

Defining sustainable packaging: A stakeholder survey

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1. Introduction

One of the criticisms of the National Packaging Covenant (NPC) is that it lacks clear targets or goals. The stated objectives of the NPC include *shared responsibility for the effective life cycle management of packaging* and ensuring that *management of packaging and paper throughout its life cycle ... produces real and sustainable benefits*.

Terms such as *effective life cycle management* and *sustainable benefits* have not been defined. While manufacturers, government agencies and community organisations are striving for sustainability or sustainable development, no-one has defined what this means for packaging systems. Terms such as *sustainable packaging* and *product stewardship* are often used, but there is no consensus on their meaning.

A stakeholder survey was undertaken between August and October 2003 to explore the meaning of sustainability for companies in the packaging supply chain and some of its external stakeholders. The purpose of the survey was to document different points of view on these issues in order to make a positive contribution to the debate about community goals for more sustainable packaging systems.

2. Research method

The method used for the survey was a limited survey of identified ‘experts’ selected on the basis of their involvement in the packaging supply chain or in an organisation with an interest in the environmental impacts of packaging. The expert panel includes representatives from Australian companies, industry associations, government authorities, academia, and environment organisations. Following the ‘Delphi’ survey method, the approach being used is to compile the results of the survey and to send a summary of the survey to respondents for further comment or clarification.

The Delphi method was first developed by the US RAND Corporation in the 1950s to pool expert knowledge on military planning and new technology. Since that time it has been used in many research fields, to facilitate communication between a large and often dispersed group of people with relevant expertise. It is often used to forecast trends, or to find answers to problems that don’t lend themselves to precise analytical techniques. In cases like this it can be useful to gather the subjective judgments of experts, and to provide an iterative process of information gathering, feedback and

more information gathering, that seeks to develop a consensus view of the issue under review.

The initial survey (Attachment 1) was sent by email to approximately 50 individuals between May and October 2003, and 30 surveys had been returned by 31 October 2003. The sectors represented by survey respondents are listed in Table 1.

Table 1: Number of respondents from each sector

Sector	Number
Manufacturer (raw materials / packaging / food/beverage)	8
Retailer (grocery / other)	2
Industry association	4
Government (State and local)	6
Non-government environment organisation	2
Consultant	3
Academic	3
Other (importer / individual)	2
Total	30

The initial survey results were then presented to a workshop at the International Solid Waste Association (ISWA) Congress in Melbourne in November 2003.

Approximately 25 people attended, including representatives from the packaging and waste management industries; local, state and federal government; and a number of international visitors. Participants were provided with a copy of the survey results, and a summary paper (Attachment 2) with key questions arising from the survey. These questions were used as the basis for a panel discussion. Panel members were drawn from the packaging industry, state government and the National packaging Covenant Council.

3. Survey Results

Survey results for each of the questions are summarized below.

3.1 Do you think that current systems for the ‘life cycle management’ of packaging are sustainable?

While most respondents believe that current systems are ‘unsustainable’ (Table 2), many rightly point out that the question is difficult, if not impossible, to answer without further clarification.

Table 2: Do you think that current systems for life cycle management of packaging are sustainable?

Response	Number of respondents
Yes	3
No	22
Don’t know / other	5
Total	30

Concern was expressed that there are no generally accepted definitions of 'life cycle management' or 'sustainable':

There is no clear agreement on the word 'sustainable' ... The boundaries of life cycles are inconsistently defined.

Industry association

...I don't think anyone has actually defined what sustainable really means let alone tried to ascertain if the system meets it.

Industry association

Not enough information on what is meant with 'life cycle management' of packaging! Not clear what systems are in place or what potential systems are available. I don't know what indicators could measure the sustainability of life cycle management systems.

Academic

One respondent argued that the answer to the question may depend on which system is being considered:

While I've answered 'no' I'm not sure the question is a helpful one. I'm unsure which systems are being referred to – governments' (e.g. the Covenant) or the various approaches adopted by the industry (the Code of Practice) or some individual companies. However whichever is the focus none is currently sustainable. The Covenant will need to change if it is to be renewed, the industry code (and others like it) are inadequate and unlikely to sustain public support for various forms of packaging ... None of the company systems that I'm aware of really adopt and apply the results of a rigorous and transparent LCA approach.

Government

Several respondents believe that the answer depends on which packaging material (e.g. cardboard or plastic), or which part of the industry, is considered:

Yes for certain materials such as glass, paper and aluminium cans due to the high volume of recycling that lowers the recycling cost. For other materials the systems are sustainable but all of the steps are not fully developed, and lower recovery rates e.g. 20-30% are not having sufficient impact on material savings and landfill reduction.

Manufacturer

... I believe the cardboard packaging lifecycle is a lot better managed than plastics on 3 counts:

- 1. Material source and type. Cardboard can readily be made from recycled materials. Yet there is little emphasis placed on the origin of plastics raw materials and the make up of the product.*
- 2. Use of the product - packaging is over used. There are many packaged goods that are packaging inside packaging inside packaging - much of which is unnecessary. I also don't believe it to be 'sustainable' to make excessive packaging for marketing purposes, nor developing packaging for*

its 'throw-away-ability' (e.g. McCain's dinner for one where the leftover bowl is thrown in the bin).

- 3. Final disposal of the product. Cardboard can be readily recycled into new products, and the recycling system is easily accessible to most end-users. Plastics are difficult to dispose of, with recycling appearing to be a difficult option (economically, as well as being a low value material, with a difficult collection and recycling process).*

Retailer

...I don't think you can talk about packaging as a whole, it is very complex and you can't tar the whole industry with one brush.

Industry association

Another view was that it may also depend on the specific environmental criteria used to evaluate sustainability:

...The answer also depends on the criteria adopted to judge sustainability - in terms of actual resources used in packaging some are 'renewable' if the resource base is appropriately managed; many (probably most) are non-renewable and the life-times of the resource base are limited - probably with an effective economic lifetime of less than a century. However the potential to shift from these as costs increase is considerable. However if the actual key to sustainability is the likelihood of continued consumer acceptance of the packaging then the answer is different. As we're seeing with plastic bags, growing consumer concerns and pressure are likely to make this form of packaging unsustainable in the not too distant future.

Government

Some commented that it is too early to say whether packaging systems are sustainable or not. One manufacturer noted that *it is still early days*, while another discussed progress in terms of a *sustainable packaging journey*:

In Australia, progress is being made towards more sustainable packaging but more can and needs to be done around reduce, reuse, redesign and recycle via a cooperative supply chain approach. Packaging needs to be seen as an integral part of the product and as such more also needs to be done about educating the consumer about responsible behaviour regarding the use and disposal of the packaged product. So the sustainable packaging journey needs ongoing improved performance and attitudes by the producers (industry) and the users (community).

Manufacturer

Many of the respondents who answered 'no' to this question highlighted issues relating to end-of-life management, i.e. the lack of recycling facilities for some materials. Others focused on the need to minimize impacts over the total life cycle, or highlighted the potential conflict between the two goals:

There is inadequate consideration of and intention to address: resource minimization / efficiency; responsibility for waste created by packaging i.e.

extended producer responsibility; systems for recovery of packaging waste for recycling / reuse; design for sustainability e.g. reuse, minimal materials etc.
Non-government environment group

Many potential recyclables still go into landfill, as no viable market exists for the recycled end product.

Retailer

The current kerbside recycling system is sustainable, but it is not necessarily related to an LCA approach. Life cycle management in its purest form is often at odds with consumer based kerbside collection/recycle systems.

Manufacturer

They focus on lightweighting and/or recycling, both of which have rebound effects that enhance throughput, sustaining unsustainable levels of material intensity.

Academic

In their answer to this question, many respondents identified barriers to sustainability, and the tensions that exist between commercial and environmental demands on packaging. Barriers that were identified include, changing life styles and consumption trends that are driving changes in packaging systems, a lack of understanding or commitment from industry and/or consumers, and a lack of regulatory enforcement.

The unsustainable use of packaging is part of a wider phenomenon of unsustainable consumption. By itself, it is not the core problem, but it is the most visible symptom. However, it is itself a contribution to the phenomenon of unsustainable consumption. Plastic bags, wraps, EPS etc are litter-ugly and are marine pollutants. Paper bags and wrappers are aesthetically pleasing but (particularly) harmful in manufacture. At the same time, packaging is a great protector of agricultural and manufactured products and thus a great saver of scarce resources. A society's self-management of packaging is part of the bigger problem of its self-management of consumption.

Consultant

Lack of consumer demand for sustainable packaging makes manufacturers companies reluctant to fully commit to the concept. With no driver for the change be it market forces or legislative this will be a very slow process.

Retailer

Packaging needs to be seen as an integral part of the product and as such more also needs to be done about educating the consumer about responsible behaviour regarding the use and disposal of the packaged product.

Manufacturer

There are too many disparate forces. The manufacturer wants to sell more volume of product, so does the distributor-retailer want less volume but packaging stability and product freshness. Consumers only get emotionally involved when frustrated by tough packaging. Most consumers are too lazy to consistently do recyclers sorting. Assuming 'life cycle management' relates to

the 'life' of the packaging medium then the competing aims of the disparate forces need to be effectively linked. Very difficult I imagine!
Manufacturer

I don't believe the current systems take a life-cycle approach. Very few members of the Packaging Supply Chain have actually undertaken an LCA or even understand what an LCA is. Even fewer individuals in the supply chain understand what sustainability is (means) and how to incorporate it into normal business practice.
Manufacturer

I don't believe industry packaging designers and marketers rate environmental impact above other aspects like aesthetics and marketability.
Industry association

... I'm also not convinced that industry is applying all of its available know-how and technology to achieve environmentally improved packaging that goes beyond just being recyclable. Much more can be done on this aspect. I also believe that the 'life cycle' concept or ethic is yet to be fully comprehended by industry and other parties.
Consultant

Consumers are becoming more demanding - putting increased commercial pressure on the integrity and role of packaging. Brand owners are responding to these and other (social, demographic) pressures with environmental consideration being pushed into the background. My perception is that many companies are more willing to let others do the work, until they themselves are in some way forced to do so.
Other organisation

The vast majority of the current generation of packages has been designed to meet only one of the sustainability criteria - namely economics. Packaging is designed to meet functional requirements at the minimum cost in almost all cases.
Academic

Some skepticism was expressed about the effectiveness of the NPC in facilitating sustainability:

Didn't know there was a system in place for this! What is it? National Packaging Covenant has done very little.
Government

...I also get the impression that many elements / corporate activities within the NPC are old or pre-existing activities that have been 'recoded'. I don't get the feeling that all the key parties are fully behind it and that it has the confidence of all jurisdictions or levels of government.
Consultant

The NPC is a good start however it is at odds with CDL [Container Deposit Legislation] ... contrary to what a lot of people say CDL does not undermine kerbside collection...

Government

3.2 What do you think are the most significant benefits of packaging?

Any examination of sustainability needs to begin with the question – is the product necessary? Is it useful? The negative impacts of a product on the environment, and possible solutions, need to be considered within this context.

Survey respondents were therefore asked to list, in order of importance, the perceived benefits of packaging. Table 3 summarizes the benefits identified by respondents, and the number of times each benefit was ranked first, second, third, fourth or fifth.

A number of conclusions can be drawn from this. Most respondents were able to list at least 3 benefits of packaging, with a total number of 113 responses to the question. The most commonly listed benefits, were:

1. Product containment and preservation
2. Convenient transport and distribution
3. Tamper evidence and food safety
4. Product information and identification
5. Marketing and product differentiation
6. Convenience for consumers; and
7. Product life extension.

One respondent noted that the packaging industry, apart from providing direct benefits through its primary functions of preservation, transport, etc, is also a major employer.

Table 3: Benefits of packaging (in order of importance)

Benefit of packaging	Total number of times listed	Number of times listed in order of importance				
		1	2	3	4	5
Contain, preserve and protect the product / higher quality due to technology of ‘preservation’	27	16	7	2	1	1
Convenient transport and distribution through the supply chain	16	2	7	4	2	1
Marketing / branding of the product / product differentiation / attract customers / visual appeal	14	1	2	3	5	3
Tamper evidence for hygiene and food safety / freedom from contamination	15	8	4	1	2	
Provide essential product information / product identification	15		4	5	4	2
Convenient / ease of use / appropriate quantity packs	9	1		3	4	1
Allows greater life span and shelf life of goods / product life optimization or extension	4		1	3		
More natural state of food in modern	2	1		1		

packaging / keeps food fresh						
Waste minimization as a result of product preservation or protection	2		2			
Occasional Multiple use (some products, e.g. plastic bags)	2			1		1
Significant employer	1				1	
Low cost for whole life cycle	1					1
Allows the retailer to display the product effectively	3			1	1	1
Allows storage of products	2			1		1
Total	113	29	27	25	20	12

3.3 What do you think are the most significant environmental impacts of packaging?

Respondents were asked to list, in order of importance, the perceived impacts of packaging. Table 3 summarizes the impacts identified by respondents, and the number of times each benefit was ranked first, second, third, fourth or fifth.

A total number of 114 responses were received to this question. The most commonly listed impacts were:

1. Litter and its impacts on wildlife and visual amenity
2. Amount of waste to landfill and the impacts of landfill (e.g. leachate)
3. Excessive or inefficient use of materials
4. Reduction in waste due to food preservation
5. Toxic wastes from manufacture or end-of-life
6. Energy costs; and
7. Lack of secondary markets for new materials.

As this list indicates, not all impacts are negative. A number of respondents also mentioned the **positive environmental impacts** that packaging has on the environment, particularly by reducing product waste.

Some respondents also mentioned **negative social impacts** of packaging, such as:

1. Fostering unsustainable consumption habits, such not valuing materials and a ‘throw-away mentality’
2. Costs of packaging
3. Increased consumption; and
4. Impacts on local consumption and production patterns.

Several respondents mentioned undesirable impacts of packaging on attitudes and consumption habits:

Lifestyle trends (e.g. encouraging disposable society and a take-away society reducing the purchase of fresh foods and cooking at home)
Retailer

Increased (excessive!) consumption due to increased availability
Industry association

Fostering the cultural habit of not valuing materials
Academic

Impacts on local markets and local industry were mentioned by one respondent:

From a sustainability perspective, there are also the social impacts of modern packaging systems, such as their impact on local markets and local consumption and production patterns. This is perhaps not as relevant here in Australia; where there is a relatively small homogenous population spread over very large distances, but is significant in developing and transition countries.

Government

Table 4: Impacts of packaging (in order of importance)

Impacts of packaging	Total number of times listed	Number of times listed in order of importance				
		1	2	3	4	5
Inefficient use of materials used in manufacture / amount of materials / material intensity (materials used for short-life product)	17	8	2	5	2	
Use of scarce or non-renewable resources	6	3		1	1	1
Fostering unsustainable cultural habits, e.g. not valuing materials / throw-away society / less purchase of fresh foods and cooking at home	6	3		1	2	
Toxicity of waste produced in manufacture / toxicity of end-product	6		1		4	1
Amount of waste to landfill / leachate from landfill	18	4	8	3	2	1
New materials being developed with no secondary markets / increased volume of material that is not recycled	3		1			2
Litter on land and in waterways / impacts of litter on wildlife	21	3	6	7	4	1
Over-packaging / convenience packaging & individual packs requiring more packaging	3	1		1	1	
Transport inefficiency / impacts of transport	2			1		1
Pollution (air, water) from production of packaging / contribution to global warming	5		1		2	2
Increased consumption due to increased availability	1			1		
Impacts on biodiversity	1				1	
Energy costs to product / energy intensity (energy production for short-life product)	5	2	1	2		
Impacts on the greenhouse effects				1		
Use of water in manufacture	2		2			
Overall environmental impacts of production and use	2		1			1
Environmental impacts of collection, transport and recycling at end of life	2		1	1		
Social impacts on local markets and local consumption and production patterns	2			1	1	
Cost	1		1			

Material or product life optimization or extension	1		1			
Improved effectiveness and efficiency of delivering products	1	1				
Reduction in waste / protection of contents	7	4	2	1		
Energy savings from modern packaging	1				1	
Councils not accepting their rubbish collection responsibilities	1			1		
Total	114	29	28	26	21	10

3.4 Describe your vision for ‘sustainable packaging’

This question was designed to build on the benefits and impacts already listed, by asking respondents to articulate a vision for sustainable packaging. Responses were varied, but some of the key requirements that were mentioned include:

- Meets essential needs, i.e. performs a valuable function and is not excessive
- Does not generate any waste, i.e. can be managed in closed cycles through strategies of reuse, recycling or composting
- Responds to the expectations of customers and stakeholders; and
- Material and energy-efficient, with minimal impacts over the packaging life cycle.

Several respondents used examples to illustrate their vision:

Packaging that you eat, i.e. an ice cream cone. Compostable or recyclable.
Government

A model or template that ideally results in no net gain or loss to environmental quality, e.g. a hessian bag is made from natural material - can be used repeatedly during its lifetime and, disposed of correctly can provide an organic benefit to the soil without further processing. Its impact is low, its utility is very high.
Manufacturer

Banana leaves. Tough, strong, attractive, biodegradable, renewable.
Academic

Many responses highlighted the need to consider economic, social and environmental needs and impacts:

Easy question to ask, difficult question to answer without writing a book on the topic. Sustainable packaging would have to be packaging that is only used when it is necessary and where it fulfils its functions of product protection, identification etc., as part of a sustainable production and consumption system. This could take a range of shapes and sizes, such as reusable packaging or packaging that is easily and readily recycled and operating in a system with high capture rates. Reusable packaging would ideally also be part

of pool systems, where standard packaging could be used by a wide range of layers, which after use could be returned to the nearest player.
Government

Some of the responses began with the need to ensure that the functional requirements of packaging are met in the most efficient way possible:

Packaging suited to need which optimizes net efficiency of resource usage and achieves a high level of consumer acceptance.
Government

Packaging used in due proportion to the protection, storage and display needs of consumables themselves consumed in due proportion to the immediate and long term health of the individual and society. Very high primary function performance (product protection, transport and storage).....
Consultant

Some responses tried to articulate the goals of sustainable packaging in environmental terms, such as closed cycles, zero waste or renewable materials:

Sustainable packaging will be part of a sustainable consumption and production pattern using resources including energy, which are able to be renewed, or replaced by comparable resources in a manner that leads towards a steady state.
Industry association

Every form of packaging has a use-life of at least a decade, circulating in the most energy efficient way possible between manufacturers, retailers and/or users many times over that period - what Walter Stahel calls a lake economy rather than the zero-use-life river economy of packaging.
Academic

Environmental acceptability involves minimizing use of material inputs in manufacturing and maximizing the recyclability, reuse or compostability of used products, i.e. promoting a closed-loop system where possible.
Manufacturer

A large number of respondents, particularly those in industry, talked about sustainable packaging in terms of community engagement and meeting stakeholder expectations:

Packaging that meets community / consumer needs, is environmentally acceptable and financially viable to produce...
Manufacturer

A system which is based upon valid science, economics and consumer behavior which is totally integrated allowing everybody to participate and own the outcomes from design/manufacture right through to usage, collection and recycling.
Manufacturer

One that will satisfy the environmental understanding /expectations of our stakeholders whilst contributing, in a cost-effective way, to a comprehensive brand image. In other words packaging that is economic, socially acceptable and environmentally compatible.

Manufacturer

In an ideal world packaging systems should seamlessly fulfill the expectations of all stakeholders involved in the supply chain as well as government and community stakeholders. It should be able to support business growth, to meet user/consumer values and expectations (both in terms of supplying expected quality of product as well as convenience in product use and discarding of packaging) and to minimally impact on the environment. It should fit seamlessly in our modern society without upsetting any of the directly or indirectly involved stakeholders.

Academic

In addition to meeting stakeholder expectations, one respondent noted the need to ensure that solutions are relevant to the specific context:

A package that after thorough examination of the needs and all aspects and options is agreed to be the most environmentally friendly option to package a particular product in a given location or environment.

Industry association

Some responses included the need for producer responsibility:

Extended producer responsibility legislated to ensure that all manufacturers and users of packaging are responsible for the packaging at the end of life...

Non-government environment organization

Reduced range of packaging materials - all of which can either be reused (really reused i.e. has a specific reuse purpose - not as a pencil caddy!) recycled (in current systems) or composted. Manufacturers being responsible for the packaging material they produce.

Government

The role of the consumer in driving or supporting sustainable packaging was also highlighted by some respondents:

Sustainable consumer packaging, uses the minimum amount of packaging material required to meet product safety/quality and merchandising standards, and has been manufactured using contents from sustainable resources that are readily recyclable through existing methods. This packaging is provided to the consumer at the same or reduced cost of other non-sustainable options and is clearly identifiable by the recognized logo. Consumer education and promotion of this packaging has led to behaviour change in consumers making this a major criteria in their purchasing choice.

Retailer

Reduced consumer expectations for packaging e.g. less demand for individually wrapped items, packaged fast food/convenience food etc. Health and safety laws to take into consideration and assist the need to reduce disposable packaging and waste in general, e.g. allow consumers to bring their own containers to shops.

Non-government environment organization

3.5 What do you understand by the term ‘product stewardship’?

Responses to this question can be categorized in two ways:

- How responsibility for the management of packaging should be assigned within the product chain, i.e. whether it should be the responsibility of the producer (however defined) or shared between different organisations within the product chain; and
- Whether it should apply to the total life cycle impacts of packaging or to the management of packaging at end-of-life.

In other words, the answers provided by respondents considered both **who** is responsible for product stewardship, and **what** they are responsible for.

In answering this question, most respondents focused on ‘shared responsibility’ in some form:

Assessing with your suppliers and customers the environmental impact of the product from raw material inputs, manufacturing process, end use and disposal. Taking responsibility with others in the product supply chain to minimize these impacts.

Manufacturer

A cradle to grave approach, but one which involves all participants. Product stewardship is not the responsibility of a single entity.

Manufacturer

Demonstrable and credible (social) responsibility, throughout the supply chain, for the extraction, manufacture, use and disposal of product components. This extended & shared responsibility must include the consumer. This is a civic duty of all concerned with individual products.

Manufacturer

Each stakeholder in the supply chain from supplier of raw material to manufacturer and retailer including the consumer. Each play a part in reducing the negative impact or aspects of a product. By the end product user creating market pressure for change down through their supply chain this can ensure that the consumer is presented with sustainable products.

Retailer

Stewardship, whether of a product, process or person, is responsibility, while under the 'steward's' control. (I am steward of my farm, while I own it, but after selling it, the stewardship passes to the new owner).

Industry association

Taking charge of the coordination of the 'life cycle' management, by various parties (e.g. within the packaging supply chain) or the 'product'. Thereby ensuring that sustainable standards are achieved at each stage of the lifecycle.
Industry association

A principle of shared responsibility, where responsibility for the environmental impacts of a product are shared amongst those involved in the product's life cycle, from manufacturing to consumption to end-of-life management.
Government

Whereby the members of the product chain are individually or collectively responsible for the waste created by the production and sales of a product - this should include the product itself, as well as the packaging (as well as any materials disposed of during the manufacture and transport process - the entire value chain).
Non-government environment organisation

Reflects the process of creating a product - typically linear by current paradigm (cradle to grave vs. cradle to cradle) - where each phase has a steward or responsible body. That is: design, supply, manufacture, distribute, sales/retail, consume, recycle, dispose or re-manufacture. The objective being to reduce the environmental impact of each phase within an appreciation of the total product life cycle....
Individual

Taking responsibility for the environmental impacts of a product throughout its lifecycle and not just those for those parts of the cycle for which one is directly responsible.
Manufacturer

Some respondents defined product stewardship to include some form of extended producer responsibility, but these were the exception rather than the rule:

That the product manufacturer has varying levels of obligation during the life of the product e.g. from cradle to grave. Suspect it is being broadened to include other players in the game including the consumer.
Manufacturer

Manufacturers responsible for all packaging they produce ie responsible for the collection and reuse/recycle/composting/disposing of the package.
Government

Some respondents defined product stewardship in terms of responsibility at end-of-life, but most respondents focused on the entire product life cycle:

Manufacturers responsible for all packaging they produce i.e. responsible for the collection and reuse/recycle/composting/disposing if the package.
Government

Providing systems to ensure that the product is not left without consequence at the end of its first use and ensuring that the whole product life cycle is either benign or beneficial to the community in crucial inputs and outputs.

Manufacturer

Industry or business-based approach to managing the full life cycle of products and product systems with a view to eliminating and/or minimizing impacts and maximising overall environmental, functional and economic performance. I believe Product Stewardship should ideally cover a range of issues and objectives associated with products (e.g. energy efficiency, water efficiency, consumer education) and not just waste and take back. It's about going back to the essential philosophy of 'stewardship'. In many ways it's an old fashioned term for 'sustainability' that was in industry currency well before ESD.

Consultant

Being environmentally and socially responsible for a product throughout a product's lifecycle (cradle to grave).

Industry association

One respondent defined product stewardship in terms of a new approach to business:

The term should refer to the new forms of business strategy that aim to decouple wealth generation from materials throughput by selling use rather than ownership in closed loops.

Academic

4. Survey conclusions and further questions

The survey demonstrated that there is a reasonably high level of consensus about the major benefits of packaging and some of the major impacts, and about goals for sustainable packaging (the 'vision'). Most respondents believe (with many qualifications and concerns about the question) that current packaging systems are not sustainable. There was however, some recognition that progress has been made and that some materials are more sustainable than others.

It is clear from the survey responses that the 'sustainability journey' for packaging is necessarily complex, due to the fact that packaging plays such a critical role in distribution, retailing and consumption. The transition to sustainable packaging needs to consider its role in larger production and consumption systems with many stakeholders.

There still seem to be several areas of uncertainty or differences of opinion between stakeholders, however.

1. The first area of difference concerns the nature of 'the problem' that needs to be addressed in relation to packaging. How we define the problem may have important implications for the development of industry programs and policy responses.

What is 'the problem' with packaging?

- *Is it the waste generated after packaging has performed its original function and been thrown away?*
- *Is it the total life cycle impacts of packaging during production, consumption, use and end-of-life?*
- *Or are both of these problems merely symptoms of unsustainable consumption patterns?*

2. The second of these relates to the issue of how responsibility for different aspects of 'life cycle management' should be allocated between different stakeholders. Most survey respondents believe that product stewardship involves some form of 'shared responsibility' between supply chain partners, government and consumers, but this definition is still ambiguous. Some respondents equate product stewardship with extended producer responsibility, which makes producers (however defined) responsible for the physical and/or financial responsibility for products at end-of-life. Others believe that each organization's responsibilities only relate to those activities that are directly under their sphere of control or influence.

What does product stewardship mean?

- *Is it a more environmentally responsible version of 'business as usual', with organisations each taking responsibility for reducing the impacts of their own activities (i.e. while the product is under their direct control)?*
- *Or does it apply to partnership activities that extend responsibility to impacts that occur beyond conventional or legal boundaries, and not just those impacts for which an organisation is directly responsible for?*
- *How should responsibilities be allocated, either individually or collectively?*

3. The final area of difference concerns the role of the consumer as a driver or a barrier to sustainable packaging. Some respondents believe that consumers play a critical role in driving the form and therefore the impacts of packaging, which means that they may provide a key to shifting to more sustainable systems. Others argue that producers have the most influence and therefore the most responsibility for driving change.

What is the role of the consumer in achieving sustainable packaging?

- *Are consumers responsible for driving changes in packaging design as they search for products that are more convenient, longer life, tamper evident etc?*
- *Or are consumers simply responding to new products launched by companies to boost sales and market share in a competitive market?*
- *Is 'sustainable consumption' a useful concept in this debate, or just more jargon?*

5. Feedback from the workshop

The questions listed above were discussed at the ISWA workshop in November 2003. A summary of that discussion is provided below.

5.1 What is ‘the problem’ with packaging?

In the community’s eyes, the problem is primarily about waste, but we need to consider total life cycle impacts as well.

It is clear that packaging plays a symbolic role in the community. We all feel guilty about packaging waste and it’s something that we all have exposure to every day. Unlike other, possibly more important issues (e.g. global warming), it is also something that consumers feel that they can influence.

Plastic bags are a good example of this. We consume more non-renewable resources by driving to the shop than the resources embodied in the plastic shopping bags that we bring home, but that doesn’t stop us driving to the shop.

5.2 What is ‘product stewardship’?

Product stewardship is about partnerships. There is a ‘disconnect’ between the environmental impacts of packaging and the people who make the decisions about design, manufacture etc. We need to find connections between designers, packaging manufacturers, filers, retailers, consumers and local government in order to address the problem. It’s not something that one group can address on their own.

One of the problems with the ‘shared responsibility’ model is that some of the responsibility has been delegated to consumers, but we haven’t spelt out exactly what they are expected to do.

5.3 What is the role of the consumer?

Consumers are very important in moving forward on this. They are demanding more from packaging, and manufacturers are responding. We need to raise awareness and educate consumers about sustainable packaging.

At the same time we can’t overload consumers, who are already trying to cope with lots of other information. Many of these issues are complex, and we need to translate them into simple messages. Degradable bags are a case in point.

On the other hand, consumers don’t have much choice when they get into a supermarket. We normally don’t have any choice of packaging if we want to buy a specific product. For example, in one supermarket in the UK, you can buy organic apples, but you can only buy them shrink wrapped on a tray.

Marketers have an important role to play in driving change. They do a lot of market research before they launch a new product – why can’t they include environmental research in this process?

We need to make sustainable packaging the ‘norm’ rather than expecting consumers to differentiate. We don’t want half the supermarket offering ‘sustainable packaging’ and half offering ‘non eco-packaging’. We need to raise the overall industry standard.

Consumers get frustrated when they buy a product and it has excess packaging, for example when an appliance is delivered and it has a lot of cardboard and polystyrene. However, they don’t choose an appliance because of its packaging, so there is no role

for consumer choice here. In any event, the energy consumed by an appliance in its life time is much more important than the packaging.

Education should play an important role in sustainable packaging by changing community norms and expectations.

6. Next steps

This project is aiming to define sustainable packaging by engaging stakeholders in a discussion about the impacts and benefits of packaging, sustainability goals and levels of responsibility within the product chain. This ‘discussion’ is taking the form of a written survey to gather initial responses, circulation of a summary paper and requests for further comment or feedback. The initial survey was sent to individuals that are closely involved in the environmental management of packaging in some form, whether from a government organisation, packaging manufacturer, food and beverage manufacturer, retailer, industry association, non-government environment organisation or an individual consumer / activist. The results of the survey were then discussed at the ISWA workshop in November 2003.

Additional feedback is now sought on some of the key questions arising from the survey and the workshop. These are summarized below.

- Is ‘the problem’ with packaging the inefficient use of materials and waste, or is it the total life cycle impacts (including biodiversity depletion, land degradation, pollution, global warming, toxicity etc)? Where should companies and policy makers focus their efforts?
- If product stewardship is about partnerships and ‘shared responsibility’, can we be more specific about allocating roles and responsibilities within the product chain and the broader community?
- Is it the responsibility of consumers to change their shopping habits to consciously choose products that minimize the environmental impacts of packaging; or is it the responsibility of manufacturers and retailers to pack and display products in environmentally responsible packaging as a normal business practice?
- How can we reconcile the sometimes conflicting expectations that individuals have as consumers, for increased convenience, safety, shelf life etc in packaging; with higher expectations that many of the same individuals have as citizens, i.e. for greater environmental sustainability of packaging?

Please send any feedback or additional comments on this paper to:
Helen Lewis
Centre for Design, RMIT University
helen.lewis@rmit.ed.au

Attachment 1
Defining Sustainable Packaging
SURVEY FORM

1. Do you think that current systems for the ‘life cycle management’ of packaging are sustainable?

Yes No

2. Why or why not?

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3. What do you think are the most significant benefits of packaging (in order of importance)?

1	
2	
3	
4	
5	

4. What do you think are the most significant environmental impacts of packaging (in order of importance)?

1	
2	
3	
4	
5	

5. Describe your vision for “sustainable packaging”

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6. What do you understand by the term ‘product stewardship’?

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7. **Which of the following sectors or groups do you belong to? (please tick 1)**

Manufacturer	<input type="checkbox"/>
Retailer	<input type="checkbox"/>
Industry association	<input type="checkbox"/>
Professional association	<input type="checkbox"/>
Government – Federal	<input type="checkbox"/>
Government – State	<input type="checkbox"/>
Government – Regional	<input type="checkbox"/>
Government - Local	<input type="checkbox"/>
Non-government environment organisation	<input type="checkbox"/>
Non-government consumer organisation	<input type="checkbox"/>
Consultant	<input type="checkbox"/>
Media	<input type="checkbox"/>
Academic / researcher	<input type="checkbox"/>
Other (please specify)	<input type="checkbox"/>

8. **Please provide your name (this is only for my use in tracking responses, so that I do not follow you up unnecessarily. It will not be used to reference any of your comments)**

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Thank you for your participation. Please return by mail, email or fax by [date provided] 2003 to:

Helen Lewis, Director, Centre for Design at RMIT

GPO Box 2476V, Melbourne 3001

Fax: 9639 3412,

Email hlewis@rmit.edu.au

If you have any questions, please contact Helen Lewis at RMIT University on (03) 9925 3485 or email at the above address.

Attachment 2
ISWA 2003 Sustainable Packaging Workshop
Wednesday 12 November, 4.00 – 5.30
Melbourne Congress Centre



Outline

This workshop is being run by the Sustainable Packaging Alliance (SPA), a partnership between of Victoria University Packaging and Polymer Research Unit, Centre for Design at RMIT and Birubi Innovation. The aim of the workshop is to present the results of a recent stakeholder survey and to discuss some of the further questions it generated on the nature of the packaging problem, the meaning of the term ‘product stewardship’ and the role of consumers in driving change.

Format

Participants will each receive a copy of the paper, *Defining packaging sustainability: a stakeholder survey*.

Initial discussion about the issues raised in the study will involve a panel of conference delegates including Rob Joy (Victorian EPA), Bob Beynon, (Victorian Association of Regional Waste Management Groups), Ed Cordner (National Packaging Covenant Council), Andrew Grant (Visy Industrial Packaging – to be confirmed) and David Brookes (Amcor). This will be followed by questions and general discussion.

Questions for discussion

The SPA research project ‘Defining sustainable packaging’ aims to engage stakeholders in a discussion about the impacts and benefits of packaging, sustainability goals and levels of responsibility within the product chain. The first stage of this research has been a written survey of stakeholders to gather initial responses, circulation of a summary paper and requests for further comment or feedback. The initial survey was sent to individuals that are closely involved in the environmental management of packaging in some form, whether from a government organisation, packaging manufacturer, food and beverage manufacturer, retailer, industry association, non-government environment organisation or an individual consumer / activist.

The initial survey demonstrated that there is generally a reasonably high level of consensus about the major benefits of packaging and some of the major impacts, and about goals for sustainable packaging. Most respondents believe (with many qualifications and concerns about the question) that current packaging systems are not sustainable. There was however, some recognition that progress has been made and that some materials are more sustainable than others.

It is clear from the survey responses that the ‘sustainability journey’ for packaging is necessarily complex, due to the fact that packaging plays such a critical role in distribution, retailing and consumption. The transition to sustainable packaging needs to consider its role in a larger production and consumption system with many stakeholders.

There still seem to be several areas of uncertainty or differences of opinion between stakeholders, however.

1. The first area of difference concerns the nature of ‘the problem’ that needs to be addressed in relation to packaging. How we define the problem may have profound implications for policy responses to address it.

What is ‘the problem’ with packaging?

- **Is it the waste generated after packaging has performed its original function and been thrown away?**
- **Is it the total life cycle impacts of packaging during production, consumption, use and end-of-life?**
- **Or are both of these problems merely symptoms of unsustainable consumption patterns?**

2. The second of these relates to the issue of how responsibility for different aspects of ‘life cycle management’ should be allocated among different stakeholders. Most survey respondents believe that product stewardship involves some form of ‘shared responsibility’ in conjunction with supply chain partners, government and consumers, but this definition is still ambiguous. Some respondents equate product stewardship with Extended Producer Responsibility, which makes producers (however defined) responsible for the physical and/or financial responsibility for products at end-of-life. Others believe that each organization’s responsibilities only relate to those activities that are directly under their sphere of control or influence.

What does product stewardship mean?

- **Is it a more environmentally responsible version of ‘business as usual’, with organisations each taking responsibility for reducing the impacts of their own activities (i.e. while the product is under their direct control)?**
- **Or does it apply to partnership activities that extend the responsibilities of organisations to the life cycle impacts of a product, and not just those impacts for which an organisation is directly responsible for?**
- **How should responsibilities be allocated, either individually or collectively?**

3. The final area of difference concerns the role of the consumer in driving the design of packaging and many of the consequent environmental impacts. Some respondents believe that consumers play a critical role in driving the form and therefore the impacts of packaging, which means that they may provide the key to shifting to more sustainable systems. Others would argue that producers have the most influence and therefore the most responsibility in driving change.

What is the role of the consumer in achieving sustainable packaging?

6. **Are consumers responsible for driving changes in packaging design as they search for products that are more convenient, longer life, tamper evident etc?**
7. **Or are consumers simply responding to new products launched by companies to boost sales and market share in a competitive market?**
8. **Is ‘sustainable consumption’ a useful concept, or just more jargon?**