

13. Packaging and The Environment – Australasia

13.1 Introduction

Walking through a supermarket in Australia or New Zealand is an experience similar to that in the USA or United Kingdom – most of the familiar brands are there. Although there are many home grown products and brands, many of the large European and American packaged goods companies have a local presence, either as marketers or manufacturers or both, often setting up a single production facility to service both markets.

This European and American influence is also evident in the local cultural mix, although one needs to add a dash of 'multiculturalism' brought about by immigration, as well as the cultural influences of the indigenous population in each country. It also comes across in the way legislation is developed – with a European philosophical base and American practicality, although many local regulators see Europe and Canada as packaging regulation trend setters.

Australia and New Zealand share a common heritage, both having evolved from collection of British colonies which were, in the case of Australia, federated into a nation in 1901 - there was talk at that time of New Zealand becoming a state within the federation, but although that did not happen, the two countries have maintained strong business and political links.

Whilst New Zealand has a single national government with responsibility for all matters other than those handled at local government level, Australia's constitution splits regulatory power between state and federal governments, the latter originally being responsible for matters of national importance, defence, foreign affairs, immigration, customs etc, the states responsible for everything else, although over time these distinctions have become somewhat blurred.

To make this system workable a series of overarching agreements and arrangements exist. An example is the Australia and New Zealand Environmental Conservation Council (ANZECC) which consists of the environment ministers of Australia and New Zealand and of each of the eight Australian states and territories (Papua New Guinea was admitted in 1997).

This council meets regularly to coordinate environmental policy and regulatory activity in the region, and to discuss matters of common interest and concern. ANZECC, as we shall see, has played an important role in the development of regulatory framework for packaging.

This chapter will outline the environmental issues confronting the packaging sector, the regulatory framework that covers it and how this has evolved.

It will concentrate on events in Australia, but use the New Zealand experience to illustrate a simpler, and more effective approach.

13.1.1 Public Perception

Public perception is important because it often underpins the push to regulate. The public perception of packaging is to a large extent imported. Of course it has as its basis the high visibility of packaging in the domestic waste stream and in litter, but concepts of the scarcity of landfill space, the need to “save landfill” and pushing recycling for its own sake, rather than as a fundamentally economically driven activity – as it was – have been imported from Europe and the USA via the media and environmental pressure groups.

George Kelly & Associates in December in 1998, found in part of his regular survey of consumer views on packaging, that 60.4% respondents felt household packaging contributed to the total waste stream by a “great degree” and a further 32.8% by “some degree”.

Of course we know the average consumer or voter has little concept of the total waste stream, they only see the part they themselves contribute. Unfortunately the regulator and politician is also part of this group and are influenced by the same perceptions.

The same study also probed public perception of environmental issues generally. The results showed toxic waste (95.6%) water pollution (92.4%) and air pollution (88.4%) to be top concerns. Household waste at 13.6% was low down the list in terms of importance although littering at 48% was seen as more of an issue.

Although aware of environmental issues per se, people according to this study, do not see themselves as environmental activists as the same study shows. Most (88.8%) describe themselves as “complying with society’s demands”. Just 5.6% describe themselves as “Interested and concerned, but not an active participant”, and only 4.8% describe themselves as “actively participating in the environment movement”.

A more detailed study conducted in 1994 by Keys Young on behalf of the New South Wales Environment Protection Authority shows similar results.

The environment as a whole was ranked fifth in importance behind unemployment, education, health, and crime and on the environmental score litter/dumping and household rubbish ranked 7th and 8th respectively after issues such as ocean and beach pollution, fresh water pollution, industrial emissions, greenhouse and loss of forests.

Perceptions about waste spill over into concerns about landfill, although it is generally recognised that some materials are ‘suitable for landfill’, particularly if they are ‘biodegradable’. When it comes to the siting of landfills (or any other waste processing facility for that matter) the NIMBY syndrome comes into play. This, more than any other factor, is responsible for a perceived landfill shortage.

13.1.2 Early Industry Response

Litter dominated the packaging debate in the 60's and 70's and, as has been the case elsewhere, the beverage industry was most often targeted, even though beverage packaging is typically a small component of the litter stream. In response to the need to "do something" about litter the beer and soft drink supported the development of community based litter education through the "Keep Australia Beautiful" movement which was set up in each state and now run a wide range of environmental education programs including the long running National Tidy Towns competition and looks after the compilation of state and national litter statistics. It has broad community support.

Funding for anti litter programs was channelled through the Litter Research Association, later to become the Litter Recycling Research Association and more recently the Beverage Industry Environment Council. Altogether these organisations have been active for more than 25 years and have supported a wide range of research and community programs.

Other industry initiatives include the setting up in 1990 of the Packaging Environment Foundation of Australia (PEFA) headed by ex-senator Chris Puplick. Its role was to lobby for a more rational and balanced approach to waste issues. Its publication "Completely Wrapped" co-authored with economist Barry Nicholls is still the most complete summation of packaging, waste and environment related information.

13.1.3 Early Regulatory Response

In 1976 the state of South Australia proclaimed the Beverage Container Act which imposed deposits on beer and soft drink containers not already covered by a voluntary return system. This measure was promoted for anti litter reasons, but not coincidentally both the major local beer producer and local Coca Cola bottlers were at that time operating refillable bottle systems and coming under pressure from single use packaging from other states. Interestingly the deposit for refillables was set at lower value than for the 'imported' single trip package. This was later challenged in the High Court and, following an adverse judgment, deposit values were equalised.

Although the S.A. legislation looked suspiciously like a dose of protectionism (it was referred to in the parliamentary lobby as the SA Brewing Protection Act), its passage puts pressure on other states to follow suit.

The beverage industry, through LRRRA was able to convince regulators that litter could also be addressed through public education and, entered into agreements with governments in several states to fund litter education programs, and later to support the development of recycling programs, in return for no legislation.

In the state of Victoria a joint committee was set up, the Recycling and Litter Advisory Council, to monitor progress and recommend appropriate future regulatory action.

13.1.4 Early Packaging Recycling

Throughout this early period, recycling at the household level tended to be privately run, with newsprint picked up by charity groups and beer bottles collected by “bottle ohs” and returned to breweries for refilling.

The introduction of aluminium cans saw the development of buy back centres as another return mechanism, and the switch from multi trip to one trip glass was accommodated by using the existing household return system – offering a relatively high price per tonne for the glass recovered (upwards of AUD 120/tonne).

A similar approach was taken to the introduction of single trip PET soft drink bottles. Recovery was supported by a high (AUD700+/tonne) buy back price.

The recovery of cardboard packaging from supermarkets and shops has always been run on commercial basis and still is.

13.1.5 Waste Realities

Having understood that much of the push to regulate packaging is perception driven several attempts were made to provide regulators with the data and background knowledge on which to base a more rational approach to regulators.

In the early 1990’s the Association of Liquidpaperboard Carton Manufacturers Inc. (ALC) funded a detailed garbage analysis for the state of Victoria and for Hobart in Tasmania. An international study tour for state officials was also arranged and funded, the objective being to promote policy based on data and analysis, as well as an understanding of all of the available management technologies.

In spite of these and other efforts, there still was the tendency to deal partially with packaging rather than the whole of the waste stream and to look at household recycling as the principal means of waste reduction – even though, as in many other places, the yard waste component was considerably greater.

The early studies showed, as in the case in other developed countries, that household packaging made up around a third of municipal solid waste, which in turn was a third of total solid waste going to landfill. This meant household packaging waste comprised less than 10% of the total solid waste stream going to urban landfill. This 10% is split amongst a multitude of materials, glass, paper, plastic and metals. The logic of focusing on this material in a “landfill reduction” or “resource recovery” effort is pretty thin, but approaches to waste here, as is evident elsewhere, are characterised by a lack of a clear environmental objectives and a tendency to base policy on perceptions rather than realities.

In 1995 ALC commissioned a study by researchers at the University of Melbourne into the total quantity of waste generated in Australia and asked them to develop a comprehensive waste strategy based on the findings.

This study showed that some 4.6 billion tonnes of waste was produced annually in the Australian economy of which around 5 million tonnes (0.1%) was municipal. This makes household packaging around 0.03% of the total. Of the 4.6 billion tonnes, around 2.1 billion tonnes is solid waste with mining (1.6 billion) and Farming/forestry (0.4 billion) the major components. Around 2 billion tonnes is liquid waste (exclusive of farming, forestry and energy whose liquid waste contributions were not known) and around 0.5 billion tonnes of gaseous waste mainly greenhouse gasses.

Looking at the generation of solid wastes, researchers confirmed the majority was generated in the extraction processes and by far the smallest proportion during the consumption stage, whilst most of the regulatory effort was being directed at post consumption waste.

The researchers concluded:

“Reducing the flow of consumer wastes to landfill is unlikely to reduce water pollution. It would reduce air pollution if it reduced the (overall) consumption of energy or the emission of methane from the landfills. Careful analysis would be required to determine whether such effects would be appreciable

Despite the popular belief that reducing the flow of consumer waste to landfill will conserve resources, the saving is likely to be quite small. Far greater conservation can be achieved by other means”

Interestingly the survey also identified the range and quantities of materials quarried in and around major population centres - sand for cement, gravel for roads, clay for bricks etc - which came to 145 million tonnes per annum - against an annual landfill volume requirement to accommodate 14 million tonnes per year.

The University of Melbourne findings are supported by a recent report from the Washington based World Resources Institute which showed that the lifestyles of people in developed economies typically use between 45 and 85 tonnes of natural resources (exclusive of liquids and gases) per person per year; most of this in the extractive phases – farming, mining and energy generation. The low figure – 45 tonnes – came from Japan, a rice based and energy conserving economy.

Studies such as these indicate the need to examine the total system of production and distribution, rather than the much less significant end of pipe domestic component, and to determine from such a study where and how the greatest improvements in resource utilisation can be made.

13.2 An Evolving Regulatory Framework

13.2.1 An Optimum Regulatory Approach

Is there such a thing as “regulation envy”? There certainly appears to be a tendency to pick up regulatory approaches used in other countries, perhaps developed to tackle a local issue, and to translate that to a new jurisdiction where the issue may or may not exist or where it may present itself in a different context requiring a different approach. There also appears to be a tendency to look to regulation to answer questions which could be handled more cost effectively if left alone.

Local regulatory agencies are of course, in touch with their counterparts elsewhere. Strong links exist, for example, between some state environment agencies and their Canadian counterparts. There is then the temptation to compare regulatory zeal – or even try to export it, as we saw after Germany proclaimed its Packaging Ordinance in 1991. Australia received a rash of delegations and speakers at conferences promoting the benefits of DSD and Extended Producer Responsibility.

We were even visited by Germany’s environment minister Klaus Topfer.

There is little informed debate about the need for legislation, whether the issue can be managed without regulating or the nature of the regulatory framework that is most appropriate to the situation. Too often little attention is paid to setting clear objectives or to analysis of the capacity of regulation to meet those objectives and do so efficiently and economically.

A case in point is the current push by OECD on Extended Producer Responsibility (EPR). Although a number of workshops have been held on the topic the OECD has not bothered to analyse the economic impacts and consequences of an EPR approach nor tried to determine what, if any net environmental gains result.

The OECD admits that much of the experience in EPR is packaging related, but even that experience should be enough to recognise it needs to re-evaluate its approach.

Packaging EPR, European style, has led to higher transferred costs, disruption to an integrated approach to waste management, and a relatively small increase in net recovered resources.

The main failings of the EPR approach relate to the fact that it is based on residual solid waste, the smallest of the life cycle impacts, and that EPR based schemes tend to prioritise material recovery and dictate the quantity and the means of doing so. Costs incurred tend to be disproportionately high and are transferred to the consumer through a mechanism that inflates its impact.

Worse still, in the case of packaging, it places a tax on a mechanism that delivers environmental benefits. In economic terms this works against the beneficial use of packaging, reducing the benefits associated with its use.

The reality is that the waste saving nature of packaging and its ability to reduce overall environmental impact throughout the product chain is not at all understood. Packaging is seen merely as a 'problem' that surfaces from nowhere in the household waste stream.

An example of the waste saving potential of packaging that has frequently been used in the debate in Australia is that of orange juice packaging. When orange juice is prepared at the factory 1.2 Kg of peel, rind, pulp and pips is left behind for each 1 litre of juice. This material can be reprocessed into a range of products. The juice is packed into a carton which weighs 30g - representing a reduction of 1.17 Kg per litre of juice packed. On sales of 400 million litres of juice, the overall saving is over 450,000 tonnes, a significant saving given that the total municipal waste stream is 5 million tonnes. The saving due to this one packaged product is equivalent to around half of the weight of material diverted through kerbside recycling programs and is, of course, amplified by similar savings contributed by other pre-processed packaged foods.

In a 'whole of environment' sense further savings accrue through the reduction in the weight of food requiring transport from the farm to markets.

The question of the impact of packaging taxes on environmental outcomes was examined in a study by Dr John Hatch and Dr Trevor Mules of the South Australian Centre for Economic Studies. In this ALC funded study an economic model was used to determine the effects on the environment through the imposition of a container tax or levy (as is usually the consequence of EPR based legislation).

The study concludes:

“as part of a materials balance approach we have shown that connections throughout the economic system means that an attack on packaging may cause an unexpected environmental effect elsewhere in the system. For example, reduced packaging output may mean an increased use of natural resources, or increased burning of fossil fuels as consumers substitute other production in place of packaging.”

(The other production being necessary to make up for losses prevented by packaging).

They conclude: “ ... given the smallness of the problem (of packaging waste), and the tendency to charge consumers the full cost of landfill, the best policy may be not to interfere”.

Australia's then Industry Commission (now the Productivity Commission) in its 1996 report on Packaging and Labelling discusses EPR as follows:

“In a reasonably competitive market, most or all of the costs of production are eventually passed down the production chain towards consumers. In this way

producer levies to fund waste disposal can ultimately be funded by consumers. Extended Producer Responsibility then becomes extended consumer liability! Although there will be costs with such an approach, there can also be benefits in current circumstances where much the cost of additional waste is met externally to the production chain – by ratepayers rather than consumers. In such circumstances extended producer liability would help internalise costs being imposed on ratepayers. However, it is quite practical to internalise these costs more directly by requiring those who actually generate kerbside waste to fund it on a user pays basis.

They then fact direct incentives to reduce their waste in a way which would not be possible if producers were funding their waste costs”.

The above talks about EPR in the context of internalising waste disposal costs. The European model, however, tries to apply to each package a differential recovery cost, based on politically determined targets and recovery mechanisms. Not only do such levies bear no relationship to the relative environmental or waste impact of different pack types, they may even distort the market for packaging in ways that do not improve environmental outcomes.

So what regulatory approach is appropriate? In a paper produced by the Business and Industry Advisory Committee to the OECD (BIAC) for the Washington Workshop on EPR, held in December 1998, the author suggest that firstly clear environmental objectives must be articulated and in setting those objectives the whole of the product life cycle, not just residual solid waste, must be considered. They also suggest that, rather than looking to one element of the production and distribution chain, all actors, including consumers and local authorities have a role.

They set out a wide range of approaches to “product” responsibility of which EPR is at one extreme:

Product Stewardship	Shared Product Responsibility	Shared Producer Responsibility	Producer Responsibility	Extended Producer Responsibility
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They suggest that any approach taken should minimise cost, maximise flexibility and optimise environmental outcomes. Obviously programs based on product stewardship or Shared Product Responsibility can be based on self regulatory mechanisms or voluntary agreements. Those at the other extreme need mandation and enforcement.

In Australia and New Zealand, as we shall see, Product Stewardship and Shared product Responsibility brought about through industry plans and voluntary agreements have been the norm and appear to be the preferred regulatory approach. To turn it into the optimum regulatory framework would need a shift in the basis of packaging legislation away from a simple solid waste basis to one which looks at minimising the impact of the total

distribution system. The analysis required for such a shift would show up packaging in an entirely different light.

13.2.2 The Australian Regulatory Framework

Power to regulate on waste, litter and recycling matters rests with the states. However, there are a number of overriding mechanisms that can, if properly applied, co-ordinate state regulatory activity.

We have already referred to the ANZECC Council of ministers. A similar body was set up under legislation passed by the federal government and in each state – the National Environment Protection Council (NEPC). This is again a ministerial council, but one which can make regulations in the form of an agreed National Environmental Protection Measure (NEPM) which are duplicated into state law as an effective means of unifying national environmental legislation and standards.

Another useful coordinating mechanism is the 1992 Intergovernmental Agreement on the Environment (IGAE). This has been signed by all Australian governments, including the Australian Local Government Association, representing local government, and binds each to consider environmental issues in all areas of policy and, where possible, to avoid duplication. It says, in part, that environmental considerations will be integrated into Government decision making processes by, among other things ...”ensuring that measures adopted should be cost effective and not be disproportionate to the significance of the environmental problems being addressed”.

The Council of Australian Governments (COAG) made up of the prime minister, state premiers and territory chief ministers, is another normalising and coordinating influence. Under COAG, governments have undertaken to prepare regulation impact assessments for new legislation, including self regulatory mechanisms. Guidelines have been issued outlining the process to be followed. These stipulate that costs to the government, business and the community of any new measure must be assessed.

Just because these mechanisms exist does not mean they work, i.e. that they produce the optimum regulatory outcome as the recently released draft report of the Productivity Commission’s review of the Implementation of Ecologically Sustainable Development (ESD) by Commonwealth Departments and Agencies shows.

The report suggests that “departments fail to follow principles of good policy making” and that “the extent and quality of ex ante assessments are variable”. They also suggest that there is a “tendency to act on problems which are immediately visible” and that there is a “lack of long term policy focus”.

“Evidence gained as part of this inquiry would suggest that a significant impediment to improved ESD policy making practices is a failure to undertake the action of analysis”...

The local history relating to the development of waste management and recycling policy and practice illustrates this.

13.3 Regulating For Recycling

13.3.1 Federal Processes – The ANZECC Agreements

In 1991 the then federal environment minister the Hon Ros Kelly announced a national target of a 50% reduction of waste going to landfill by end of year 2000 (based on a 1990 baseline). This resulted in the development of a National Waste Minimisation and Recycling Strategy which had two key components, the first a National Kerbside Recycling Strategy (packaging based) and secondly the National Packaging Guidelines.

The latter simply said that the amount of packaging waste going to landfill would be reduced by 10Kg per capita (5%) per year, or 50% by 2000, and was to have been based on a public education effort and voluntary industry actions which were to include some reduction and recycling efforts. The guidelines were to apply to both domestic and “industrial” packaging, but have not been monitored or followed up.

The National Kerbside Strategy evolved from a series of meetings between government and industry during which industry groups representing different types of packaging were asked to develop recycling plans which “volunteered” the achievement of certain recovery and reduction targets by 1995. These were the first of the “ANZECC agreements”. Several of the materials involved were already being recovered at significant levels and in their case the commitment formalised what was already happening. Other materials were new to the system. It was the first attempt to make industry “responsible” for recycling outcomes.

The 1995 ANZECC Targets

Plastic Containers*	25%
Glass	45%
Aluminium Cans	65%
Steel cans	25% (1996)
Liquidpaperboard	20%
Newsprint	40%
Paper Packaging	71% of input to secondary fibre

(* Milk and soft drinks)

In response to the release of the draft strategy the then Industry Commission took the unprecedented step of publicly releasing its own assessment of the document, without the strategy having been officially referred to them – The

Commission had simply responded instead to the Commonwealth EPA's general call for comment.

It should be noted that the commission had a few months previously released a two volume report on its extensive inquiry into recycling and had the previous year produced an interim report on paper recycling.

The latter was clear about increased recycling rates for paper:

"The report concludes that the important question is not whether the recycling rates should be higher but whether the Australian community would be better off they were".

"Attempts by governments to push recycling for its own through purchasing policies, tax concessions or recycling targets are unlikely to promote efficient recycling".

In their report on Recycling the Commission did not recommend regulatory intervention, but improvements in the way local governments provided waste services, including the need to view recycling as integral to waste management and the need to relate waste charges to disposed volumes to ensure charges covered costs and to set charges for recycling collection services. It concluded:

"Efficient recycling is not advanced where governments give priority to readily identifiable, but not significant, elements of the household waste stream (as with South Australia's container deposit legislation and Victoria's recycling targets)"and repeated the question raised earlier"would the community be better off" if recycling rates were increased.?

The Industry Commission was therefore, not surprisingly, quite critical of the 1992 National Waste and Recycling Strategy. It said "some of the measures ... could help achieve the objectives... However other measures could undermine these goals. For example mandatory recycling and waste material targets are difficult to police, lack flexibility to cope with changing market conditions and potentially over-ride more efficient government measures for allocating resources to these uses... More fundamentally, many of the goals themselves are inconsistent with maximising community welfare. ".....The strategy needs to be modified in ways which pay more attention to the operation of markets and the removal of impediments to efficient resource use".

(In retrospect the Commissions warning on markets was correct as oversupply of materials is one of the factors that has more recently led to a decline in prices paid for collected materials.)

This first round of ANZECC agreements was endorsed by ANZECC ministers. Government was right to consult with industry and enter into "voluntary" or cooperative arrangements. However the emphasis of the negotiation process was not on what could reasonably be collected and processed, but what

resources industry could provide, financial and other, to accelerate the rate of collection and educate the community to recycle more.

There is no doubt that recovery of materials increased during the period covered by the first ANZECC agreements (1992-95) and that most material groups either met or exceeded their agreed target. This was a significant achievement given the size and population spread of Australia (18 million people on an island the size of Europe or the U.S.A.) and the relative low level of reprocessing capacity, and the fact that recycling levels were not forced upwards through the use of prescriptive legislation, packaging taxes or levies so characteristic of the European approach to recycling. The major factor contributing to the success of the ANZECC approach was more than likely due to the rapid expansion of local government collection programs and the evolution of more efficient collection systems using specialist contractors and could have been achieved even more economically through effective program co ordination at the local government level. The provision of a good service is the most significant factor encouraging community recycling.

Commonwealth and State agencies, on behalf of ANZECC started to negotiate the second round of ANZECC agreements with industry in 1996. These were to cover the 1996-2000 period. However this time there was an attempt to impose a uniformity high recycling/diversion rate of 75% which later was split into two ranges one of 75% and 50%.

Industry could however achieve these targets using a variety of mechanisms including source reduction (lighter packaging) and commercial (factory scrap) recycling.

These agreements were more difficult to negotiate, because they were seen as less “voluntary” and the higher targets were creating real difficulties, not the least of which was an adequate local processing capacity and the knowledge that the local government collection system could not deliver the required high yields for some materials (it is not possible to force people to recycle and, in practice, they tend to put out for collection the “easy” materials).

Some of the 2nd round agreements were not signed until 1998, and some were not signed at all, (aluminium and glass) because of disagreement about the two tiered approach to targets.

Again discussions centred around what industry could contribute – not what was possible to achieve in a coordinated approach to collection, marketing and reprocessing. The agreements again attempted to make industry “responsible” for the outcome of a collection process that was largely controlled by local government contracts and at the whim of individual consumers.

13.2.3.2 State Legislation

As early as 1991 the state of Victoria enacted the Environment Protection (Resource Recovery) Act which enabled the State EPA to enter into Industry Waste Reduction Agreements (IWRA) with companies or industry sectors. An early draft of this legislation called for the imposition of levies as a funding mechanism. This mechanism was opposed by industry and removed by amendments during the upper house debate.

The concept of an “industry agreement” came from the period of activity of the Recycling and Litter Advisory Council (RALAC) when sections of the beverage industry had been persuaded to enter into agreements with the EPA which saw funds transferred to specific recycling and litter related programs. EPA felt that, with the backing of legislation other sectors of industry could be persuaded to part with money.

Under the legislation the EPA can ask a company or industry to enter into a negotiated agreement to reduce overall waste. Whilst there is significant potential to reduce waste within industry sectors, i.e. at the production or commercial level, early agreement focussed more on post consumer waste in an attempt to make packaging producers and product marketers responsible for reducing post consumer waste volumes.

In practice the negotiation of IWRA’s was a lengthy process because the EPA insisted on agreements containing a substantial financial commitment (tax) whereas industry groups maintained that this was not a required under the legislation, that the content of the plan and what it could achieve were more important. Eventually a handful of agreements were negotiated, most reflecting the content of the existing national ANZECC agreements and transferring to the state plan a proportion of what had been committed at the national level.

In 1995 the New South Wales government passed the Waste Minimisation and Management Act also based on the concept of industry plans. Again the process of developing plans is a lengthy one with the first plan – for the dairy industry not signed off until May 1998.

The New South Wales legislation contains a range of sanctions for non-complying industries or companies, including the introduction of levies or deposits, take back obligations, performance bonds and product bans, although some of these measures have yet to be tested in the courts for constitutional validity.

The legislation allows industry to self nominate for an industry plan or be nominated by the EPA or State Waste Advisory Council. Plans can be either negotiated or written by the EPA and imposed without consultation. The dairy industry was nominated to develop a plan through the legislation itself as the question of milk packaging was being debated at the time of the passage of this legislation - a dairy company had chosen this time to close the last refillable glass bottle plant in the state as sales had dropped to below 2% of the market.

Not surprisingly the legislation required the industry plan to nominate a target for refillables. After much study and debate this was set at zero.

Legislation in both states also introduced a landfill levy. In the case of Victoria this currently stands at AUD\$4.00/tonne and the majority of revenue (80%) goes to an organisation called Ecorecycle set up to help develop waste minimisation programs.

In New South Wales the levy is AU\$17.00/tonne in metropolitan areas and AU\$8.00/tonne for regional landfills. Some of the funds go to support the administration and activities of Waste Boards set up under the Act, but the larger proportion goes to general revenue.

The state of Queensland has just drafted an Environment Protection Policy (EPP) for waste management under its 1994 Environment Protection act.

Western Australia is currently amending legislation to enable it to enforce the proposed national packaging measure and South Australia's environmental law automatically adopts national measures.

Tasmania and the Australian Capital Territory do not have specific packaging related legislation, but new legislation in the Northern Territory – Waste Management and Pollution Control Act 1998, can be used to regulate packaging and related waste.

Western Australia has for some years imposed a small 'voluntary' litter levy on beverage packaging to fund the litter education activities of that state's Keep Australia Beautiful organisation which has been absorbed into the bureaucracy there. In the context of the National Packaging Covenant it is seeking to retain and extend that levy.

South Australia has already been mentioned as Australia's only container deposit state. Over the years several attempts have been made to extend the deposit system to milk and juice packaging - the idea promoted by the soft drink sector, who see these product as competitive, and by the EPA who see it as an extension of power. Following the decision two years ago to impose a moratorium on such an extension, pending the trial of a comprehensive anti litter program, the EPA has now hired consultants to review the system and recommend future action.

Both the Northern Territory and Western Australia have been looking at container deposit systems, and the local government representative on the New South Wales EPA Board has recently managed to get a resolution passed there for it to be examined as a recovery mechanism in that state.

13.2.4 The Need for a National Approach

During 1996 it became obvious that, in spite of agreements reached at the national level through the ANZECC process, individual states were legislating to, at a minimum, duplicate the "industry agreement" or "industry plan"

process at the state level. The feeling appeared to be that additional local funding could be extracted from industry groups using this approach. There was a perceived need to short circuit the development individual state mechanisms and to try to develop a new national approach .

The concept of a National Packaging Covenant as a means of coalescing and coordinating the packaged goods sector environmental commitment was first raised at a conference held in Sydney in August 1996.

Speakers from more than a dozen countries outlined their national experience and the experience of New Zealand and the Netherlands, where a national covenant had been negotiated, was felt to be most appropriate and applicable – as up until then the Australian regulatory framework had always been based on “voluntary” agreements.

13.3 The New Zealand Experience

In June 1996 the New Zealand Minister for the Environment, the Hon. Simon Upton, launched the New Zealand Packaging Accord.

The accord had been in development for two years and was based on analysis of urban waste and packaging trends. This analysis had shown that packaging recycling was already significant, and that lightweighting and changes in design had reduced packaging weight per unit of goods by an average 24% during the previous ten years. This reduction, together with recycling had reduced packaging waste by over 40% over this period. All achieved without legislation and without European style EPR).

It was recognised that the implementation of recycling targets in New Zealand faces practical difficulties, not the least of which being that some 25% of packaging is imported and over 40% of locally produced packaging is exported (mostly to Australia), the spread of its population and, like Australia, a distinct lack of local industry to provide a ready market for collected material.

The Packaging Accord is based on a Shared Product Responsibility approach where each actor in the chain has a responsibility for optimising outcomes. This approach includes, naturally local government and the consumer.

The research which provided the basis for the Accord was coordinated by industry through the Packaging Industry Advisory Council (PIAC), who went on to negotiate the Accord with local and national governments.

The Accord sets out a range of activities aimed at overall waste minimisation. These were agreed through a process coordinated by the Packaging Environmental Advisory Group (PEAG) made up of national ministerial representatives, local government and environment groups, representing as well as packaging industry representatives. Under the Accord, industry are particularly committed to accept a Code of Practice which aims to minimise the amount of packaging used and to assist, wherever possible and practical,

the recovery of packaging through recycling. A practical example of industry support is uniform recyclability labelling.

All parties are committed to collection of data over the five years of the Accord and progress will be monitored by PEAG. The Accord is unique in that it clearly identified the role of local government as the agency responsible for the collection of recyclables and does not, either by direct or indirect means, seek industry financial support to carry out this responsibility.

13.4 Towards An Australian Covenant

Negotiation of the Australian National Packaging Covenant started after ANZECC ministers endorsed the concept at their November 1996 meeting.

The first task was to consolidate and coordinate industry input. The prime mover in this exercise was Paul Howlett of the Environment Industry Development Network (EIDN), a federally funded organisation formed by government to develop industry partnerships to achieve environmental objectives, including joint capacity to tackle major environment related projects, both local and overseas.

The first step was to explain the concept of a packaging covenant and the need for it to key industry groups and individuals. To achieve this a presentation was prepared by Peter Lazar of Professional Public Relations, who took this around to key industry people. His objective was to obtain broad agreement to the setting up of a coordinating and negotiating committee who would develop the covenant, negotiate its contents and promote its acceptance. This committee met for the first time in February 1997 and called itself the Packaging stewardship Group. (PSG) representing a dozen industry associations drawn from raw material producers, packaging manufacturer groups, and groups representing packaged product marketers and retailers.

The PSG meetings were professionally facilitated to ensure the group focused on common concerns rather than differences and that it effectively analysed the issues that needed to be addressed and put these into a realistic business and political context and framework.

Early meetings were also used to develop an agreed strategy for the development and negotiation of the Covenant and, most importantly, an agreed industry position on key issues. For example it was agreed that there was a need for a national framework to replace the state by state approach that was evolving, that industry was opposed to prescriptive legislation, particularly legislation which sought to impose mandatory targets of packaging taxes or levies, and that recycling collections needed to be based on market realities rather than be directly or indirectly subsidised by industry.

Local government was seen as the key group with whom agreements on a Covenant had to be reached, so a joint committee was set up between PSG and the various state and national local government associations. This group,

the Australian Kerbside Recycling Alliance (AKRA), met over a period of almost a year to agree on the parameters for an agreement on recycling.

It should be recognised that these negotiations took place at a time when state politicians were being told, directly by local government, and indirectly via the media, that recycling was 'in crisis' as a result of reduced prices being paid for collected materials. Although it was convenient to blame the Asian crisis which was affecting industry's ability to export excess paper for the price drop, the reality was that for several materials more material was being collected than the market could absorb and some companies were removing the subsidy component of buy back prices that had been used earlier to stimulate recovery.

"Who pays" was therefore key issue that needed to be addressed. The "who pays" question was brought to the fore through industry funded studies which pinned down the cost of kerbside recycling collections. Conducted by Barry Nicholls of Coopers Lybrand, the study determined the cost of recycling in Sydney (population 4.0 million) and used modeling to project 2000 costs under a range of scenarios. It showed current (1996) costs at \$A17.00 per household per year, costs which would peak at \$A22.00 household using projected year 2000 recovery rates and current prices or \$A26.00 per household under a "low price" scenario for material buy back prices using the existing collection methods. The buy back value of collected materials was contributing \$A17.00 per household per year as an offset to collection costs.

The study showed that by adoption of centralised Material Recovery Facilities (MRF's) to replace the current mixture of MRF's and kerbside sort systems, year 2000 costs could be kept down to \$A13.00 per household and could be reduced to \$A7.00 per household if fortnightly collections were to be introduced to replace weekly ones..

Similar results came from a study of Melbourne's (3.0 million people) recycling systems. The worst case scenario was, however extrapolated, by some to come up with a national recycling "funding gap" estimate of \$A100 million, based on the 5 million households then covered by recycling collection services. This \$A100 million figure became the focus of the recycling funding debate and led to early demands that, as part of the Covenant process, industry had to come up with a way of funding this notional "shortfall".

Although this was the starting point of negotiations, the industry delegation was able to show how industry contributed to recycling and overall waste reduction. Important factors were the \$A700 million that had, over the previous five years, been invested in reprocessing facilities (on a commercial basis) and the annual \$A 75 million spent to buy back, at commercial rates, the kerbside collected materials.

Industry, of course, also funds packaging innovations which has increased overall packaging efficiency and reduced the quantities requiring recovery or disposal.

When the funding of the shortfall itself was discussed it was agreed that in the end the consumer could pay for it in one of three ways, directly through council rates, indirectly through state taxes (e.g. increased landfill levies) or through the cost of purchased packaged products. It was agreed that the first was the most direct and efficient. Other methods would add to costs and give rise to allocation and distribution difficulties.

Although this theoretical agreement was relatively quickly achieved, it was not readily accepted by all of local governments' association membership and political pressure continued throughout the negotiation process for industry to contribute to local government costs.

The AKRA group, however, moved on to develop the "Kerbside Schedule" of the Covenant which was to coordinate action between industry and government to improve the kerbside collection system, the objective being to secure a viable and sustainable national kerbside program, - a major covenant commitment.

At the insistence of local government the AKRA group was initially devoid of state government representation. They saw the state and federal governments as part of the "problem" as these were the people who had, without analysis, imposed the waste recycling and landfill diversion targets, and imposed landfill levies, which were the two factors most responsible for the cost increases local government had to absorb. Several states had also imposed a cap on local government rates which made it difficult to pass on these cost increases to ratepayers. The result was that often local municipalities had to make difficult decisions in order to be able to fund recycling programs. One Sydney council decides to postpone the building of a baby health centre, another the expansion of child care services.

The result was that there was little progress evident to state and federal authorities in the early stages of the negotiations. As a result federal and state government set up a "higher level negotiating group" made up of a small number of company CEO's (and later their delegates) with whom they felt a Covenant would more quickly be negotiated. (Get a few of them and their cheque books around a table!). Fortunately there was good communication between that group and PSG.

Interestingly the focus of the higher level group's discussion was more on the financial aspects of an agreement between the parties – how much would industry contribute firstly to recycling. This reflected the pressure ministers were under from local government to contribute to the increasing cost. Later, when industry had made it quite clear that there would be no funds provided to subsidise recycling collections the debate moved on to funding the process of facilitating a "transition to a market based approach to recycling".

After much debate (the initial transitional plan called for \$A50 million of industry funding) the higher level group settled on a range of programs (yet to be finalised) costed at \$A34.9 million over 3 years to be jointly funded by industry and government. This commitment was put into the Covenant

package. It is interesting to note that there has been no attempt on the part of government to justify this contribution or tax on environmental grounds. It could be argued that the problems of local government stem from the way the recycling issue had been handled by government (remember the Industry Commission warnings) and the fact that local government had, for the most part, been given little assistance on how to go about setting up programs and how to manage them cost-effectively. One of the difficulties was that several municipalities had become exposed to commodity trading risks associated with the marketing of collected materials (sometimes on the basis of official advice) and that this was the source of the economic pain. The pragmatic view taken by industry is that the \$A17.45 million is the political price to be paid for a longer term improvement in the system.

Next came debate on the “free rider” issue.

A “free rider” problem arises when some companies within an industry sector are asked to contribute financially or incur costs as a result of legislation or an agreed program and their competitors are not, giving rise to a competitive disadvantage. This issue has been widely debated in the context of EPR, but it should be recognised that it is an artefact of the regulatory regime. There is no genuine “free-rider problem” – it only occurs where there is an attempt made to intervene in the market.

The severity of the issue depends on the level of financial impost on those in the loop which depends on the commitments they have made. In the case of the Australian National Packaging Covenant this means a relatively small contribution to the proposed transitional fund and voluntary commitment to an action plan which should reflect what is already being done. The cost would not appear to be so significant as to result in a competitive disadvantage.

However, its introduction into the debate brought about a request from the higher level group for government to develop “a satisfactory regulatory safety net” to address the issue of “free riders” and “imports”. This development surprised some because the original objective of a covenant approach was to develop the Covenant as a self regulatory alternative. It would not be the first occasion where fear of others gaining even a slight competitive edge has headed industry down the path of more regulation to try to enforce a level playing field. The UK experience comes to mind where industry argued for years on how to make the system of extracting funds “fair” - rather than uniting against an unnecessary impost - only to end up with an expensive and market distorting system of permits.

Government obliged with the development of a National Environment Measure for Used Packaging Materials (NEPM) which saw two rounds of public consultation before being finalised and agreed to by NEPC ministers in July 1999.

13.4.2 The National Packaging Covenant (NPC) and NEPM for Used Packaging Materials

The National Packaging Covenant was substantially complete in August 1998 and together with the negotiated industry contribution to the transitional arrangements was part of an offer made by industry to government who had then to finalise the "regulatory safety net legislation" - the NEPM for Used Packaging Materials.

The National Packaging Covenant underpins a cooperative framework for the management of life cycle impacts of packaging and paper based on the concepts of product stewardship and shared product responsibility and will provide a forum for regular consultation on relevant issues. The Covenant will see manufacturers and marketers optimise design and minimise in-house waste and production impacts.

Covenant signatory companies will be asked to develop an action plan, either alone or as part of an industry group, with elements drawn from a menu of options such as developing and implementing in house waste minimisation programs and purchasing initiatives, undertaking and promoting research, reducing production, printing and transport waste, eco-redesign, lightweighting, cleaner production, support of kerbside programs through buy-back of materials, market development, labelling and community education. It is proposed that model action plans be developed for small to medium enterprises (SME) to facilitate their participation.

Action plans currently in place under ANZECC agreements at the federal level or under state legislation will be deemed to meet covenant requirements, or the affected industries can choose to develop a new plan under the Covenant.

Contribution to the three year transitional fund will be part of any signatory's action plan. This fund will cover projects identified as necessary to help local government make the transition to a market based approach (non subsidised) to kerbside recycling where it has not already done so. Price Waterhouse Coopers has conducted an initial study of possible funding mechanisms which are currently being finalised.

Importantly the NPC recognises the positive contribution made by packaging to the reduction of community environmental impact associated with the production and distribution of goods, particularly food.

The National Packaging Covenant is an important development because it takes the regulation of packaging in a different direction. Whilst building on previous cooperative arrangements forged primarily with the beverage and paper sectors the NPC covers the complete 'packaging chain' from raw material producers to retailers, and involves local, state and federal government, and indirectly consumers and targets all packaging, not just the traditionally recycled fraction.

The NPC will be in place for 5 years and should reduce the pressure on the states to legislate in the area.

Its voluntary nature allows signatories to select the area of activity best suited to their place in the “chain”. It takes a comprehensive and more realistic approach to packaging allowing for, and giving credits to, any effort along the way that helps reduce impact and waste. Its voluntary nature allows signatories to select the area of activity best suited to their place in the “chain”.

In that context it clearly recognises that local government has the responsibility of running and managing kerbside collection programs and covering their cost. There will be no mechanism to transfer this to the packaging sector.

Part of the agreed NPC package is a proposed study, an independent assessment, of kerbside recycling systems. This will examine economic, environmental and social costs and benefits of kerbside recycling programs – the first such study since the announcement of the 50% waste reduction target in 1991.

The outcomes of this study may result in recommendations affecting the extent, and scope of recycling programs. For example it may find that recycling has less merit for some materials than others and the cost of their recovery may not be warranted. It may find that recycling is not beneficial if markets for the collected materials are too remote or, put in another way, some communities are too remote from available markets.

Similar conclusions were drawn by the Institute for Prospective Technological Studies who were asked by the European Parliament to report on the impediments and prospects for the recycling industry in Europe. Amongst their conclusions were:

"Recycling is not always necessarily the preferable waste management solution since it is limited by the Second Law of Thermodynamics and obeys the law of diminishing returns....and...The desirability for increased recycling depends on its relative merit compared to other waste management options in a given geographic area."

For the first time, recovery of kerbside systems will be compared with commercial material recovery programs to determine where economies of scale can help reduce costs or where one or other should be emphasised.

The study will also examine current markets for collected materials as well as identifiable trends.

NPC implementation and progress will be monitored by a National Covenant Council drawn from government and industry.

In contrast to the NPC, the NEPM for Used Packaging Materials Measure has been drafted along the lines of European style take back legislation. Rather than being applicable to all in the packaging chain it targets only “brand owners” and only those that use packaging that ends up in the kerbside

collection system, (unless the material involved makes up a small component of the waste stream – or the company can show they are doing something similar to a covenant signatory company in their field - in which case they are Covenant and NEPM exempt)

The fact that the NPC and NEPM do not cover the same actors or range of materials targeted, and that the latter has a sizeable exemption categories, means it cannot perform the “safety net” function originally asked for by industry.

The NEPM will first have to be enacted into state legislation (except where this is automatic). It can then be used by state authorities to enforce NPC membership and compliance. Non complying brand owners will first be notified of their obligations and could then face a financial penalty to be determined by each implementing state.

Additionally the measure imposes a series of record keeping requirements on non complying brand owners and on local government to track material recovery by type, and will require the consolidation of that, and NPC related information at a state and national level.

13.4.3 Regulation Impact Assessment

Under federal government guidelines a Regulation Impact Statement (RIS) has had to be prepared for both the National Packaging Covenant and The NEPM for Used Packaging Materials. These documents examined alternatives to legislation, including the 'do nothing' option, and the economic impact of the two proposals on business, other actors and the community as well as their capacity for delivering the required outcome.

The statements prepared lack a detailed cost/benefit analysis, excused on the basis that this was too difficult given the lack of available data. The reason given to proceed with an NEPM for used packaging that was given was that it was part of the package of measures (industry had asked for it) and it was assumed that without the NEPM to back up the Covenant "the community was likely to see a reduction in the amount of material recovered at kerbside. The estimated reduction is in the order of 180,000 tonnes per year compared to current collection quantities. This reduction is in contrast to the projected increase of 200,000 tonnes per year in the NPC and NEPM environment"

No argument or data was provided to support that statement.

The RIS for the NEPM promotes a "take back " obligation for brand owners as the preferred enforcement mechanism, comparing it with "do nothing" and container deposits (CDL) as the other two regulatory alternatives available on which to base the NEPM. The "do nothing" option was discarded as not capable of delivering the required outcome and CDL on the basis of cost and equity problems - leaving European style take back as the recommendation. Curiously the mechanism currently already in place in two states - the ability to ask an industry sector or company to develop an industry plan or

agreement - which would have been entirely compatible with the form and nature of the Covenant, and applicable across the board like the Covenant - was not considered as an option.

When asked why, a member of the drafting group admitted they had simply acted on the advice of a London based consultant who felt that a take back obligation on brand owners was the way to go.

An earlier part of the document had compared a range of regulatory options as alternatives to the NEPM comparing their relative strengths and weaknesses, using overseas examples to illustrate some points. It rejected as alternatives mechanisms such as a landfill levy to raise additional funds for kerbside, although this is already in place in the majority of states, and householder waste related charges (pay as you throw) although this mechanism had already been agreed as the most appropriate during the Covenant negotiations, and are already in use. It also has strong community support. A community survey of 1000 householders in Melbourne conducted in 1994 by the Waste Management Council (which preceded EcoRecycle) found 88% in favour of using municipal rates to pay for recycling and when told the average garbage cost was \$A75 per annum the majority were stated a preparedness to pay extra for recycling. (13% - \$30 or less, 24% between \$31 and \$60, 44% between \$61 and \$80 and 19% Over \$80)

The document, as a whole, lacked substantive analysis - almost a case of "we know what we want - let's go through the motions."

The RIS for the Covenant comes to the conclusion that this is the best and most appropriate mechanism and, curiously makes the following comments regarding one of the alternatives - a "take back" obligation on fillers importers and brand owners - the mechanism on which the NEPM is based:

"It may be difficult to ensure substantial positive outcomes from this option without high costs for monitoring, enforcement and administration. Furthermore, experience with national IWRA's suggests that it could be difficult to set and adjust targets so that they remain equitable over time.....

Environmental effects would probably be marginal, as there would be no direct incentive for producers to minimise packaging. This option would possibly slow the increase in waste to landfill and impacts from the use of virgin materials"

The conclusion that can be drawn from the two documents is that there is still a long way to go before we will see reasonable attempts made to analyse packaging related issues on the basis of real rather than supposed environmental and economic factors.

Given that one of industry's early objectives in the process of negotiating the Covenant was to push for some more detailed and rigorous analysis of the packaging related environmental issues, the result has been disappointing.

The process has, however, achieved a recognition of the need to go beyond kerbside recycling to achieve waste and impact reduction, taking the emphasis off post consumer recycling as the only measured or recognised mechanism and recognising the importance of industry efforts and investment in, for example, new pack design and technology.

The experience in both countries has also shown that is possible, provided industry is relatively united, to negotiate a more effective and meaning regulatory framework - against the trend to regulate - and one that delivers benefits at lower cost to business and the community.

13.5 Recycling in Perspective

The RIS documents referred to above appear to take it for granted that more recycling is necessarily better. Further, they claim public support for recycling, although this is in effect based on its assumed benefit, is good reason to back it from a regulatory perspective. It is claimed, for example, that recycling participation encourages other environmentally positive behaviour, although no evidence is presented to support this claim.

Although consumer surveys generally show strong theoretical support for recycling and high levels of self reported participation, garbage and recycling bin studies show that, on average, around 55% of households put material out for collection on any particular collection day and that the proportion of recyclable material deposited in the recycling bin instead of the garbage bin varies greatly by material and area. Perceptions relating to the need for or value of recycling different materials vary significantly and recycling motivations may be anything but environmental.

Consumer attitudinal differences to the need to recycle different types of packaging materials was probed in research conducted by G Kelly for the ALC in 1994 which showed materials such as glass, newsprint and PET soft drink bottles were considered "important to recycle" and cardboard cartons and steel cans less so. A related finding was that plastic bottles were considered by 80.8% of respondents "to contribute most to environmental deterioration" whilst steel and aluminium cans rated an 8.8% response and cardboard beverage cartons 6.3%. Motivation to recycle a particular container then has elements of volume, (space taken up in the garbage can), perceived value and perceived harm.

A second study that year by the same researcher probed consumer understanding of recycling and related issues. Using focus groups recruited from Sydney and Melbourne the study found many were confused about the nature of recycling with a large proportion seeing it as refilling or reuse, and little understanding of the need to reprocess or remanufacture materials before they can again be used. Hence the resource using downside of recycling is not appreciated. The study also identified extensive reuse of materials within the home. Glass jars and bottles, newsprint, metal cans and cartons all had high reuse rates. These kept them out of the waste/recycling stream temporarily or permanently or made them unsuitable for recycling, but

avoided the need to use new materials for these purposes. This in home reuse or recycling is a form of conservation not often recognised or measured. It does, however, impact on our capacity to recover materials to meet official targets.

The study concludes that people are confused about recycling and environmental issues in general, but that the motivation to recycle is more personal than environmental stemming from the need to manage waste within the home environment, conform minimally to society's demands (e.g. making an attempt to sort materials into bins) helped by a crude understanding of the post recovery processes. They have a low desire to organise their thoughts on environmental issues or learn more about them and are, in fact, quite happy to forget about the environment on a day to day basis, were it not for the fact that they were constantly reminded by promotions, advertising and general media reporting. Their lack of concern stems from the fact that most of the impacts commonly referred to (greenhouse, ozone, energy etc) are invisible and outside the personal range of experiences.

It should be noted that, whilst in this chapter we have concentrated on packaging related matters and have highlighted the early regulatory emphasis on packaging recycling and waste reduction, several states have moved on to look at green waste and other elements of the domestic waste stream and have made efforts to reduce building and demolition waste, again using industry agreements as a mechanism, although landfill pricing policies and levies have also had an impact. Road recycling is also on the increase.

Landfill avoidance still appears to be a significant motivator rather than analysis of transport related energy/greenhouse impacts, which in the case of these materials, are significant - whilst they are relatively inert as fill.

The role of composting is growing and there appears to be an increasing interest in waste-to-energy, not in the form of incinerators but through the use of other technologies. Australia's last municipal waste incinerator (the 140,000 tpa Waterloo plant) was closed in 1995 following a change of government in New South Wales.

Since then we have seen the development of a whole waste stream bioreactor facility through Stirling council in Perth, Western Australia and proposals put forward for a Waste Energy Recycling Facility in Wollongong in New South Wales. This will process domestic waste into a 'biomass pulp', recover recyclable components and use pyrolysis to recover energy.

A Gosford based company, Biomass Energy Services and Technologies (BEST) has also developed briquetting technology to turn household organic waste, including mixed waste paper and beverage cartons, into solid fuel which can be sold as a replacement for domestic firewood. The National Greenhouse Office has given the company a grant to help it establish the first of such facilities in Canberra, the national capital.

There appears to be a growing appreciation of the need to go beyond the recycling of packaging to meet waste diversion targets, yet no general understanding of the need to look for whole of waste stream solutions to overcome the high intrinsic cost associated with the multi-stream nature of a recycling focused approach, nor, in the case of packaging of the real limits to the growth of recycling due to the problem of contamination which makes much of the packaging stream unrecoverable, and the increasing trend to lighter pack types which will make it even less economically viable.

13.6 Other Issues for the Packaging Sector

This chapter has concentrated on the evolution of packaging related legislation and the associated regulatory framework which, as it has in other countries, originally had a litter emphasis and more recently a recycling or waste reduction emphasis.

Whilst the current emphasis is on "resource recovery" (where the cost of recovery in economic and environmental terms tends to be ignored), the litter issue is likely to resurface as the key issue as soon as the recycling system's perceived problems are fixed.

The high visibility of packaging in the domestic waste and litter stream, together with the rapid growth of the use of packaging, is what has helped create the public perception of packaging as a 'problem'. The fact that packaging, in the way it is now used as a distribution facilitator, is a relatively recent phenomenon, must also be a factor in the formation of public attitude. We tend to forget that the automation of paper making occurred a little over 100 years ago and the first mechanical glass moulding plant was as recent as 1903. Society has only had a few generations to get used to modern packaging which has during that time undergone considerable evolution.

Some of the pressure for a return to refillables, for example, could well be based on the fact that this was a pack type the community had become accustomed to and was comfortable with - it is a nostalgia factor or fear of change that has come into play.

The packaging sector must realise that, although we have a community that is relatively comfortable with the use of packaging and, perhaps unconsciously, is aware and appreciative of its benefits, there has not been time, in an historical sense, to develop total comfort - especially given the lack of positive information generally available, through media and other sources, that can put the role of packaging into its proper context.

There is no overall program to communicate the benefits of packaging to the community and, in absence of such activity, consumer perception is not helped by promotions which show packaging in a negative light such as currently supported by one of our major supermarket chains. This promotion is managed by the "Clean up Australia" organisation which, through its access to community service time, has placed TV commercials showing a typical supermarket checkout in operation with the operator asking the customer in

an accusing tone how much impact her purchases of packaged products have had on the environment.

Other industry promotions have focussed on pack recyclability to the extent that this is now seen by consumers as an important pack attribute, when packaging's conserving and preserving role makes a more important contribution to reduction in overall environmental impact.

There is no doubt that the environmental performance of packaging in a general sense as well as its performance in the waste and litter stream will need ongoing consideration by manufacturers and marketers. If packaging is to redeem itself in the public eye, more will have to be done to explain its role in the total scheme of things. Under the Covenant in Australia and the Accord in New Zealand, industry has been given time to do this. Failure to act will see it forego the opportunity to inoculate the local system against imported concepts of packaging regulation.

In an ideal world we would see the packaging sector in the two countries start to tackle and challenge simplistic concepts such as the waste hierarchy as a basis for waste policy, promoting instead the need to set clear environmental objectives, ones that actually emphasise impact reduction, and analysis of the total system to determine where improvements in outcomes can most easily and economically be made.

This would require a higher level of understanding within the packaging sector of how packaging and the environment interact and how the regulatory framework should evolve to optimise that interaction, together with a belief that industry can continue to bring about positive regulatory change.

The importance of success in that endeavour goes beyond the avoidance of the rigid, high cost, regulatory regimes for packaging characteristic of Europe, it is one way the packaging sector can ensure that the environmental benefits associated with the use of packaging are optimised.

13.7 Conclusions

Issues confronting the packaging sector in Australia and New Zealand are similar to those confronting the industry in other parts of the world, being based, as they are elsewhere on a public perception of packaging that suggests it is the cause of waste rather than part of the solution of society's waste problems. Much of the information that has formed that opinion, along with the idea that packaging should be controlled by regulation, has been 'imported' via the media, environmental pressure groups and contacts between government agencies, many of whom were happy to promote the local adoption of regulatory 'solutions' that seemed to be 'successful' elsewhere.

Whilst there were early attempts to go down these paths, lately the trend in both Australia and New Zealand is towards self regulation based on concepts of 'shared product responsibility'. However the pressure to use 'command

and control' approaches or ones based on European style Extended Producer Responsibility is still there - in government departments, in environment groups, in sections of local government and the media because there is not, as yet, a broadly based understanding that these approaches do not help optimise environmental or economic outcomes.

The greatest challenge ahead is to develop an understanding within the packaging industry of the need to continue to push for packaging related policy to be based on sound analysis rather than commonly held perceptions.

Key words: packaging, environment, impact, accord, covenant, waste, recycling, policy, public perception, local government, government, regulation, industry, hierarchy, cost, economic, extended producer responsibility, shared product responsibility.

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