the lack of domestic competition combined with barriers to trade established by the *Basel Convention* may result in the development of facilities which are less technologically advanced than those in other nations. This may result in a reduced rate of resource recovery and an increased amount of residual material going to landfill.

Without sufficient measures to ensure the competitiveness of recycling industries, the environmentally sound management of some hazardous wastes could be placed under jeopardy. An increase in wastes going into storage, landfill or illegal dumps also increases the risk of hazardous materials leaching into the soil, groundwater and atmosphere and increases the risk to human health through spillage and inhalation of dangerous fumes.

3.4 Summary

It is clear that the benefits that accrue to Australia from being a party to the *Basel Convention* outweigh the cost to Australia of not being a Party. This is because:

- it would be difficult and costly for Australia to trade with *Basel* Parties; and
- Australia would have little, if any, influence on the rules under which this trade would occur.

This conclusion, however, does not address whether the *Basel Convention* itself provides a net benefit.

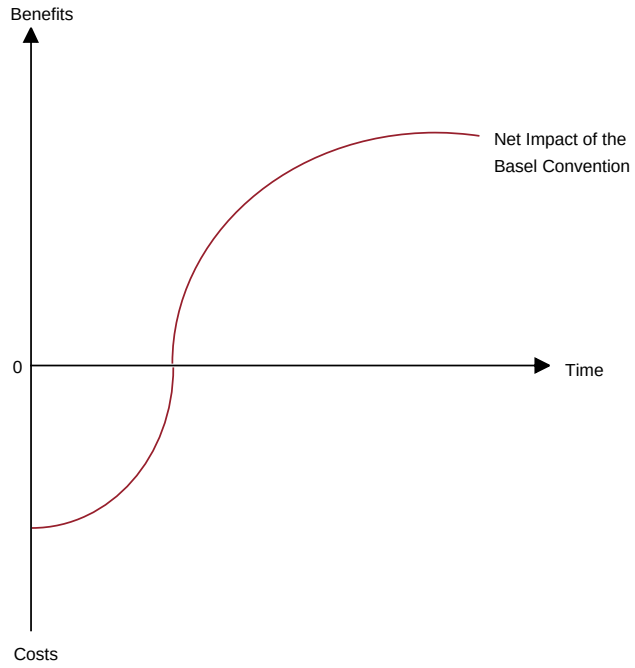
On the positive side, the *Basel Convention* regulates behaviour in a manner which should provide clear environmental benefits — it diverts hazardous waste away from countries without the capacity or environmental standards to deal with the waste in an environmentally sound manner, towards countries with higher environmental standards and more environmentally sound technologies.

However, it is important to note that there are also a series of negative impacts associated with the *Basel Convention*. There will be costs as communities which have come to depend on importing or exporting hazardous waste adjust to the *Basel* restrictions (eg, loss of employment, etc). These costs are expected to be transitionary in nature as the global economy adjusts to *Basel* over the longer term.

Given these *Basel* costs and benefits, Figure 3.4 is a stylised representation of the net impact of the *Basel Convention* over time.

Figure 3.4

A STYLISED REPESENTATION OF THE NET IMPACT OF THE *BASEL CONVENTION*



Source: The Allen Consulting Group

It is impossible to precisely estimate the Figure 3.4 costs and benefits in terms of dollars, or the period of time in which it can be said that the net impact of *Basel* will be positive. However, the Review Team suggests that, even though there may be those who suggest that the *Basel Convention* currently imposes net costs on Australia, in the longer term it should provide net benefits to Australia and the world.

Chapter Four

Australia's Legislative Framework

This chapter provides an overview of Australia's legislative response to Australia's international obligations under the *Basel Convention*.[62]

4.1 Australia's Legislative Framework

4.1.1 The HWA

Legislative Background

In 1989 Australia introduced legislation to implement the *Basel Convention*. However, as the *HWA* was passed at a time when key issues in relation to the implementation of the *Basel Convention* were still being negotiated, Australia later found itself at odds with its international obligations as the *Convention* was further developed. This problem was highlighted by the Minister for Sport, Territories and Local Government in the Second Reading Speech when he introduced amendments to the *Act* into the House of Representatives on 6 May 1996:

> "At that time … [the principal Act was passed] … the major concern regarding trade in hazardous waste related to hazardous waste sent to another country for what is termed final disposal, that is, for incineration, landfilling or the like. As a result, the principal act defines waste as material which has been rejected as worthless or otherwise falls within the ordinary definition of waste. As such it generally does not cover material sent for recovery. In the years since the Convention was negotiated the emphasis in international debate has shifted to its coverage of materials which are traded for recovery operation, that is, for reclamation of metals or recovery of other useful materials.
>
> Just as the trade in hazardous waste for final disposal led to an active process of transferring the environmental costs associated with the generation of hazardous waste from one country to another, and in particular from developed to developing countries, so the trade in hazardous waste for recovery operations can similarly lead to the transfer of environmental costs in an uncontrolled fashion.
>
> The Basel Convention was drafted to cover both kinds of processes, that is, both final disposal and recovery operations., and both kinds of processes are included in the convention definitions under the single term "disposal". The Australian act does not covey a wide range of hazardous wastes from which valuable materials are to be recovered; these hazardous wastes have not been rejected as worthless or do not fall within the ordinary meaning of waste. The major purpose of amending the act is to remedy this discrepancy between our international obligations and our domestic legislation."
>
> Hansard: Representatives Main Committee, Thursday, 23 May 1996, MC1339.

In 1996, the Australian government amended the *HWA* to ensure that Australia could discharge its *Convention* obligations in full.

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[62] Further information on Australia's international obligations and the regulatory environment created by the *HWA* can be found on the web pages of Environment Australia (http://www.environment.gov.au/epg/hwa/hwa_guide.html) and the Secretariat of the *Basel Convention* (http://www.basel.int).

Overview of the Act

The *HWA* and associated regulations make trade in certain hazardous wastes subject to government controls through a permit system.[63]

As shown in Figure 4.1, the basic rules of the *HWA* depend on four important factors:

- whether or not the material to be shipped is a waste — the *HWA* defines waste as, "substances or objects which are disposed of or are proposed to be disposed of or are required to be disposed of by Commonwealth, State or Territory law".[64] The Australian lists of hazardous wastes and other wastes are based on the international Lists A, B and C as described below:
  - ➢ List A — generally controlled wastes, now Annex VIII of the *Basel Convention*;
  - ➢ List B — generally uncontrolled wastes, now Annex IX of the *Basel Convention*; and
  - ➢ List C — wastes of uncertain status.
- whether or not the material to be shipped is hazardous wastes — the *HWA* covers hazardous wastes only, and defines hazardous waste as:
  - ➢ waste prescribed by the Regulations, where the waste has any of the characteristics mentioned in Annex III to the *Basel Convention*;
  - ➢ wastes that belong to any category contained in Annex I to the *Basel Convention*, unless they do not possess any of the hazardous characteristics contained in Annex III;
  - ➢ household waste;[65] or
  - ➢ residues arising from the incineration of household waste.[66]
- whether the waste is intended for final disposal or recovery —
  - ➢ final disposal of waste involves operations listed in Annex IVA of the *Basel Convention* and includes operations such as incineration or landfill. The Government has banned exports of waste for final disposal unless the circumstances are exceptional.[67] Imports of hazardous waste for final disposal are permitted provided the facility is capable of handling the waste in an environmentally sound manner and the relevant Australian State or Territory jurisdiction has no objections to the proposal;

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[63] In addition, when the *Waigani Convention* enters into force, exports of hazardous wastes to countries and territories in the *Convention* area (except New Zealand) will be banned. Imports of hazardous from these countries to Australia will move under new rules similar to those for other imports.

[64] As it is not always obvious whether a material is a waste or not, further information to assist in determining whether materials are wastes is provided in Environment Australia, *Distinguishing Wastes from Non-Wastes under Australia's Hazardous Waste Act*, Third Edition, Information Paper No 7, Canberra, 2000.

[65] Household waste means waste collected from households, but does not include waste specified in the Regulations.

[66] For further information see — Environment Australia, *Guide to Controlled and Other Wastes under Australia's Hazardous Waste Act*, Information Paper No 4, AGPS, Canberra, June 1998 and Environment Australia, *Setting Concentration Cut-Off Levels for Metal Bearing Wastes under Australia's Hazardous Waste Act*, Information Paper No 5, AGPS, Canberra, 1998.

[67] Exceptional circumstances are not necessarily limited to only the following examples:

- there will be significant risk of injury of damage to human beings or the environment if a permit were not granted; or
- the waste is required for research into improving the management of hazardous waste.

  - ➢ recovery involves operations listed in Annex IVB of the *Basel Convention* and includes recycling or reclamation of waste materials, use as a fuel and recovery of components. These shipments may be permitted provided certain conditions are met; and

- where the waste is being transported to — waste shipments may only take place between countries which are Parties to the *Basel Convention*, except where a specific arrangement exists with a non-Party under Article 11 of the *Convention*. These specific arrangements can set out controls which are different from those prescribed by the *Basel Convention*, provided such controls do not reduce the level of environmental protection intended by the *Convention*. Parties can also use Article 11 arrangements to introduce controls that suit their particular needs.

Notification and Consent Procedures

An important element of the regulatory arrangements is the 'prior notification and consent process'.

Under Articles 6 and 7 of the *Basel Convention*, exports may only take place if:

- all countries of transit and import have given their express written consent based on detailed information which clearly describes the effects of the proposed movement on human health and the environment;
- wastes are managed in an environmentally sound manner in the importing country (exporting countries are obliged to require this and cannot transfer the responsibility); and
- the exporting country does not have the technical capacity and the necessary facilities to dispose of the wastes, or the wastes are required as raw material for recycling industries in the importing country.

Written Contracts

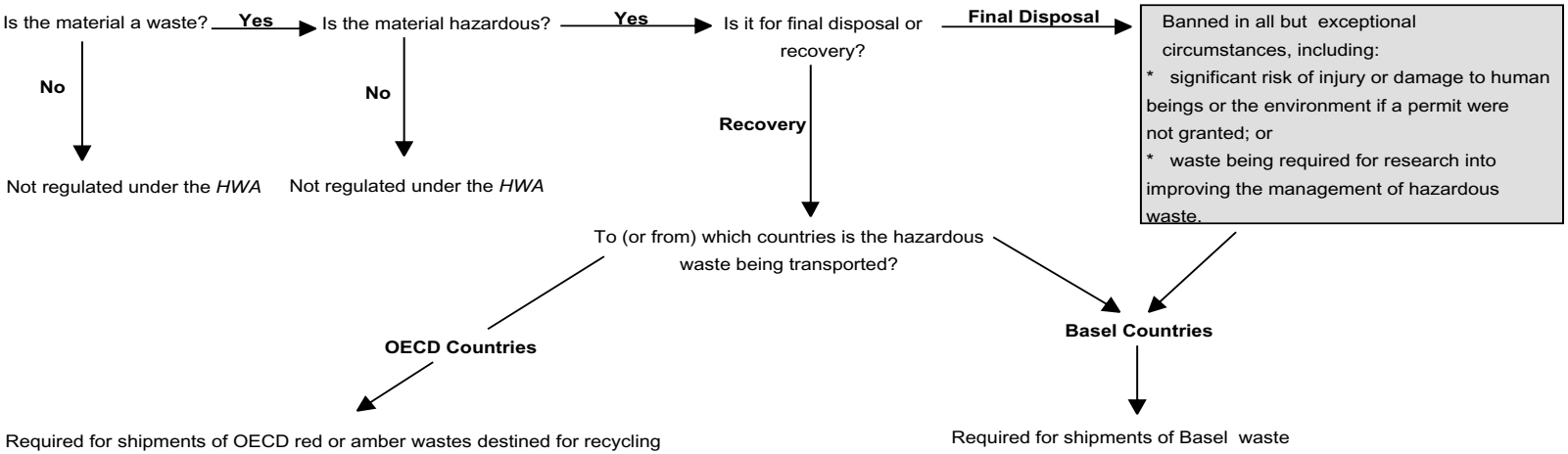
Under the *HWA* an applicant for a permit must have a written contract, covering all movements, with the person taking or sending the wastes. When an application is made for a permit, EA notifies all relevant countries of the movement. A permit cannot be granted until these countries have issued their written consent. Under the *HWA* the time recommended for notification and consent is 60 days but countries may take longer if they wish.

Environmentally Sound Management

The concept of environmentally sound management of hazardous waste is defined in the *Convention* as taking all practicable steps to ensure that the hazardous waste is managed to protect human health and the environment. A Technical Group has been established under the *HWA* to advise the Minister to assist in the determination of what constitutes environmentally sound management and whether particular facilities or processes meet the definition. For that reason it includes people with expertise in scientific and technical, social and economic, environmental and public health fields.

Figure 4.1

THE NATURE OF REQUIRED PERMITS UNDER THE HWA



Special Export Permit (OECD) To OECD countries for example, an export of metal-bearing sludges from Australia to Belgium requires a special export permit. As for Basel Export Permits, consent will be required from each state of transit before a permit can be issued.	**Basel Export Permit** To non-OECD countries if the shipments transit any other countries (such as Singapore or New Zealand) consent will be required from them before a permit can be issued. Australia defines transit to include a ship entering a port or roadstead, or an aircraft landing.
Special Import Permit (OECD) From OECD countries for example, imports of zinc ash from New Zealand require a special import permit.	**Basel Import Permit** From non-OECD countries.
Special Transit Permit (OECD) **Transitting Australia** for example, a shipment of arsenical wastes from New Zealand to France would require a transit permit if the ship entered an Australian port or roadstead.	**Basel Transit Permit** Transiting Australia for example, if waste oil or tar is being sent from Fiji to Singapore on a ship that enters an Australian port, a Basel Transit Permit will be required.

Source: The Allen Consulting Group and Environment Australia.

4.1.2 The OECD Regulations

As noted in Chapter Three, the OECD has special rules for shipments of waste for recovery. The rules mean that waste can be shipped between countries, even if they are not Parties to the *Basel Convention*.

The OECD requirements also vary according to the kind of waste going for recovery. Waste is assigned to three lists according to the degree of hazard posed, with different controls for each list:

- *Red list waste* — this is very hazardous waste, such as asbestos and materials contaminated by polychlorinated biphenyls (PCBs);
- *Amber list waste* — this is hazardous waste, for example, solvents, acids, batteries and some heavy metals such as arsenic and mercury; and
- *Green list waste* — this is waste which the OECD countries have agreed is non-hazardous when moved within the OECD: it includes paper, textiles and some scrap metals.

Waste destined for final disposal cannot move under the OECD rules.

Shipments to or from OECD countries are controlled under a special set of rules, the *Hazardous Waste (Regulation of Exports and Imports)(OECD) Regulations 1996*.

Notification and Consent Procedures

The *OECD Regulations* provide for tacit consent to be provided under certain circumstances for amber listed waste.

Written Contracts

Under the *OECD Regulations*, transfrontier movements of red and amber wastes may only occur under the terms of a valid written contract. Contracts are required to include provisions for financial guarantees where necessary to provide for alternate recycling, disposal or other means of environmentally sound waste management in cases where arrangements for the shipment and the recovery operations cannot be carried out as foreseen. They must also specify which party to the contract shall assume responsibility for alternate management of the waste.

Once a permit application has been received, EA notifies all relevant countries of the movement. The time allowed for notification and consent for movements of hazardous waste to OECD countries is 40 days, and from or to transiting OECD countries is 30 days. If an objection has not been received in writing within 30 days of the date on which the importing country acknowledges receipt of the notification then tacit consent can be taken to have been granted.

4.1.3 Other Matters

Under both the *HWA* and *OECD Regulations* there are a range of further requirements before permits can be granted:

- before a permit can be issued the Minister must be satisfied that the applicant has appropriate insurance. Appropriate insurance is taken to

mean applicants should be covered by public liability insurance with a limit of liability of at least $5 million, including insured legal liability to third parties in respect of personal injury or damage to property. It should also cover the cost of removing, nullifying or cleaning up any contamination or pollution which is caused by a 'sudden and accidental event';

- before an export permit can be issued, the Minister for the Environment must be satisfied that the waste will be managed in an environmentally sound manner. Detailed evidence to support this is not generally required for OECD permits, but is necessary for all Basel permits. Guidance may be requested from EA and the Technical Group; and
- the Minister may also refuse to grant an export permit if safe and efficient disposal options are available in Australia.

4.2 A Broad or Narrow Interpretation of the Legislative Objectives?

As a result of becoming a Party to the *Basel Convention*, in 1996 the Australian Government amended the *HWA* to ensure that Australia could discharge its *Convention* obligations in full.[68] Consistent with these reforms, sub-s.3(1) of the *HWA* includes an explicit legislative objective:

> "The object of this Act is to regulate the export, import and transit of hazardous waste to ensure that exported, imported or transited waste is managed in an environmentally sound manner so that human beings and the environment, both within and outside Australia, are protected from the harmful effects of the waste."

A fundamental tension with respect to the *HWA* and related subordinate legislation is whether its objective is:

- *narrow* — to implement Australia's international obligations with respect to the transboundary movement of hazardous waste (ie, to accept sub-s.3(1) of the *HWA* on face value); or
- *broad* — to explicitly seek to achieve the objectives as specified in the *Basel Convention* and associated international treaties. As noted earlier, the *Convention* aims to protect the environment and human health from the improper disposal of hazardous wastes, and has three key objectives:
  - ➢ to minimise the generation of hazardous wastes;
  - ➢ to ensure the availability of adequate disposal facilities for the environmentally sound management of hazardous wastes; and
  - ➢ to reduce transboundary movements of hazardous wastes to a minimum consistent with their environmentally sound and efficient management.[69]

It is helpful to outline the generally accepted hierarchy of integrated waste management:

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[68] The major purpose of the amendments was to remedy discrepancies between these obligations and the existing domestic legislation: in particular, the definition of hazardous waste is now aligned with that in the *Basel Convention*.

[69] See Article 4 of the *Basel Convention*. A further objective which is commonly cited, but which does not form an obligation under Article 4 of the *Convention*, is to dispose of hazardous waste as close as possible to their source of generation.

- waste avoidance;
- reduction of quantities and toxicity at source;
- recycling, resource recovery and reuse; and
- environmentally sound disposal.

To date, the *Basel Convention* has arguably focused more on the third and fourth tiers than the first two.[70] However, as an multi-lateral environmental agreement is designed mainly to regulate transboundary movements (which occur for either disposal or recycling), this is perhaps to be expected. Nevertheless the *Convention* also clearly has objectives related to the first two tiers. Moreover, NGOs such as Greenpeace argue that a global hazardous waste agreement should treat the problem at source rather than at the 'end of pipe' and have argued strenuously that tight trade restrictions on transboundary movements for disposal and recovery will assist this process.

A problem that arises if the broad approach is adopted is that the achievement of these objectives is likely to require a broad range of policy responses to be effective, some of which may relate to trade in hazardous waste, but which more than likely will involve a range of policy options well beyond that envisaged with respect to the *HWA* (eg, kerbside recycling, taxation, etc).

Parties to the review generally accepted that a narrow approach is necessary for the sake of the *HWA*. That is, the *HWA* should seek to implement Australia's international obligations, with the expectation that this will lead to longer term environmental benefits and outcomes as specified in the *Basel Convention*. For example:

> "The *Basel Convention* has broader goals and objectives, some of which are very long term. In it's present form the Act doesn't address these broader objectives. They should be dealt with elsewhere."
>
> Greenpeace discussion, 5 September 2000.

Concerns have also been voiced over the fact that by attempting to take a broad approach, these broad ranging and sometimes conflicting objectives of the *HWA* have not made it very easy on industry to interpret their obligations under the *HWA*.

The remainder of this report assumes that the HWA should seek to implement Australia's international obligations, and that while this will go some way to achieving the objectives of the Basel Convention, the Basel objectives are likely to be broader than the HWA.

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[70] This may be seen as consistent with the regulation of hazardous waste in Australia to the extent that the first two tiers are predominantly state and territory responsibilities, while the third and fourth can be seen as joint Commonwealth and state and territory responsibilities.

C

Part C — An Assessment of the *HWA* to the Degree that it Goes Beyond the Convention's Requirements

This Part describes and assesses the broad costs and benefits in those instances that the *HWA* goes beyond the *Basel Convention* and results in competitive distortions. Regulatory distortions are considered in two separate categories: import and export prohibitions; and permit restrictions.

Chapter Five

Import and Export Prohibitions

The *HWA* and associated regulations contain four prohibitions on market participation (ie, the *HWA*'s permit arrangements do not apply):

- two prohibitions simply implement Australia's obligations under the *Basel Convention* and are not considered further —
  - ➢ the transboundary movement of hazardous waste to Antarctica — this obligation stems from Article 4(6) of the *Basel Convention*; and
  - ➢ the transboundary movement of hazardous waste between Australia and countries that are not parties to the *Convention*. This is not an absolute prohibition as Article 11 of the *Convention* provides exemptions.[71]
- two prohibitions exceed Australia's obligations under the *Basel Convention*. These prohibitions prohibit exports for final disposal in all but exceptional circumstances and imports for final disposal.

All four prohibitions stop the participation of firms in particular hazardous waste markets[72] and are clear competitive restrictions. It is only the latter two, however, that are considered in subsequent sections because they go beyond Australia's minimum obligations.

5.1 Import and Export Prohibitions

The following sections described just how the *HWA* prohibitions on exports for final disposal and imports for final disposal go beyond Australia's minimum obligations.

5.1.1 Exports for Final Disposal

Article 4(9) of the *Basel Convention* provides that the Parties must take appropriate measures to ensure that the transboundary movement of hazardous waste only be allowed if the state of export does not have the technical capacity and the necessary facilities, capacity or suitable disposal sites to dispose of the wastes in question in an environmentally sound and efficient manner.

In addition the *OECD Decision* C(19)178/FINAL states that for wastes not to be subjected to recovery operations, Member countries shall:

> "(a) consistent with environmentally sound and efficient management practices insofar as possible dispose in their own territory the wastes produced therein;

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[71] Parties may enter into arrangements regarding transboundary movement of hazardous wastes or other wastes with Parties or non-Parties provided that such agreements or arrangements do not derogate from the environmentally sound management of hazardous wastes required by the *Convention.*

[72] Furthermore, once ratified by two thirds of the parties to the *Waigani Convention*, the import of all hazardous and radioactive waste into South Pacific Forum Countries will be banned. However, Australia will be able to receive hazardous wastes exported from South Pacific Forum Island countries that are not Parties to the *Basel Convention.*

> (b) take action to reduce their transfrontier movements to the minimum justified by environmentally sound and efficient manner;
>
> (c) on a continuing basis, identify those wastes that cannot be managed in an environmentally sound manner within their territory. They shall encourage the establishment of additional and appropriate waste management infrastructure so that these wastes can be managed within their own territory and if such infrastructure cannot be established they shall cooperate by means of bilateral original plans agreed at governmental levels meant to ensure environmentally sound management of the waste."

Section 18A of the *HWA* bans the export of hazardous waste for final disposal in all but exceptional circumstances. In deciding whether there are exceptional circumstances, the Minister must have regard to the following:

> (a) whether there will be a significant risk of injury or damage to human beings or the environment if the Minister decides not to grant the permit;
>
> (b) whether the waste is needed for research into improving the management of hazardous waste;
>
> (c) whether the waste is needed for testing for the purposes of improving the management of hazardous waste;
>
> (d) matters prescribed for the purposes of this paragraph."

From the above, it becomes clear that the *HWA* and associated regulations goes beyond both *Basel Convention* and the *OECD Decision* C(90)178 in that the *HWA* prohibits exports of hazardous waste for final disposal, regardless of whether Australia has the technical capacity and necessary facilities to deal with the waste.

5.1.2 Imports for Final Disposal

The *Basel Convention* requires Parties to the *Convention* to minimise the transboundary movement of hazardous waste. The *OECD Decision* C(19)178/FINAL also gives similar guidance on the matter without any specific requirements.

The importation of hazardous waste for final disposal is not considered by the Commonwealth to be in the public interest or consistent with public expectations and hence is not permitted unless:

- Australian entities own the waste or have primary responsibility for disposing of the waste;
- Australia has international obligations that justify importation of the waste (eg, the return of lithium batteries for disposal following the Australian Army's withdrawal from peace keeping operations); or
- return of household waste for disposal for the French Antarctic Research Base in Antarctica. Much of the waste originated from products purchased in Tasmania, which is an important supply base for Antarctic expeditions. These imports are also in keeping with Australia's obligations under the *Antarctic Treaty*.

for example, as a result, the Commonwealth will only permit the import of persistent organic pollutants under exceptional circumstances from nations of the South Pacific Forum, except New Zealand, which are signatories to the *Basel Convention.*

The Commonwealth's policy, while keeping with the spirit of the *Basel Convention* and the *OECD Decision*, is likely to exceed Australia's obligations by way of implementation.

5.2 Benefits of Import and Export Prohibitions

There are a number of benefits arising from prohibiting exports of hazardous waste for final disposal and imports for final disposal.

5.2.1 Prices and Quantities

The prohibition on exports of hazardous wastes for final disposal has placed degrees of pressure on Australian governments, industries and consumers to minimise the generation of hazardous wastes, or develop procedures and facilities to deal with them within Australia (ie, this means that Australia would no longer export its problems to other countries).

As illustrated in section 3.4.2 the prohibition will result in a greater increase in domestic disposal rates which will lead to an increase the demand for storage, recycling and disposal services in Australia. The resulting impact will be an increase in the price paid for these services.[73]

In addition, as hazardous waste is generally a by-product of producing another good or service, an increase in waste disposal costs[74] will lead to a contraction in output. Any contraction in hazardous waste generating output should also result in a decrease in hazardous waste production.

Unfortunately though, the available data suggests that production has not decreased. Industry representatives suggested that this is because waste is going into unsustainable long-term storage and that the prices charged for landfill do not reflect the full costs of disposal.[75]

5.2.2 Environment and Human Health

As developing countries may lack the potential to deal with hazardous wastes in an environmentally appropriate manner, a prohibition on Australia exporting hazardous waste for final disposal is likely to have the benefit of providing some protection to the global environment. However as Australia would be unable to export to developing countries (that are unlikely to have the expensive technology needed to destroy such wastes), even in the absence of a prohibition, unless the *Basel Convention*'s

[73] In the longer term there may be an increase in the availability of disposal facilities or development of technologies to enable recycling which may ease the price pressure.

[74] Which ultimately falls upon the industries that produce hazardous waste and the consumers of primary materials.

[75] When setting prices for disposal it is essential that landfill prices and acceptance criteria are set in such a way as to ensure that prices reflect real environmental costs — see Campbell, Parliamentary Secretary to the Ministers for the Environment, Sport and Territories and Local Government, *Keynote Address to the Third National Hazardous and Solid Waste Convention*, Sydney Convention & Exhibition Centre, Darling Harbour, 27 May 1996. Subsidising legal disposal of hazardous waste lowers the cost of the pollution generating activity, thus distorting relative prices in the output market and increasing the quantity of hazardous wastes that need to be disposed of in the first place — see Nowell and Shogren, "Challenging the Enforcement of Environmental Regulation" (1994) 6(3) *Journal of Regulatory Economics* 265.

environmentally sound management procedures were met, the particular benefits flowing from this specific aspect of the prohibition are likely to be minimal.

The prohibition on imports of hazardous waste into Australia for final disposal has the potential to benefit Australia by providing protection against the dumping of other countries' wastes. This is particularly important given the large sums involved in cleaning up these wastes.

In addition, prohibitions on the import and export of hazardous waste for final disposal means that the risks associated with their movement (eg, handling errors, risks of shipping accidents, and so on) are reduced and hence the natural environment and human health and safety are likely to be better protected.

5.2.3 Industry Development

Given Australia's distance from technologically advanced treatment facilities it appears that the only wastes that would be worth sending overseas for final disposal are highly toxic and dangerous wastes such as metal alkyls, diethylaluminium and POPs wastes that require highly advanced and expensive disposal technology. For wastes that can be disposed of in Australia, it is highly unlikely that the export option would be cost-effective given that equivalent environmentally sound management standards would need to be demonstrated and transport costs are likely to preclude.

For example, prior to 1996, Australia exported PCBs for final disposal in accordance with these obligations. However, the amended *HWA* provided the stimulus for developing a small number of domestic facilities that can dispose of persistent organic pollutants such as PCBs. It is important to remember, however, that the *HWA* has also lead to a concomitant increase in the cost of disposing of these wastes.

5.2.4 Community Concerns

The import of hazardous waste is a sensitive, ongoing community issue, and the inability for the Commonwealth to deal appropriately with hazardous waste leaves open the possibility for great community concern (both nationally and internationally). There appears to be a strong desire to restrict the importation of hazardous waste for final disposal in order to preserve the Australian environment.[76]

5.3 Costs of Import and Export Prohibitions

5.3.1 Prices and Quantities

As demand for export handling (ie, treatment, storage, landfill, disposal, etc) of hazardous waste in Australia would be higher than without the

[76] See The Kurri/Weston Concerned Citizens submission.

prohibitions, the price of such services can be expected to be higher than without the prohibitions.

As outlined in section 3.3.2 export prohibitions have increased the cost of domestic disposal and the cost of producing the primary material, of which hazardous waste is a by-product. However as transports costs from Australia to OECD countries are such that exports for final disposal are unlikely to be commercially viable for most hazardous wastes (except highly toxic and dangerous wastes such as metal alkyls, diethylaluminium and POPs wastes that require highly advanced and expensive disposal technology) the increase in costs is likely to be relatively small.

5.3.2 Environment and Human Health

The prohibitions on certain transboundary movements of hazardous wastes may create financial and environmental costs because the wastes may have been handled more costs effectively overseas, and may have been handled in a manner that is less environmentally harmful. Rather than being exported these hazardous wastes must be stored, treated or disposed of in Australia, maintaining (often ongoing) environment risks in Australia.

5.3.3 Industry Development

The implications of Australia's apparent unwillingness to import hazardous waste has been emphasised in a recent Discussion Paper on POPs (not necessarily the *HWA*) by du Plessis:

> "As there is now no manufacture here of these POPs and their importation is largely banned, a finite inventory of bulk POP wastes existed in Australia. Over recent years a great deal of this appears to have already been destroyed…
>
> Given the above changes…, the time is fast approaching when there will be insufficient bulk waste to keep all the POP destruction facilities fully utilised. It is conceivable then that one or more of the technologies will cease its operation, reducing the depth and breadth of Australia's POP destruction capability and experience. This would occur progressively until there are no facilities left that can operate viably."
>
> du Plessis, *PCB Waste Import — Discussion Paper*, 20 July 1999 cited in ELI Eco Logic Pty Ltd submission, p.7.

The prohibitions on export of hazardous waste for final disposal may in effect create barriers to the economic development of newly developing countries. In recent times, many firms from these countries have successfully made significant developments in high-technology sectors predominantly by forming partnerships with more technologically advanced firms from developed countries. Anecdotal evidence suggests that these partnerships have helped firms in those countries to build the technological capabilities and skills needed to penetrate international recycling markets and reduce the hazardous waste generation levels within their own countries.

There are a range of other economic costs associated with the prohibition on exporting wastes from Australia for final disposal overseas:

> "On the importing side, less developed countries receive foreign currency as payment for disposing of wastes. These countries, many of which are deeply in debt, desperately need the income from such trade. In 1988, Guinea-Bissau signed a contract to accept 3.5 million tons of hazardous wastes for $140

> million. This amount is greater than its gross national product (Dufour and Denis, 1988).
>
> In some deals, the importing countries' benefits lie beyond cash. Bangladesh, Paraguay, Haiti, Angola, Tunisia, Sierra Leone, Honduras, and some other countries use foreign hazardous wastes as fuel to generate electricity. Some exporting countries promise to construct an incinerator to burn the wastes and generate power. In effect, their trade in wastes transfers waste disposal technology from developed countries to developing ones. As a result, developing countries can improve the technology to control pollution in their countries.
>
> Wastes, used as land reclamation material in a country where land is scarce or unusable, can be equally attractive. The President of the Marshall Islands has given the U.S. firm, Admiralty Pacific, preliminary approval to import about one-third of California's wastes. The residents of the Marshall Islands want to use the wastes to increase the size and elevation of the island (Greenpeace, 1989)."
>
> Xing & Kolstad, *Environment and Trade: A Review of Theory and Issues*, Economics Working Paper 2-96, University of California Santa Barbara, 1996, pp.24-25.

5.3.4 Other Costs

The *HWA* prohibitions may increase the need for ongoing regulatory responsibility for Australia states and territories (whereas if the wastes were exported the responsibility would ultimately be transferred to overseas authorities).

5.4 Summary

The decision to prohibit exports of hazardous wastes for final disposal except under exceptional circumstances is an Australian policy, not an obligation of the *Convention*. However, it is in keeping with Article 9(a) which states that, "the transboundary movement of hazardous wastes and other wastes only be allowed if the state of export does not have the technical capacity and the necessary facilities, capacity or suitable disposal sites in order to dispose of the wastes in question in an environmentally sound and efficient manner". The prohibition for final disposal under the *HWA* goes beyond this obligation as it includes wastes that cannot be dealt with in Australia.

The broad impact of the restriction on the export of hazardous waste for disposal is summarised in Table 5.1.

Table 5.1

SUMMARY OF THE POTENTIAL IMPACTS OF THE *HWA* RESTRICTIONS ON EXPORTS AND IMPORTS FOR FINAL DISPOSAL

Impact Upon …	*Description*
Domestic hazardous waste producers	Increased disposal costs raise costs for the production of primary (upstream) goods and services. There is an expectation that this will provide and incentive to switch to less waste producing methods, but there is little evidence of this having occurred.
Domestic merchants	Reduced revenue as transboundary movements are curtailed.
Domestic disposal services	Minimal increases in demand.
Domestic environmental and human health Impacts	Thought to be negative at this stage. The inability to export the hazardous waste means that waste that would have otherwise gone overseas is now disposed of in Australia. The concern is that the disposal, in some circumstances, may be less than best practice — ie, going into landfill — and hence degrades the environment and poses a risk to human health.
Overseas importers of hazardous waste for disposal	Threats to the economic and industrial development of developing countries who may have opportunities to form partnerships with more technologically advanced firms from developed countries.
Overseas environmental impacts	Beneficial due to a reduction in the dumping of hazardous waste. However, without avenues to permit the export and subsequent environmentally sound management of waste, there is the potential for continued environmental damage.

Source: The Allen Consulting Group

One of the claimed benefits of the export restriction is that it provides the incentive for companies to develop environmentally sound domestic facilities/technologies to deal with the waste. There is some evidence to support this, but it is too early to be definitive.

The real benefits to both Australia and the rest of the world include a reduction in risk and potential externalities of transporting hazardous wastes, which is likely to be substantial given the nature of the waste.

Although there are likely to be some costs to Australian industry and the community resulting from the two prohibitions, these are likely to be minimal because:

- very few export applications have ever been received for wastes destined for final disposal. Consequently demand for exporting for final disposal appears to be low;
- if it cannot be demonstrated that the risks of storage or domestic disposal is likely to have a significant impact on human health or the environment, then the risks to the environment of transportation are likely to be higher than not exporting the waste;
- in the absence of this policy, applications would be assessed in accordance with the *Basel Convention*, and would need to demonstrate environmentally sound management; and
- the costs of disposing of wastes in countries where environmentally sound management can be demonstrated (ie OECD countries) are likely to be comparable to Australian disposal costs and it is arguable whether exporting for final disposal would be cost effective given the additional transportation costs required.

Given these observations, the Review Team considers that, at least over time, the additional restrictions on the import and export of hazardous waste for final disposal are likely to provide a net benefit and hence can be justified under NCP.

Chapter Six

Permit Restrictions

6.1 Permit Restrictions

To implement Australia's international obligations under the *Basel Convention* and other related international instruments, the *HWA* and its regulations establish a permit scheme for those hazardous waste dealings that are not prohibited (see Chapter Five).

In order to participate in the transboundary movement of hazardous waste firms must obtain a permit which ensures that they meet a number of specific requirements set down by the *HWA*.

Some of these requirements stem directly from the *Basel Convention* and as such provide little scope for discretion.[77] As all parties face the same conditions these provisions are unlikely to have a significant impact on competition and are therefore not subject to review. These include:

- that the waste will undergo a recovery operation in the importing country at a recovery facility that is authorised to carry out recovery operation on waste of that type;[78]
- that there is a written contract that specifies the details of the management of the waste; and
- that the prior notification and consent arrangements have been met.

Other requirements that are discretionary (ie, are not specifically mandated by the *Basel Convention*) and are subject to review include:

- that the applicant must be able to pay the appropriate application fees.[79] At around $200 to $500, fees for export and import permits involving OECD countries are much lower than those involving export to other parties to the *Basel Convention* ($4,400 plus). This disparity may create a bias towards movements between OECD countries for low value wastes;[80]
- that the applicant must be a suitable person — for example, under sub-s.17A(2)(b) of the *HWA* the Minister must grant a *Basel* transit permit if the Minister is satisfied:

---

[77] For example, the *Basel Convention* includes a duty to re-import. This has been included in the *HWA* such that where when an approval for a transboundary movement of hazardous waste has been given and cannot be completed in accordance with the terms of the export permit, the exporters are required to ensure that the wastes in question are taken back into the state of export by the exporters (see Article 8 of the schedule to the *HWA*). This obligation has a user-pays flavour and seeks to avoid the transfer of risk to the Commonwealth. This may be important given the costs associated with re-importation — for example, in 1999 the cost of returning three containers (about 60 tonne) of computer scrap hazardous waste from the Hong Kong was $94,000 (excluding administrative costs).

[78] sub-s.16(1)(d) of the *OECD Regulations.*

[79] The fees were set on a cost reflective basis in consultation with stakeholders in 1996. *Basel* permit fees reflect the high cost of establishing the Technical Group and assessment of environmentally sound management practice.

[80] See ss.3&7 *Hazardous Wastes (Regulation of Exports and Imports) (Fees) Regulations 1990.*

"that having regard to:

(i) the applicant's financial viability; and

(ii) the applicant's previous record in relation to environmental matters; and

(iii) any other relevant matters;

the applicant is a suitable person to be granted a Basel transit permit;"

- that the applicant has an appropriate level of insurance;[81]
- that the proposals would be consistent with the environmentally sound management of the hazardous waste;[82] and
- subject to conditions — the Minister may grant a permit subject to conditions.[83]

However the Minister may decide not to grant the permit if the Minister thinks that it is not in the public interest.

Furthermore, even after a person is granted with a permit the Minister may vary the permit, at his or her discretion, by:

- imposing a condition on the permit;
- changing or cancelling a condition of the permit; and
- changing the day on which a condition must be complied with.[84]

These permit-related restrictions have the effect of placing operational limitations on both the conduct of firms in the industry, as well as creating barriers to entry through controls placed on the behaviour of market participants.

6.2 Benefits of Permit Schemes

The main benefit claimed for permits — which are a form of licensing — is that the establishment of clear permit criteria ensures that:

- only suitably skilled and organised companies with a sound environmental record will provide international transport of hazardous waste. While past behaviour is not always a good indicator of future behaviour a number of stakeholders viewed the relationship to be sufficiently strong;
- the Commonwealth is satisfied that the planned route and transport processes will not unduly endanger human health or the environment; and
- there are clearly established procedures in place to deal with unforeseen circumstances (ie, if a contract can not be completed in accordance with the terms of the contract, the exporter is required to take back the waste within 90 days from the time of importing, unless alternative

[81] sub-s.17A(2)(c).
[82] sub-s. 17(1A)(1)(a).
[83] For example, see sub-s.22(1).
[84] sub-s.26(2).

arrangements can be made for their disposal in an environmentally sound manner).

These benefits accrue to:

- Australia directly — to the extent that the permit scheme provides some assurances to the safe transport of hazardous wastes in and around Australia and helps protect Australia's international reputation;
- other countries — to the extent that the permit scheme ensures that the country of receipt is aware of the details of the shipment including the nature and size of the shipment, the facility which will treat/recycle the waste etc, this ensures that hazardous waste is dealt with in an environmentally sound manner; and
- exporters — as countries give their consent before the shipment departs, the risk that the shipment will be returned is minimised.

The threat of permit revocation can be used as an enforcement tool in ensuring the maintenance of professional and environmentally appropriate standards in the transport and treatment of hazardous waste.

6.3 Costs of Permit Restrictions

As the *Basel Convention* does not strictly speaking mandate permit restrictions, these licensing (permit) regimes, have, at least in theory, an impact on economic efficiency because they create entry barriers and hence distort underlying supply decisions. This can occur in two ways.

Firstly, the administrative and compliance costs associated with obtaining a permit — both in terms of the application fee and the time and expenses required to fill in the appropriate paperwork — can increase the costs of supply (hence moving the supply curve up). For example, in discussing the generic concept of export controls, the IC has argued that:

> "export controls imposed a range of costs through their distortionary impact on prices as well as through the delays imposed on companies in gaining necessary approvals, the increased uncertainty placed on trading partners and the resources they tied up in setting, monitoring and enforcing the regulations."
>
> Industry Commission, Mining and Minerals Processing in Australia — Volume 1, AGPS, Canberra, 1991.

This general observation appears consistent with the operation of the permit system for the transboundary movement of hazardous wastes for recovery purposes between OECD countries:

> "The information, albeit limited, on trade flows lends support to the view that, without restriction, cross border flows of hazardous waste for recycling/recovery would increase. Since the mid-1990s, however, there has been a halt in the growth of exports and there has been substantial changes in the patterns of some exports. In addition, since the mid-1990s, the level of imports of waste-type items has been erratic relative to the early 1990s. These changes led support to the view that the *HWA* and associated regulations have influenced both the volume and composition of that trade. Available information does not indicate that less waste is being generated at this stage."
>
> Productivity Commission submission, p.5.

Pasminco reinforced the IC's view, particularly emphasising the potential effects on the competitiveness of Australian industry:

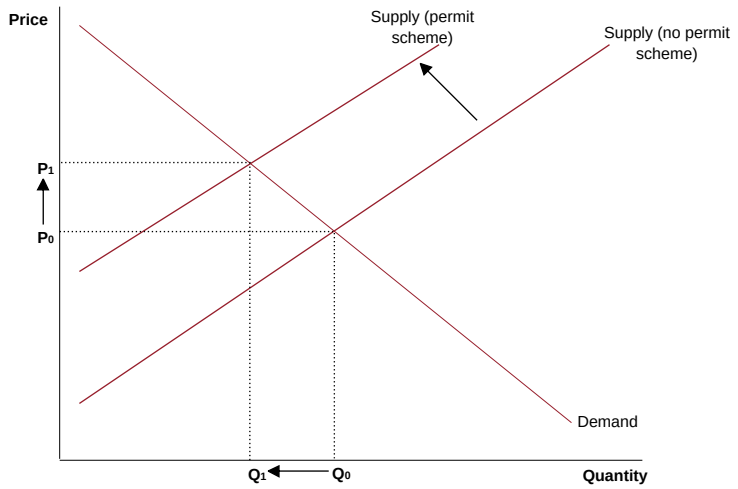
> "Although the Basel permit system provides adequate control it can effect competitiveness of Australian companies. Obtaining a permit is a lengthy process and the time taken to obtain the permit can impact on the windows in the raw materials schedules of the treatment facilities. This can result in these facilities sourcing their raw material from companies outside Australia."
>
> Pasminco submission, p.1.

Secondly, licensing can restrict competition by limiting the number of people who are allowed to provide a good or service, this can enhance the permit holders' market power, allowing them to charge higher prices to the disadvantage of consumers.

The impact of these twin forces is shown in simple terms in Figure 6.1. The price of hazardous waste export services is higher, and the volume exported lower, under a permit scheme than in comparison to a regime without a permit scheme. These costs ultimately fall upon those industries that produce the hazardous wastes, and their consumers.

Figure 6.1

THE IMPACT OF A PERMIT SCHEME UPON A PARTICULAR HAZARDOUS WASTE EXPORT MARKET



Source: The Allen Consulting Group

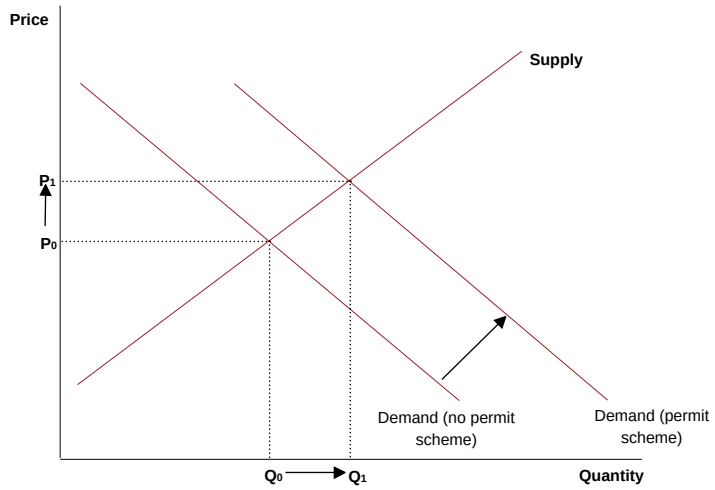
This view appears to have the support of the PC: "The changed pattern of trade flows can reasonably attributed directly to the introduction of export

permit requirements for waste destined for recycling/recovery purposes in the mid-1990s."[85]

As the permit scheme is likely to increase the costs of exporting hazardous wastes, it is likely that demand for domestic storage, recycling and disposal services will increase. As shown in Figure 6.2, the impact is likely to be an increase in the price paid for such services.[86]

Figure 6.2

THE IMPACT OF A PERMIT SCHEME UPON DOMESTIC HAZARDOUS WASTE SERVICES



Source: The Allen Consulting Group

In addition, the permit arrangements appear to have the following costs:

- as the costs associated with the permit scheme could increase demand for Australian waste treatment and handling (and the price of such treatment and handling), there may be a greater environmental risk for Australia as the incentive for illegal dumping of waste increases (unless the waste has a commercial value);
- some wastes for recycling that were previously sent to non-OECD countries have been diverted either to OECD countries or domestic recycling facilities where costs are higher;
- a number of industry members were critical of the *Basel* and *OECD* requirements to have a contract in order to obtain a permit because a large percentage of recyclable material is traded on world spot markets (ie, requiring a firm delivery date). Thus, firms need to know when they can deliver waste in order to participate in the market. In effect, the pre-permit contract requirement operates in the opposite manner to the market and is a barrier to trade;[87] and
- as fees are not based upon the size of exports or the hazards associated with particular exports the fee structure may provide a distortion in favour of larger exporters and/or exporters of more hazardous materials.

[85] Productivity Commission submission, p.4.

[86] In the longer term there may be an increase in recycling facilities that may ease the price pressure.

[87] See ELI Eco Logic Pty Ltd submission, p.3.

6.4 Summary

The current permit arrangement is a logical way in which to implement Australia's commitments under the *Basel Convention* and associated international agreements.

Like all permit schemes, the EA administered permit scheme imposes costs upon industry and ultimately consumers. These costs are offset by a high degree of transparency and the provision of greater industry certainty.

Given that most other countries also have permit arrangements for transboundary movements of hazardous waste the Review Team does not consider the *HWA* to be a factor that substantially reduces the international competitiveness of the Australian industry and should be considered NCP compliant.

6.5 Reform Options

The following sections consider reforms that could be undertaken to reduce the costs of the existing licencing scheme while maintaining the benefits.

6.5.1 Alternative Licensing Approaches

The current licensing regime can be characterised as a 'positive licensing' scheme in that it requires parties to positively meet certain criteria before being allocated a permit.

There are a number of alternative licensing arrangements — ie, self-regulation, negative licensing and certification — which are commonly considered in NCP reviews but which are not considered in this case because the Review Team suggests that they would not allow compliance with Australia's international treaty obligations — in any case, see Box 6.1.

Box 6.1

SELF-REGULATION AS AN ALTERNATIVE REGULATORY APPROACH

Even if self-regulation were consistent with the *Basel Convention*, the findings of the NEPC with respect to the Controlled Waste NEPM suggests that self-regulation is an inappropriate mechanism to control hazardous waste movements across borders:

> "Self regulation could involve voluntary policing of waste management by generators and transporters. Industry associations could introduce or amend codes of practice, such that illegal disposal of controlled wastes is discouraged. For example, the relevant agency could recommend that generators or transporters report cases where illegal disposal is suspected, and provide some basis for their suspicions.
>
> While licensing could impose strict conditions it is not expected that self regulation will extend to all participants in the management of controlled wastes. Membership of industry associations does not necessarily cover all relevant businesses.
>
> Another problem is voluntary restrictions on waste management options. Self-regulation is unlikely to achieve voluntary refusal by waste transporters. Consider a shipment of controlled waste to an interstate landfill, where disposal fees are cheaper. Transport businesses may choose to move wastes to the landfill if this is allowed by the destination jurisdiction, even if a superior method of management exists in the source jurisdiction. Since legislation in the destination jurisdiction allows this method of disposal, it is difficult to argue that self regulating transportation businesses would elect not to use the facility.
>
> It may not be possible to systematically collect statistics on controlled waste if a self-regulatory code is used as required for obligations under international treaties. Self -regulation will not achieve the objectives of the Measure.
>
> Key points:
>
> • Self regulation is not an explicit method of controlling and tracking movements of controlled waste.
>
> • Self regulation is not comprehensive, and will not achieve the goal of the Measure."

Source: National Environment Protection Council, *Impact Statement for a Draft National Environment Protection Measure For The Movement of Controlled Waste Between States and Territories: Draft*, Canberra, pp.17-20.

An alternative approach that the Review Team considered was that of co-regulation. There are two co-regulatory approaches that were considered:

- the hazardous waste industry could develop and administer its own permit arrangements, with the Commonwealth Government providing legislative backing to enable the arrangements to be enforced (eg, the Government could enforce undertakings to comply with a code of practice). In this case industry could develop minimum standards that should apply before a permit is provided. If such standards were not acceptable to the Government then traditional government licensing could be employed until such time as industry developed suitable standards; or
- the Commonwealth could develop licensing criteria which are administered by the industry but are enforced by the Government.[88]

The principal benefit of co-regulation is that it harnesses the industry's desire to be regulated and puts the onus on industry to take on more responsibility. It is also claimed that because industry has more expertise than government, co-regulation avoids the possibility of government imposing standards (often based on inaccurate perceptions) that industry cannot meet.

A co-regulatory approach need not lessen environmental standards — the Government can seek to maintain current (or different) safeguards through ongoing regulation and enforcement.

While co-regulation is often hailed as a more cost-effective form of regulation, in many cases the cost savings are to the government, but such costs would, in practice, simply be transferred to the industry and then on again to consumers.

There was no support away from positive government licensing from any sector of the industry or from environmental groups. For example:

> "Self regulation for wastes such as these would be a highly risky path to take. In our experience, the waste industry has an unacceptable number of 'cowboys' who are driven by the most convenient and lowest cost options (not always legal) for disposal."
>
> ELI Eco Logic Australia Pty Ltd submission, p.5.

Similarly:

> "Australia obligations under the Basel Convention cannot be fulfilled through a process of self-regulation or voluntary compliance. We could not believe that they [sic] are any private bodies in the hazardous waste industry that have either sufficient sectoral coverage, the power or the willingness to except [sic] responsibilities associated with a co-regulatory regime."
>
> National Toxic Network submission, p.2.

Given that the definition of hazardous waste is so diverse the Review Team considers that it would be very difficult for industry to supply the degree of oversight required by the *Basel Convention*. Co-regulation would probably only succeed once the definition of 'hazardous' and 'waste' have been

[88] For further information on alternative co-regulatory approaches see Taskforce on Industry Self-Regulation, *Draft Report*, Canberra, 2000 available at http://www.treasury.gov.au/self-regtaskforce.

redefined, and even then only in a limited number of sectors with strong industry associations with broad sectoral coverage.

OBSERVATION

The current 'positive licensing' approach embodied in the HWA permit scheme is consistent with Australia's international obligations and is the most appropriate approach given the inability of less restrictive approaches to meet Australia's international obligations.

6.5.2 Reassessment of the Definition of 'Hazardous Waste'

It is notable that in their review of the impact of the *Basel Convention*, the OECD said that, "one of the biggest difficulties for the effective functioning of the Basel Convention's regulatory regime is the core question of defining precisely what materials it covers".[89]

Firstly, a criticism of the current regulation of hazardous waste is that the definition of 'waste' may be inappropriate in that materials considered waste by one country may be seen as valuable secondary materials by another.

The *Basel Convention* defines wastes as, "substances or objects which are disposed of or are intended to be disposed of or are required to be disposed of by the provisions of national law". Under the *Convention*, 'disposal' means any operation specified in Annex IV, which comprises two lists of 'disposal operations':

- Annex IVA (the 'D-list') sets out operations which do not lead to the possibility of resource recovery, recycling, reclamation, direct re-use or alternative uses; and
- Annex IVB (the 'R-list') sets out operations which may lead to resource recovery, recycling, reclamation, direct re-use or alternative uses.

The contentious issue is with respect to whether a good should or should not be on either the D-list or the R-list.[90] For example, many stakeholders questioned whether waste from a manufacturing process which is used as an input to a subsequent industrial process (a recycling or recovery operation) should be characterised as 'waste'. Similarly, Cox and Sheales argue that: "In a practical and economic, sense, such material would appear to be best classified as a raw material input, especially where it has commercial value."[91]

Secondly, a further criticism is with respect to the definition of 'hazardous' and the classification system. Article 1.1.(a) of the *Basel Convention* defines hazardous wastes as all wastes that belong to any category contained in Annex I, unless they do not possess any of the characteristics contained in Annex III. Annex III contains a list of hazardous characteristics.

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[89] Organisation for Economic Co-operation and Development, *Trade Measures in the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal*, COM/ENV/TD(97)41/Final, OECD, Paris, 1998.

[90] Some guidance as to what constitutes a waste is provided in Environment Australia, *Distinguishing Wastes from Non-Wastes Under Australia's Hazardous Waste Act*, Third Edition, Information Paper No.7, Canberra, March 2000.

[91] Cox & Sheales, "Basel Convention — Economic Issues in the Ban on Shipments of Hazardous Waste" (1996) 3(3) *Australian Commodities* 384 at 387.

The *Basel Convention* does not define concentration cut-offs for hazardous constituents of wastes. It is up to each Party to determine if the Annex I materials exhibit any of the characteristics listed in Annex III.

An ongoing criticism of the *Convention* and the *HWA* is that non-hazardous materials may have been caught in the classification process. For example, some companies have argued that:

> "it is not appropriate to classify recyclables using a leachate test that is designed to assess the leaching characteristics of materials that are disposed of in a general landfill. As recyclables are not disposed to landfill it is not appropriate to use leachate tests to determine cut-off levels."
>
> Environment Australia, *Setting Concentration Cut-Off Levels for Metal Bearing Wastes Under Australia's Hazardous Waste Act*, Information Paper No 5, Canberra, 1998, p.13.

This risk of misclassification may create regulatory uncertainty for industry and increase export costs through the imposition of additional compliance costs.

To provide a greater degree of certainty EA has issued a number of advisory papers on the operation of the *HWA* which specifically address issues relating to the interpretation of hazardousness and distinguishing waste from non-waste.[92]

Furthermore, EA is in the process of amending *Regulations* to the *HWA* to provide greater certainty to industry and others about which plastic wastes are subject to the *Basel Convention* and the *HWA* and which are not. The proposed amendment is a footnote to the relevant B-list entry in the *Regulations* clarifying the meaning of, "prepared to a specification". This amendment aims to ensure that poorly-sorted post-consumer plastic wastes are not exported without a permit and in potential breach of the *Basel Convention*.

It is also important to note that industry was generally complimentary about EA's willingness to listen to concerns that certain materials had been mis-classified as hazardous wastes.

OBSERVATION

While the Review Team acknowledges the industry concern regarding the designation of materials as 'hazardous' and 'waste', the current system is constrained by Australia's international obligations. Mechanisms for industry to voice their concerns are available — eg, the Technical Group — and provide industry with scope for dialogue with the regulators.

The *HWA* largely adopts the definition of hazardous waste found in the *Basel Convention*, and makes reference to its annexes.

However, the definition of 'hazardous waste' is slightly broader under the *HWA* compared to the *Basel Convention*.

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[92] These include, for example, Environment Australia, *Guidance on the Hazard Status of Waste Electrical and Electronic Assemblies or Scrap Under the Hazardous Waste Act*, AGPS, Canberra, 1999; Environment Australia, *Guidance on the Hazardous Status of Zinc and Copper Ash, Dross and Residues Under the Hazardous Waste Act*, AGPS, Canberra, 1999; Environment Australia, *Distinguishing Wastes from Non-Wastes Under Australia's Hazardous Waste Act, Third Edition*: Information Paper No.7, AGPS, Canberra, 2000; and Environment Australia, *Setting Concentration Cut-Off Levels for Metal-Bearing Wastes Under Australia's Hazardous Waste Act*: Information Paper No. 5, AGPS, Canberra, 1998. See http://www.environment.gov.au/epg/hwa/gd.html.

Under the *HWA* the Government has the opportunity to prescribe additional wastes as hazardous. To date this has not been done. However, if the Government were to do so this would have the result that the *HWA* would exceed Australia's obligations under the *Basel Convention*. Such an extension, however, may be able to be justified in the circumstances.

Despite general consistency between the *HWA* and Australia's international obligations, there are two minor technical issues with respect to the definition of hazardous waste that deserve attention. These are discussed in the following sections.

Household Wastes

Under the *HWA* the definition of 'hazardous waste' includes 'household wastes' — household waste is defined as, "waste collected from households, but does not include waste specified in the regulations".[93]

In contrast, under the *Basel Convention* household wastes are not classified as hazardous wastes, they are classified as 'other wastes' under Annex II.

Legal advice provided to the Review Team notes that:

> "Legally 'other wastes' are treated in exactly the same way as 'hazardous wastes' under the Basel Convention. They are subject to the same procedures in relation to transboundary movement.
>
> Practically, 'other wastes' are likely to be treated less stringently than 'hazardous wastes'. The Guide to the Control System for the Basel Convention, adopted by the Conference of parties in 1998, states that Annex II consists of waste that requires special consideration, although are not normally considered as hazardous wastes.
>
> The 'hazardous' classification of household wastes therefore may make it more difficult for Australian traders of household waste. Any inconvenience to traders of household waste may be ameliorated by the provisions allowing the government to prescribe wastes as not household wastes."
>
> Blake Dawson Waldron, legal advice provided to the Review Team, p.5.

Although a technical distinction, this may result in distorted or incorrect market signals being received by Australian traders on household wastes.

RECOMMENDATION ONE

Consideration should be given to prescribing wastes so as to not include standard household wastes.

Exclusions

The *Basel Convention* excludes from the definition of hazardous wastes those wastes deriving from the normal operations of a ship. This appears to be on the basis that there could be technical breaches of the *Convention* if waste is generated on board a ship in transit between countries.

With the exception of the *Waigani Convention* area, the *HWA* does not exclude such wastes. This creates the situation whereby many ships operating to and from Australia may be in technical breach of the *HWA* because their engines create wastes that would normally be classified as hazardous.

[93] See s.4.

RECOMMENDATION TWO

The HWA should be amended to exclude from the definition of hazardous wastes those wastes which derive from the normal operations of a ship, the discharge of which is covered by another international instrument.

6.5.3 Environmentally Sound Management and Other Requirements for OECD Permits

Advice from BDW suggests that in most respects the OECD permit requirements contained in the *OECD Decision Regulations* do not exceed the minimum requirements imposed by the *OECD Decision*. However, the *Regulations* are stricter than the *OECD Decision* in a number of important ways.

First, with respect to OECD *export* permits, BDW notes that:

> "Reg. 16 of the OD Regulations provides that the Minister can refuse to grant a special export permit (authorising the export of hazardous waste to OECD countries) if satisfied of the following:
>
> - the Minister thinks it is in the public interest to do so; or
> - there is another way in which the hazardous waste could appropriately be dealt with; and
> - dealing with the waste in that way would not pose significant risk of injury or harm to people or the environment; and
> - having regard to Australia's international obligations, the waste should be dealt with in that way rather than according to the export proposal; or
> - the hazardous waste could be disposed of safely and efficiently by using a facility in Australia; and
> - such a disposal would be consistent with the environmentally sound management of the waste; and
> - having regard to the desirability of using facilities in Australia for the disposal of hazardous waste, the waste should be disposed of by using that facility rather than according to the export proposal.
>
> These conditions strictly exceed the requirements of the OECD Decision. They also exceed the requirements of Article 11 of the Basel Convention which provides at (2) that the provisions of the Basel Convention will not apply to Article 11 agreements provided that the agreements are consistent with environmentally sound management of hazardous waste as required by the Basel Convention."
>
> Blake Dawson Waldron, legal advice provided to the Review Team, p.9.

Second, with respect to OECD *import* permits, BDW notes that:

> "When considering whether or not to grant an import permit under the OECD Decision, under reg.23 the Minister has to take a number of conditions into account, including the following:
>
> - Before granting or refusing a special import permit, the Minister must consider whether the waste to which the relevant import proposal relates should be dealt with in a way other than the way set out in the proposal;
> - In considering whether the waste should be dealt with in another way, the Minister must have regard to Australia's international obligations in relation to the international movement of hazardous waste (for example, obligations under the Basel Convention and the OECD Decision);

- [Whether] The waste will be transported in a way that is consistent with the environmentally sound management of the waste; and
- The Minister may refuse to grant the permit if the Minister considers that it is in the public interest to do so.

These conditions strictly exceed the requirements of the OECD Decision."

Blake Dawson Waldron, legal advice provided to the Review Team, p.10.

The issue that then arises is whether the additional permit criteria can be justified under NCP.

BDW notes that, "In inserting these additional conditions in the OD Regulations, the Australian government is keeping with the spirit of the Basel Convention, however it is exceeding its obligations under the OECD Decision, and so the Basel Convention."[94] In effect, BDW is suggesting that these permit criteria that go beyond our treaty minimum obligations do so in a manner consistent with the broader objectives of the *Basel Convention* (see section 3.1). Whether they impose net costs depends on the criteria's interpretation.

As noted previously, there are legitimate concerns that restrictions on the export of waste for recovery may have deleterious domestic environmental impacts.

According to the OECD, the, "efficient and environmentally sound management of hazardous wastes may justify some transfrontier movement of such waste in order to make use of appropriate disposal facilities in other countries".[95]

Hazardous wastes are to be managed in an 'environmentally sound manner' and should not be transferred unless this can be assured.[96] 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".[97] This definition has proved to be controversial with some critics arguing that it is overly vague; it is claimed by some parties, for example (and not withstanding Article 4(10)), that it is not clear whether the criteria for 'environmentally sound' is to be determined by the importing or the export country.

EA has stated that, consistent with Article 4(10) of the Basel Convention, it is Australia's responsibility to determine whether an overseas facility operates in an 'environmentally sound manner'. In consultation with Simsmetal it was emphasised that whenever EA sets and imposes guidelines on other countries Australia is in fact impacting on their sovereign rights.[98]

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[94] Blake Dawson Waldron, legal advice provided to the Review Team, p.10.

[95] Organisation for Economic Co-operation and Development, *Decision of the Council Concerning the Control of Transfrontier Movements of Waste Destined for Recovery Operations*, C(92)39/Final, OECD, Paris, 1992, p.2.

[96] See s.18A of the *HWA* and Reg.16 of the *Hazardous Waste (Regulation of Exports and Permits) (OECD Decision) Regulation*.

[97] See Article 2(8).

[98] Discussion with Peter Netchaef, Simsmetal.

In legal advice prepared for the Review Team, BDW has suggested that s.18A of the *HWA* — the provision setting out the environmentally sound management criteria — may exceed the requirements of the *Basel Convention* with respect to exports to OECD countries if a restrictive interpretation of Article 2(8) of the *Basel Convention* and the concept of environmentally sound management is made. Evidence suggests that EA and the *HWA* reference groups have taken such a restrictive approach:

> "On the issue of environmentally sound management the [Policy Reference and Technical] groups have considered seven important principles that now underlie Australia's approach to the environmentally sound management of hazardous wastes. They are a) to minimise waste generation; b) to dispose of the hazardous waste in the country that generated the waste if this can be done in an environmentally sound and efficient manner; c) to protect human health and the environment; d) not to transfer the obligation to require environmentally sound management to countries of import or transit; e) to manage the waste through a "cradle-to-grave" approach; f) not to take advantage of less stringent environmental controls or human health standards; and g) to place the onus of proof on the applicant for permit. *The first four principles stem directly from the Basel Convention while the remaining three reflect the manner in which it is implemented under the Australian Hazardous Waste Act."*
>
> Greenfield, "Environmentally Sound Management of Hazardous Waste Exported for Recovery: An Australian Perspective" presented at the *OECD Workshop: The Environmentally Sound Management Of Recoverable Wastes (ESM)*, Cancún (Mexico), October 28-29, 1999, p.2. Emphasis added.

This description of environmentally sound management reaffirms the view that EA's approach goes beyond that required by a restrictive view of Australia's international obligations. In some circumstances these additional criteria appear to be contradictory (eg, a cradle-to-grave approach implies acceptance of transboundary flows, but the concern about jurisdiction shopping implies a disinclination to support transboundary movements).

Reflecting views advanced during the stakeholder consultations, the Review Team is concerned that approval may be excessively denied because of the belief that there are existing and adequate facilities in Australia when in fact the degree of competition in the market is sub-optimal (see the discussion in section 3.3).

As with all administrative processes, the issue is one of finding the right balance. The Review Team suggests that the current grounds for refusing permits are appropriate with some minor tweaks:

- export permits — if wastes can be recovered in an appropriate manner overseas at a significant cost and/or quality[99] advantage then this should be an indicator that the domestic market is less competitive. This should be a factor that is taken into account by EA and the Minister; and
- import permits — EA and the Minister should explicitly consider whether allowing an import of hazardous waste will assist in achieving critical mass for domestic recycling facilities.

RECOMMENDATION THREE

In considering whether or not to grant a Special Permit, factors that should be considered (or given greater weight) include:

[99] Quality may be evident in guaranteed recovery times (ie, more reliable service).

- *in the case of export permits — the degree of competition in the domestic market; and*
- *in the case of import permits — whether imports are necessary to achieve critical mass and/or a reasonable degree of competition in the domestic recovery market.*

Another potential concern is that, the assessment of whether domestic facilities are 'environmentally sound' is done by the state environmental protection agencies. As these agencies have different assessment criteria, resources, and policies there is the potential for inconsistent assessments across Australia. This may distort the development of 'environmentally sound' recycling facilities, leading to a concentration in specific jurisdictions. There is no evidence to suggest that this is in fact a problem, but it is an issue that should be borne in mind over time.

OBSERVATION

As Environment Australia principally relies upon state environment organisations when assessing the domestic facilities there is a risk that divergent standards will be used when assessing import applications. This concern is somewhat addressed by field visits by the Technical Group, but should be monitored to ensure that it does not develop into a real concern.

6.5.4 Pre-Approval

As discussed earlier, in cases where the transboundary movement of hazardous wastes is not prohibited in principle, the *Basel Convention* provides for an elaborate monitoring and control procedure based on the principle of 'prior notification and consent'.

In order to streamline this process, without exposing the environment and human health to undue risk, there are three approaches that can be considered — see Table 6.2 (next page).

It is clear from Table 6.2 that the first two options exist in practice, but provide little benefit for industry. To provide for more effective pre-approval the pre-approval regime in the *Regulations* should be extended to meet our international obligations.

RECOMMENDATION FOUR

The Hazardous Waste (Regulation of Exports and Imports) (OECD Decision) Regulations should be amended to bring them into line with the OECD Decision provisions whereby once a competent authority has notified the OECD Secretariat of a decision to not raise objections over certain types of shipments notification must still be provided to that country but the 30 day objection period is waived.

Table 6.2

PRE-APPROVAL APPROACHES

Approach	*Description*	*Comment*
Domestic pre-approval	One approach may be to undertake a certification/pre-approval process whereby the Minister will certify the use of particular facilities in Australia (eg, factories) for automatic consent if their request meets certain guidelines.	A similar program has been implemented for Australian domestic facilities but no firms have sought pre-approval. This may be because domestic pre-approval is unlikely to substantially reduce the time required for approvals.
Pre-approval of shipments to specific recovery facilities	Under Part IV(2) of the OECD (92)39 Decision regulatory authorities having jurisdiction over specific recovery facilities and over transfrontier movements of wastes destined for recovery operations, may decide not to object to shipments of certain types of wastes to that facility. These decisions can be limited to a specified period of time and may be revoked at any time.	The Union Miniere facility in Belgium is currently pre-authorised under Belgium law, however this facility's pre-approval has failed to streamline the prior notification and consent process with applications still facing lengthy delays. In this respect, BDW notes that: "The OECD Decision includes provisions whereby a competent authority can notify the OECD Secretariat of a decision to not raise objections over certain types of shipments. In these cases, notification must still be provided to that country, however the 30 day objection period is waived. The notification must arrive prior to the dispatchment of the shipment. These pre-consent provisions have not been incorporated into the OD Regulations. Therefore, even where countries have granted pre-consent to the import, the Australian exporter must still apply for a permit, and the Minister must allow 30 days for objections prior to granting the permit. In this regard, the OD Regulations are stricter than the OECD Decision."
International pre-approval	Another approach is to seek to negotiate bilateral or multilateral agreements with other countries and facilities.	This would expand on the pre-approval of shipment to specific recovery facilities by seeking to establish relationships with trading partners. The agreements would seek to further streamline the prior notification and consent process by pre-approving established and previously documented travel arrangements (ie, the means by which particular hazardous wastes are shipped via particular routes to particular facilities). For example, the Minister has previously approved permits for the export of lead dross to a facility in Belgium. If proposed exports were to be carried out under identical conditions to those already approved by both Australia and Belgium, a bilateral agreement could be negotiated to facilitate the speedy treatment of hazardous waste in a manner consistent with Australia's obligations under the *Basel Convention*.

Source: The Allen Consulting Group and Blake Dawson Waldron, legal advice provided to the Review Team, p.10.

As to the third approach, there is a divergence in opinion over the appropriateness of streamlining the approval process. For example:

> "National Toxic Network does not consider preapproval via bilateral agreements as either feasible or practical, as is evident in the length of time and quantity of effort required to negotiate any form of international agreement."
>
> National Toxic Network submission, p.3.

However, Greenpeace did not see any reason why it would not be possible or even beneficial to streamline the 'prior notification and consent' procedures with countries such as Belgium.[100] This view was also supported by major industry participants including Pasminco and Simsmetal.

[100] This is because Australia regularly exports hazardous waste to this country. For example in 1990-00 sixteen export permits were issued for approximately 48,000 tonnes of hazardous waste. Six of the permits, and over half of the waste, was for export to Belgium. Similar schemes could be established for regular trading partners such as New Zealand and the United Kingdom.

The Review Team's concern is that significant government resources would be required over an extended period of time in order to develop bilateral agreements. Even if such agreements can be reached there is no guarantee that industry would make use of them (eg, new facilities may be developed in other countries, making the bilateral agreement useless).

RECOMMENDATION FIVE

Existing pre-approval mechanisms appear to have limited industry understanding, and in any case appear to be less effective than would be hoped. To the degree possible Environment Australia should seek to encourage the uptake of pre-approval domestically and abroad and should encourage overseas Parties to ensure that pre-approval provides a meaningful reduction in the administrative costs of the HWA and the Basel Convention generally.

6.5.5 Fees

EA's *HWA* permit fee structure is set out in Table 6.3.

Table 6.3

APPLICATION FEES

	Basel Permit	Special Permit
Application fee for an Export Permit	$4,440	$480
Application fee for an Export Permit if made within 12 months of the grant of a permit of the same type[101]	$420	$420
Notice given to a foreign country through which the waste is to be transported (in relation to an application for an Export Permit)	$110	$110
Application to vary an Export Permit	$370	$370
Application for Import Permit	$270	$270
Application for a Import Permit authorising hazardous waste to be sent to a facility approved as a recovery facility	$420	$210
Application to vary a Import Permit	$210	$210
Application for a Transit Permit	$110	$110
Application to vary a Transit Permit	$110	$110

Source: *Hazardous Waste (Regulation of Exports and Imports) (Fees) Regulations 1990.*

The fee structure outlined in Table 6.3 is based on cost recovery principles (and implicitly takes into account environmental risks because, all else being equal, applications that involve greater environmental risks will involve more intensive notification and consent procedures).

Some parties considered this fee structure appropriate. For example:

[101] And in relation to an export proposal of the same type as the proposal to which the earlier permit relates; and the grant of which being consequent on the earlier permit ceasing to be in force, and subject to the same conditions.

> "In regard to the issue of fees we believe the current fee structure is reasonable and inline [sic] with other countries who charge fees, however most countries we deal with do not charge a fee."
>
> Tredi Australia submission, p.6.

However, a consistent theme at the roundtables was the perceived expense of the initial Basel Export Permit.

Although the current fee structure is set to recover administrative costs,[102] the structure can be viewed as a competitive distortion because:

- fees for export and import permits involving OECD countries are much lower than those involving export to other parties to the *Basel Convention*;[103] and
- as fees are not related to volume, small exporters may find it relatively more expensive to export than large volume exporters. Therefore the current fee structure may seen to favour large volume exporters.

There are a range of approaches that could be adopted when setting fee levels — see Table 6.4.

Table 6.4

ALTERNATIVE COST RECOVERY APPROACHES

Approach	*Description*	*Comment*
Cost recovery	The aim would be to recover a certain percentage of the costs of issuing permits. The aim would be to require those applicants with more complex proposed arrangements to pay relatively more than other applicants.	This is a relatively complex task requiring the establishment of clear evaluation criteria.
Ability to pay	This approach would use some equity criteria when determining fee levels.	To some degree this approach is already in place in that non-profit university institutes have been waived fees. Some concern was expressed at the roundtables that university research centres, even though they may be non-profit, often undertake research work on a contractual basis and hence may not justify an exemption from the fees.
Willingness to pay	This would require EA to make an estimate of the willingness of an applicant to pay.	This would be a relatively complex task requiring the establishment of clear evaluation criteria. The Review Team does not consider this a feasible approach.
Volume of exports	This approach would require those who export more to pay a higher fee.	This approach had some industry support at the roundtables and in submissions: "Permit fees should be on a tonnage basis — those who export/import more should pay more. People are already being paid, or paying, for waste on a per tonne (or volume basis)."[104]
Environmental risks	Parties whose exports would create higher environmental risks would have to pay a higher fee.	This approach could be done on the basis of OECD lists. This would acknowledge that there are likely to be higher costs associated with prior notification and consent for higher risk shipments. Furthermore, it may be reasonable to price risks as a signal to industry to find processes that have lower risk hazardous wastes.
A combination of the above approaches	See above	See above

Source: The Allen Consulting Group

[102] Administrative costs include the costs of convening the Technical Group and the determination of environmental sound management.

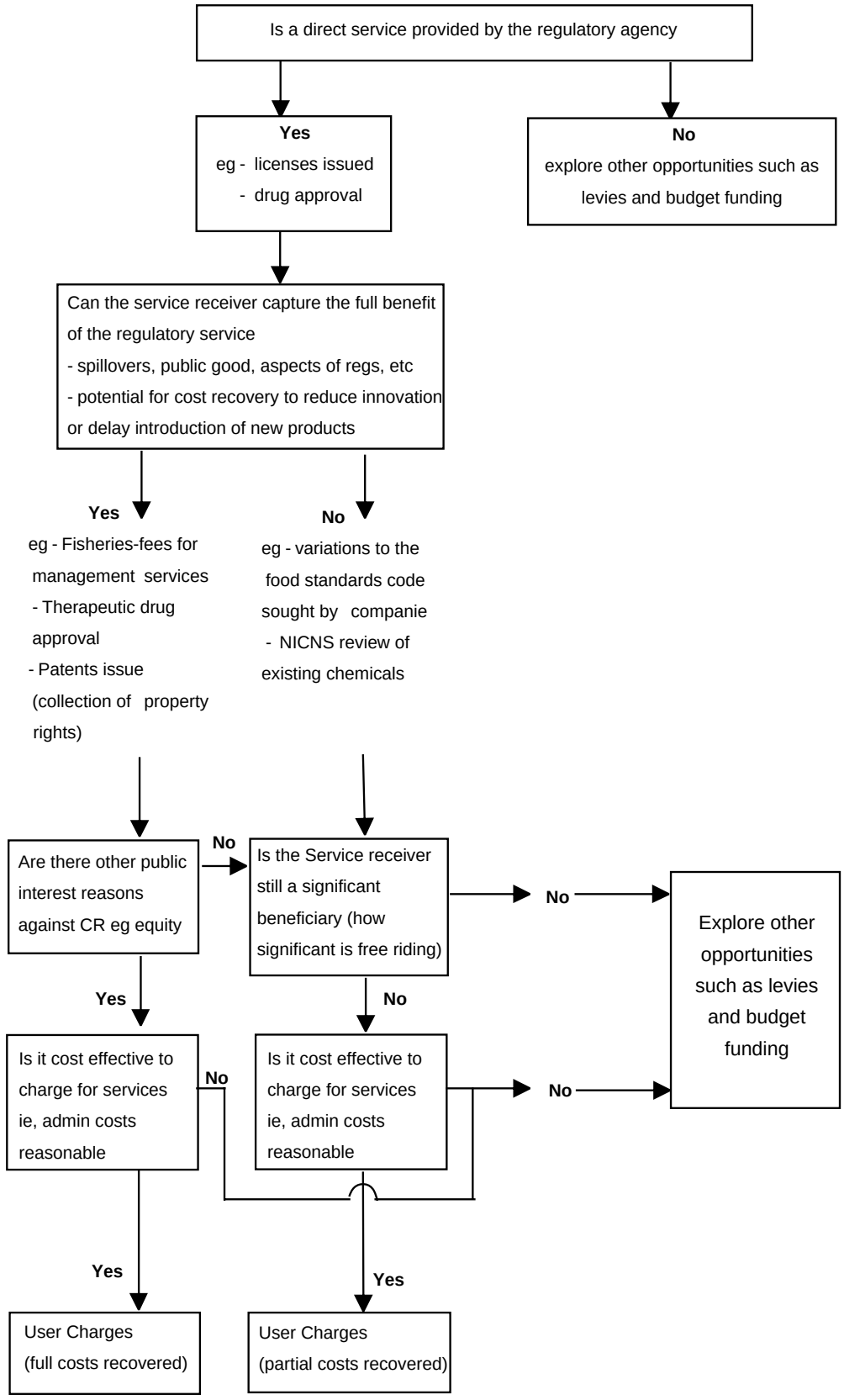
[103] See ss.3&7 *Hazardous Wastes (Regulation of Exports and Imports) (Fees) Regulations 1990*.

[104] ELI Eco Logic Australia Pty Ltd, submission, p.5.

A useful framework in which to consider alternative funding approaches is shown in Figure 6.3.

Figure 6.3

FUNDING OPTIONS FOR REGULATORY AGENCIES



Source: Derived from the Office of Regulation Review

The Review Team considers that Figure 6.3 can be applied in the following manner:

- a direct service is provided in that individual permits are offered;
- while there are some spillovers associated with issuing a permit, in general it is reasonable to state that an applicant captures the full benefit of the service because the permit is specific to them alone;
- the issue then becomes one of determining whether there is a public interest reason against cost recovery. The Review Team considers that there may be a case for suggesting that there should be a departure from cost-recovery principles with respect to exports. The current fee differential between Basel and Special Permits skews exporters' thinking as to which permit to obtain. Given the often low value wastes that are exported, $4,000 or so is a significant differential;
- it is clearly cost effective to charge for services for issuing and varying permits.

There are three alternative approaches:

- equalise fees at the lower fee level — this approach would provide a subsidy to parties who wish to export to Basel countries. The subsidy would have to be provided by the government;
- equalise fees at the higher fee level — this approach would provide a cost impost to parties who wish to export to non-OECD countries. This approach would provide a financial windfall to the government; or
- set fees at an average cost recovery rate — this approach would mean reduced fees for parties wishing to export to non-OECD countries and higher fees for parties who wish to export to OECD countries. There should be no financial impact on the Government.

The Review Team's preference is for the third option because:

- it conforms to the principle of cost recovery, even if this is across different permit types (and therefore involves a cross-subsidy); and
- it focuses the choice as to the best export destination on the principle of whether or not the permit criteria will be met and the attractiveness of the destination.

The Review Team notes, however, that this approach is likely to be opposed by parties who export to OECD countries — ie, the majority of actual or potential exporters — and who would expect to see a rise in fees.

There was no dissatisfaction voiced by industry regarding the fees for import permits. For example:

> "The fees charged at present for the permit application [import] are not a significant financial consideration in the movement of the waste. The costs associated with the actual freight and disposal costs are significantly higher than the administration costs for the permit system."
>
> ELI Eco Logic Australia Pty Ltd, submission, p.5.

The Review Team considers that import fees should continue to be determined on a cost recovery basis.

The Review Team acknowledges that its preferred approach — set fees at an average cost recovery rate across both Basel and OECD permits — is unlikely to receive industry support at this stage, and it is in this light that the following recommendation is made.

RECOMMENDATION SIX

Fees for permits should be reviewed so that, in addition to being based on cost recovery principles, their relative levels do not unnecessarily distort the decision to send hazardous waste to either Basel or OECD destinations.

6.5.6 Insurance

Article 6(11) of the *Basel Convention* requires any transboundary movement of hazardous waste to be covered by insurance, bond, or other guarantee as may be required by the State of import or any State of transit.

There is a strong argument that says that, given the potential environmental and health risks associated with the transport of hazardous waste, insurance may:

- facilitate the cleaning up of the environment and human health;
- reduce the financial burden on governments in the event that there is damage caused in the process of transporting hazardous waste; and
- protect individual firms from liability.

There are a number of insurance issues facing this review.

Firstly, should insurance be made mandatory? Given that exporters of hazardous waste benefit from holding insurance, there may be a sufficient incentive for it to be provided without government intervention. However, almost all parties at the industry roundtable expressed an opinion that it is important for the *HWA* to continue insurance to be mandatory. As emphasised by the National Toxic Network, stakeholders consider:

> "that it is essential that the Hazardous Waste Act specifies insurance as a requirement to obtain a permit to transport hazardous waste. The environmental risks associated with transport can be so significant as to require mandatory insurance."
>
> National Toxic Network submission, p.3.

Secondly, if insurance is to remain mandatory then the issue must focus on what level and type of insurance is required.

Under the existing arrangements, cl.5 of the OECD *Regulations* provides that:

> "an applicant for a special permit has 'appropriate insurance' if, were the permit to be granted, the applicant would be:
> (a) reasonably insured against risks that might arise in relation to the hazardous waste to which the permit relates; or
> (b) whether because of arrangements made by the applicant or otherwise-able to discharge his or her liability that might arise in relation to the waste."
>
> Hazardous Waste (Regulation of Exports and Imports) (OECD Decision) Regulations 1996.

EA interprets 'appropriate insurance' as meaning that applicants should be covered by public liability insurance with a limit of liability of at least $5 million, including insured legal liability to third parties in respect of

personal injury or damage to property. It should also cover the cost of removing, nullifying or cleaning up any contamination or pollution which is caused by a 'sudden and accidental event'. This is a reasonable interpretation, but it should not be used to stifle the flexibility inherent in the quote above.

Under section 18B of the *HWA* applicants are already free to make the case for lower insurance. However, if current third party household insurance requires a minimum liability of $5 million, then it is unlikely that hazardous waste transporters would realistically be able to demonstrate that lower insurance obligations on transporting hazardous waste could be considered adequate.

Hence, it should be made clear to applicants that they can provide lower levels of coverage if they can satisfy EA that there is adequate coverage given the size of the shipment and its degree of hazard, and conversely they can expect to have higher burdens if the risks are more significant.

RECOMMENDATION SEVEN

While it is administratively convenient to establish default insurance requirements, applicants should be made aware that they have the power to make the case for lower insurance obligations.

The Review Team also considers that it should be made clear to applicants that there should be no need for the applicant to hold the insurance themselves but requires parties to make arrangements to be able to discharge their own liability.[105] All that should be required is for the applicant to demonstrate that appropriate insurance is held at every stage of the shipment.[106] The Review Team suggests that this option will provide additional flexibility to a limited number of applicants, but that in general the extra paper burden (ie, satisfying EA of the existence of adequate insurance at every stage) will reduce the attractiveness of this approach for the majority of applicants.

RECOMMENDATION EIGHT

It should be made clear to applicants that insurance may be held by parties other than the applicant. The applicant would be required to demonstrate that appropriate insurance is held at every stage of the shipment.

6.5.7 Permit Duration

The current export permits are valid for twelve months. Following that period a party has to reapply for a new permit and undergo the complete application process. Thus, if a shipment has been delayed beyond twelve months a new permit is required even if there have been no material changes since the permit was issued.

In this context, an amendment to the OECD *Regulations* has been made to allow for the statutory twelve-month period to commence from the date on which a permit commences, not the date that the permit is granted. This allows exports of hazardous wastes for the full twelve month period and

[105] Industry generally seems unaware that sub-s.18(b) already provides for parties other than the applicant to hold suitable insurance.

[106] Simsmetal expressed concerns that insurance made them liable all along the supply chain even though they do not have an ability to control the behaviour of parties further along the supply chain (ie, in other countries).

enables applicants to apply for a permit renewal well in advance of the expiry date of their lapsing permit.

The *Issues Paper* raised a number of options to reduce the costs associated with licensing; one of those suggested increasing the duration of permits beyond twelve months. A few parties considered extended permit durations as inappropriate:

> "Permit duration is probably too long at 12 months. A lot can happen in 12 months (political changes, disposal facilities performance, general acceptance of the movement, etc) and it could be argued that a permit should only apply to a specific cargo under a significantly shorter time-frame (say 3 months)."
>
> ELI Eco Logic Australia submission, p.5.

Despite this concern, a number of parties supported longer permits once applicants have demonstrated an ability to export hazardous waste in a manner consistent with the *HWA*. For example Simsmetal regarded a year as acceptable for a first-time permit holder, but once they have been granted a permit and have not defaulted then subsequent permits may be issued for up to three years.[107]

It is noted that the possibility of longer permit durations was recently considered in the context of the OECD Waste Management Policy Group, but the general form of the proposal was not accepted. It was accepted, however, that in the case of pre-authorised facilities permits of up to three years duration would be permitted. Australia is unable to progress this issue further. Some members voiced their disappointment that the three year extension of permits will not extend generally to all permits.

6.5.8 Duplication

The permit system may be considered by many stakeholders to be unnecessarily duplicative in that applicants are required to fill out a number of different original forms that are simply duplicates.[108] For example, to apply for a Basel Export Permit, a person is required to complete:

- one original of the Environment Australia Hazardous Waste Act Application Form;
- two originals of the Basel Convention Transboundary Movement of Waste — Notification Form (plus one original form for each proposed transit country); and
- two originals of the Basel Transboundary Movement of Waste — Movement/Tracking Form (plus one original for each proposed transit country).

This duplication may impose costs — particularly with respect to time — on the applicant as well as the processing officer who is required to ensure that the original forms are consistent. As this process creates unnecessary delays for the permit applicant it also leads to increases in the costs borne

[107] A number of participants at the roundtable meetings also agreed that past behaviour should be used to gauge whether applicants should be issued with permits for a longer duration.

[108] Original forms are considered to be forms of clean appearance that bear original signatures.

by industry. As a large amount of materials are traded on the world spot markets delays can result in important implications for the signing of contracts.[109]

> "Whilst the delays associated with the permitting system can possibly lead to loss of business, these delays should not be significantly longer than for anyone who wants to move such wastes anywhere in the world (that is via the Basel Convention protocols)."
>
> ELI Eco Logic Australia Pty Ltd submission, p.4.

While the duplication of original forms protects against fraud it may be possible to achieve the same result by streamlining the forms to ensure that all requirements are met in a single form.

E-commerce has the potential to realise substantial increases in firm and governmental productivity.[110] As the Government is committed to adoption of e-commerce through the *Electronic Transactions Act 1999*, there is potential for electronic submission of application forms and payment of fees. Stakeholders generally agreed that, "e-commerce certainly provides efficiencies with respect to administering the system and reducing time and overall cost of submitting permits."[111]

EA is currently exploring this option through the Government's on-line initiative, which may enable applicants to access permit application forms online and to track and monitor permits on the Internet. However the scope for productivity improvements may be limited because of processes adopted in participating countries (ie, they may require hand signed forms rather than electronic signatures).

RECOMMENDATION NINE

Environment Australia should continue to take steps to encourage overseas Parties to accept electronic documentation as part of the HWA notification and consent procedures.

6.5.9 Fines

The *HWA* provides for fines of up to $1 million for contraventions of the *HWA* and its associated regulations.

The economic literature suggests that the role of penalties is one of deterrence:

[109] Emphasised by Simsmetal during consultation.

[110] See The Allen Consulting Group, *E-commerce Beyond 2000: Final Report*, prepared for the National Office for the Information Economy, Department of Communications, Information and the Arts, Canberra, 2000.

[111] ELI Eco Logic Australia Pty Ltd submission, p.5.

> "Deterrence requires that the penalty be set so that it is just high enough to require offenders to pay for all of the harm their conduct inflicts on the rest of the community. If it were costless to observe or catch individuals or firms when they engage in an externality creating activity, then presumably the traditional Pigouvian tax solution would be employed — everyone would be caught and fined an amount equal to the external cost of their activities. However, as many offenders are not caught or successfully prosecuted, the expected penalty should be increased so that it equals the external harm generated divided by the probability of successful prosecution. If the penalty is set according to this criteria the would-be offender anticipates paying the full social cost of his or her actions and is thus deterred from offending."
>
> Thorpe, "Determining the Appropriate Role for Charge Bargaining in Pt IV of the Trade Practices Act" (1996) 4(1) *Competition & Consumer Law Journal* 69 at 69.

In the context of hazardous waste, another parameter needs to be considered — the cost of *legal* disposal. Not only does the government decide how to price non-compliance — through a maximum penalty stipulated in the *HWA*) and how much effort to expend on monitoring — but the government also prices compliance by setting the price of legal disposal (ie, through the fees required to legally export and import hazardous waste). As Sullivan shows, if the price of legal disposal is too high, the government actually encourages illegal disposal.[112]

In the current context, if the level of fines as applied by courts are:

- too low — compliance with the *HWA* will be sub-optimal (ie, there will be an incentive to flaunt the *HWA's* requirements); and
- too high — firms may spend excessive resources in ensuring compliance with the *HWA*.

This point is reaffirmed by Cohen:

> "Thus, the agency must take into account the fact that if it tries to impose a very steep penalty, it will incur additional enforcement costs as firms attempt to evade, challenge enforcement actions in court, etc. … we expect low monitoring/probability of detection and high penalties when the activity is judged to be especially damaging and the regulator can be certain of legal and public support for prosecution. Examples of the latter are midnight dumping of hazardous wastes."
>
> Cohen, *Managing and Enforcing Environmental Policy*, mimeo, August 1998, p.10.

The suspicion of the Review Team is that the current penalty level (as applied by the courts) is likely to be too low to provide a real deterrence. For example:

> "The first [and only] prosecution under the Act was concluded on 25 May 1999 when guilty pleas were entered to charges of exporting hazardous wastes to the Philippines without a permit. *The company was fined $2000 and a director was fined $500.*"
>
> Department of the Environment and Heritage, *Annual Report 1998-99*, AGPS, Canberra, 199, p.223. Emphasis added.

A problem is that it is difficult to draw broadly applicable conclusions as to the appropriateness of the current penalty regime from this single case.

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[112] Sullivan, "Policy Options for Toxics Disposal: Laissez-Faire, Subsidization, and Enforcement" (1987) 14 *Journal of Environmental Economics and Management* 58.

It has been suggested that, as a general rule, Australian penalties should not be out of kilter with those of our neighbouring countries and countries with which we trade in hazardous waste.

The Review Team disagrees with this assertion. Presumably penalties in other jurisdictions are set upon their perceptions as to what is necessary to deter illegal movements of hazardous waste into and out of their country.[113]

If there is a concern that there is an inequality of incentive for importers versus exporters then this can be addressed by providing guidance in the form of specific factors that should be taken into account when determining fines.

Similarly, Cohen has analysed criminal sanctions imposed on companies that have violated US environmental laws.[114] Both criminal fines and total monetary sanctions were found to increase with identified harm and if the contravention was with respect to hazardous waste.[115]

While Hammit and Reuter cite survey evidence that small quantity generators of hazardous waste in the US significantly overestimate the chance the government will monitor them,[116] parties to the roundtables considered that many merchants/exporters of hazardous waste from Australia are correct in viewing their chances of being caught operating in breach of the *HWA* are slim.

OBSERVATION

While the Review Team considers that the penalty level is possibly too low to provide a deterrent in some circumstances, with only one conviction for contravening the HWA it is difficult to make definitive statements with respect to the level of deterrence provided by the HWA.

[113] This would include the availability and cost of disposal and recycling.

[114] Cohen, "Environmental Crime and Punishment: Legal/Economic Theory and Empirical Evidence on Enforcement of Federal Environmental Statutes" (1992) 82(4) *Journal of Criminal Law & Criminology* 1054.

[115] Cohen, "Environmental Crime and Punishment: Legal/Economic Theory and Empirical Evidence on Enforcement of Federal Environmental Statutes" (1992) 82(4) *Journal of Criminal Law & Criminology* 1054 at 1095.

[116] Hammitt & Reuter, "Measuring and Deterring Illegal Disposal of Hazardous Waste: A Preliminary Assessment", mimeo 1988 Santa Monica, CA: RAND, as cited in Cohen, Managing and Enforcing Environmental Policy, mimeo August 1998, p.5.

D

Part D — Complementary Reform Options

This Part considers issues and options raised by stakeholders during the review. The range of reform options are constrained by the review requirement that the *HWA* and its associated regulations should be consistent with Australia's international obligations.

Chapter Seven

Complementary Reform Options Outside the Scope of this Review

During the review a broad range of issues beyond the scope of the current review — ie, largely because they relate to Australia meeting its *Basel Convention* objectives or related to broader waste management practices — were discussed. A number of such issues are addressed in this chapter.

7.1 Upstream Reform Options

The most direct approach to concerns regarding the transport of hazardous wastes may be to seek to reduce the creation of hazardous wastes to the socially optimal level.

A common criticism voiced by stakeholders is that the Commonwealth Government has not even taken steps to minimise the generation of hazardous chemicals and wastes and hence achieve the broader objectives of the *Basel Convention*.[117]

Industry also agreed and noted that insufficient support has been given to assisting in the collection of widely dispersed hazardous wastes (eg, mobile phone batteries).[118]

The need for the development of a national comprehensive waste management strategy in Australia in order to comply with the obligations imposed under the Basel Convention has long been recognized.[119]

OBSERVATION

The HWA alone will not achieve the broader Basel Convention objectives; more is required to be done across all levels of government to minimise generation of hazardous wastes.

7.2 Streamlining Commonwealth and State/Territory Definitions of Hazardous Waste

A concern of a number of stakeholders related to differing definitions of hazardous waste adopted under the *HWA* and other state and territory regimes. Stakeholders were particularly concerned about the relationship between the *HWA* and the *Movement of Controlled Waste Between States and Territories NEPM*.

The *Movement of Controlled Waste Between States and Territories NEPM* ensures that controlled wastes that are to be moved between states and territories are properly identified, transported, and handled in ways that are

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[117] See Friends of the Earth submission, p.2.

[118] See also Wright, Independent Public Assessment — Landfill Capacity and Demand, State Government of New South Wales, Sydney, 2000.

[119] Lipman, "The Convention on the Control of Transboundary Movements and Disposal of Hazardous Wastes and Australia's Waste Management Strategy" (1990) *Environmental and Planning Law Journal* 283 at 290.

consistent with environmentally sound practices. The NEPM sets up a management system that includes:

- tracking systems which provide information to assist agencies and emergency services, and ensure that controlled wastes are directed to and reach appropriate facilities;
- prior notification systems which provide participating States and Territories with access to information, to assess the appropriateness of proposed movements of controlled wastes in terms of transportation and a facility selection process; and
- the licensing and regulation of generators, transporters and facilities so that tracking and notification functions are compatible with participating State and Territory requirements.

The NEPM includes a list of 'Controlled Wastes' which will be subject to procedures for information collection and sharing between jurisdictions. Parties are concerned, however, about inconsistent definitions,[120] and also because states and territories are allowed to opt out of the national standard.

This concern is similar to that identified in the IC's 1993 waste management inquiry:

> "A number of participants argued that greater uniformity of environmental criteria is required. According to participants, non-uniformity of environmental criteria raises costs and introduces unnecessary uncertainty for EWMESS firms. Costs may be raised because EWMESS firms must invest time and effort in seeking out and understanding the criteria used in different jurisdictions as part of the process of developing and marketing their products and services."
>
> Industry Commission, *Environmental Waste Management Equipment, Systems and Services*, AGPS, Canberra, 1993, p.102.

The Review Team notes the IC's observation that:

> "states and territories should not be prevented from adopting different criteria if circumstances warrant it. This is important for ensuring that states have sufficient flexibility for taking into account specific circumstances that may be peculiar to that state. However, where this is done, states and territories should explain the reasons for any departures as part of the community consultation process."
>
> Industry Commission, *Environmental Waste Management Equipment, Systems and Services*, AGPS, Canberra, 1993, p.103.

OBSERVATION

While the operations of the NEPM are clearly outside the scope of this review, industry is concerned about barriers to waste trade domestically, particularly given the reduced scope to move hazardous waste offshore. It is not clear to the Review Team as to why differential definitions of Controlled Waste should exist across the nation. The Review Team suggests that further work should be undertaken to see if there is scope for harmonising the NEPM Controlled Waste definitions and the HWA hazardous waste definitions.

[120] This is not a new concern — see *National Environmental Protection Council, Movement of Controlled Waste Between States and Territories: Summary of submissions received by the National Environmental Protection Council in relation to the draft National Environment Protection Measure and Impact Statement for the Movement of Controlled Waste between States and Territories and National Environmental Protection Council's responses to those submissions*, June 1998, p.19.

7.3 Better Collection and Dissemination of Hazardous Waste Data

It has been argued that the prior notification and consent mechanism has failed to improve community knowledge about the international hazardous waste trade.[121] It appears that, in Australia, this flaw is due to how Australia uses the information it is required to collect rather than the prior notification and consent mechanism itself.

The lack of reliable public information about the volume and nature of hazardous wastes generated in Australia and exported means that:

- it is difficult for the Commonwealth to assess the impact of the *HWA* and formulate policy; and
- the hazardous waste recycling and disposal industry lacks adequate information upon which to base investment decisions — lack of information is a barrier to industry development (see section 3.4.4).[122]

There are two approaches that could go some way to rectifying this information deficiency.

Firstly, EA should be required to publish details of actual hazardous waste flows. Import and export permit holders are currently required, at the expiry of the permit or once shipments have been completed (which-ever is sooner) to supply EA with shipment volumes. EA currently collects this information but does not analyse it or make it public. Publication of this information will aid in the identification of actual movements rather than permitted (and hence overstated) hazardous waste movements.

RECOMMENDATION TEN

Environment Australia should be required to publish information about the actual (ie, in comparison to permitted) shipments of hazardous waste.

Secondly, a number of stakeholders suggested that an important first step is to include hazardous waste in the National Pollutant Inventory (NPI).[123] The NPI is a database designed to provide the community, industry and government with information on the types and amounts of certain chemicals being emitted to the environment. The NPI was developed as a National Environment Protection Measure (NEPM) through the National Environment Protection Council (NEPC).[124]

Australian industrial facilities using more than a specified amount of the chemicals listed on the NPI reporting list are required to estimate and report emissions of these substances annually for inclusion on the NPI.[125] Emissions

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[121] See Kreuger, "Prior Informed Consent and the Basel Convention: The Hazards of What Isn't Known" (1998) 7(2) *Journal of Environment and Development 23*.

[122] This is not a new problem — see Industry Commission, *Environmental Waste Management Equipment, Systems and Services*, AGPS, Canberra, 1993, pp.177-178.

[123] See Friends of the Earth submission, p.5.

[124] The NEPC is a statutory body currently made up of the Commonwealth, state and territory Environment Ministers which makes Measures to protect the environment.

[125] Currently industry are required to report their emissions to air, land and water of 36 of the 90 chemicals listed on the NPI — reporting on emissions of the longer list of 90 substances will commence when industry reports on 2001-02 emissions. Industry reporting handbooks have been developed to provide guidance to industry on how to estimate their emissions — facilities will not be required to report their emissions for the NPI until a handbook has been prepared which relates to the sector in which they work.

from facilities using less than the specified amount of the chemicals listed on the NPI are estimated.[126]

Interestingly, the Review Team notes that hazardous wastes were originally envisaged as falling within the NPI's ambit:

> "The Hazardous Waste NEPM will allow the tracking of individual shipments of waste across State and Territory borders to ensure that such shipments reach an appropriate treatment or disposal facility. By contrast, the NPI will collect annual information on total transfers of hazardous substances in wastes. Correlation of information between the Measures could provide a better picture of management of hazardous wastes in Australia."
>
> National Environment Protection Council, *Impact Statement — Draft National Environment Protection Measure for the National Pollutant Inventory*, Draft as at 12/6/1997, p.24.

The NPI NEPM will be reviewed at the end of 2000. This review will consider a number of relevant issues including whether reporting on transfers of wastes should become part of the NPI.

OBSERVATION

While not pre-empting this forthcoming review, the Review Team suggests that the need to obtain better information about hazardous waste production should be reinforced to the NPI reviewers.

7.4 Issues to Address in Future *Convention* Negotiations

7.4.1 WTO Concerns

A number of commentators have suggested that there may be a conflict between the *Basel Convention* and the World Trading Organisation (WTO) multilateral trading system. For example, Andersen notes that:

> "the fact that discriminatory trade measures are increasingly being used to achieve the environmental objectives of rich countries, without regard to legitimate economic development concerns of poorer countries, increase the likelihood of environment-related trade disputes."
>
> Anderson, "Social Policy Dimensions of Economic Integration: Environmental and Labour Standards", *National Bureau of Economic Research Working Paper 5702*, Cambridge, August 1996, p.17.

While taking the time to analyse the potential for conflict in some depth, the OECD prefaced its analysis of the potential conflict with the following observations:

[126] Government also estimates emissions arising from everyday household activities, such as driving to work and mowing the lawn.

> "It should be recalled at the outset that, to date there have been no cases of conflict between the obligations with respect to trade provisions in a multilateral environmental agreement and rights under the WTO which have led to formal dispute settlement in any forum, including the WTO dispute settlement system. There are clear political reasons explaining this situation, including the undesirability of calling into question a multilateral treaty signed by many national Governments. As the Basel Convention (not including the amendment) enjoys very broad membership, this signifies widespread international acceptance of the Convention and further reduces the likelihood of a conflict arising."
>
> Organisation for Economic Co-operation and Development, *Trade Measures in Multilateral Environmental Agreements*, OECD, Paris, 1999, p.127.

The major concern appears to be with respect to the *Ban Amendment* (see section 3.2.1).

The OECD acknowledges that the *Ban Amendment* may not achieve an outcome that is entirely consistent with the *Basel* objectives:

> "However it can be argued that there is a problem in the overall economic and environmental impact of splitting the world market in two as concerns certain recyclable hazardous wastes which are valuable sources of secondary raw materials in some industries. Consequently in South/South trade, a discouragement of recycling in non-Annex VII countries, increased demand for extraction and processing of raw materials, cost increases and competitive disadvantage to user-industries in developing countries, a reduction in flows of environmentally sound recycling technology and technical assistance, and possibly enhanced backyard recycling. The broader goal of avoiding damage to health and environment may not be unambiguously well served once these ramifications are included in the calculus. Loss of business for the industries involved is another economic dimension."
>
> Organisation for Economic Co-operation and Development, *Trade Measures in the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal*, OECD, 1998, Paris, p.32

Furthermore, it can be argued that:

- those non-OECD countries with environmentally sound and economically viable recycling operations would be penalised by such a distinction (ie, by having their access to suppliers from OECD countries cut off); and
- as Australia has already emphasised, a closed Annex VII could raise WTO problems as a trade barrier based on the arbitrary distinction of membership in an international organisation (as the current Annex VII is essentially OECD countries as noted above).[127] Furthermore, "From a trade policy point of view, there is a possibility that a State could find itself unable simultaneously to meet its obligations under the Basel Convention and the GATT/WTO Agreements."[128]

The Review Team notes that some developed countries objected to the *Ban Amendment* as being 'bad' environmental policy because the same objectives could have been achieved through a more flexible import ban mandated by

[127] Statement of Australian delegation to Conference of Parties-4, 26 February 1998.

[128] Organisation for Economic Co-operation and Development, *Trade Measures in Multilateral Environmental Agreements*, OECD, Paris, 1999, p.135.

the *Convention*. Similarly, others have stressed the desirability of deposit/refund systems as alternatives to the *Ban*.[129]

The PC expressed concern with, "provisions of the HWA that treat some (mainly developing) countries differently to others" and queried whether there are, "alternative ways of meeting the treaty's objectives … that are more consistent with the general non-discriminatory (most-favoured-nation) provisions of the multilateral trading system".[130]

The Review Team notes the Commonwealth Government's current position:

> "(b) the Australian Government has expressed a clear view that countries should be able to move both on and off Annex VII on the basis of their ability to manage waste in an environmentally sound manner; and
>
> (c) the Australian Government also considers it important that Article 11 of the Convention (which enables Parties to enter into bilateral, multilateral or regional agreements or arrangements with other Parties or with non-Parties) should continue to be available between Annex VII and non-Annex VII countries irrespective of whether the ban amendment enters into force or not."
>
> Greenfield, "Environmentally Sound Management of Hazardous Waste Exported for Recovery: An Australian Perspective" presented at the *OECD Workshop: The Environmentally Sound Management Of Recoverable Wastes (ESM)*, Cancún (Mexico), October 28-29, 1999, pp.3-4.

The Review Team accepts the analysis that suggests that the *Ban Amendment* would impose net costs.[131]

OBSERVATION

The Review Team considers that the Government's stance on the Ban Amendment is consistent with NCP principles.

7.4.2 Facilitation of Product Take-Back Programmes and Closed-Loop Recycling

In a number of roundtable meetings international manufacturers recyclers emphasised the growing emphasis placed upon corporate take-back programs (ie, cradle-to-grave manufacture and recycling programs).

The OECD argues that the current OECD Control System for transboundary movements of wastes destined for recovery operations seems neither to encourage increased recovery efforts by industries that are involved in

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[129] Berger, *North-South Trade in Recyclable Waste: Economic Consequences of Basel*, Seminar paper 98-03, Centre for International Economic Studies, University of Adelaide, 1998, p.12.

[130] Productivity Commission submission, cover letter.

[131] See Bureau of Industry Economics, *Implication of a Ban on Exports of Used Lead Acid Batteries*, Occasional Paper 31, AGPS, Canberra, 1995; and Berger, *North-South Trade in Recyclable Waste: Economic Consequences of Basel*, Seminar paper 98-03, Centre for International Economic Studies, University of Adelaide, 1998.

product take-back programmes, nor to promote producers to establish effective and safe closed-loop recycling systems for their products.

OBSERVATION

The Review Team understands that the OECD Working Group on Waste Management Policy (WGWMP) has been working towards developing modified control procedures which would encourage product take-back and closed-loop recycling. The Review Team suggests that this will become an increasingly important issue, and one that a number of stakeholders to this review would encourage.

E

Part E — Appendices

Appendix A

Terms of Reference

1. The *Hazardous Waste (Regulation of Exports and Imports) Act 1989* (the legislation) is referred to a Taskforce of Officials (the Taskforce) for evaluation and report by 30 November 2000. The Taskforce is to focus on those parts of the legislation which affect competition, or which impose costs or confer benefits on business.

2. The Taskforce of Officials is to take into account the following objectives:

a) the legislation and associated regulations which restrict competition should be retained only if the benefits to the community as a whole outweigh the costs; and if the objectives of the legislation and associated regulations can be achieved only by restricting competition. Alternative approaches which may not restrict competition include quasi-regulation and self regulation;

b) in assessing the matters in (a), regard should be given, where relevant, to effects on the environment and human health, welfare and equity, occupational health and safety, economic and regional development, consumer interests, the competitiveness of business including small business, and efficient resource allocation;

c) the need to promote consistency between regulatory regimes and efficient regulatory administration, through improved coordination to eliminate unnecessary duplication;

d) there should be explicit assessment of the suitability and impact of any standards referenced in the legislation, and justification of their retention if they remain as referenced standards; and

e) compliance costs and the paperwork burden on small business should be reduced where feasible.

f) Australian compliance with the Basel Convention on the Control of Transboundary Movements of Hazardous Waste and their Disposal (the Basel Convention) including agreements and arrangements made under Article XI of the Convention.

3. In making assessments in relation to the matters in (2), the Taskforce should have regard to the analytical requirements for regulation assessment by the Commonwealth, including those set out in the Competition Principles Agreement. The report of the Taskforce should:

a) identify the nature and magnitude of the social, environmental or other economic problem(s) that the legislation seeks to address;

b) clarify the objectives of the legislation;

c) identify whether, and to what extent, the legislation restricts competition;

d) identify relevant alternatives to the legislation, including non-legislative approaches;

e) analyse and, as far as reasonably practical, quantify the benefits, costs and overall effects of the legislation and alternatives identified in (d) and any identified alternative means of compliance with the Basel Convention including Article XI agreements and arrangements, taking into account relevant developments in hazardous waste management;

f) identify the different groups likely to be affected by the legislation and alternatives;

g) list the individuals and groups consulted during the review and outline their views, or reasons why consultation was inappropriate;

h) determine a preferred option for regulation, if any, in light of the objectives set out in (2); and

i) examine mechanisms for increasing the overall efficiency, including minimising the compliance costs and paper burden on small business, of the legislation and, where it differs, the preferred option.

4. In undertaking the review, the Taskforce is to advertise nationally, consult with key interest groups and affected parties, and publish a report.

Within four months of receiving the Report of the Taskforce, the Government intends to announce what action is to be taken, after obtaining advice from the Ministers for the Environment and Heritage and, where appropriate, consideration by Cabinet.

Appendix B

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Appendix C

The Consultation Process

C.1 Consultations

This review was determined by EA to require a targeted consultation process and the placement of an advert in relevant newspapers notifying people of the availability of an *Issues and Options Paper* and requesting submissions.

Environment Australia supplied The Allen Consulting Group with a database comprising the names and addresses of people or organisations who had applied for or enquired about obtaining Hazardous Waste Export Permits. Invitations to attend a round-table meeting in either Sydney, Melbourne or Canberra were:

- e-mailed to approximately 115 stakeholders together with an *Issues Paper* and a fax-back form to register their interest in attending and indicate their preferred location; and
- posted to a further 57 stakeholders (without e-mail) together with a covering letter and a fax-back form for them to indicate whether they would like to receive a copy of the *Issues Paper*, register their interest in attending and also indicate their preferred location.

The following tables detail the response to those invitations.

Table B.1

SYDNEY ATTENDEES — MONDAY, 4TH SEPTEMBER

Name	Company	Comment	Attended Roundtable
Alan Morgan	International Recycling		
Bill Gara	NSW EPA		✓
Cas Koperberg	Lewer Corporation Pty Limted		
Chris Dodd	C.D. Dodd Scrap Metal Recyclers		
Col and Marcia Maybury	Kurri Kurri Landcare		✓
David Lowe	MetalCorp		
Duncan McGregor	Transpac		✓
Garbis Simonian	Weston Aluminium Pty Ltd		✓
Gary Young	Watts Batteries		✓
Greg Cook	MetalCorp		
James Rosborough	Adec Australia		✓
Joe Ignacz	MetalCorp		
Magdelene Steffens	EGC		
Michael Campbell	3M Australia Pty Ltd		✓
Michael Chanell	IBM GSA	Unable to attend roundtable. Apologies forwarded	
Michael Hapke	Panasonic Australia Pty Ltd	Ken Thompson and Andrea Thompson also attended	✓
Peter Netchaef	Simsmetal Limited		
Phillip Owen	Industrial Galvanizers Corp		✓

Name	Company	Comment	Attended Roundtable
Richard Watt	Watts Batteries		✓
Sam Sheriff	Euromet Australia		
Warwick Burns	Industrial Galvanizers Corp	Represented by Philip Owen	

Table B.2

MELBOURNE ATTENDEES — TUESDAY 5TH SEPTEMBER

Name	Company	Comment	Attended Roundtable
Alan Richardson	Larvik Pigment Limited		✓
Bob Giblan	Pan Abrasives (Aust) Pty Ltd	Attended on behalf of Chris Bard and Stephen Wittwer	✓
David Markey	GNB Technologies Pty Ltd		✓
David Sinclair	Pasminco	Attended the Policy Reference Group meeting	
Diane Kovacs	Monsanto Australia Limited	Unable to attend roundtable. Apologies forwarded	
Garry Ienco	Testing & Commissioning		
Gordon Dennis	Army		✓
Matt Bardwell	Melbourne Metal Recyclers	Unable to attend roundtable. Apologies forwarded	
Matt Ruchel	Greenpeace Australia		✓
Matthew Kinnane	Sun Metals Corporation		
Nigel Harris	RAAF		
Noel Seletin	Intercontinental Metals P.L		
Peter Brotherton	Australian Conservation Foundation		
Tom Maggs	Antartic Division	Unable to attend roundtable. Apologies forwarded	
Will Lemessurier	MRI (Aust) Pty Ltd		✓

Table B.3

CANBERRA ATTENDEES — WEDNESDAY, 6TH SEPTEMBER

Name	Company	Comment	Attended Roundtable
Andrew Thaler	Scrapp.Com – Panther Resources		✓
Arne Bell	Department of Foreign Affairs & Trade		
Bill Bowen	Department of Foreign Affairs & Trade		✓
David Coutts	Australian Aluminium Council		✓
Karenn Singer	Department of Transport & Regional Services		✓
Mariann Lloyd-Smith	National Toxic Network Inc		✓

Discussions were also held with the Policy Reference Group and with other parties on an informal basis over the phone.

C.2 Submissions

Parties were invited to respond to the *Issues Paper* and matters raised at the roundtables by lodging a formal submission. Submissions were received from the following organisations and individuals:

- Tredi Australia Pty Ltd — 28 September 2000;
- Pasminco — 28 September 2000;
- Friends of the Earth — 29 September 2000;
- National Toxics Network — 1 October 2000;
- ELI Eco Logic Australia Pty Ltd — 2 October 2000;
- C D Dodd Scrap Merchant — 3 October 2000;
- The Kurri/Weston Concerned Citizens — 3 October 2000; and
- Productivity Commission — 4 October 2000.

Appendix D

Legal Advice

The Review Team commissioned BDW to provide advice on the degree to which, if at all, the HWA and its related subordinate legislation exceeds Australia's international obligations under the *Basel Convention*. The advice is attached.