



Ministry for the
Environment
Manatū Mō Te Taiao

Product Stewardship and Water Efficiency Labelling

New Tools to Reduce Waste

Discussion Document

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Foreword

This Government is committed to sustainable development for New Zealand. Our desire is to grow our economy while maintaining a healthy environment.

Waste is a key environmental issue for New Zealand; if we are to live in a sustainable society, we have to get better at reducing the amount of waste we produce, as well as reusing and recycling more of it.

That is why the Government produced the 2002 *New Zealand Waste Strategy*. It sets out a long term vision for reducing waste, using resources efficiently, recovering resources from the waste stream, and the better management of residual waste. This discussion document deals with *product stewardship*, which is one of the policies mentioned in the strategy.

Product stewardship involves producers, brand owners, importers and consumers accepting responsibility to help manage the environmental effects of the products through their life cycle. It is a tool with the potential to greatly improve how we deal with waste in New Zealand.

Several useful industry-led product stewardship schemes already exist in New Zealand. I am pleased the Ministry for the Environment has been able to contribute positively to the establishment and administration of two newer industry-led schemes: the 2004 Packaging Accord aimed at reducing packaging waste; and Tyre Track, which is directed at the better management of old tyres.

But there is greater potential for product stewardship to contribute to reductions in waste, and to fill a gap in our current set of tools for addressing waste. I therefore believe the time has come to put product stewardship policy in New Zealand on a more formal footing.

This document discusses the issues involved with product stewardship and some of the options we could consider. While it sets out a preferred option, the final shape of a product stewardship policy and its adoption by government will be determined after consultation.

The discussion paper also addresses water efficiency labelling for whiteware, toilets and taps.

I invite all interested parties to comment on the proposals in this document and to help the development of a product stewardship and water efficiency labelling policy for New Zealand.



Hon Marian L. Hobbs
Minister for the Environment

Feedback

The Ministry for the Environment seeks your comment on the further development of product stewardship and water efficiency labelling in New Zealand. Your input will help the Government make decisions about product stewardship, the legislation supporting the development of product stewardship schemes and water efficiency labelling.

We encourage you to make an electronic submission by visiting the Ministry's website, www.mfe.govt.nz, and following the instructions there.

The closing date for submissions is 31 August 2005.

You can email your submission to:

product.stewardship@mfe.govt.nz

or post it to:

Product Stewardship Submissions
Ministry for the Environment
PO Box 10362
Wellington

After receiving submissions, the Ministry for the Environment will report to the Minister for the Environment our recommendations for the further development of product stewardship and water efficiency labelling policy in New Zealand.

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Executive Summary

The New Zealand Waste Strategy

The 2002 *New Zealand Waste Strategy* sets a new direction for the reduction, resource recovery and better management of waste in New Zealand. The strategy addresses a challenge facing many countries in the world: how to break the strong link between economic development and waste generation. It provides a broad policy framework for addressing the different problems arising from the generation of waste.

Among the different waste streams discussed in the strategy are those that present particular management or disposal problems. These wastes are often products that have reached the end of their useful life, such as used oil, batteries, tyres and cars.

Reducing harm from these wastes requires additional measures throughout a product's life cycle, from manufacture and use through to disposal. These measures include product design, making resource recovery from waste easier, improving resource recovery systems, and providing for the costs of wastes in prices. Product stewardship is one way to ensure that appropriate measures are implemented.

What is product stewardship?

Product stewardship involves producers, importers, brand owners, retailers and other parties involved in the life cycle of products accepting responsibility for the environmental impacts of the products throughout their life cycle. At the manufacturing stage this includes having waste issues considered when decisions are made on the choice of material, the design of the product, the manufacturing process and efficiency of resource use. It may also include mechanisms such as resource recovery from waste and improved disposal of products. The term 'extended producer responsibility' is used in a similar way, although often with a narrower focus on the responsibilities of producers.

Product stewardship schemes have been implemented in many other countries and regions, including Europe, the United States, Canada, Japan and Australia.

Examples of product stewardship schemes in New Zealand

There are already several examples in New Zealand of industry operating voluntary schemes based on product stewardship principles. For example, importers of refrigerants operate a programme to fund the destruction of CFCs recovered from end-of-life refrigeration and air-conditioning equipment. Other examples include:

- schemes for the collection of old mobile phones and batteries, initiated by Vodafone, Telecom and the mobile phone companies
- used oil recovery schemes run by several oil companies
- recovery of whiteware initiated by Fisher and Paykel Ltd.

All these schemes are industry-led and have been organised voluntarily. Current legislation does not provide for regulation for product stewardship.

Strengths and limitations of the current approach

The main strengths of the current voluntary approach are that it provides flexibility and the opportunity for industry leadership, and avoids effort in areas where there may be little benefit from a scheme. The main limitations are that scheme development is slow and piecemeal. Some of this slowness is due to uncertainties about ‘free-riders’ (non-participants who seek to benefit while not complying with the mechanisms established or contributing to the costs). Concerns about competition regulation may also be a factor. There can also be a reluctance to ‘own’ a waste problem as this can involve additional costs.

Options and the proposed approach

This document states the policy objectives of the Government and addresses options to achieve them. In doing so, it draws on international and domestic experience. The options discussed include:

- the status quo – what we have now
- industry-led schemes, with the regulation of free-riders
- a mandatory approach to the establishment of product stewardship schemes.

Using the strengths of each of them, the paper then outlines a preferred approach. This uses voluntary mechanisms, with regulation as a safety net to fill the gaps.

This document seeks comment on these and any other options, and on issues affecting their implementation.

Issues for further consideration on product stewardship

Section 5 of the paper discusses a number of issues that will need further consideration in the development of product stewardship policy for New Zealand and section 6 contains some specific questions for your consideration.

Water efficiency labelling scheme for New Zealand

Section 7 also addresses water efficiency labelling for whiteware, toilets and taps. This issue is linked to Australian initiatives to improve the efficiency of water use, but it also has energy benefits from savings in the use of hot water. We are seeking feedback on a similar labelling system for New Zealand.

Next steps

Once comment on this discussion document is received, the Government will consider the policy options. This may entail new legislation, which will then be open to further public scrutiny and comment through parliamentary processes, including select committee consideration of bills.

1 Introduction and Context

1.1 Waste and sustainable development

Waste is “any material, solid, liquid or gas, that is unwanted and/or unvalued, and discarded or discharged by its owner” (Ministry for the Environment, 2002: 7). Almost every activity using materials and energy creates waste.

As economic activity has increased, so has the amount of waste. Not only do production processes create waste as by-products, but the products themselves eventually end up as waste. All steps of the production cycle, including distribution and consumption, have an effect on the environment. If development is to be sustainable we need to decouple environmental pressures from economic growth.

1.2 The New Zealand Waste Strategy

Because the generation of waste is so much a part of economic activity, and because there are so many forms of waste, there is no single or simple solution to the waste problem. New Zealand has made good progress in some areas of waste management, but past policies were not sufficient and a new direction is needed.

The New Zealand Waste Strategy (Ministry for the Environment, 2002) was developed as a joint exercise between central and local government to provide new direction on waste management. The strategy recognises the complexity of waste and encourages changes in thinking and acting towards waste, including seeing waste not so much as an end-of-pipe problem but as a potential resource and a symptom of inefficient resource use. The strategy promotes a change in direction that would help ‘close the loop’ on resource use and waste generation in ways that would be compatible with sustainable development.

The strategy provides guidance for policies on waste reduction, resource efficiency, resource recovery and waste management. It has three core goals:

- to lower the costs and risks of wastes to society
- to reduce the environmental damage from the generation and disposal of wastes
- to increase economic benefit by using material more efficiently.

2 Product Stewardship

2.1 Wastes with particular management and disposal problems

There are some wastes that cause particular management or disposal problems. These problems derive from the characteristics of the waste material when it is disposed of at the end of its useful life, which cause harm to health or the environment, or create a public nuisance. Many of these products have some residual economic value at the end of their life, but this is usually not enough to ensure the recycling of all the materials or their safe disposal.

Table 1: Products and the problems faced in their disposal

Product	Problems arising from disposal
Tyres 3 to 4 million tyres reach the end of their life each year	<ul style="list-style-type: none"> • Disposal difficulties and costs for councils • Visual pollution • Risk of fires in stockpiles – causing air pollution and firefighting costs
Used oil An estimated 30 million litres of used oil is generated annually	<ul style="list-style-type: none"> • Risk of waterway contamination • Costs for councils • Air pollution from low-temperature burning
Cars About 25,000 cars are abandoned annually	<ul style="list-style-type: none"> • Costs to councils of disposing of abandoned vehicles (\$6 million a year) • Visual pollution • Environmental pollution (eg, from leakage of oil) • Public safety • Difficulty compartmentalising for potential reuse, recycling and safe disposal
Electronic wastes Up to 80,000 tonnes per year	<ul style="list-style-type: none"> • Hazardous substances in products (including lead, mercury, cadmium and hexavalent chromium) present health risks • Fast-growing volume • Difficulty compartmentalising for potential reuse, recycling and safe disposal
Packaging Comprises 12% of waste to landfill	<ul style="list-style-type: none"> • Major issue of public concern (nuisance) • Significant contribution to litter • Major part of total waste to landfill

These problems arise because, generally, once products are sold, producers, importers and retailers are no longer responsible for the product's impacts. Also, consumers may not consider the costs of disposal when purchasing a product because these costs often fall on others. In these cases there are no direct links between the problems of disposing of the product, and product design to reduce waste at the end of the product's life. Disposal is often easier – and in many cases is cheaper to the producer and consumer – than recycling or waste minimisation.

The New Zealand Waste Strategy recognises the importance of product stewardship as a mechanism for managing wastes such as those listed in the table above.

2.2 What is product stewardship?

‘Product stewardship’ is the term used to describe an approach whereby producers, importers, brand owners, retailers, consumers and other parties involved in the life cycle of a product accept a responsibility for the environmental impacts of the products through their life cycle. This can include upstream impacts from the choice of materials and the manufacturing process, through to downstream impacts from the use and disposal of products. The term ‘extended producer responsibility’ (EPR) is used in a similar way, although usually with a narrower focus on the responsibilities of producers.

Product stewardship aims to encourage producers and other parties to internalise a substantial proportion of the environmental costs arising from the final disposal of their products. Internalising involves creating schemes that help to shift the costs of managing wastes from ratepayers and taxpayers to the producers and consumers. This ensures the costs of wastes get considered when purchase and production decisions are made. Product stewardship schemes can contribute to a reduction in waste and to the recovery of materials from the waste stream.

In many cases producers and others will accept responsibility for their products and undertake activity to manage the environmental impact of the product. This is often done through a variety of methods, including operating a materials recovery scheme, recycling schemes and product redesign. In other cases government can regulate aspects of product stewardship.

Common product stewardship schemes include:

- changes to product design
- consumer information
- collection and recycling
- financing mechanisms
- deposit–refund schemes
- advance disposal fee schemes
- materials charges
- specified recycling contents
- reuse, including remanufacture.

Which mechanisms are used will depend on the nature of the waste problem and the industry concerned. Each scheme will be different from others because they are tailored to individual products and waste situations.

2.3 Product stewardship internationally

Product stewardship (including extended producer responsibility) schemes are not new. Several countries have adopted policies, sometimes targeting specific products, and often have legislation that provides for regulation. The Organisation for Economic Co-operation and Development (OECD) provides a forum for governments to consider the policy implications of product stewardship, and it has produced a guide for governments (OECD, 2001a).

While early product stewardship approaches were often based on a prescriptive approach supported by legislation, more recent policies developed in Canada¹ and Australia rely strongly on industry initiated and led schemes, with regulation being used as a backstop to discourage the operation of 'free-riders'. 'Free-rider' are non-participants who seek to benefit while not complying with the mechanisms or contributing to the costs. In this context free-riders could add waste to the volumes which are being recovered by others. Alternatively, they could undercut scheme participants in the market as they will not be seeking to cover the costs of dealing with waste.

A mandatory approach to product stewardship has commonly been adopted in Europe, Japan and some other parts of Asia.

The products commonly targeted by product stewardship schemes and regulation overseas include packaging, used oil, used cars and tyres and used electronic goods.

It is important to note that the introduction of product stewardship schemes overseas can have an impact on New Zealand. New Zealand industry supplies products to other countries and these must comply with regulatory requirements where they are used. When New Zealand imports products, these may be designed to meet the requirements of other countries' schemes, which can make recovery and recycling easier. It is also likely that there could be instances of New Zealand being supplied with 'old stock' that does not comply with new standards overseas if our product requirements are lower than those overseas.

2.4 Product stewardship in Australia

In Australia, where the states and territories have principal responsibility for the environment, several states have adopted product stewardship policies for products such as used oil, packaging, computers and televisions. Currently, however, work is underway on a nationally consistent policy and the development of a co-regulatory approach to product stewardship schemes (Environment Protection and Heritage Council, 2004). This work is being done under the direction of the Australian Environment Protection and Heritage Council, comprising both federal and state ministers. The development of this policy has implications for some New Zealand companies that are manufacturing products in Australia or exporting products to Australia.

The Australian proposal involves industry, governments and other stakeholders establishing a product stewardship agreement covering specific products. This provides the basis for approved schemes. Industry is expected to develop such schemes on a voluntary basis. As part of the agreement, however, the federal and state governments would provide a regulatory framework which would penalise parties that did not become members of approved schemes.

The Australian policy proposal is currently being considered through a public discussion paper, with the expectation that Australian ministers will consider the outcomes of the consultation process, either in April 2005 or at a meeting later in the year.

¹ *British Columbia Product Stewardship Regulation Review*,
http://wlapwww.gov.bc.ca/epd/epdpa/ips/reg_review.html

2.5 Product stewardship in New Zealand

In the past, New Zealand had schemes that would now be classed as product stewardship. For example, the old system of deposits on bottles was a form of product stewardship. There are currently several schemes in New Zealand that incorporate elements of product stewardship, including the recovery schemes for vehicle batteries, whiteware and used oil, and the 2004 - 2009 Packaging Accord. All current New Zealand schemes are industry-led and participation is voluntary.

The New Zealand Waste Strategy set the following target:

By December 2005, businesses in at least eight different sectors will have introduced Extended Producer Responsibility pilot programmes for the collection and reuse, recycling or appropriate disposal of at least eight categories of special wastes.

Some of the progress towards this target is presented in Table 2 below.

Table 2: Industry-led extended producer responsibility programmes

Product	Company	Nature
Mobile phones	Vodafone, Telecom	Separate product take-back schemes
Whiteware	Fisher & Paykel	Product take-back and water efficiency labelling
Computers	Hewlett Packard	Product take-back
Used oil	Multiple oil companies	Used oil take-back
Tyres	Multiple companies and the Motor Trades Association	Tracking system
Packaging	Multiple sectors and companies	Accord, including recycling targets and design commitments
Refrigerants	Multiple companies	Voluntary industry levy funding and product (CFC) take-back
Paint	Resene	Take-back of old paint

Other activities underway include the collection of old chemical drums, silage plastic wrap, batteries, toner cartridges and plastic bottles. All New Zealand schemes to date have been voluntary.

Some schemes, such as the collection of mobile phones and the recovery of old paint, have been established without government involvement as industries have responded to overseas trends and customer expectations. In other cases, including the development of the new Packaging Accord and a used-tyres tracking scheme, the Ministry for the Environment has been actively involved. The Ministry has sometimes acted as a facilitator, encouraging the establishment of new schemes or the enhancement of existing schemes. In some cases the Ministry has provided financial support for the establishment of schemes.

In reviewing progress on the targets contained in the *New Zealand Waste Strategy*, free-riding was identified as an issue that potentially limited the establishment of product stewardship schemes (Ministry for the Environment, 2004a). Experience since suggests that back-stop powers for regulation are needed before difficult issues are tackled because of the market risk that some product stewardship schemes face from non-participants.

2.6 Existing statutory instruments

The legislation affecting waste is outlined in Table 3.

Table 3: New Zealand legislation: what it can and can't do

The Act, and what it can do	The limitations of the Act
Resource Management Act 1991 (RMA)	
<ul style="list-style-type: none"> Promotes sustainable management of natural and physical resources, including avoiding, remedying and mitigating any adverse effects of activities on the environment. Regulates discharges to land, water and air from activities, including manufacturing and facilities that treat or dispose of wastes. 	<ul style="list-style-type: none"> Cannot directly influence the nature and volume of products that become waste, resource recovery from used products, or product design. Does not shift the burden and responsibility for environmental effects of waste so that this is shared among all product-cycle decision-makers.
Hazardous Substances and New Organisms Act 1996 (HSNO)	
<ul style="list-style-type: none"> Puts controls on the importation and manufacture of new hazardous substances. Puts controls on the management and disposal of hazardous substances. 	<ul style="list-style-type: none"> Cannot control wastes that do not meet HSNO thresholds as 'hazardous substances'. (The role of the HSNO Act will be enhanced if current proposals for group standards include some special wastes.) Cannot directly influence decisions about features and volumes of products that become waste (including product design) that do not involve 'hazardous substances'.
Local Government Act 2002 (and LGA 1974 Part XIII)	
<ul style="list-style-type: none"> Provides for waste management planning at the local level including: <ul style="list-style-type: none"> waste reduction by-laws on waste management providing a variety of funding mechanisms for waste minimisation. 	<ul style="list-style-type: none"> Mechanisms such as tracking, levies and deposits can only be managed separately by each local authority. Does not provide clear powers influencing decisions made at the top end of the product cycle about products. Does not shift the burden and responsibility for the environmental effects of products so that this is shared among all product-cycle decision-makers.
Litter Act 1979	
<ul style="list-style-type: none"> The Litter Act is designed to control litter and directs waste into waste management systems. Provides for council by-laws and the council collection of litter. 	<ul style="list-style-type: none"> Does not influence the nature and volume of products that become waste, resource recovery from used products, or product design. Does not shift the burden and responsibility for the environmental effects of waste so that this is shared among all product-cycle decision-makers.

The existing statutory mechanisms relating to wastes do not regulate for product stewardship. There are provisions dealing with wastes, but none of these cover all stages of a product's life cycle. The result is that government cannot regulate for product stewardship schemes and the schemes that do exist are limited to what can be achieved through voluntary measures.

3 The Objectives for Product Stewardship in New Zealand

Product stewardship can contribute towards all three of *The New Zealand Waste Strategy* goals (see section 1.2). Product stewardship in New Zealand would have the following objectives.

Objective 1: Use resources more efficiently and reduce the volume of waste produced

Product stewardship can increase resource efficiency. Requiring producers to bear some financial responsibility for the end-of-life waste management costs of their products can encourage them to take actions that reduce these costs, such as eliminating excessive packaging or components that are costly to recycle. It could extend to improved design so that fewer resources are used by a product in its everyday function as, for example, in domestic washing machines where improved design can mean that these use less energy and water.

Objective 2: Increase the resources recovered

Product stewardship schemes often have a focus on take-back mechanisms for the products. The development of these mechanisms, particularly national ones, can result in economies of scale for recycling operations, leading to increased resource recovery. Good design can also help the ‘de-construction’ of products and the recovery of materials.

Objective 3: Include the costs of waste management into the price of products

Product stewardship shifts the burden for managing special wastes away from the general ratepayer on to those who produce the products and those who buy them. In this way it helps to *internalise* the environmental costs involved in managing products through their life cycle. Internalising these costs provides economic incentives to use resources efficiently. It is also in keeping with the polluter-pays principle.

Objective 4: Enhance product design

The efficiency with which a product uses resources is also an important feature of design. Better design for this can provide improvements in other areas. For example, reducing the number of components and having fewer different materials in the product can improve product reliability as well as making resource recovery from the used product easier.

Objective 5: Provide product stewardship that is effective and efficient

Product stewardship schemes should target areas where wastes are a significant problem and where worthwhile reductions in resource use and harm can be achieved. Schemes should be designed to retain competition, and should be carefully targeted at the problem of waste. Coverage will often need to be national rather than local. The benefits of any scheme should exceed the effort and costs of establishing and running it.

To achieve this, schemes should be run in a transparent way, with the responsibilities of all the parties clearly defined. Schemes should also be monitored to ensure their effective operation. Industry leadership and effective participation will help achieve this.

4 Policy Approaches for Product Stewardship Schemes

This section considers a range of policy options and their ability to achieve useful reductions in waste. It then outlines a preferred approach based on the strengths of the other options.

4.1 Option 1: Status quo

The current approach to product stewardship provides some scope for flexibility. It allows for the development of schemes without any involvement of the Government, as well as schemes established with government support. Examples of established national schemes are those covering packaging, tyres and used oil. Some existing schemes have, however, been limited in terms of their scope and performance. These are outlined in the Appendix.

The establishment of product stewardship schemes could be further encouraged through the clear articulation of the objectives being pursued by government and how they will be achieved.

Schemes are limited to areas and activities where they are established by individual companies, or the industry comes to an agreement. However, the current law does not provide the ability to address free-riders. The Government cannot regulate for the establishment of schemes and cannot set enforceable performance targets.

Table 4: Option 1: Status quo

Features	This option will:	This option will not:
<ul style="list-style-type: none">• Based on Waste Strategy principles• Voluntary approach• Existing level of government encouragement and support	<ul style="list-style-type: none">• Give industry-wide flexibility• Allow new schemes• Improve rates of resource recovery for some products and reduce the nuisance or risk associated with these products	<ul style="list-style-type: none">• Clarify priorities for schemes• Give assurance that schemes will have wide participation by being able to deal with free-riders• Allow government to make the establishment of schemes mandatory

4.2 Option 2: Industry-led schemes with the regulation of free-riders

This approach would maintain some of the positive features of the current approach (flexible, industry-led schemes), but it would also provide the opportunity to regulate in circumstances where the presence or potential presence of free-riders threatened the successful development of an efficient and effective scheme.

The establishment of a product stewardship agreement would provide the basis for an approved industry product stewardship scheme (or schemes). The agreement would include commitments to action that reduces the problem of waste, including commitments such as product take-back schemes for recycling, and agreement on the use of recyclable materials. The expectation is that each agreement would be designed to address issues and opportunities in a particular product or group of products, and that no two agreements would be the same.

Agreements could include a commitment to regulate to impose a cost on those that do not join the scheme (free-riders), where this is necessary because non-participation prevents the scheme achieving waste reduction goals and where it is a significant burden on participants. The nature of the regulatory intervention would be limited to controlling free-riders, and the development of the schemes would be undertaken by industry. Controls over free-riders allow industry to share the costs of schemes fairly.

New legislation would be required to provide the regulatory powers to control free-riding. Such legislation would not, however, include the power to force an industry sector to develop a product stewardship scheme, nor would it allow government to set performance objectives.

If participating businesses are to be given protection from free-riders by means of regulation there will need to be protection for consumers, because regulation could affect competition. In addition, where the regulation imposed a levy there would need to be assurance that any levy was properly spent.

Table 5: Option 2: Industry-led schemes with the regulation of free-riders

Features	This option will:	This option will not:
<ul style="list-style-type: none"> • Product stewardship agreements between industry and government • Establishment of industry-led schemes under agreements • Legislation providing for the regulation of free-riders to industry agreements 	<ul style="list-style-type: none"> • Provide an explicit agreement between parties as the basis for product stewardship schemes that establish 'responsibilities' • Provide incentives for potential free-riders to join schemes and possible regulation to ensure a 'level playing field' for all producers within a sector • Enable the establishment of schemes involving a whole industry sector 	<ul style="list-style-type: none"> • Force an unwilling industry into the establishment of product stewardship agreements • Make the establishment of schemes mandatory, or give the Government power to set scheme performance requirements such as targets

4.3 Option 3: Mandatory approach to the establishment of product stewardship schemes

This would involve new legislation and regulation to make the establishment of product stewardship programmes for specific products or product categories mandatory. The regulations would be used where there are problems with waste products. For these products the regulations could cover matters such as:

- product design requirements
- mandatory consumer information
- collection and recycling targets
- minimum treatment standards
- mandatory financing mechanisms
- deposit–refund schemes
- advance disposal fee schemes
- materials taxes
- specified minimum recycling content.

A mandatory system would require the Government to formally oversee the development of the system, as well as the means to monitor and enforce compliance. This may have the disadvantages of losing the effectiveness and flexibility of schemes initiated and led by industry. In addition to the administrative costs of regulation, this option could also impose costs on the economy arising from inefficiency if the regulations are not well targeted and well designed.

Table 6: Option 3: Mandatory approach to the establishment of product stewardship schemes

Features	This option will:	This option will not:
<ul style="list-style-type: none"> • Legislation requires product stewardship schemes • Prescribed targets for collection and recovery • Can be either industry delivered or government delivered • Allows for specific tools to be implemented 	<ul style="list-style-type: none"> • Provide a 'level playing field' for producers • Provide certainty for all stakeholders • Give clear performance expectations • Give government control over the performance of product stewardship activities • Provide a range of economic and other tools to back up schemes 	<ul style="list-style-type: none"> • Give the flexibility and effectiveness of industry-led approaches to product stewardship • Provide market incentives for industry to reduce programme costs through product redesign

4.4 Option 4: Preferred approach – a mix of voluntary and regulatory approaches

The preferred approach seeks to draw on the strengths of all the options outlined above and to avoid the weaknesses of each. It involves establishing a generic framework that can cater for a range of future voluntary product stewardship schemes, and providing for some regulation as a backstop. In summary, the preferred approach has two main features.

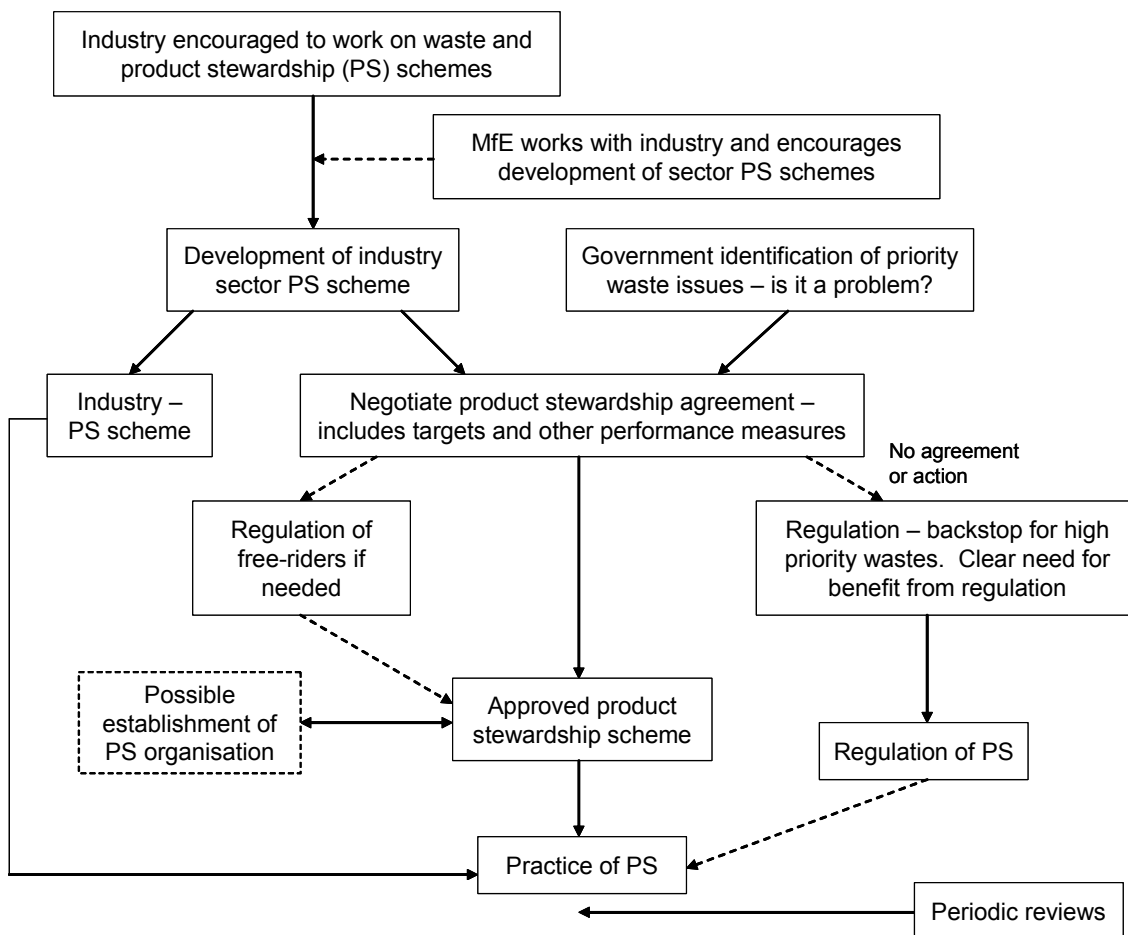
- *Product stewardship agreements* would be negotiated and signed by an industry sector, either collectively or by individual firms. The Government may be a party to the agreement.
- A *regulatory safety net* comprising regulatory powers would be enabled by new legislation. The legislation would provide the tools to allow the regulation of free-riders where this is necessary, and would also provide for mandatory schemes as a backstop measure. Regulation for mandatory schemes would only be used where there are significant waste problems and no voluntary scheme to deal with them.

The first preference for implementing product stewardship schemes is for voluntary product stewardship agreements with industry. This retains the flexibility and strengths of the voluntary approach, and reflects concern that poorly designed regulation can be administratively expensive and result in significant efficiency losses in the economy.

Under this approach, the Government would focus on identified priority wastes. These are wastes where there are significant problems with disposal (or potential problems where the waste stream is growing). Initially, a voluntary scheme would be sought to address the problem. This enables industry and stakeholders to develop an effective scheme that deals with the problem but which operates in a way that suits them. One area where this is expected to be important is in design changes to reduce waste problems. In some sectors that already export to Australia the scheme may mirror approaches being taken in Australia, while in others approaches used in Europe, Asia or North America may be more important. The key thing is that the scheme is effective at dealing with the waste issue.

Regulation would then be considered only where no effective voluntary scheme could be developed and where there was a clear indication that there would be net benefit from such intervention.

Figure 1: Preferred option for product stewardship policy



More details on the criteria for identifying the priorities for action and issues on the design of schemes are outlined in section 6 of this paper.

Table 7: The preferred approach

Features	The preferred approach will:	The preferred approach will not:
<ul style="list-style-type: none"> Product stewardship agreements between industry and government Legislation can regulate free-riders As a backstop regulation could require industry to operate product stewardship schemes 	<ul style="list-style-type: none"> Enable industry-led schemes Allow a range of economic and other tools to be used to back up schemes Provide certainty and a 'level playing field' for producers Give government control over the performance of product stewardship activities, if necessary Give clear performance expectations 	<ul style="list-style-type: none"> Rely on industry leadership Avoid regulation entirely – regulation may be needed for free-riders

5 Design and Implementation Issues

5.1 Introduction

This section outlines a number of issues relating to, and aims to stimulate comment on, the design of product stewardship schemes for New Zealand.

The preferred approach seeks the advantages of industry initiated and led approaches to the development of product stewardship schemes while providing greater certainty that waste priorities will be successfully addressed through a regulatory backstop.

The approach would reflect a preference for industry-initiated and -run voluntary product stewardship schemes. This continues the current approach and takes advantage of the flexibility of voluntary approaches and the knowledge that industry has about its own products and business. Effective actions that reduce wastes and improve resource recovery may vary widely between products. In some, redesign could be critical to any waste reduction; in others, little change in design may be undertaken and more effort put into recovery and recycling.

Regulation would be used sparingly and in priority areas only. It could be used to improve the operation of product stewardship agreements by regulating free-riders or to ensure the essential management of waste where there is no likelihood of voluntary action.

The Government has not finally approved this policy approach. The final shape of a product stewardship policy and its adoption by the Government will be determined after consultation on this document has been completed.

5.2 Priorities

The New Zealand Waste Strategy outlines criteria for prioritising government action on waste. These apply to all public action on waste, including government encouragement and involvement in product stewardship schemes. The criteria are as follows.

- *Volume and harm* – the volume of waste is related to the environmental harm it causes. Are there significant problems with this material stream? What is the size of the waste stream, what is the nature of the harm it causes, and how/where is the harm felt? Is it clear that existing waste management tools are not adequate to deal with the problems?
- *Achievability* – policies and actions must be achievable and realistic to ensure success. Is it likely that an effective solution can be developed?
- *Public concern* – to be effective, policy and action must respond to public concerns. Is this product stream a priority for the community? What is the level of concern about impacts of mismanaged disposal of this product within the community (among individuals, community groups, councils and industry)?

- *Cost-effectiveness* – policies and actions must be cost-effective, and those that offer the best value will take priority. What are the environmental, social and economic costs and benefits associated with the present regime?

A proposed fifth criterion for government involvement in product stewardship is:

- *The need for national action* – arguably this falls under both ‘achievability’ and ‘cost-effectiveness’, but for clarity it should be added as one of the criteria for central government involvement in product stewardship. Is this a regional or a national problem? (If localised, we would tend to work with stakeholders to find a local solution.) What role can other existing waste management tools, such as provisions under the Local Government Act, take in addressing the problems?

Government would continue to encourage initiatives by individual firms to establish product stewardship schemes, but the Ministry for the Environment would focus its resources on supporting industry-wide schemes covering ‘priority’ products. These schemes would normally be voluntary and designed by industry to address the waste problem that is identified as the priority.

5.3 Product stewardship agreements

The main mechanism for establishing product stewardship schemes would be through negotiated *product stewardship agreements*. This approach allows an industry or sector to reach agreement on the basis for product stewardship within any industry or sector, but still allows the development of more than one scheme if this is the preference of those involved. The Ministry for the Environment may help establish a scheme because of its expertise and experience in this area.

The product stewardship agreement would specify what those parties to the agreement would do and how the scheme would operate. This could include, among other things, agreed changes to product design, labelling, collection and recycling, deposit–refund schemes, advance disposal schemes and specified recycling contents. The agreements should be clear on the responsibilities of different parties and how the schemes would be translated into practice.

For priority products, regulation may be considered if industry does not reach an agreement that would deal with the waste issue, or if regulation is needed to ensure that a scheme works.

The Ministry for the Environment has already been informally involved in the establishment of agreements (including the Packaging Accord and Tyre Track), but if this approach is adopted it would place the development of agreements on a more formal basis. The development of product stewardship agreements may include consideration of the need to regulate for the establishment of schemes, but does not presume that regulation will be needed.

5.4 Scheme design issues

Free-riders

'Free-riders' is a term from economics to describe firms or people that do not meet their fair share of the costs of their use of a resource or involvement in its benefits. Free-riders can benefit from product stewardship schemes, where products from companies that have not paid for the programme enter a recycling system, or where a producer does not include a charge to cover disposal of the product and their product price undercuts competitors who do include a disposal charge.

In some situations even a small amount of free-riding can compromise the entire system. In others, free-riding may not threaten the viability of a product stewardship scheme and may be accepted and dealt with by those involved. This may, depending on the circumstances, still raise equity concerns.

The effect of free-riding is one reason why there has been a definite shift overseas from relying solely on voluntary initiatives of producers to the introduction of mandatory programmes for some products by governments. For more discussion on free-riders and product stewardship, see the OECD (2001a) guide to governments and the proceedings of an extended producer responsibility seminar (OECD, 2001b).

It is proposed that any New Zealand legislation would guard against free-riding where it compromised the scheme or was a significant and onerous burden on those participating.

Competition

Business competition issues are relevant to product stewardship schemes, whether these are voluntary or regulated in some way.

To promote competition in markets the Commerce Act places limitations on particular types of co-operation among companies. For example, it prohibits firms from forming agreements to fix prices or that contain provisions that have the effect of substantially lessening competition. This may occur if producers in one sector all agree to uniformly pass on the costs of waste disposal in the price of their goods, or if those same producers all agree to use one waste disposal service provider, thereby shutting out competitors.

Competition issues need to be addressed through the careful design and implementation of schemes. For example, the establishment of a separate product stewardship organisation to run schemes is one way to limit the scope for dominant producers/suppliers from using product stewardship to avoid competition. Having transparency in the operation of these organisations is an important protection to both consumers and many industry participants.

Imports

Many of the products that are candidates for product stewardship schemes are imported. The ‘producers’ in product stewardship schemes will also need to include importers as well as New Zealand manufacturers to ensure all similar products are covered. Schemes should not disadvantage (or advantage) domestic manufacturers.

There is a question as to what powers are needed to ensure that imported products are treated the same as those that are domestically manufactured.

Trade agreements

Product stewardship policies have the potential to affect trade at the level of specific products. These policies might include economic instruments, such as levies or deposit–refund systems, which can act like a uniform tax regardless of the origin of the targeted product. These types of fees/levies are allowed under World Trade Organization (WTO) rules as long as they apply equally to both domestic and imported products.

Other product stewardship policies require certain product standards, product design requirements and labelling, and these can also have trade implications. For example, having to adjust production facilities to comply with diverse technical requirements in individual markets can raise the unit cost of production, making goods more expensive than they need to be. This can in some cases lead to market access restrictions.

The OECD has found few specific examples of actual trade effects from product stewardship (or extended producer responsibility) programmes (OECD, 2001a). Product stewardship requirements, whether voluntary or mandatory (and therefore a technical regulation) nevertheless need to take into account New Zealand’s obligations under the WTO Agreement on Technical Barriers to Trade (TBT). The TBT Agreement ensures that regulations, standards, testing and certification procedures do not create unnecessary obstacles to trade and are not more trade-restrictive than is necessary to fulfil a legitimate objective.

The TBT Agreement does not prevent countries from adopting the standards or technical regulations they consider appropriate for things like product safety or environmental impact. But for the benefit of consumers and producers alike, it encourages countries to use international standards wherever appropriate. The use of domestic and international experience (eg, the OECD guidelines in product stewardship scheme design) will be an important component in ensuring this requirement is met if the proposed product stewardship policy is taken forward.

The TBT Agreement requires that the procedures used by governments to decide whether a product conforms with national standards are fair and equitable. The agreement applies the Most Favoured Nation (MFN) and national treatment principles so that WTO members are obliged not to use methods that would give domestically produced goods an unfair advantage. If the circumstances that led a country to adopt a regulation change, or a new, less trade-restrictive measure becomes available, then the TBT Agreement says the regulation must be removed.

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal aims both to reduce the amount of waste produced by signatories and to regulate the international traffic in hazardous wastes (especially to developing countries). Any product stewardship agreement that involves the export of waste products overseas for recycling or disposal would need to comply with the requirements of the Basel Convention.

Costs and incentives

The costs of product stewardship schemes can be met in a number of ways.

Some costs may 'lie where they fall'. For instance, the costs of collecting some waste products are met by the companies organising the collection system.

Some costs, such as scheme administration, may be apportioned across the scheme participants and paid for through an industry levy. For example, the scheme for the collection of ozone-depleting refrigerants is funded through a voluntary levy. The refrigerant levy applies to gases imported in containers, but not to gases that are part of products such as car air-conditioning systems.

In Australia, product stewardship schemes being developed for televisions and computers would be financed through a levy or 'advance disposal fee', which will be included in the purchase price met by the consumer. The fee covers the costs of resource recovery or disposal at the end of the product's life. It is probable that some schemes in New Zealand will require the use of one or other of these levies.

If the levies or advance disposal fees used in product stewardship schemes affect the profit margins from products, some businesses may be unwilling to pay these on a voluntary basis and this area may be one where implementing the safety net of legislation is needed.

Any use of levies needs to be carefully considered to ensure that the right incentives are established. Under the polluter-pays principle, industry and consumers should pay the full costs of their decisions, including the cost of avoiding and remedying any environmental damage. Where the costs of wastes are internalised in the costs and prices of products, they will also be factored into decisions on product design and whether or not to use the product.

In some cases the costs of waste are met by the community through the costs of dealing with waste or through environmental degradation. There could be savings to councils and others if product stewardship schemes reduce wastes. While not strictly in accordance with the polluter-pays principle, it may make sense for councils and government to contribute to the start-up of some schemes because of these savings.

Orphan products

Product stewardship schemes often involve some form of product take-back arrangement. The establishment of take-back schemes requires consideration of how to deal with products manufactured or sold by parties that are no longer part of the sector involved in the scheme. These are referred to as 'orphan' products.

Orphan products are likely to be more significant in the early stages of product stewardship schemes; before orphan products are replaced with products produced by members of product stewardship schemes. Low volumes of orphan products may not affect the viability of schemes, but the costs of dealing with significant volumes could be a real impediment to a scheme's success.

5.5 Scheme management issues

Administration and governance of product stewardship schemes

All product stewardship schemes will require specific arrangements for their administration and governance. This may be able to be simply arranged, particularly when schemes involve only one or a few companies. In most cases, however, there will be a significant number of parties involved.

The usual response to this situation is arms-length scheme management by a separate entity, which administers the product stewardship scheme. Such an entity is known as a product stewardship organisation, or PSO. A PSO may be a new organisation, or an existing organisation could take on the new function. For the Packaging Accord, the Packaging Council of New Zealand is the PSO. In some overseas product stewardship schemes the PSO is a separate not-for-profit organisation.

Governance involves a different role from administration, and is usually filled by some form of governance body which has a similar role to the board of a company. The governance body would have overall responsibility for monitoring the performance of the product stewardship scheme and would take key decisions relating to the setting and overview of budgets and the settling of disputes between parties.

Monitoring and compliance – voluntary schemes

In the design of industry initiated and led schemes, provision should be made for monitoring and public reporting on the performance of the scheme. Monitoring a scheme's compliance is usually the responsibility of the product stewardship organisation administering the scheme and its governance body. The Ministry for the Environment may also have a role in monitoring approved product stewardship schemes, and would take performance into account if and when it considers there is a case for scheme regulation.

Implications for existing schemes

The proposals in this paper do not have any immediate impact on agreements currently in place covering packaged goods and Tyre Track, provided those agreements continue to operate. The Packaging Accord is to be reviewed in 2009 and Tyre Track in 2006. These reviews will provide the opportunity for an assessment of how these schemes are performing and what changes might be necessary for the schemes to be consistent with the final product stewardship policy.

5.6 Role of the Government

The role of the Ministry for the Environment in encouraging the development of product stewardship could include:

- preparing guidance material on the development and implementation of schemes
- establishing priorities for the development of schemes
- negotiating specific product stewardship agreements
- monitoring the performance of schemes
- if regulation occurs the Ministry would be involved in implementing measures to avoid free-riders (under options 2 and 4), regulation of specific problem areas only (option 4), or regulation only as a backstop (option 3).

In considering how product stewardship might work with specific products or special wastes, the Ministry for the Environment will undertake an assessment of the applicability of product stewardship as a solution.

Deciding whether to regulate

Under the preferred approach, regulation is intended only as a backstop for when voluntary schemes do not deal with significant problems or to deal with free-rider issues.

Before regulation is considered, the waste area being targeted by the regulation would have already have been identified as a priority area for government involvement under the criteria listed in 5.2 above. Only where voluntary measures do not work would regulation be considered for these wastes. Criteria for deciding whether to regulate include the following:

- there is no effective voluntary action and none is likely
- the benefits of regulation outweigh the costs, after taking account of all the costs (including all compliance and enforcement costs) and all the benefits of no action and alternative courses of action
- the waste can cause significant adverse effects on one or more of:
 - economic well-being
 - biodiversity and ecosystems
 - human health and enjoyment of the environment
 - soil resources or water quality
 - the relationship between Maori and their culture and traditions and the environment
- regulation is not contrary to international obligations.

Monitoring and compliance – regulations

When regulations are used these will need to be enforced. Although the Ministry for the Environment will have the central role in developing any regulations, a number of other agencies could potentially be involved. Such involvement may be determined by the product stewardship mechanisms provided for in the regulations. Regulation could also extend to products entering the New Zealand market from overseas. Any scheme to levy disposal charges will involve a collection agency and the reimbursement of the costs to those doing waste collection and recovery.

If mandatory standards on product materials, recycling targets and so on are imposed, then some checking of compliance will be needed. This could involve both local and central government agencies. Legislation will need to provide for any sharing of information between agencies that is necessary (eg, use of Customs data to identify imports and importers).

5.7 Legislation supporting product stewardship schemes

The preferred option includes legislation providing regulatory powers supporting product stewardship schemes. As we have stressed, use of regulatory powers would not be automatic, and would be used only where it was needed; that is, where the product stewardship scheme would fail without it, resulting in adverse environmental effects.

Regulatory powers would be available for use to:

- Create a ‘level playing field’ for industry and to avoid some parties obtaining a competitive advantage or free-riding by standing outside of product stewardship agreements – the provisions in the agreements would need to be approved by government before regulation could be considered, and regulation could require parties to be a member of a product stewardship scheme or face similar obligations.
- Provide government-approved product stewardship schemes with the potential to use a range of economic and other tools supporting the objectives of the schemes, possibly including:
 - advance disposal fees
 - product-refund schemes
 - mandatory recycled material content.
- As a safety net to cover circumstances where industry-led schemes fail or cannot be established, even with controls over free-riders. In these cases consideration would be given to mandatory schemes.

No current legislation provides the powers envisaged, and they are unlikely to fit comfortably as part of any existing statutes, such as the Resource Management Act or the Hazardous Substances and New Organisms Act. New legislation may be required.

The legislation to support the preferred option (option 4) would need to have provisions enabling:

- the identification of wastes or products that are government priorities for product stewardship measures, and reasons why these have been identified
- the establishment of product stewardship agreements between the government and other parties
- the approval of product stewardship schemes where regulation is sought to implement the provisions of product stewardship agreements
- regulation-making powers covering:
 - the identification of the product(s) or waste that will be the subject of the scheme
 - the identification of producers
 - prescribing standards or targets (and exemptions to these) for the use of natural and physical resources in specified products and/or the disposal of specified products
 - specification of the duties and responsibilities of identified producers, or users and holders of specified products
 - the application of mechanisms such as deposit fees, take-back schemes, codes of practice or industry levies
 - prescribing methods for reporting and confirming that products meet requirements for standards, targets or labelling
 - provisions for compliance and enforcement.
- before regulations are made the Minister must:
 - publicly notify the proposal to make the regulations
 - give interested parties the opportunity to make submissions on the proposal to make regulations
 - consult with the appropriate people.

Any proposals to use the regulations would be subject to an assessment of the costs and benefits of regulation in that particular circumstance under the Government's requirements for the assessment of regulatory impacts and compliance costs.

6 Questions to Consider

This section lists a number of issues that will need further consideration in the development of product stewardship schemes. The questions seek to focus your comments, but if there are other aspects you wish to comment on please do so.

Once comment on this discussion document has been received, government will consider whether legislation is required. Any legislation introduced would be open to further scrutiny and comment through the select committee process.

Product stewardship

- 1) What are your views on the priority product areas for product stewardship schemes in New Zealand? Give reasons for your views.
- 2) What assessment process should precede any decision to establish:
 - a) a product stewardship scheme
 - b) any regulation to enforce or establish a product stewardship scheme?
- 3) Is the proposal to negotiate product stewardship agreements a necessary step in establishing specific product stewardship schemes?
- 4) Should a product stewardship policy provide for more than one industry sector scheme, as proposed, or limit sectors to a single scheme?
- 5) What role should the Ministry for the Environment play in the development of product stewardship schemes?
- 6) What circumstances would justify government regulation of product stewardship schemes? What criteria should be used to determine if government should regulate?
- 7) How should government organise any enforcement that may be needed for regulation?
- 8) Should government ensure an equivalent acceptance of environmental responsibility by all companies by regulating companies who may gain a competitive advantage by not participating in product stewardship schemes where other companies have agreed to do so?
- 9) Do you think there is a case for including mandatory product stewardship tools (such as deposit–refund schemes) in a product stewardship policy?
- 10) How should the costs of product stewardship schemes be met? Should they fall solely on those creating the waste (the producer of the product and the consumer), or should they fall on those benefiting from reduced waste?
- 11) What obligations should product stewardship schemes place on different parties, and how can assurance be given that these obligations will be met?
- 12) How can assurance be given that products manufactured domestically and imported are both included in product stewardship schemes and treated evenly? Are there other trade issues for your industry that we should consider?
- 13) What other policy or design issues need to be considered in the development of product stewardship schemes?

7 A Water Efficiency Labelling Scheme for New Zealand

7.1 Introduction

Australia is in the process of introducing a mandatory water efficiency labelling scheme (WELS) for six specific products: washing machines, dishwashers, taps, toilets, showerheads and urinals. The labelling aspect of the scheme will allow consumers to see how water-efficient a product is via a rating scheme. WELS is not a product stewardship measure: it deals primarily with consumer information, and a mandatory system is being considered.

The scheme was agreed by the Environment and Heritage Ministers of the Australian Commonwealth and state and territory governments, operating as the Environment Protection and Heritage Council, and it comes into effect in Australia in May 2006. Water supply–demand balances are an important problem in Australia and mandatory WELS is an important element of demand management.

There are strong trans-Tasman trade reasons for New Zealand to introduce a water efficiency scheme. The New Zealand Government has to respond to the Australian initiative because our trading relationship with Australia means that we generally seek to have regulatory harmony between the two countries.

7.2 Rationale for New Zealand

Water efficiency labelling of products will help consumers to reduce water use.

Although New Zealand is wetter than Australia, there are still issues with securing and conserving water supplies. Many areas with reticulated town supply face restrictions on water use, especially in summer. Water efficiency labelling will contribute to reducing the need for increased supply capacity. The volumes likely to be saved are modest, so the savings here are not likely to be great. In areas without a supplier of piped water residents have to provide their own supply, often through collecting rain water off the roof. Around 13% (511,000 people) (Ministry of Health, 2005) of the population are in this situation and get their water from non-registered sources. Information on water efficiency will be especially important to these people when they purchase appliances and undertake renovations.

A reduction in hot water use will reduce energy consumption. This provides savings for consumers in terms of reduced energy (usually electricity) for water heating. Washing machines, dishwashers and shower heads can all affect energy use through reducing water consumption. Because of this there is a link to energy efficiency labelling and testing. Use of hot water is one of the variables assessed when assessing energy efficiency.

A reduction in water use will also provide savings and improvements in the area of wastewater disposal. Many of our smaller plants need upgrading to meet acceptable standards. Savings in water use may reduce the costs of running and providing wastewater collection and treatment systems. The volume that is likely to be saved is only a relatively small proportion of the total, however, so savings may be limited. There may be some worthwhile local savings where sewers are nearing full capacity so that upgrades can be deferred.

In areas using septic tanks (covering about 15 to 20% of the population) the contribution of water saving is likely to be more important. Many of the areas reliant on septic tanks have poorly draining soils and wet conditions. Modern appliances such as automatic washing machines have greatly increased the water discharged into the septic tank. Decreasing the volume of greywater entering the septic tank and reducing the outflow to the disposal field (where the effluent soaks into the ground) means that the soil is more likely to remain permeable and not blocked with bacterial growth. Many old septic tanks are especially susceptible because they are often not well designed or have limited capacity. Failure of septic tanks to deal with effluent can lead to environmental damage, such as contributing to the eutrophication of lakes and streams, and to health risks through contaminating water and shellfish.

There are also trade reasons for introducing mandatory labelling. Under the Trans-Tasman Mutual Recognition Arrangement (TTMRA), a product that may be legally sold in New Zealand may also be sold in Australia, even if it does not meet the requirements of any further Australian regulations. The TTMRA would, therefore, allow New Zealand products with no water efficiency labelling to continue to be able to be sold on the Australian market after the mandatory standard comes into effect.

If non-compliant New Zealand products did continue to be sold on the Australian market, this would have a negative impact on the efficacy of Australia's mandatory standard and would likely cause concern among Australian industry, which would have to meet any costs of complying with the standard but would compete with products that did not. Australia could decide to respond to this by seeking a temporary exemption from the TTMRA to prevent these non-compliant New Zealand products being sold on the Australian market. An initial 12-month exemption could be extended for a further year, provided two-thirds of relevant state, territory and federal ministers agreed. A permanent exemption would require the agreement of all jurisdictions, including New Zealand.

Australia is New Zealand's biggest market for water-consuming appliances. There is the potential for trade disruptions and tension resulting from the continued presence of non-compliant New Zealand products on the Australian market. This could be avoided if New Zealand manufacturers exporting to Australia complied with the same water efficiency labelling standards.

A cost-benefit analysis for WELS (Ministry for the Environment, 2004b) showed that adopting a mandatory water efficiency labelling scheme can yield small net benefits for New Zealand if it achieves small improvements in the water efficiency of products. The value of the reductions in energy use for water heating was estimated to be much more significant than the value of saving water, and would be up to 90% of the total benefits for some products. This report only considered costs where water was supplied by a local network and waste was treated through a district sewerage scheme. The total benefits calculated are therefore only the benefits relating to these situations and do not cover areas not connected to local water supply networks and sewers.

The cost-benefit report considered that the costs for companies of a mandatory scheme are likely to be relatively small. This is because most products sold in New Zealand are also sold in Australia, so there would be little in the way of additional costs of testing for extending the scheme to New Zealand. The proposal is also similar to energy labelling. Any move to make hot water use more efficient saves both energy and water, so some of the testing for water efficiency is already being done. For companies, the main costs will be the costs of the labelling, although there may also be additional costs for registration to cover the costs of government administration. However, for products sold in both countries these are expected to be sunk costs – they will already have been incurred for registering with the Australian scheme.

7.3 Feedback on proposed legislation sought

The first stage in implementing mandatory water labelling is to create the legal power for water efficiency labelling regulations to be promulgated. None exists presently. The second stage will be the development of and consultation on the regulations themselves, including which products should be covered and what performance standards products should meet. Additional public comment will be sought on specific labelling requirements for different products before any regulations are finalised. Questions are provided at the end of this section to help focus your feedback on these issues.

Four of the products listed under WELS (urinals, toilets, shower heads and taps) fall under the Building Code. The New Zealand Building Code has many common elements with the Plumbing Code of Australia, and many of the means of compliance are joint Australian – New Zealand standards. WELS standards and labelling for these products will need to be consistent with the Building Code and the relationship of these to the Building Code will need to be made clear. The New Zealand Building Code is currently under review and will include provisions for the promotion of sustainable development, such as water conservation and water efficiency. The review is scheduled to report to the Minister in November 2007.

Decisions about how best to administer labelling will be a consideration in determining in which Act the provisions relating to water efficiency will be included. It could be under the product stewardship legislation proposed in this discussion document, or be an amendment to an existing Act such as the Environment Act.

7.4 How closely do we already align with Australia?

If introduced into New Zealand the WELS would require firms importing or manufacturing products for sale in New Zealand to label them, using a standardised design, and to provide customers with information on the expected water consumption from their use. The information provided would be based on tests of water use by independent laboratories.

The regulatory set-up would be similar to New Zealand's energy efficiency regulations, whereby the products would be listed with the labelling and efficiency standards they are

required to meet (AS/NZS6400). In the WELS case, it would be important to achieve trans-Tasman consistency on:

- the types of products subject to the water efficiency labelling scheme
- registration and labelling requirements
- minimum performance/efficiency requirements
- technical standards.

For New Zealand, the minimum performance level should be contained in the Building Code.

What would be the effect on your business if New Zealand aligned these aspects of the scheme with Australia's scheme?

7.5 Administration options

To run such a scheme a body of some description will need to:

- register products and maintain a database of registered products
- monitor whether standards are being met and enforce the standards if they are not being met.

There are various options for who could administer the scheme, including:

- Australia, under contract to New Zealand
- the EECA, working closely with Australia, as they do now for energy efficiency labelling
- the Ministry for the Environment, working closely with Australia
- other mechanisms.

The Ministry for the Environment option is seen as the least efficient because the Ministry currently does not have any similar role.

Do you have any views about which administration option would be easiest for you?

WELS – water efficiency labelling questions to consider

- 14) Would water efficiency labelling influence your purchases of whiteware and plumbing products?
- 15) Would there be any savings to you or your council from reducing domestic water usage by using more efficient whiteware and plumbing fittings?
- 16) What are your views on having mandatory water efficiency labelling on the products identified in this section?
- 17) What would be the effect on your business if, under a New Zealand labelling scheme, we aligned the types of products subject to the water efficiency labelling scheme, registration and labelling requirements, minimum performance/efficiency requirements and technical standards with Australia's?
- 18) Do you have any views about which administration option would be easiest for you: a New Zealand-based or an Australian-based administration body?

Appendix: Deficiencies in Present Arrangements for Some Wastes

Product	Current arrangements	Environmental costs and impacts
Tyres ¹	<ul style="list-style-type: none"> • A voluntary tyre collection system is managed by the Motor Trade Association: companies under direct management of New Zealand tyre manufacturers are members of Tyre Track, along with a spread of independent tyre dealers and garages. • A high proportion of tyres were hitherto taken by dairy farmers. • There is a very small quantity of recycling through sites in Auckland, Wanganui and Otaki. • Tighter controls under Litter Act have the potential to help, but they are not the full solution. 	<ul style="list-style-type: none"> • Councils already face major legal and enforcement costs associated with end-of-life tyres. • Tyre disposal issues are likely to increase as demand from dairy farmers for tyres declines. • The high risk of fighting tyre fires is a major risk for councils (\$100,000 for the last significant Waikato fire). • Companies are signing up with Tyre Track but are still unwilling to charge disposal fees out of line with those of competitors (still resistant to cost of shredding). • The cost of unauthorised storage is still below the point at which companies are willing to invest in legitimate activities.
Used oil	<ul style="list-style-type: none"> • Voluntary collection has operated since 1996. • There is a good recovery infrastructure (a national network of collectors, subject to a code of practice through contract with Holcim). • Take-back arrangements are in place for industrial and commercial customers, providing they use a sole oil supplier. • About 21 million litres of oil can be accounted for, out of a possible 33–40 million litres; 13 million litres is used as substitute fuel by Holcim, Westport. 	<ul style="list-style-type: none"> • Large oil companies are unwilling to increase their commitment in the absence of a level playing field. • There is minimal producer responsibility for oil sold through the retail sector (collection costs have been progressively shifted to councils and landfills). • There is no coverage for businesses buying from two or more oil companies. • 10–20 million litres of oil is unaccounted for.
End-of-life vehicles ²	<ul style="list-style-type: none"> • The cost of retrieving and dismantling abandoned end-of-life vehicles presently falls on councils. • Dismantling of old cars is undertaken by auto wreckers, who on-sell as parts and/or pass on to scrap metal dealers. • Tow firms and others are left holding vehicles impounded for reasons such as unpaid fines • Voluntary collection arrangements apply to the collection of refrigerant. 	<ul style="list-style-type: none"> • Costs to councils of managing end-of-life cars assessed at \$6 million annually. This is in spite of a healthy market for scrap metal. • Environmental degradation, costs to private landowners etc is not costed but is real. • Auto dismantlers are a significant monitoring and enforcement issue for councils.

Product	Current arrangements	Environmental costs and impacts
E-waste	<ul style="list-style-type: none"> Voluntary collection systems are run by five individual companies: Vodafone, Telecom, Hewlett Packard, Dell and Fisher & Paykel. Voluntary initiatives are limited geographically. The domestic recycling infrastructure is poorly developed. 	<ul style="list-style-type: none"> It is estimated there is up to 85,000 tonnes of e-waste per year. Small quantities are collected by individual systems: 1 million mobile phones are potentially available for recycling per year, but Vodafone and Telecom are collecting fewer than 70,000 per year. Hewlett Packard (approximately 30% of New Zealand's personal computer market) report 728 tonnes collected for the entire Asia-Pacific region in 2003. Dell's take-back system has been suspended for most of 2004 due to difficulties with their Australian recycling contractor. Hazardous substances in equipment are being disposed of to landfill: lead, mercury, cadmium, hexavalent chromium, brominated flame retardants.
Packaging	<ul style="list-style-type: none"> The new Packaging Accord was launched in August 2004. This requires sector groups to set targets to reduce the life-cycle impact of packaging they manufacture, or use on goods they produce. The new Accord was negotiated in spite of resistance from many within the packaging sectors. It is most likely to be effective on a voluntary basis if the promise of regulation is perceived as real. 	<ul style="list-style-type: none"> There are high implementation costs associated with the voluntary Packaging Accord. There is a high degree of public concern about packaging, leading in particular to demand for a tax on plastic bags and deposits on drink containers.
Farm chemicals	<ul style="list-style-type: none"> Safe handling and disposal of current products is influenced by HSNO legislation, but HSNO does not apply to orphan products. Collection systems are run by councils, and chemicals are disposed of in New Zealand or shipped overseas depending on type. Growers face some incentives from exporters looking for safely or sustainably grown products (eg, apples for market). However, these incentives cover only a small part of the market. The relatively high cost of new, patented products means consumers have an incentive to use older, out-of-patent products where feasible. Large chemical companies willing. 	<ul style="list-style-type: none"> The cost to government of the present recovery regime is \$0.5 million per annum, and total costs to councils are estimated to be at least as high. There are risks that stockpiles will again accumulate on farms as farming practices change, farmers over-buy, products become outdated or properties change hands.
Farm plastics ³		<ul style="list-style-type: none"> The predominant form of use appears to be on-farm burning – the cheapest option, but the one that has the worst environmental outcomes. To get plastic off farms and into a recycling system would cost an additional \$55–60/tonne. However, administration of a levy scheme for farm plastics would cost \$377/tonne for LDPE film and \$0.51 per container.

Notes:

- 1 Firecone 2004. *Management of End-of-Life Tyres*. <http://www.mfe.govt.nz/publications>.
- 2 S Cassells 2001. *Deficiencies in New Zealand's Approach to Recycling End-of-Life Vehicles*. Massey Dept Applied and International Economics.
- 3 URS and NZIER 2003. *Life Cycle Analysis for the Management of Waste Farm Plastics and Economic Analysis of Waste Farm Plastic Management Options*.

References

- Environment Protection and Heritage Council (Australia). 2004. *Industry Discussion Paper on Co-regulatory Frameworks for Product Stewardship*.
- Ministry for the Environment. 2002. *New Zealand Waste Strategy*. Wellington: Ministry for the Environment.
- Ministry for the Environment. 2004a. *Review of Targets in the New Zealand Waste Strategy*. Wellington: Ministry for the Environment.
- Ministry for the Environment. 2004b. *Water Efficiency Labelling for New Zealand: Cost-benefit analysis*. Prepared by COVEC. Wellington: Ministry for the Environment.
- Ministry of Health. 2005. *Annual Review of Drinking-water Quality in New Zealand 2003*. Wellington: Ministry of Health.
- OECD. 2001a. *Extended Producer Responsibility: A guidance manual for governments*. Paris: OECD.
- OECD. 2001b. EPR programme implementation and assessment. Part 2: Assessing EPR policies and programmes. *Proceedings of OECD Seminar on Extended Producer Responsibility, 13–14 December 2001*. Paris: OECD.
- Sinner J, Salmon G. 2003. *Creating Economic Incentives for Sustainable Development*. Auckland: New Zealand Business Council on Sustainable Development.