



# Evaluation of National Packaging Covenant signatory action plans and annual reports

Part of the mid-term review of the National Packaging Covenant

Final Report

30<sup>th</sup> July 2008

Report to the National Packaging Covenant Council

## **Prepared by**

Karli Verghese, Ian Jones, Paul-Antoine Bontinck, Glenn Di-Mauro Hayes,  
Juin Majumdar, Nicholas Johns and Areli Avendano

GPO Box 2476V Melbourne Telephone 613 9925 3484  
Victoria 3001 Australia Facsimile 613 9639 3412  
www.cfd.rmit.edu.au cfd@rmit.edu.au



## Executive summary

### *Introduction*

The Centre for Design at RMIT University undertook a review of action plans and annual reports from signatories within the National Packaging Covenant (NPC) Mark II, as part of the mid-term evaluation of the NPC. The review was completed during March-June 2008. A total of 199 action plans and 217 annual reports were reviewed from a total of 140 randomly sampled signatories. It is important to note that these results only reflect what was gathered from the action plans and annual reports in the random sample. The random sample comprised brand owners (95); packaging manufacturer/supplier (19); wholesaler/retailer (7); industry association (7); commonwealth, state, territory and local government (6); raw material supplier (4); and community and waste management groups (2). The star rating, given by an independent reviewer when plans and reports are submitted to the National Packaging Covenant Council, of sampled signatories was: 1 star (2 signatories); 2 stars (38); 3 stars (52); 4 stars (30); and 5 stars (16).

The review of action plans and annual reports demonstrated that a significant amount of activity is occurring within the packaging supply chain to reduce environmental impacts, from purchasing through to operations and product design. Whilst in some cases this change may have been spurred from within the individual companies, it is reported that much of this activity has been initiated or facilitated as a result of the Covenant process.

It was determined that the level of quality within action plans and annual reports was not related to organizational size. Submissions by small to medium sized companies were often as good as, or sometimes better, than those submitted by very large organisations. Many of the signatories who had previously been signatories to NPC Mark 1 (MK1) and had signed on to MKII were able to report at satisfactory level. However, the more recent additions to the NPC who had not been signatories to MK1 often needed additional time in order to fulfil the necessary reporting requirements.

Viewed as a whole, signatories were generally able to positively report specific actions aimed at one or more of the goals or targets. Many of the commitments listed in action plans related to cleaner production or waste minimization within operations and many signatories also committed to actions designed to achieve change within their supply chains. The rate of addressing each of the five goals remained between 60-70%, demonstrating that actions outlined in one action plan were then reported in their related annual report.

The Environmental Code of Practice for Packaging (ECoPP) was produced to assist signatories to implement the principles of the code in their product development process and to provide guidelines to help evaluate the environmental impact of new and existing packaging. With 66 (69%) of the 95 brand owners in the sample indicating some level of use of ECoPP, there are encouraging signs that signatories are improving upon their reporting of actions and activities. Although actions by signatories are indicating a positive step forward, the majority of signatories do

not provide details on how the tool is actually being used and what changes, if any, it is making in their day-to-day decision-making. Although truly incorporating environmental design and ECoPP into the product development process is expected to take some time to translate into widespread changes in product design, the action plans reported indicated that many of the signatories remain in the beginning stages of incorporating environmental design elements into the development process.

### **General findings**

Action plans and annual reports submitted by signatories were evaluated against four central components of the covenant: Section 4 - Product Stewardship; Schedule 2 – Environmental Goals, Overarching Target and Key Performance Indicators; Schedule 4 – Action plans and annual reports; and Schedule 5 – the Environmental Code of Practice for Packaging (ECoPP).

Overall, the Covenant is based on the principle of product stewardship. Section 4 of the Covenant addresses the principles of product stewardship – *a shared responsibility for the lifecycle of products including the environmental impact of the product through to and including its ultimate disposal* (NPCC 2005, p 4). The relevant product stewardship categories are design, production, distribution, disposal, research, market development, education, labelling, wholesaling and retailing and recycling and reprocessing.

Table ES1 presents a comparison of the scoring of annual reports of the product stewardship categories from the 2003 evaluation of NPC action plans and annual reports (part of NPC MK1) (Lewis and James 2003) and this current 2008 review. For each product stewardship category points were given for general intent to comply (1.5); levels of written commitment, including detailed actions (1.5), setting measurable (numerical) targets and/or dates and outcomes; (0.75) establishing data collection system to measure progress (0.75); and assigning specific resources/responsibilities to the issues (0.5) to arrive at a total of 5 possible points. While there are improvements in some of the scoring for 2008, compared with the 2003 evaluations, they are only very small incremental improvements with signatories still only intending to comply with the issue or detailing actions. There is a very low level of reporting among signatories of measurable targets, providing data collection systems or assigning specific resources or responsibilities.

Table ES1 Comparison of scoring for activities by sectors between 2003 review and current 2008 review

Activity	Brand owners		Government		Industry associations		Packaging manufacturers		Raw material suppliers		Retailers	
	2003	2008	2003	2008	2003	2008	2003	2008	2003	2008	2003	2008
Design	3.01	2.94	1.38	NA	0.0	1.29	2.22	2.96	2.00	2.25	2.4	2.14
Production	2.93	2.66	0.00	NA	0.0	1.29	2.25	2.68	2.00	2.75	1.8	2.36
Distribution	2.21	2.17	0.00	NA	0.0	0.86	1.22	2.54	1.50	2.25	2.1	1.64
Disposal	2.54	2.35	0.00	1.92	0.0	1.36	2.81	2.63	1.00	2.75	2.1	2.00
Research	1.77	2.08	1.34	1.42	0.0	1.36	2.53	2.03	1.50	2.63	2.4	1.50
Market development	1.48	1.81	2.66	2.08	0.75	1.36	3.56	1.63	1.50	2.19	1.5	1.93
Education	2.03	2.31	2.66	3.79	0.75	1.36	2.81	1.89	2.50	2.75	2.1	1.43
Labelling	2.74	2.50	0.00	0.92	0.0	1.14	1.31	1.54	1.50	2.25	2.1	2.36
Wholesaling and retailing	NA	1.65	NA	0.83	NA	0.64	NA	1.20	NA	1.63	NA	2.14
Recycling and reprocessing	NA	2.36	NA	3.08	NA	1.89	NA	2.78	NA	2.25	NA	2.11

**Notes:**

- Evaluation of NPC action plans and annual reports for NPC Mark I (Lewis and James, 2003).
- Orange shading indicates that 2008 score is lower than 2003 score, while green shading and bold numbers indicates an improvement from 2003.

### **Reporting rate against Goals**

There are five specific NPC Environmental Performance Goals that encompass environmental, social and economic performance that a signatory's performance is assessed against. There are also 29 Key Performance Indicators (KPIs) that are aligned with a specific goal.

#### **Goal 1 - Packaging should be optimised to integrate considerations about resource efficiency, maximum resource re-utilisation, product protection, safety and hygiene (KPIs 1-8)**

Reporting rates for KPIs 1-8 ranged from 30% to 73%, indicating a tremendous amount of work is still needed to ensure all signatories are contributing. With such a variation in reporting it is difficult to ascertain to what degree goal 1 is being achieved.

#### **NPC Goal 2 - Efficient resource recovery systems for consumer packaging and paper (KPIs 9-16)**

Over 75% of all signatories reported expansion of existing on-site recycling facilities, or implementing new facilities now or in the near future. However, missing data by government signatories for most KPIs (9, 11, 12, 13, 15), and low reporting levels and insufficient baseline data overall made a proper assessment difficult and suggests that progress towards this goal is uncertain.

#### **NPC Goal 3 - Consumers able to make informed decisions about consumption, use and disposal of packaging of products (KPIs 17-20)**

The overall reporting of data is fair. In general government needs to do more with respect to collecting the requested data. KPI 20 is an exception with sufficient detail being provided.

#### **NPC Goal 4 - Supply chain members and other signatories are able to demonstrate how their actions contribute to Goals (KPIs 21-26)**

It appears that state and territory government are adequately reporting against KPIs 24 and 25. However, only 66% of signatories are reporting tonnages of packaging from on-site collection facilities and only 39% have implemented a Buy Recycled purchasing policy or practices. The majority of signatories are still in the early stages of implementing sustainable strategies and programs like "Buy Recycled".

#### **NPC Goal 5 - All signatories are able to demonstrate continuous improvement in their management of packaging through their individual Action plans and Annual reports (27-29)**

Positive signs are observed with the reporting against KPIs for goal 5. However, the general absence of explicitly stated and measurable targets and milestones indicates significant room for improvement.

### **Reporting rate against Overarching Targets**

The three overarching NPC targets were developed to provide a means to measure the performance of signatories in meeting the Covenant goals and contributing to improvements in the life cycle management of packaging. Target 1 is concerned with the increased recycling of post consumer packaging from 48% (2003 baseline date) to 65% by 2010. Target 2 is concerned with the increased recycling of 'non-recyclable' packaging from 10% (2003 baseline data) to 25% by 2010. Target 3 is concerned with no new packaging to landfill (against 2003 baseline data). In determining whether the actions of a signatory are contributing towards the overarching targets, the issue of signatories not translating their actions into their annual report makes it difficult to conclude the level of contribution. On an action-by-action basis, some contribution towards the targets is being met, however, the lack of comprehensive reporting of key material flow data makes this difficult to determine.

### **Reporting rate against Key Performance Indicators**

Table ES2 provides a summary of the percentage of signatories reporting against each key performance indicator.

Table ES2 Reporting rate against key performance indicators

Goal		KPI	Responsible sector	% of relevant sampled signatories reporting
1	1	Ratio of product to packaging by weight	Individual brand owners	67%
	2	Resources used to produce packaging by material type (energy and water)	Packaging manufacturers	68% (energy), 58% (water), 67% (ratio)
	3	Improvements in design, manufacture, marketing and distribution to minimise the environmental impacts of packaging	Brand owners, packaging manufacturers, raw material suppliers, wholesalers/retailers	70-82%
	4	Changes to protection, safety, hygiene, shelf-life or supply chain considerations affecting amount and type of packaging used	Brand owners, packaging manufacturers, raw material suppliers, wholesalers/retailers	52-57%
	5	Average % per annum, of post consumer recycled content in packaging manufactured	Packaging manufacturers	42%
	6	Total "non-recyclable" packaging as a % of total packaging sold.	Brand owners	65%
	7	Total weight of consumer packaging disposed to landfill	NPCC	Not reviewed
	8	Consumer packaging as a % by weight of total waste and relative to other waste stream components	State/territory and local government	33%
2	9	Total weight of consumer packaging recycled through domestic and away from home recovery systems	Local government and individual recyclers/reprocessors	25%
	10	Total weight of recycled consumer packaging sold to end-users	Individual recyclers/reprocessors	0%
	11	Number of councils operating according to good practice collection principles and state-based benchmarks	State, territory and local government	33%
	12	Percentage of households with access to kerbside collection systems	Local government	0%
	13	Percentage of households with access to other domestic collection systems	Local government	0%
	14	Number of commercial and industrial premises with packaging recycling collection systems	NPCC	Not reviewed
	15	Percentage of councils and government agencies providing public place recycling infrastructure	All levels of government	50%
	16	Percentage of signatories providing recycling collection facilities for post-consumer packaging generated on-site	All signatories	100%

Table ES2 continued

3	17	Amount and type of consumer packaging in the litter stream	State and territory government	66%
	18	Contamination rates in consumer packaging recovery systems (e.g., kerbside, events, venues, public places, workplaces)	State, territory and local government and recyclers/reprocessors	50%
	19	Improvements in consumer knowledge about the functional attributes of packaging including recyclability/reuse	National Projects Group	Not reviewed
	20	Improvements in littering behaviour	State, territory and local government	83%
4	21	Estimated tonnage of consumer packaging recycled and sent to landfill respectively from on-site collection facilities	All signatories	66%
	22	Number of signatories who have formally adopted the ECoPP and developed systems for its implementation	NPCC (note: signatories do report against this KPI, however it is NPCC's responsibility to report the aggregate results, which is why the ECoPP was reviewed separately)	Refer to Table 23 on Page 46 for breakdown
	23	Application of Covenant compliance procedures by NPCC to identify non-complying signatories	NPCC	Not reviewed
	24	Implementation of NEPM procedures by jurisdictions	State and territory government	100%
	25	Enforcement of the NEPM to 'free riders' and non-complying Covenant signatories	State and territory government	100%
	26	Implementation of Buy Recycled purchasing policy or practices	All signatories	94%
5	27	Establishment of baseline performance data	All signatories	86%
	28	Annual reporting against action plan	All signatories	80%
	29	Demonstrated improvement and achievements against individual targets and milestones	All signatories	75%

The findings in this report mirror very closely with the findings presented in the 2003 evaluation of action plans and annual reports. The vast majority of action plans and annual reports reviewed failed to systematically report against the specific requirements of the Covenant (i.e. they did not address all requirements). The general low scores across the different types of signatories reflect this trend, a trend previously reported in the 2003 report. This is highlighted in the general absence of explicitly stated and use of targets and milestones, and overall deficiency in the breath of recorded improvements.

As noted in the 2003 report, it was recognised that action plans and annual reports may not actually reflect the level of activity in organizations (i.e. the fact that a plan does not mention education on waste minimization does not necessarily mean that this does not happen). In addition, some categories of the Covenant are not applicable to some signatories (e.g., production of packaging materials not applicable to government).

However, the appearance of similar trends between the 2003 report and this current report would seem to signal the positive predictions discussed in the 2003 report have not materialised to the extent that was anticipated.

### ***Key areas for improvement & recommendations***

There is a need to place greater importance on the Environmental Code of Practice for Packaging (ECoPP). ECoPP was produced to assist signatories to implement the principles of the code in their product development process and to provide guidelines to help evaluate the environmental impact of new and existing packaging. If signatories are not using and reporting their use of ECoPP then they should be deemed non-compliant until they can clearly demonstrate its use. Given the significance of ECoPP within the Covenant, further investigation of why signatories are choosing to either not use the code or to only use aspects of ECoPP instead of fully integrating it into the packaging development process needs to be completed. This could be completed with in-depth interviews and identifying the reasons for why ECoPP is not being used by all industry signatories. A review of the actual wording, structure and delivery format of ECoPP should also be undertaken. Signatories should also be required to submit completed ECoPP reports to allow for cross-referencing that the checklist is being used and to demonstrate its implementation.

There is a need to allocate additional resources to ensure effective monitoring and follow-up of signatories. There remains a universal lack of measurable (quantifiable) targets in both action plans and annual reports. The majority of signatories fail to indicate how data will be collected to measure progress in the action plan, and many do not specifically report against actions and measures in the annual reports. Additionally, whilst most signatories identify their name and the sector they represent in the supply chain, most are still failing to provide basic information such as NPC Contact Officer details and company size/turnover, and/or do not include resources allocated for implementation of specific activities. By signing up to the Covenant, signatories are making a public declaration that they are intending to comply with the principles and requirements of the Covenant. They should therefore allocate sufficient time, money and human resources to implement their commitments, to monitor, and report. Allocating additional resources would help ensure action plans are completed correctly and submitted at least every three years and that annual reports contain measurable data and are lodged by 31 October each year to enforce non-compliant policies.

There is a need for clearer explanations, and improved communication with signatories, of the NPC goals, targets & KPIs. The current wording of many of the goals, targets & KPIs leaves too much interpretation for the individual signatories & creates confusion. Simplifying and providing clearer wording would help improve the situation and ensure action plans and annual reports are completed correctly. Signatories should also understand how the key performance indicators are linked to the goals and targets and how their packaging designs and decisions

impact upon them.

Enhancing the existing standard checklist and introducing a standardised document format for signatories to fill in for both action plans and annual reports is recommended. Action plans need to contain detailed actions, targets or outcomes, timelines, responsibilities, funding allocations and indicate how data will be collected to measure performance. Annual reports need to reference action plans and report with sufficient transparency and quantification, eliminating signatory's reliance on reporting "ongoing" and "yes/no" responses that provide no direct evidence of actions or continuous improvement. A standard format would simplify the process for all concerned (signatories, covenant committee and external reviewers). The format could provide for specific company information, but contain standardised locked fields prohibiting editing, moving or deleting sections, highlighting areas not addressed. This would save signatories time in reporting, and streamline performance review.

The National Packaging Covenant Council (NPCC) should also direct more funds into providing a greater level of training and workshops for signatories to guide them on how to compile action plans and annual reports. A large number of signatories just do not clearly understand what is required of them which results in them providing insufficient information or reporting incorrect information.

Many signatories are doing the right thing and are making significant improvements in reducing the life cycle impact of packaging. These good achievements should be celebrated and communicated, not only through the packaging supply chain, but also to the wider public including consumers. Reward those signatories who are making significant contributions to the NPC, product stewardship, and the environment.

## Table of contents

Executive summary .....	i
<i>Introduction</i> .....	i
<i>General findings</i> .....	ii
<i>Key areas for improvement &amp; recommendations</i> .....	iv
List of Tables .....	viii
List of Figures .....	x
1 Introduction.....	11
2 Objectives and scope .....	11
3 Research method .....	12
3.1 Sample size selection.....	12
3.2 Evaluation criteria .....	13
4 Findings .....	14
4.1 Star rating of action plans and annual reports.....	14
4.2 Evaluation of action plans and annual reports .....	15
4.2.1 Signatory name, Sector (place in the packaging supply chain), Company size / turnover category, NPC Contact Officer name and details including position.....	15
4.2.2 Number of action plans and annual reports submitted for NPC Mark II.....	16
4.2.3 Schedule 2 – Environmental Goals, Overarching Targets and Key Performance Indicators.....	16
4.2.3.1 Environmental Performance Goal 1 .....	16
4.2.3.2 Environmental Performance Goal 2 .....	22
4.2.3.3 Environmental Performance Goal 3 .....	25
4.2.3.4 Environmental Performance Goal 4 .....	27
4.2.3.5 Environmental Performance Goal 5 .....	29
4.2.3.6 Overarching targets .....	32
4.2.4 Section 4 of the Covenant - Product stewardship .....	33
4.2.4.1 Design .....	35
4.2.4.2 Production .....	36
4.2.4.3 Distribution.....	37
4.2.4.4 Disposal .....	38
4.2.4.5 Research .....	39
4.2.4.6 Market development .....	40
4.2.4.7 Education.....	41

4.2.4.8	Labelling.....	42
4.2.4.9	Wholesaling and retailing .....	43
4.2.4.10	Recycling and reprocessing .....	44
4.2.5	Schedule 5 of the Covenant – Environmental Code of Practice for Packaging.....	45
4.2.6	Section 5 of the Covenant - Roles and undertakings.....	48
4.2.7	Schedule 4 of the Covenant – Action plans and annual reports .....	50
4.3	Compare action plans .....	52
4.3.1	Overall summary of reported actions by signatories.....	52
4.3.2	Comparing the equivalence of actions of signatories of similar size and supply chain position .....	57
4.3.2.1	Brand owner signatories .....	57
4.3.2.2	Packaging manufacturing signatories .....	59
4.3.2.3	Wholesale / Retail signatories .....	61
4.3.3	Contribution of signatories to NPC goals and targets.....	61
4.4	Effectiveness of current action plan and annual report process.....	63
5	Recommendations .....	68
6	Conclusions.....	70
7	References .....	71

## List of Tables

Table 1 Selection of sample size.....	13
Table 2 Total number of sampled signatories against NPCC star rating system .....	14
Table 3 The number of sampled signatories, per sector, against the NPCC star rating system .....	14
Table 4 Number of signatories including identifying information in action plans and annual reports .....	15
Table 5 Number of action plans and annual reports submitted by sample signatories for NPC Mark II.....	16
Table 6 Degree to which sampled signatories have addressed NPC goal 1* .....	17
Table 7 KPI 1 – Total weight of consumer packaging sold and products packaged per annum for all sampled Brand Owners .....	17
Table 8 KPI 2 – Total resources used to produce packaging for all packaging manufactures.....	18
Table 9 KPI 6 – Total tonnes of “non-recyclable” packaging sold per annum into the Australian market.....	20
Table 10 Reporting rate of KPIs 1 to 8 (towards goal 1) .....	22
Table 11 Degree to which sampled signatories have addressed NPC goal 2* .....	22
Table 12 KPI 16 – Percentage of signatories providing recycling collection facilities for post-consumer packaging generated on-site .....	24
Table 13 Reporting rate of KPIs 9 to 16 (towards goal 2) .....	25
Table 14 Degree to which sampled signatories have addressed NPC goal 3* .....	25
Table 15 Reporting rate of KPIs 17 to 20 (towards goal 3).....	26
Table 16 Degree to which sampled signatories have addressed NPC goal 4* .....	27
Table 17 KPI 21 – Estimated tonnage of consumer packaging recycled and/or sent to landfill from on-site collection facilities .....	27
Table 18 KPI 26 – Degree to which signatory has implemented a ‘Buy Recycled’ purchasing policy or practices .....	28
Table 19 Reporting rate of KPIs 21 to 26 (towards goal 4).....	29
Table 20 Degree to which sample signatories have addressed NPC goal 5* .....	29
Table 21 Reporting rate of KPIs 27 to 29 (towards goal 5).....	30
Table 22 Identification of product stewardship categories applicable for each signatory sector .....	34
Table 23 Degree to which ECoPP is integrated by signatories.....	46
Table 24 The degree of performance by signatories as a whole to the roles and undertakings of the Covenant.....	48
Table 25 The degree to which signatories have reported against the essential components of an action plan according to Schedule 4 of the Covenant.....	50

Table 26 Examples of actions being implemented by signatories as documented in their action plans .....	53
Table 27 Examples of continuous improvement by signatories as documented in their annual reports.....	55
Table 28 Comparison of reporting against a selection of KPIs for two large sized brand owner signatories.....	57
Table 29 Comparison of reporting against a selection of KPIs for two small sized brand owner signatories.....	59
Table 30 Comparison of reporting against a selection of KPIs for two medium sized packaging manufacturer signatories .....	60
Table 31 Comparison of reporting against a selection of KPIs for two medium sized wholesaler/retailer signatories .....	61
Table 32 Comparison of findings from NPC Mark I and Mark II review of action plans and annual reports.....	64
Table 33 Comparison of scoring for activities by sectors between 2003 review and current 2008 review .....	65

## List of Figures

Figure 1 Comparison of achievement level of meeting goals between action plan and annual report for all signatories* .....	31
Figure 2 Comparison of achievement level of meeting Covenant overarching targets between action plan and annual report for all signatories* .....	32
Figure 3 Average score for all signatories in the product stewardship design category .....	35
Figure 4 Average score for all signatories in the product stewardship production category.....	36
Figure 5 Average score for all signatories in the product stewardship distribution category .....	37
Figure 6 Average score for all signatories in the product stewardship disposal category.....	38
Figure 7 Average score for all signatories in the product stewardship research category.....	39
Figure 8 Average score for all signatories in the product stewardship market development category .....	40
Figure 9 Average score for all signatories in the product stewardship education category .....	41
Figure 10 Average score for all signatories in the product stewardship labelling category .....	42
Figure 11 Average score for all signatories in the product stewardship wholesaling and retailing category.....	43
Figure 12 Average score for all signatories in the product stewardship recycling and reprocessing category.....	44
Figure 13 Average score of reference to ECoPP integration by signatories.....	46
Figure 14 Degree to which ECoPP is integrated by signatories.....	47
Figure 15 Weighted average score against product stewardship categories.....	62
Figure 16 Comparison of star rating score from the independent assessor with the current review	66

## 1 Introduction

The Centre for Design at RMIT University undertook to review action plans and annual reports from signatories to the National Packaging Covenant (NPC) Mark II, as part of the mid-term evaluation of the NPC. The review was undertaken during March-June 2008. A total of 199 action plans and 217 annual reports were reviewed from a total of 140 randomly sampled signatories.

The National Packaging Covenant (NPC) (Covenant) (NPCC 2005) is the voluntary component of a co-regulatory arrangement for managing the environmental impacts of consumer packaging in Australia. The current Covenant covers the period 2005-2010. The mid-term review of the Covenant is being undertaken during 2008.

## 2 Objectives and scope

The objectives of the project were:

- Determine a methodology to select a statistically valid sample for action plans and annual reports. This sample needed to be representative of both the size and numbers of organisations at each point in the supply chain as well as other signatories.
- Report the number of action plans and annual reports with a 1, 2, 3, 4 or 5 star rating.
- Evaluate signatories' action plans and annual reports at an individual level.
- Compare actions and outcomes between industry signatories of similar size and position in each part of the packaging supply chain.
- Evaluate signatories' contributions as a whole.
- Evaluate the effectiveness of the current action plan and annual report process.

This report evaluates the contribution signatories are making to the National Packaging Covenant, by reporting on and evaluating the tangible outcomes being delivered through signatory action plans and annual reports, by individual organisations, within packaging chain sectors and by other signatories. In addition, this report evaluates the action plan and annual report process.

### 3 Research method

#### 3.1 Sample size selection

As of 5<sup>th</sup> February 2008, there were 629 signatories<sup>1</sup> to the NPC. The sampling method chosen was representative of both the size and numbers of organisations at each point in the supply chain. Using the database held by the National Packaging Covenant Council (NPCC) Secretariat, the categories of NPC signatories were grouped as follows:

- Industry Plans (further divided)
  - Raw material supplier;
  - Packaging manufacturer/supplier;
  - Brand owners and fillers;
  - Retailers and distributors;
- Industry Association Plans;
- State/Federal Government Plans;
- Local Government Plans; and
- Community and waste management groups.

The selection criteria for obtaining the sample size followed a similar process as that undertaken in the 2003 evaluation of action plans and annual reports (Lewis and James 2003). The objective of the random sampling for the 2008 evaluation comprised the following criteria:

- Report the number of action plans and annual reports with a 1, 2, 3, 4 and 5 star rating;
  - Sample to be statistically valid (total population only);
  - 90% confidence interval to be achieved for total average star rating only;
- Confidence intervals for results in supply chain strata were less than 90%;
- Sample to be representative of size and quantity of organisations at each point in the supply chain; and
- A combined total of 100 reports were reviewed for the strata: Brand owners and wholesaler/retailer. Forty (40) reports were sampled from all other categories (allocated between the categories on a population basis).

The methodology used was as follows:

- A stratified random sampling approach was applied, where strata were based on mutually exclusive points in the supply chain (i.e., raw material supplier, packaging manufacturer, etc);
- The proportion of reports falling into each of 1 through to 5 stars were estimated for each stratum based on a random sample of each;

---

<sup>1</sup> The number of signatories listed under the various categories was counted, according to <http://www.packagingcovenant.org.au/page.php?name=currentsignatories>.

- Company size was noted to allow disaggregation of results, however the confidence interval for this data was not known until after the sampling was complete. The sample standard deviation had a 90% confidence rate indicating a 3.1 mean star rating of the 140 signatories surveyed, with a high confidence of 3.2 and low confidence of 3.0; and
- The number of reports to be assessed was estimated such that there was a 90% confidence that the population proportion was within 10 percentage points of the sample proportion overall.

Table 1 lists the population and sample size.

**Table 1 Selection of sample size**

<b>Signatory category</b>	<b>NPC population size*</b>	<b>Sample size for evaluation</b>
<b>Brand owner</b>	479	95***
<b>Community and waste management groups</b>	10	2**
<b>Commonwealth, state, territory and local government</b>	18	6
<b>Industry association</b>	19	7
<b>Packaging manufacturer/supplier</b>	55	19
<b>Raw material supplier</b>	11	4
<b>Wholesaler / retailer</b>	37	7
<b>TOTAL</b>	<b>629</b>	<b>140</b>

**Notes:**

(\*) As of 5<sup>th</sup> February 2008

(\*\*) The initial proposal required a review of three waste management signatories. Of the total seven signatories available, only one had completed both an action plan and annual report. This resulted in only one waste management signatory being reviewed.

(\*\*\*) To bring the total review to 140, it was necessary to replace the two missing waste management signatories. It was decided that increasing the brand owner group from 93 to 95 was the best approach given the large sample size of brand owner signatories.

Early in the evaluation it became apparent that some of the sampled signatories had not submitted an annual report (as they were new signatories), while others had not submitted either an action plan or annual report (as they were also new signatories). It was necessary to re-sample so that the evaluation could compare the details of an action plan against a submitted annual report. The random sampling process was repeated three different times, with a non-success rate averaging around 60% for each re-sampled set, to reach the total of 140. Of the 72 signatories that did not meet the sampling requirements 39 (54%) were new signatories that were not required yet to submit either an action plan and/or annual report.

### 3.2 Evaluation criteria

The evaluation of action plans and reports was based upon a combination of qualitative, semi-quantitative and quantitative data. The semi-quantitative scoring system developed for the first evaluation of action plans (GHD 2002), and which was used in the 2003 review of action plans and annual reports (Lewis and James 2003), was utilised in the current study. In addition to this

scoring system, performance was evaluated based on quantitative inputs by signatories in their annual reports and deviation/proximity of these from the NPC goals and targets.

## 4 Findings

### 4.1 Star rating of action plans and annual reports

The star rating system used by the NPC Council classifies submitted action plans and annual reports as a 1, 2, 3, 4, or 5 stars. The number of action plans and annual reports, from the sampled signatories, that have been ranked and fall under each level are summarised in Table 2 and detailed per sector in Table 3.

**Table 2 Total number of sampled signatories against NPCC star rating system**

NPCC Star Rating	Sampled signatories (140)	
	Number of action plans	Number of annual reports
★	2	2
★★	38	38
★★★	52	52
★★★★	30	30
★★★★★	16	16

**Note:**

Although the star ratings for plans and reports are the same it does not necessarily mean that the same signatory has a two star plan and a two star report.

**Table 3 The number of sampled signatories, per sector, against the NPCC star rating system**

NPCC Star Rating	No Star Rating	★	★★	★★★	★★★★	★★★★★	Sample
Brand Owner	2	1	25	35	21	11	95
Waste Management	0	0	1	0	0	0	1
Community Group	0	0	0	1	0	0	1
Government	0	1	3	2	0	0	6
Industry Association	0	0	3	3	0	1	7
Packaging Manufacturer	0	0	3	9	5	2	19
Raw material supplier	0	0	0	0	3	1	4
Wholesaler/retailer	0	0	3	2	1	1	7
<b>TOTAL</b>	<b>2</b>	<b>2</b>	<b>38</b>	<b>52</b>	<b>30</b>	<b>16</b>	

## 4.2 Evaluation of action plans and annual reports

From the selected sample, each signatory's action plans and annual reports were evaluated against the following:

- Identification of specific quantitative and qualitative results against the three Covenant targets and goals where appropriate.
- For Industry Signatories:
  - Report whether action plans indicate that Covenant principles have been integrated into existing systems within organisations, for example, design and marketing.
  - Report on the implementation of the Environmental Code of Practice for Packaging (ECoPP) and how it is integrated into day-to-day decisions.

### 4.2.1 Signatory name, Sector (place in the packaging supply chain), Company size / turnover category, NPC Contact Officer name and details including position

A requirement of all NPC signatories is the inclusion of details on the organisation, the packaging supply chain sector it operates in, company size / turnover category and contact details of the internal NPC Contact Officer. Table 4 lists the number of signatories that were compliant per action plan and annual report.

**Table 4 Number of signatories including identifying information in action plans and annual reports**

Identifying information*	Sampled signatories (140)	
	Number of action plans	Number of annual reports
Signatory name	140	140
Sector in supply chain	140	140
Company size / turnover category**	42	43
NPC Contact Officer name and details including position	133	135

**Notes:**

(\*) Reviewed against one action plan and one annual report

(\*\*) applicable only to industry signatories

While signatories are compliant with identifying their name and the sector they represent in the supply chain, a small minority are not including details of the NPC Contact Officer (5%). With respect to the 127 industry signatories (i.e., raw material supplier, packaging manufacturers/suppliers, brand owners, wholesaler/retailer, and waste management) only 33% included details on the company size/turnover category of their organisation.

#### 4.2.2 **Number of action plans and annual reports submitted for NPC Mark II**

Table 5 presents the number of action plans and annual reports that sampled signatories have submitted for the NPC Mark II.

**Table 5 Number of action plans and annual reports submitted by sample signatories for NPC Mark II**

Document	Total number submitted by sampled signatories
Action plan 1	140
Action plan 2	59
<b>Total</b>	<b>199</b>
Annual report 1	140
Annual report 2	77
<b>Total</b>	<b>217</b>

All data that was compiled for this specific NPC review utilised only the most recent action plan and annual report submitted by signatories. The values presented in Table 5 summarise all action plans and annual reports reviewed. The numbers do not indicate that some signatories are deficient in submitting either a second action plan or report, but simply reflect the total number of action plans and annual reports reviewed overall and that of the signatories reviewed, 59 had second action plans and 77 had second annual reports that were the most recent documents.

#### 4.2.3 **Schedule 2 – Environmental Goals, Overarching Targets and Key Performance Indicators**

The action plans and annual reports of sampled signatories were reviewed against the NPC Environmental Goals, Overarching Targets and Key Performance Indicators (KPIs) (NPCC 2005, p 20-22). The following section details the degree to which signatories as a whole are addressing the NPC Goals and Targets with reference to each of the KPIs.

##### 4.2.3.1 Environmental Performance Goal 1

The 1<sup>st</sup> NPC environmental goal states *that packaging should be optimised to integrate considerations about resource efficiency, maximum resource re-utilisation, product protection, safety and hygiene* and incorporates KPIs 1-8 (Table 6).

**Table 6 Degree to which sampled signatories have addressed NPC goal 1\***

<b>Goal 1</b>	<b>Total</b>	<b>Percent</b>
Goal addressed	103	74%
Some evidence goal being addressed	21	15%
Goal not addressed	16	11%

**Notes:**

(\*) To determine if signatories addressed a Goal/Target, KPIs were grouped by their appropriate Goal/Target and assessed using the following criteria: Goal addressed – explicitly and correctly reported all and/or majority of KPIs; Some evidence goal being addressed – data provided for KPIs but in a confusing or incorrect manner and/or demonstrated actions in place to address KPI; Goal not addressed – no data provided for majority of KPIs.

KPIs 1 to 4 include a mix of quantitative and qualitative measurements analysing how signatories guarantee the protection, safety, hygiene and shelf-life of a product through minimising the amount of material and other resources required in packaging design, manufacturing, distribution and marketing. Each are summarised below.

**KPI 1: Ratio of product to packaging (by weight).**

Only individual brand owner signatories are required to submit details for KPI 1 (Table 7). Note that in their public annual report brand owners are only required to report the ratio – reporting details on packaging used and products packaged is not mandatory as this data is reported via the confidential Industry Data Aggregation System (IDAS) which is a mandatory requirement of a signatory's annual report.

**Table 7 KPI 1 – Ratio of product to packaging (by weight) per annum for all sampled Brand Owners**

<b>KPI 1</b>	<b>Ratio Product to Packaging</b>
Reported	64 (67%)
Not Reporting	31 (33%)

Of the 95 brand owner signatories sampled, only 67% reported a product to packaging ratio, and of this group, only 61% of the 64 reported the ratio in the correct units. The remaining 31 brand owner signatories either reported the ratio as multiple ratios or as a percentage. Although not formally required to, 73% provided quantitative data for the total weight of consumer packaging sold and 50% provided details on the quantity of products packaged. Reasons cited for not providing the data included: the need to re-work their baseline data collection system, problem-solving bugs in new computer systems and logistics of compiling data for large national/international systems. In other instances, some simply failed to provide the required ratio.

## KPI 2: Resources used to produce packaging, by material type: energy (Mega joules), water (kilolitres)

Only packaging manufacturers are required to complete KPI 2 (Table 8).

**Table 8 KPI 2 – Total resources used to produce packaging for all packaging manufactures**

KPI 2	Total Energy (Mega joules)	Total Water (Kilolitres)
Total	44,651,394	74,503
Not Reporting	6 (32%)	8 (42%)

Of the 19 packaging manufacturer signatories, 68% complied by supplying total energy used to produce their packaging materials though only 58% supplied details on the total water in their packaging manufacture. This KPI proved very difficult for many signatories whereby signatories reported data in different ways/units and in different degrees of detail (see insert). Some signatories were exempted due to classification of being an importer and not the manufacturer, or provided annual averages instead of totals. The primary reason cited for not providing data was a general lack of capacity to breakdown the consumption of energy over different areas of the manufacturing process.

### Examples of data reported for KPI 2

*0.0185kWh / unit sold (1.1% reduction)*

#### Energy

Paper: 1104 MJ/t  
Plastics 4: 3358 MJ/t  
Plastics 6: 4240 MJ/t  
Composite: 1705 MJ/t

#### Water

Paper: 0.05 kL/t  
Plastics 4: 0.3 kL/t  
Plastics 6: 0.3 kL/t  
Composite: 0.03 kL/t

*2,147 MJ/t  
0.10 kL/t*

## KPI 3: Improvements in design, manufacture, marketing, and distribution to minimise the environmental impacts of packaging

Brand owners, packaging manufacturers/suppliers, raw material suppliers, and wholesaler/retailers

### Examples of data reported for KPI 3

- Removal of layer pads from chilled product pallets. Savings of estimated \$40,000 second year running. In a range of ice creams the cardboard outer was removed and replaced with shrink-wrap. Savings of \$100,000.
- *“Signatory” is satisfied that those considerations are already met as per its adherence to its quality management policy. Now that a baseline ratio has been calculated “Signatory” will be monitoring and reviewing upon next assessment.*
- Redesign packs to incorporate recycled board, damaged cartons recycled, 70% of distribution cartons reused, 55% of transport strapping recycled.
- *As 100% product, primary and secondary packaging is imported and packaging has been developed to comply with corporate and quality standards, there is minimal capacity to influence this packaging locally.*
- *Implemented appropriate environmental message for all new branded consumer packaging artwork, to encourage consumers to dispose of the package in a responsible manner.*

are all required to complete qualitative KPI 3.

On average the examples provided by the Signatories ranged from a general intention through to reporting a detailed list of actions. Packaging design was primarily addressed through

signatories changing over to and/or increasing the use of recycled materials and the introduction of biodegradable packaging. Marketing and manufacturing primarily addressed implementation of recycling logos and labels reminding consumers to recycle and/or informing them of the recycled content of the product. Between 18% to 30% of signatories did not report against this KPI with many citing satisfaction with status quo and existing conditions. In many cases, signatories did not report data for KPI 3 specifically, but referred to related achievements incorporated during the past year or within their discussion of Product Stewardship, making it difficult to ascertain if they had successfully reported against the KPI.

**KPI 4: Changes to protection, safety, hygiene, shelf-life or supply chain considerations affecting amount and type of packaging used**

Brand owners, packaging manufacturers/suppliers, raw material suppliers, and wholesaler/retailers are required to complete qualitative KPI 4.

Similar to KPI 3, examples provided by the signatories ranged from a general intention through to lists of actions or specific actions implemented. Actions could essentially be broken down into reduce, re-use, bulk, and weight. The reduction of packaging weight was one of the largest examples cited, whilst many signatories discussed how they had been able to reduce X amount of materials during production and distribution phases.

Another example was the increase in use of recycled content in packaging materials. Use of bulk distribution/packaging design and

actual supply changes were also cited. The rate of non-reporting was slightly higher compared to KPI 3, with 43% to 48% of signatories not reporting. Similar to KPI 3, many signatories cited satisfaction with status quo and existing conditions. Additionally, many again did not report data for KPI 4 specifically, but referred to related achievements incorporated during the past year or within their discussion of Product Stewardship, making it difficult to ascertain if they had successfully reported against the KPI.

**Examples of data reported for KPI 4**

- To reduce the number of plastic bags entering landfill, we adjusted our manufacturing process to enable receivable of bulk ice, changing from 10kg bags to bulk bins for Ice deliveries.
- *As “Signatory” already upholds and maintain strict Workplace Health and Safety obligations, “Signatory” has not needed to implement any additional changes to the protection, safety, hygiene, shelf-life or supply chain considerations affecting the amount and type of packaging used.*
- Most design/production changes have already been completed, and further change would lead to degradation of product.
- *Currently examining the potential of down-gauging LDPE shrink film from a 50 micron thickness to a 45 micron thickness. Machine limitations have prevented the introduction of 45 micron film to date, work is continuing.*
- I&S have consistently applied the principles of its ECoPP when approached by existing or new customers for changes to design of new projects. I&S encourage all of its customers to adopt its ECoPP principles.

### KPI 5: Average percent per annum, of post-consumer recycled content in packaging manufactured (separated by type)

Only packaging manufacturers are required to complete KPI 5. This performance indicator is aimed at packaging designed and manufactured to optimise the amount of post-consumer recycled content. Examples provided by the signatories ranged from a simple percentage of recycled content, to much more detailed answers by type. Almost 58% of all packaging manufacturers failed to report any data. Reasons cited for not providing information ranged from satisfaction with status quo and existing conditions to exemption due to importer classification. Several signatories failed to supply data and/or were currently developing data collection systems.

### KPI 6: Total weight, by type, of “non-recyclable”<sup>2</sup> packaging solid per annum into the Australian market

Only brand owners are required to complete KPI 6 (Table 9).

**Table 9 KPI 6 – Total tonnes of “non-recyclable” packaging sold per annum into the Australian market**

KPI 6	Total Tonnes
Total	188,488
Not Reporting	33 (35%)

**Notes:**

(\*) Totals are an aggregate of all annual reports reviewed.

#### Examples of data reported for KPI 5

- Manufactured products are imported from overseas and although some of these have 100% post-consumer recycled content, this does not impact on Australian recycling initiatives. The average % per annum, of post consumer recycled content in locally sourced packaging will be reported by the local manufacturers in their Action plans.
- *An annual review was conducted on collection of all past consumer packaging collected as compared to total number of completed units manufactured. Level has remained steady, however efforts continue to be made to increase levels wherever possible.*
- Based on data and various internal sources of information we have estimated the average % of post-consumer recycled content at 5 % (was 1.7% for 2005-2006).

Secondary:

- *Total recycled content on locally-sourced board is 76 percent post consumer content.*

Transport:

- *100% total recycled content, of which 92% is post consumer*
- *55% of transport strapping is now 100% recycled results to 2.28 tonnes*

Headquarters:

- *We currently use office copy paper containing 55% recycled content*

#### Examples of data reported for KPI 6

Paper (waxed): 10 tonnes  
 Plastic Type 4: 2.1 tonnes  
 Plastic Type 5: 70.1 tonnes  
 Plastic Type 7: 112 tonnes  
 % of total packaging 36.9%

*Weight of Plastic (HDPE) pails 20.1 tonnes*  
*Weight of plastic DG containers 3.3 tonnes*

Cardboard 204.34 t  
 Waxed Cardboard .28 t  
 Plastic 1: 21.23 t  
 Plastic 2: 33.95 t  
 Plastic 3: 1.67 t  
 Plastic 4: 6.87 t  
 Plastic 5: 35.38 t  
 Plastic 6: 0.17 t  
 Plastic 7: 35.84 t  
 Aluminium: 0.02 t  
 Composites: 3.05 t  
 Total: 342.81 t

<sup>2</sup> Relates to NPC Target # 2; covers Plastics codes 4-7, non-recyclable paper and cardboard packaging and all composite packaging

Reporting details on “non-recyclable” packaging used is not mandatory as this data is also reported via the confidential Industry Data Aggregation System (IDAS), which is a mandatory requirement of a signatory’s annual report.

Of the 95 brand owner signatories, 65% reported the total tonnage of “non-recyclable” packaging sold per annum into the Australian market. A general theme that emerged was the reporting of “total” tonnage instead of separating packaging into different material groups. Secondly some signatories were confused as to which materials are currently classified as “non-recyclable” with some reporting values against polymers that are classified as recyclable (see insert).

#### **KPI 7: Total weight of consumer packaging disposed to landfill**

The NPCC is the responsible party to report on KPI 7 therefore no signatories reported on this performance indicator.

#### **KPI 8: Consumer packaging as a percent by weight of total waste and relative to other waste stream components**

Only government signatories (excluding Commonwealth) are required to complete KPI 8. Of the signatories reporting, one Government cited 6.9%, and the other cited 15.65% (a reporting rate of only 33%). Given that only two out of the seven government signatories reported data, it could be concluded that this KPI is not being achieved.

#### **General conclusions against goal 1**

The data reported for the eight KPIs illustrate a large variation among all signatories, regardless of size, type, or tenure as a Covenant signatory. Within brand owners – the largest group surveyed – although changes cited were of a positive nature, the emerging theme painted the majority of brand owners in a general embryonic stage overall, with their primary energies set on achieving solid baseline data, developing workable data collection process, or emphasising research and development (R&D) instead of actually citing substantial progress.

With regard to government programs, many stated that they are working with other government departments and businesses to increase understanding of packaging optimisation and increasing optimisation through collection systems.

Some industry associations indicated that they were working with signatories to increase understanding of packaging optimisation, whilst others had carried out preliminary trials.

Packaging manufacturers primarily focused on small design changes to materials, recycling damaged materials back into the production phases (in-house recycling), and investigating methods to increase recycled materials into packaging.

Raw material suppliers reported some re-use, recycling, and ongoing trial programs aimed at reducing overall weight in packaging materials. Wholesaler/retailers often cited recycling and reuse programs, reduction of plastic bags, and on-going discussions with grocery retailers to install onsite recycling. With reporting rates among KPIs 1-8 ranging from 30% to 73% there is still a tremendous amount of work needed to ensure all signatories are contributing. While there is such

a variation in reporting it could be concluded that progress towards goal 1 of the NPC is fair and reporting of information about this goal is also fair (Table 10).

**Table 10 Reporting rate of KPIs 1 to 8 (towards goal 1)**

KPI	Responsible sector	% of signatories reporting
1	Individual brand owners	67%
2	Packaging manufacturers	68% (energy), 58% (water)
3	Brand owners, packaging manufacturers, raw material suppliers, wholesalers/retailers = packaging supply chain	70-82%
4	Brand owners, packaging manufacturers, raw material suppliers, wholesalers/retailers	52-57%
5	Packaging manufacturers	42%
6	Brand owners	65%
7	NPCC	Not reviewed
8	State/territory and local government	33%

#### 4.2.3.2 Environmental Performance Goal 2

The 2<sup>nd</sup> NPC environmental goal seeks to deliver *efficient resource recovery systems for consumer packaging and paper*.

KPIs 9 to 16 help to establish action and progress towards this goal (Table 11).

**Table 11 Degree to which sampled signatories have addressed NPC goal 2\***

Goal 2	Total	Percent
Goal addressed	91	65%
Some evidence goal being addressed	27	19%
Goal not addressed	22	16%

**Notes:**

(\*) To determine if signatories addressed a Goal/Target, KPIs were grouped by their appropriate Goal/Target and assessed using the following criteria: Goal addressed – explicitly and correctly reported all and/or majority of KPIs; Some evidence goal being addressed – data provided for KPIs but in a confusing or incorrect manner and/or demonstrated actions in place to address KPI; Goal not addressed – no data provided for majority of KPIs.

KPIs 9 and 10 are qualitative measurements focused on secondary market creation supported for recovered packaging material.

**KPI 9: Total weight of consumer packaging recycled, through: (a) Domestic and (b) Away from Home recovery systems respectively.**

Only local government and individual recyclers and reprocessor (waste management) signatories are required to complete KPI 9. With regard to the three local governments, one directly and clearly answered the KPI, one didn't report it at all, and the last is still compiling and analysing the required data. The only waste management company assessed failed to report on this KPI.

Overall reporting against this KPI was poor.

**KPI 10: Total weight of recycled consumer packaging sold to end-users**

Individual recyclers and reprocessors are required to report against KPI 10. The signatory reviewed did not provide specific data against this KPI.

**KPI 11: Number of Councils operating according to good practice collection principles and state-based benchmarks**

Only state, territory and local government signatories are required to complete KPI 11. Of the six government signatories assessed, only one clearly demonstrated improvement that was substantiated with quantitative data, whilst another described some improvement on their actions. Of the remaining signatories, one was still analysing data, whilst the remaining failed to address the KPI. Overall reporting against this KPI was poor.

**KPI 12: Percentage of households with access to kerbside collection systems**

Only local government signatories are required to complete KPI 12. No local government signatories were able to demonstrate any data or improvement for this KPI. The reasons provided were that the signatory was still analysing the data or they simply failed to report on the KPI. Overall reporting against this KPI was poor.

**KPI 13: Percentage of households with access to other domestic collection systems**

Only local government signatories are required to complete KPI 12. No local government signatories were able to demonstrate any data or improvement for this KPI. The reasons provided were that the signatory was still analysing the data or they simply failed to report on the KPI. Overall reporting against this KPI was poor.

**KPI 14: Number of commercial and industrial premises with packaging recycling collection systems**

As the NPCC is the responsible party to report on KPI 14, no signatories reported on this performance indicator.

**KPI 15: Percentage of Councils and government agencies providing public place recycling infrastructure**

All levels of government signatories are required to complete KPI 15. Of the 6 government signatories sampled, 50% were able to provide clear data addressing KPI 15. The three that reported data were state governments (see insert). The three who did not report were local governments. Their reason for not reporting was that they were still analysing the data or they simply failed to report on the KPI.

**Examples of data reported for KPI 15**

- 43% have implemented public place recycling.
- In total for the state, 55% of Councils offer public place recycling.
- In 2005-06 1,329 recycling bins were installed.

### **KPI 16: Percentage of signatories providing recycling collection facilities for post-consumer packaging generated on-site**

All signatories are required to complete KPI 16 (Table 12).

**Table 12 KPI 16 – Percentage of signatories providing recycling collection facilities for post-consumer packaging generated on-site**

<b>KPI 16</b>	<b>Total</b>	<b>Percent</b>
Provide recycling collection facilities	108	77%
Do not provide recycling collection facilities	24	17%
Confusion/uncertainty with question	8	6%

The vast majority of signatories (77%) reported that they provide recycling collection facilities on site to some degree (Table 12), with paper and plastic the primary packaging types collected. What is most interesting is the confusion reported by a small majority of signatories. The answers reported from some signatories ranged from “Does not have the systems to quantify this relatively small amount of material”, to “waste collectors do not provide a quantification service” or that there is “no data available”. These responses would seem to indicate that either the KPI question itself is confusing, or that some signatories (roughly 5%) answered the question incorrectly. Comparing the signatories that reported not having on-site recycling facilities against the signatory’s broader annual report findings often produced counterintuitive results to actions and findings that the signatory reported elsewhere within their annual report.

#### **General progress towards goal 2**

Over 75% of all signatories reported expanding existing on-site recycling facilities, implementing new facilities, or making plans to implement one in the near future. Aside from the small amount of confusion regarding what constitutes recycling from some signatories, overall KPI 16 would seem to indicate that action is being taken. KPIs 9 and 10 require reporting by recyclers/reprocessors/waste management sector. It is difficult to make conclusions here as only one signatory in this group was sampled. The lack of data reported by government signatories for KPIs 9, 11, 12, 13 and 15 indicates that this sector is not achieving even sufficient baseline data to enable an assessment against goal 2. In summary progress towards goal 2 of the NPC is poor and reporting of information about this goal is also poor (Table 13).

**Table 13 Reporting rate of KPIs 9 to 16 (towards goal 2)**

KPI	Responsible sector	Reporting rate
9	Local government and individual recyclers/reprocessors	25%
10	Individual recyclers/reprocessors	0%
11	State, territory and local government	33%
12	Local government	0%
13	Local government	0%
14	NPCC	Not reviewed
15	All levels of government	50%
16	All signatories	100%

#### 4.2.3.3 Environmental Performance Goal 3

The 3<sup>rd</sup> NPC environmental goal 3 is concerned with *consumers being able to make informed decisions about consumption, use and disposal of packaging of products* and incorporates KPIs 17 to 20 (Table 14).

**Table 14 Degree to which sampled signatories have addressed NPC goal 3\***

Goal 3	Total	Percent
Goal addressed	72	51%
Some evidence goal being addressed	17	12%
Goal not addressed	51	36%

**Notes:**

(\*) To determine if signatories addressed a Goal/Target, KPIs were grouped by their appropriate Goal/Target and assessed using the following criteria: Goal addressed – explicitly and correctly reported all and/or majority of KPIs; Some evidence goal being addressed – data provided for KPIs but in a confusing or incorrect manner and/or demonstrated actions in place to address KPI; Goal not addressed – no data provided for majority of KPIs.

#### **KPI 17: Amount and type of consumer packaging in the litter stream**

State and territory government signatories are required to complete KPI 17. Two of the three signatories were able to present detailed reports regarding consumer packaging in the litter stream, whilst the other failed to report data for the KPI. Overall reporting is good.

**KPI 18: Contamination rates in consumer packaging recovery systems (e.g. kerbside, events, venues, public places, and workplaces)**

State, territory and local governments, and recycling service providers and reprocessor (waste management) signatories are required to complete KPI 18. Three of the six government signatories (50%) were able to provide a percentage of contamination in the consumer packaging recovery system. Of the remaining signatories, one was still analysing data, whilst the remaining failed to address KPI. Overall reporting is fair.

**KPI 19: Improvements in consumer knowledge about the functional attributes of packaging, including recyclability/reuse**

The National Projects Group is responsible for this KPI. Data relating to this KPI is not sourced from signatory action plans.

**KPI 20: Improvements in littering behaviour**

Local, state and territory governments in addition to the NPCIA are required to report against KPI 20. Of the six government signatories, five provided details on policies, Acts of Parliament or programs that have been funded to address littering. Examples of programs and the amount of littered items are given. Overall reporting is very good.

**General progress towards goal 3**

The overall reporting of data to support goal 3 is fair. In general government needs to do more with respect to collecting the requested data. KPI 20 is an exception with sufficient detail being provided. In summary progress towards goal 3 of the NPC is fair and reporting of information about this goal is also fair (Table 15).

**Table 15 Reporting rate of KPIs 17 to 20 (towards goal 3)**

KPI	Responsible sector	Reporting rate
17	State and territory government	66%
18	State, territory and local government and recyclers/reprocessors	50%
19	National Projects Group	Not reviewed
20	State, territory and local government	83%

**Examples of data reported for KPI 18**

- Contamination in kerbside recycling crate systems average 1 to 2 %, whereas the newly introduced MGB systems average around 11% contamination
- *Contamination rate was 11.3% in 2005-06*
- Kerbside - Nil, Events 10%, Venues NA, Public places NA, workplaces NA

#### 4.2.3.4 Environmental Performance Goal 4

The 4<sup>th</sup> NPC environmental goal relates to whether *supply chain members and other signatories are demonstrating how their actions contribute to Goals (1) – (3) and incorporates KPIs 21 through 26* (Table 16).

**Table 16 Degree to which sampled signatories have addressed NPC goal 4\***

Goal 4	Total	Percent
Goal addressed	51	36%
Some evidence goal being addressed	43	31%
Goal not addressed	46	33%

**Notes:**

(\*) To determine if signatories addressed a Goal/Target, KPIs were grouped by their appropriate Goal/Target and assessed using the following criteria: Goal addressed – explicitly and correctly reported all and/or majority of KPIs; Some evidence goal being addressed – data provided for KPIs but in a confusing or incorrect manner and/or demonstrated actions in place to address KPI; Goal not addressed – no data provided for majority of KPIs.

#### **KPI 21: Estimated tonnage of consumer packaging recycled and sent to landfill respectively from on-site collection facilities**

All signatories are required to complete KPI 21 (Table 17).

**Table 17 KPI 21 – Estimated tonnage of consumer packaging recycled and/or sent to landfill from on-site collection facilities**

KPI 21	Recycled Material (Tonnage)	Landfill Material (Tonnage)
Total	99,905	57,401

Of the 140 signatories, 66% complied by supplying their estimated tonnage of consumer packaging recycled or sent to landfill from their on-site facilities. 62 signatories (44%) either did not list volume of consumer packaged, or that it was either recycled or sent to landfill. Some listed percentages, some listed values with no differentiation, and many did not address the KPI.

#### **Examples of data reported for KPI 21**

- Recycling: 5 tonnes, 4% of total waste
- Landfill: 24 tonnes, 94% of total waste
- *Waste landfilled amounts to 20.4 tonnes:*
  - 19.6 tonnes sent for recycling; 96% of total waste
  - 2.5 tonnes sent to landfill; 12.5% of total waste
- In 2005-06 departments generated 100kg of waste per full time equivalent, and recycled 83% of the waste

**KPI 22: Number of signatories who have formally adopted the ECoPP and developed systems for its implementation**

The NPCC is required to report aggregated results for this KPI, however the ECoPP was reviewed in individual plans and details of the results can be found in section 4.2.5.

**KPI 23: Application of Covenant compliance procedures by NPCC to identify non-complying signatories**

The NPCC is required to report this KPI.

**KPI 24: Implementation of NEPM procedures by jurisdictions**

State and territory governments are required to report against KPI 24. The three sampled provided details on the NEPM. Two indicated that they had contacted [X] number of non-signatories, one as a result of undertaking the brand owner audit.

**KPI 25: Enforcement of the NEPM procedures to “free riders” & non-complying NPC signatories**

State and territory governments are required to report against KPI 25. Examples of enforcement procedures undertaken included warning letters issued or statutory notices sent to non-compliant signatories, resulting in these companies signing up.

**KPI 26: Implementation of Buy Recycled purchasing policy or practices**

All signatories are required to complete KPI 26 (Table 18).

**Table 18 KPI 26 – Degree to which signatory has implemented a ‘Buy Recycled’ purchasing policy or practices**

KPI 26	Not Implemented	Implemented
Policy implemented		55
Policy not implemented	47	
Stated to be addressed and/or to be implemented	17	
Signatory has own policy	15	
Not clear in report	6	
<b>TOTAL</b>	<b>85 (61%)</b>	<b>55 (39%)</b>

The review of KPI 26 indicated that the majority of signatories are still in the early stages of implementing sustainable strategies like “Buy Recycled”. Although only 39% reported formally implementing the “Buy Recycled” policy, another 17 (12%) stated the policy was under review and/or would be implemented within the next year, and another 15 (10%) had incorporated a recycled policy similar to “Buy Recycled”. The primary reasons for not implementing the policy centred on reliance on other companies for packaging and not adopting a recycled purchasing policy for food containers due to safety reasons.

**Examples of data reported for KPI 26**

- The Purchasing Procedure states that the company will consider products with highest recycled content in purchasing decisions and implement where product efficacy and appeal is not compromised. Purchasing staff are encouraged to purchase products with the highest level of recycled content.
- *No formal implementation. Decision to utilise Buy Recycled completed on a project-by-project basis based on cost and applicability.*
- Buy Recycled Practice incorporated into Integrated Management System.
- *Priority is given to buy product with recycled contents*

**General progress towards goal 4**

As KPI 22 and KPI 23 are reported by the NPCC it is difficult to make an overall conclusion about overall progress towards goal 4. Only 66% of signatories are reporting tonnages of packaging from on-site collection facilities and only 39% have implemented a Buy Recycled purchasing policy or practices. The majority of signatories are still in the early stages of implementing sustainable strategies and programs like “Buy Recycled”. In summary progress towards goal 4 of the NPC is good and reporting of information about this goal is also good (Table 19).

**Table 19 Reporting rate of KPIs 21 to 26 (towards goal 4)**

KPI	Responsible sector	Reporting rate
21	All signatories	66%
22	NPCC	Not reviewed
23	NPCC	Not reviewed
24	State and territory government	100%
25	State and territory government	100%
26	All signatories	94%

**4.2.3.5 Environmental Performance Goal 5**

The 5<sup>th</sup> NPC environmental goal aims for *all signatories demonstrating continuous improvement in their management of packaging through their individual Action plans and Annual reports* and encompasses KPIs 27 to 29 (Table 20).

**Table 20 Degree to which sample signatories have addressed NPC goal 5\***

Goal 5	Total	Percent
Goal addressed	96	69%
Some evidence goal being addressed	18	13%
Goal not addressed	26	18%

**Notes:**

(\*) To determine if signatories addressed a Goal/Target, KPIs were grouped by their appropriate Goal/Target and assessed using the following criteria: Goal addressed – explicitly and correctly reported all and/or majority of KPIs; Some evidence goal being addressed – data provided for KPIs but in a confusing or incorrect manner and/or demonstrated actions in place to address KPI; Goal not addressed – no data provided for majority of KPIs.

**KPI 27: Establishment of baseline performance data**

All signatories are required to report against KPI 27. Over 86% of all signatories either specifically addressed the requirement of baseline data for every KPI, or indicated a response for missing data such as implementing new data collection systems.

**KPI 28: Annual reporting against action plan (i.e., action plan with baseline data and milestones)**

All signatories are required to report against KPI 28. Similar to the trend in KPI 27, roughly 80% of all signatories were able to report against existing baseline data with data compiled from the previous financial year. A trend that occurred across all signatories was a general absence of explicit milestones, with the greater majority of signatories simply reporting against baseline/previous year data.

**KPI 29: Demonstrated improvement and achievements against individual targets & milestones (e.g., annual reporting against Action plans and milestones)**

All signatories are required to report against KP 29. 75% of all signatories were able to demonstrate improvement and achievements against individual targets and milestones. Trends that occurred across all signatories were a general absence of explicit milestones, with the greater majority of signatories simply reporting against baseline/previous year data. There was also significant difference among signatories with regard to the depth and breath of recorded improvements and achievements. Some simply reported against baseline data, others provided much more detailed lists of achievements.

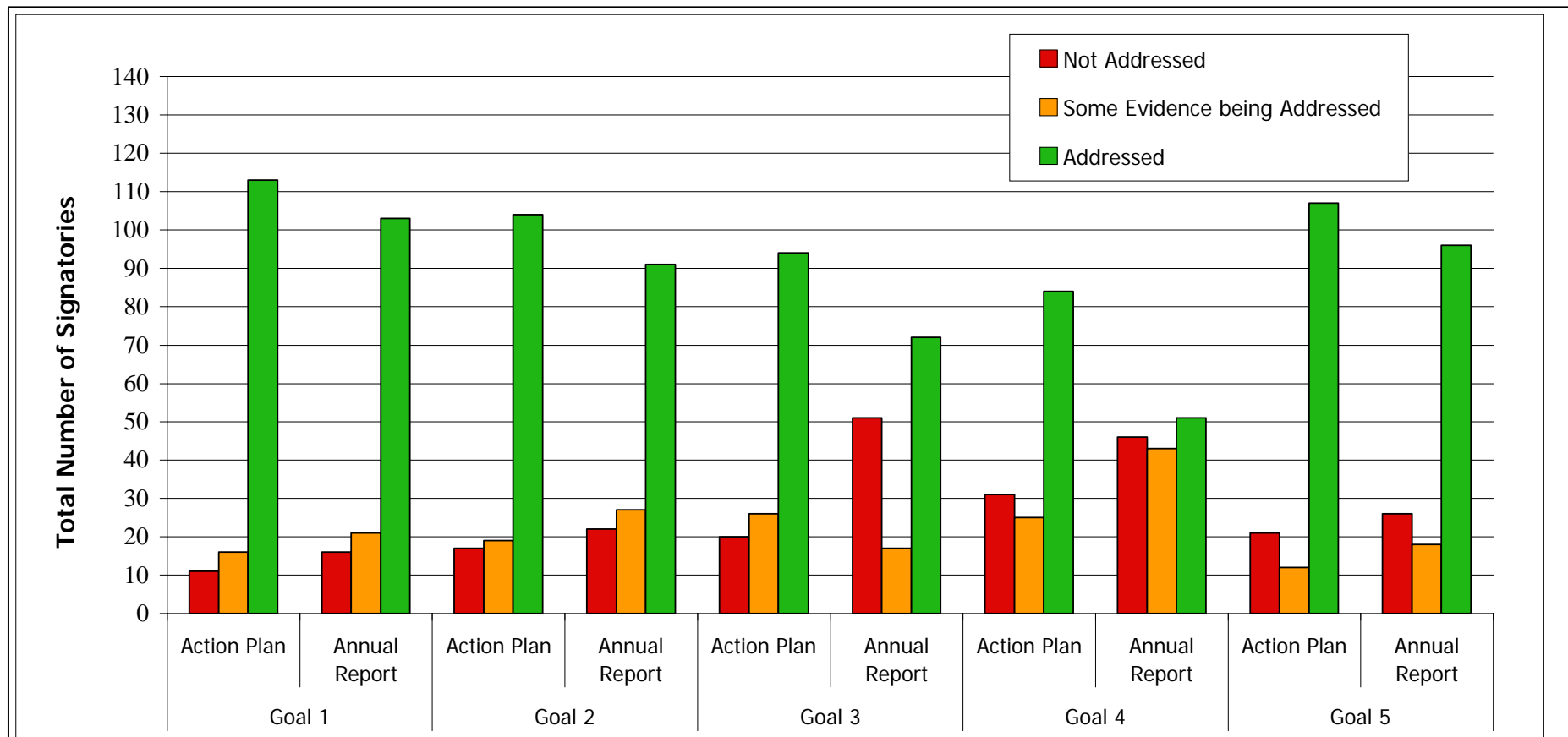
**General progress towards goal 5**

Positive signs are observed through the reporting against KPIs for goal 5 with the majority of signatories reporting (Table 21). However, the general absence of explicitly stated and usable targets and milestones, and breath of improvements recorded does indicate significant room for improvement. In summary progress towards goal 5 of the NPC is fair and reporting of information about this goal is also fair (Table 21).

**Table 21 Reporting rate of KPIs 27 to 29 (towards goal 5)**

<b>KPI</b>	<b>Responsible sector</b>	<b>Reporting rate</b>
27	All signatories	86%
28	All signatories	80%
29	All signatories	75%

Figure 1 presents a summary of the degree to which the goals of the Covenant, considering the respective KPIs, have been addressed in signatory action plans and annual reports. A similar trend exists across the five NPC goals whereby there is a reduction in the number of signatories translating actions into the reports.



**Figure 1 Comparison of achievement level of meeting goals between action plan and annual report for all signatories\***

**Notes:**

(\*) To determine if signatories addressed a Goal/Target, KPIs were grouped by their appropriate Goal/Target and assessed using the following criteria: Goal addressed – explicitly and correctly reported all and/or majority of KPIs; Some evidence goal being addressed – data provided for KPIs but in a confusing or incorrect manner and/or demonstrated actions in place to address KPI; Goal not addressed – no data provided for majority of KPIs.

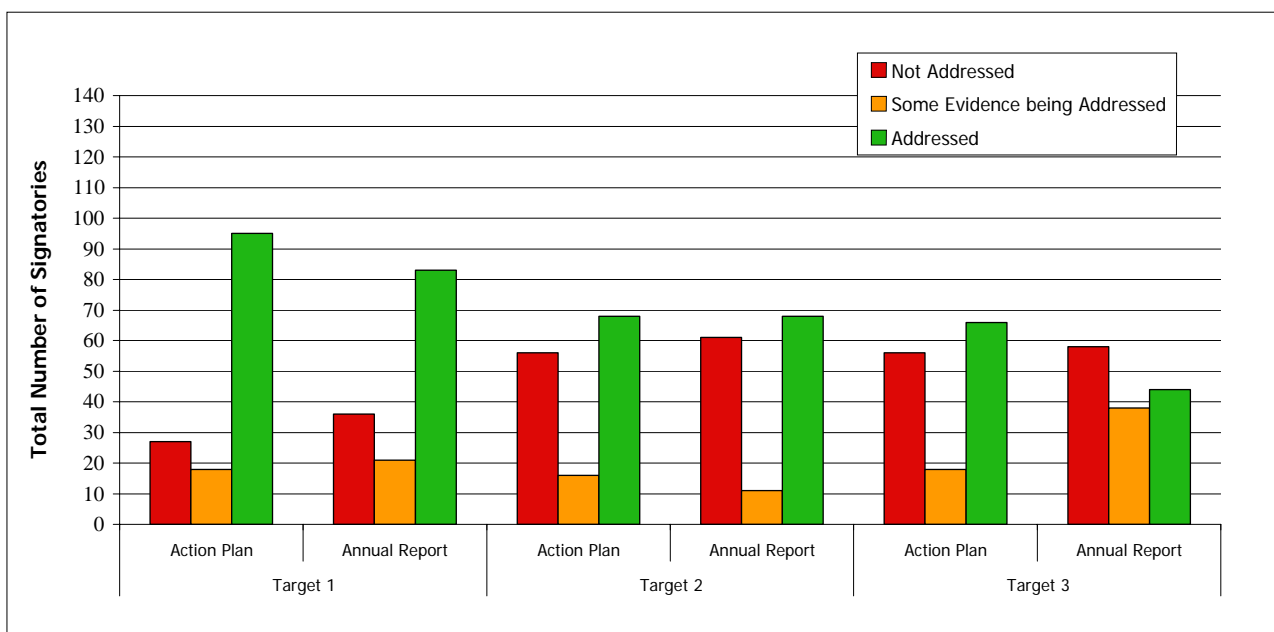
#### 4.2.3.6 Overarching targets

The Covenant has three overarching targets that have been developed to provide a means to measure the performance of signatories in meeting the Covenant goals and contributing to improvements in the lifecycle management of packaging. These targets are:

- Target 1: Increased recycling of post consumer packaging from 48% (2003) baseline data) to 65% by 2010;
- Target 2: Increase recycling of “non-recyclable” packaging from 10% recycling rate (2003 baseline data) to 25% by 2010; and
- Target 3: No new packaging to landfill (against 2003 baseline data).

Figure 2 provides a summary of the degree to which the targets of the Covenant are being addressed within signatory action plans and annual reports. A similar trend exists with the NPC targets as was observed against the NPC goals, with signatories not translating their planned actions into the annual reports.

**Figure 2 Comparison of achievement level of meeting Covenant overarching targets between action plan and annual report for all signatories\***



**Notes:**

(\*) To determine if signatories addressed a Goal/Target, KPIs were grouped by their appropriate Goal/Target and assessed using the following criteria: Goal addressed – explicitly and correctly reported all and/or majority of KPIs; Some evidence goal being addressed – data provided for KPIs but in a confusing or incorrect manner and/or demonstrated actions in place to address KPI; Goal not addressed – no data provided for majority of KPIs.

#### **4.2.4 Section 4 of the Covenant - Product stewardship**

Section 4 of the Covenant addresses the principles of product stewardship – *a shared responsibility for the lifecycle of products including the environmental impact of the product through to and including its ultimate disposal* (NPCC 2005, p 4).

The relevant areas are design, production, distribution, disposal, research, market development, education, labelling, wholesaling and retailing and recycling and reprocessing.

As depicted in Table 22 annual reports for all signatories were assessed against the ten product stewardship areas when appropriate. The actual wording in the NPC is not explicit as to which categories each sector should report against so this table has been generated to assist in the interpretation of those who are excluded from specific categories and the rationale. The methodology employed in previous evaluations of action plans and annual reports (i.e., GHD (2002) and Lewis and James (2003)) was used with one point allocated for the presence of each sub-element in an annual report, signifying a general intent by the signatory to comply with the covenant. Additional points were awarded for parts that provided greater levels of written commitment, including detailed actions, measurable targets, collection of data, and assigning resources. The values in brackets indicate the weighting given to each to arrive at a total of 5 possible points per sub-element in an annual report:

- A. A general intent to comply with the issue (1.5)
- B. Detailed action/s addressing the issue (1.5)
- C. Setting measurable (numerical) targets and/or dates and outcomes (0.75)
- D. Providing a system for collecting the relevant data to assess what progress has been made in addressing the issue (0.75)
- E. Assigning specific resources/responsibilities to addressing the issues (0.5).

For each signatory an overall score was calculated based upon the above scoring and weighting system. An average per sector (e.g., raw material suppliers, brand owners, retailer) was then calculated by taking the scores per signatory in that sector, totalling them and then dividing by the number of signatories in that sector to arrive at an average score per sector. Each area of product stewardship is presented below.

Table 22 Identification of product stewardship categories applicable for each signatory sector

Signatory	Product Stewardship Categories										Rationale for Signatory not reporting on all Product Stewardship Categories
	Design	Production	Distribution	Disposal	Research	Market Dev	Education	Labelling	Wholesale / Retail	Recycling / Reprocessing	
Brand Owners	√	√	√	√	√	√	√	√	√	√	
Waste Management				√	√	√	√			√	Not directly responsible for these categories or does not have direct influence
Community Groups				√	√		√	√	√	√	Not directly responsible for these categories or does not have direct influence
Government				√	√	√	√	√	√	√	Not directly responsible for these categories or does not have direct influence
Industry Groups	√	√	√	√	√	√	√	√	√	√	
Packaging Manufactures	√	√	√	√	√	√	√	√	√	√	
Raw Materials Suppliers	√	√	√	√	√	√	√	√	√	√	
Wholesalers / Retailers	√	√	√	√	√	√	√	√	√	√	

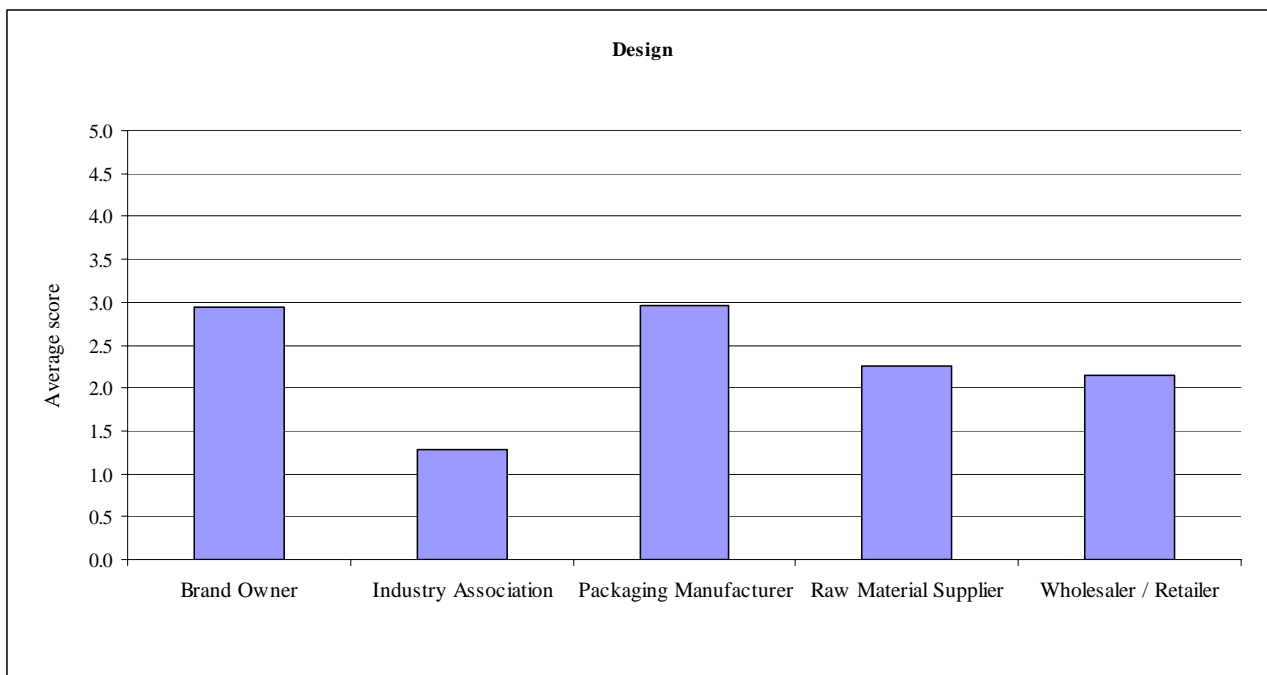
#### 4.2.4.1 Design

##### **Design (Product Stewardship – Section 4 of Covenant)**

In designing packaging, careful consideration will be given to its possible effect on the environment from manufacturer to end user as well as to its recovery (including re-use and recycling) and/or final disposal. Package designers should work with all participants in the supply, use and recovery of packaging materials (from design to re-use) to ensure that waste minimisation, secondary market creation and the reduction of litter are taken into consideration.

Figure 3 presents the average scores for all signatories in the product stewardship design category. The weighted average score was 1.9, indicating a general intention of signatories to comply with the category, but often lacking detailed actions or measurable targets. A common trend with most signatories was the failure to provide details on what specific resources are being allocated (e.g., money, time, responsible department in organisation). This category is not applicable to waste management, community groups, and government signatories.

**Figure 3 Average score for all signatories in the product stewardship design category**



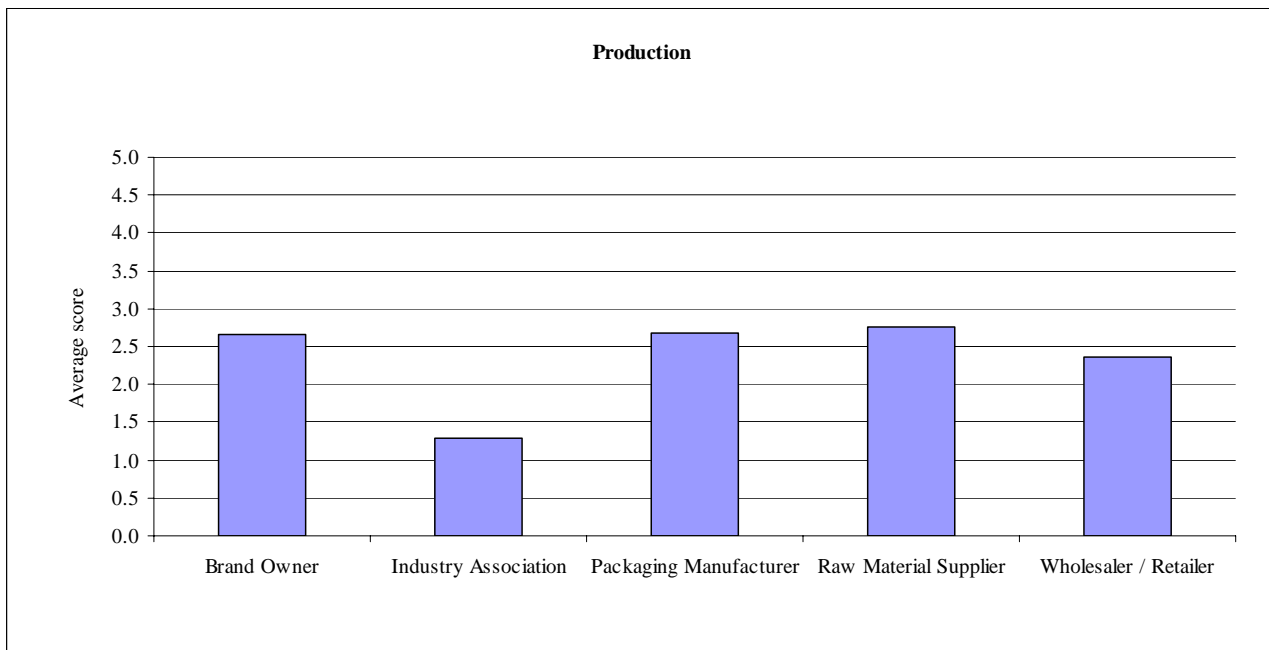
#### 4.2.4.2 Production

##### **Production (Product Stewardship – Section 4 of Covenant)**

Packaging will be manufactured to minimise the amount of material essential to guarantee the protection, safety and hygiene and shelf life of the product. Report on the source and generation of packaging materials.

Figure 4 presents the average scores for all signatories in the product stewardship production category. The weighted average score was 1.9, indicating a general intention of signatories to comply with the category, with the majority still lacking in providing either detailed actions or measurable targets. The trend of failing to address specific resources (e.g., money, time, responsible department) continues. This is category is not applicable to waste management, community groups, and government signatories.

**Figure 4 Average score for all signatories in the product stewardship production category**



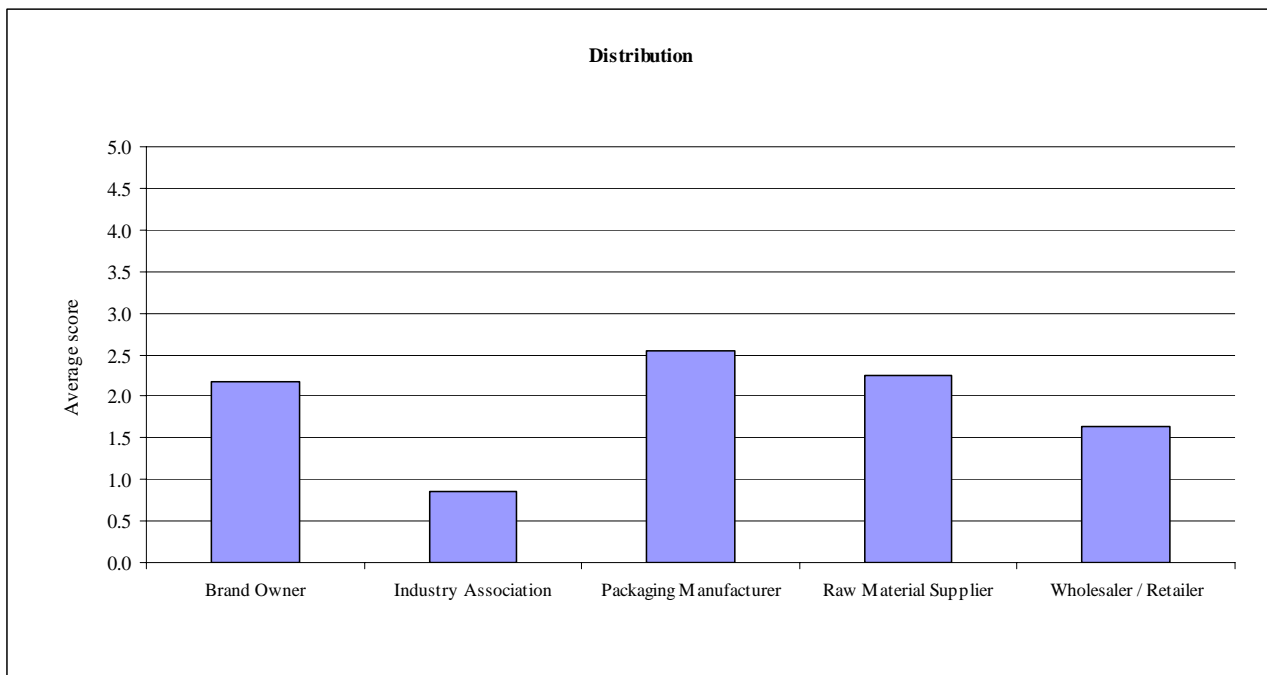
#### 4.2.4.3 Distribution

##### **Distribution (Product Stewardship – Section 4 of Covenant)**

Logistics will be designed so as to reduce material and energy consumption to optimal levels whilst maintaining product quality.

Figure 5 presents the average scores for all signatories in the product stewardship distribution category. The weighted average score was 1.9, indicating a general intention of signatories to comply with the category, with the majority still lacking in either detailed actions or measurable targets. The trend of failing to address specific resources (e.g., money, time, responsible department) continues. This category is not applicable to waste management, community groups, and government signatories.

**Figure 5 Average score for all signatories in the product stewardship distribution category**



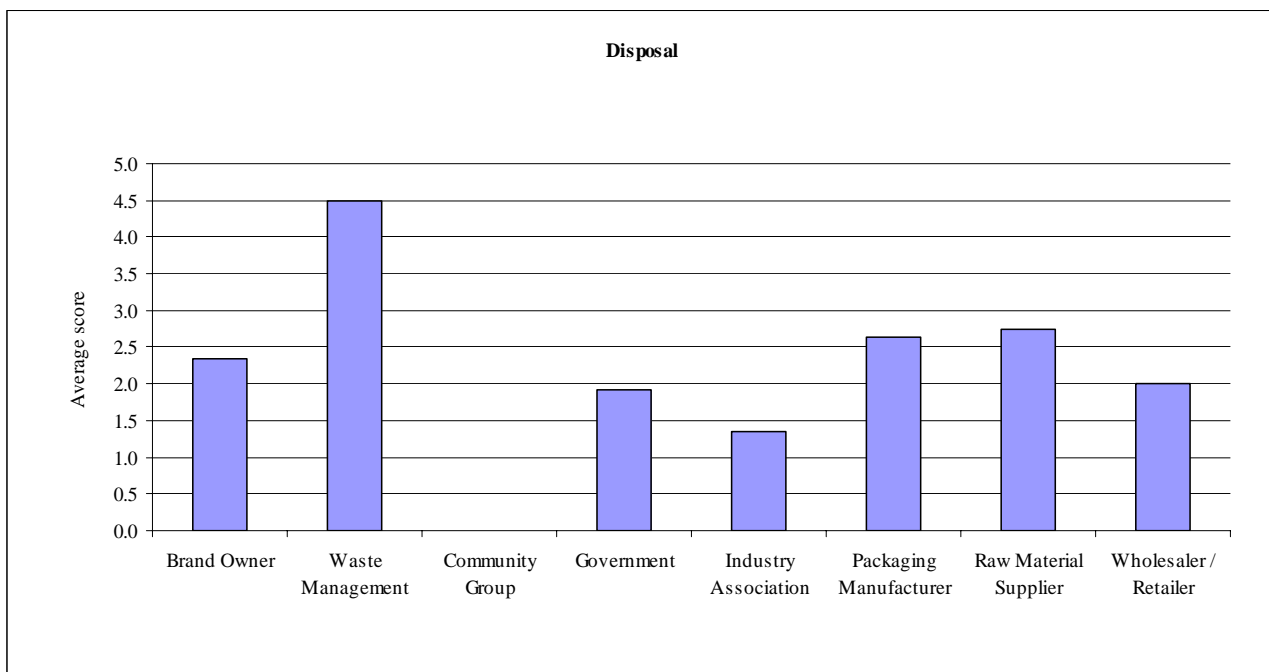
#### 4.2.4.4 Disposal

##### **Disposal (Product Stewardship – Section 4 of Covenant)**

Packaging should be designed to facilitate its safe and easy disposal by consumers when it reaches the end of its lifecycle. In this context, disposal includes re-use, recycling and other forms of recovery to minimise adverse environmental impacts.

Figure 6 presents the average scores for all signatories in the product stewardship disposal category. The weighted average score was 2.0, indicating a general intention of signatories to comply with the category, with the majority still lacking in either detailed actions or measurable targets. The trend of failing to address specific resources (e.g., money, time, responsible department) continues. The one exception to this trend is a strong showing by the waste management sector, which identified almost every category.

**Figure 6 Average score for all signatories in the product stewardship disposal category**



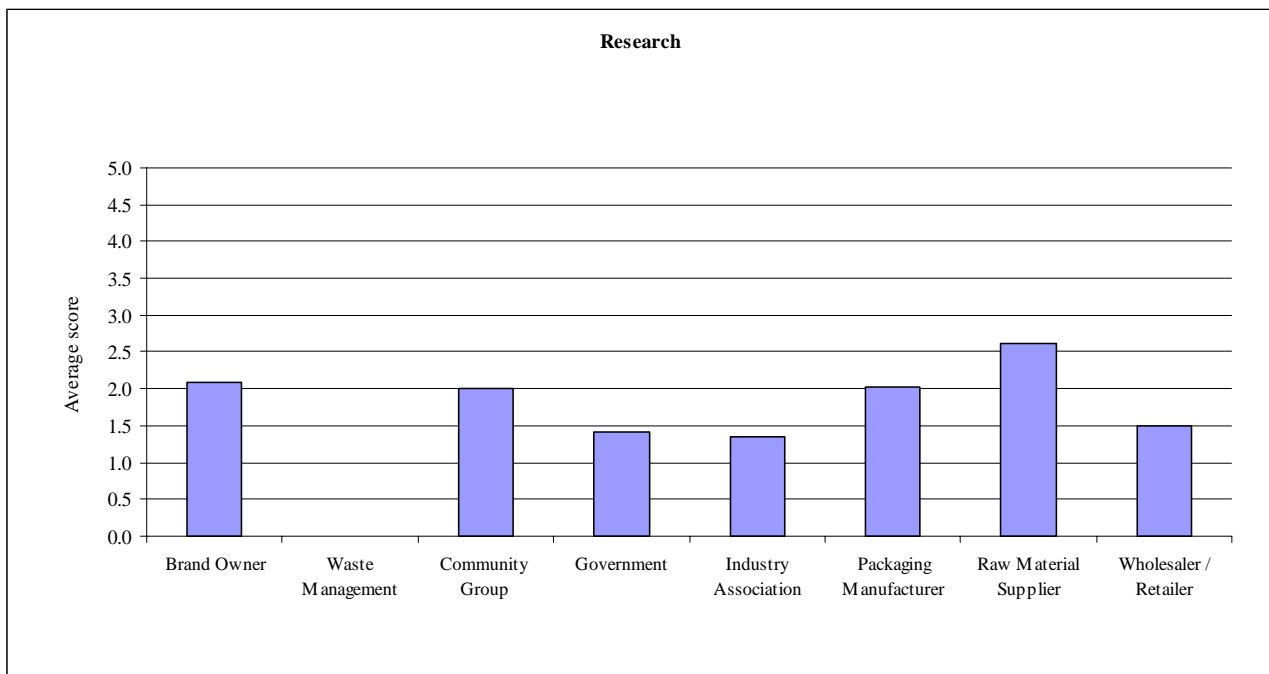
#### 4.2.4.5 Research

##### **Research (Product Stewardship – Section 4 of Covenant)**

There is a need to conduct and facilitate research into environmental and lifecycle issues involving the supply, use and recovery of packaging materials. This research should seek, among other things, to identify new uses or markets for recovered materials that are essential for the sustainability of the recycling system. The research should also aim to reduce the amount of packaging and collect data on its use.

Figure 7 presents the average scores for all signatories in the product stewardship research category. The weighted average score was 2.0, indicating a general intention of signatories to comply with the category, with the majority still lacking in either detailed actions or measurable targets. The trend of failing to address specific resources (e.g., time, money, responsible department) continues.

**Figure 7 Average score for all signatories in the product stewardship research category**



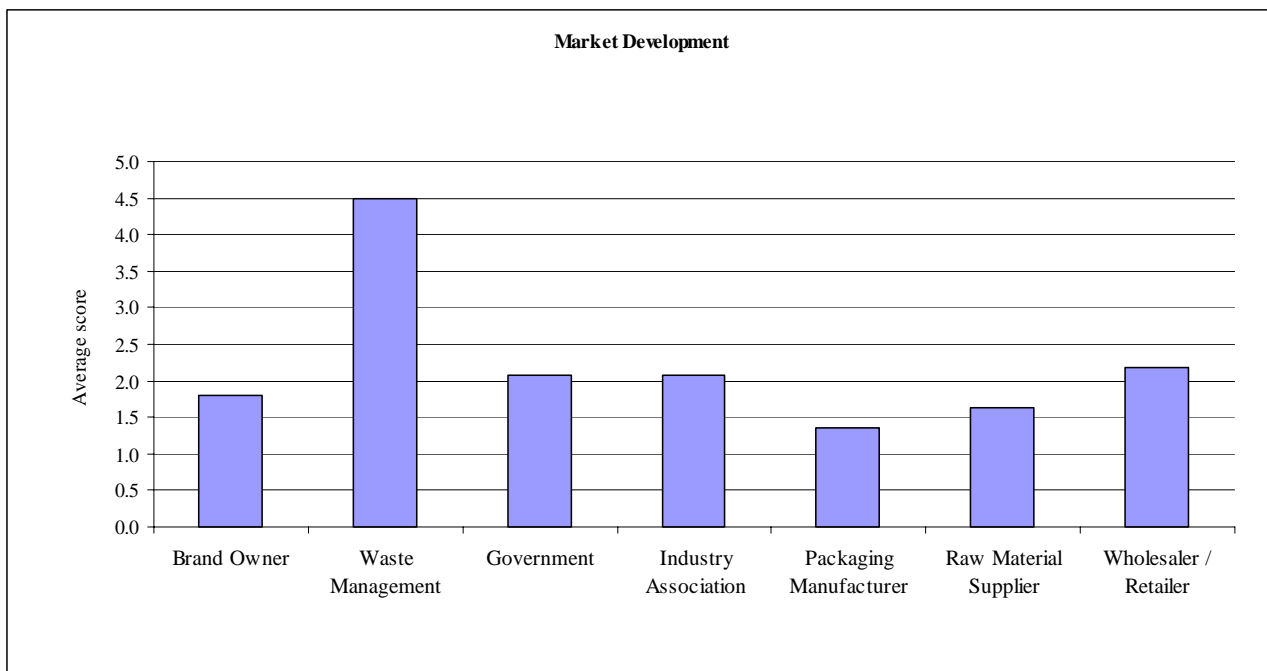
#### 4.2.4.6 Market development

##### **Market development (Product Stewardship – Section 4 of Covenant)**

Expanded markets for recyclable materials are essential to the sustainability of the recycling system. Frameworks need to be established to ensure that new product development using recovered materials is accelerated and that inappropriate barriers to the marketing of products with recycled content are removed.

Figure 8 presents the average scores for all signatories in the product stewardship market development category. The weighted average score was 2.1, indicating a general intention of signatories to comply with the category, with the majority still lacking in either detailed actions or measurable targets. The trend of failing to address specific resources (e.g., time, money, responsible department) continues. The one exception to this trend was a strong showing by the waste management sector, which identified almost every category. This category was not applicable to community group signatories.

**Figure 8 Average score for all signatories in the product stewardship market development category**



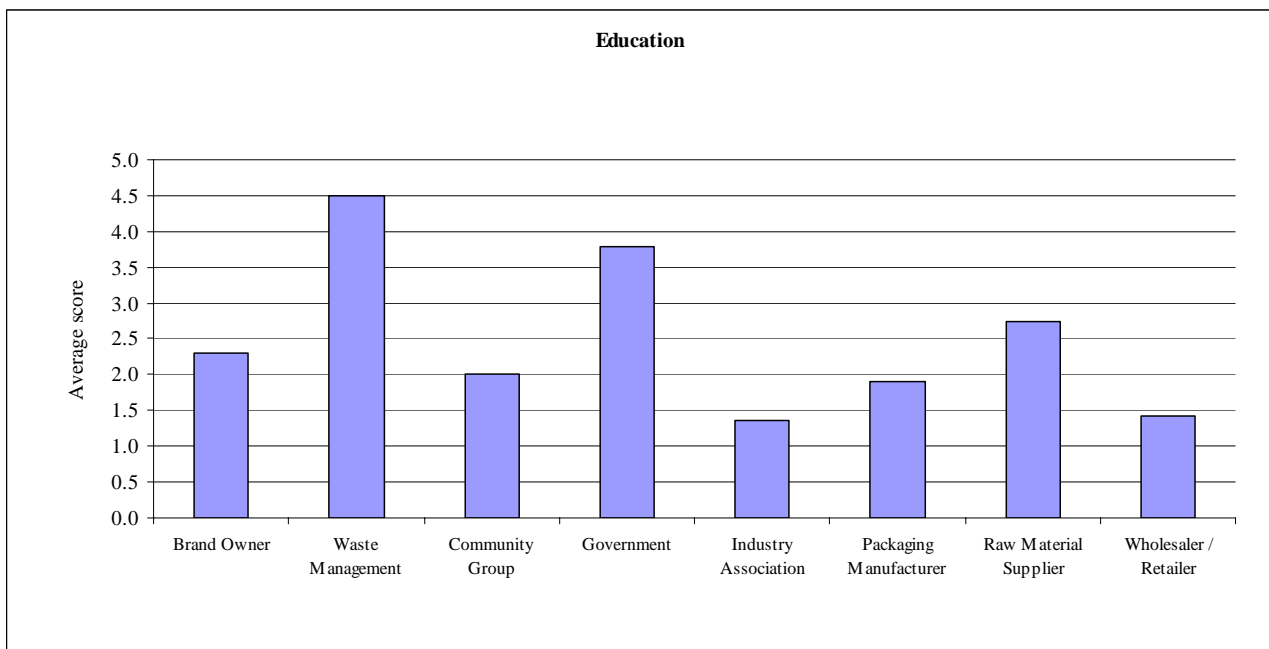
#### 4.2.4.7 Education

##### **Education (Product Stewardship – Section 4 of Covenant)**

It is essential that reliable information be developed and circulated to assist consumers in making informed purchasing choices. The responsibility for establishing and financing a balanced information campaign for the general community and school students must be shared by all those in the packaging supply chain and all governments.

Figure 9 presents the average scores for all signatories in the product stewardship education category. The weighted average score was 2.0, indicating a general intention of signatories to comply with the category, with the majority still lacking in either detailed actions or measurable targets. The trend of failing to address specific resources (e.g., time, money, responsible department) continues. The exception to this trend was a strong showing by the government and waste management sectors where almost every category was identified.

**Figure 9 Average score for all signatories in the product stewardship education category**



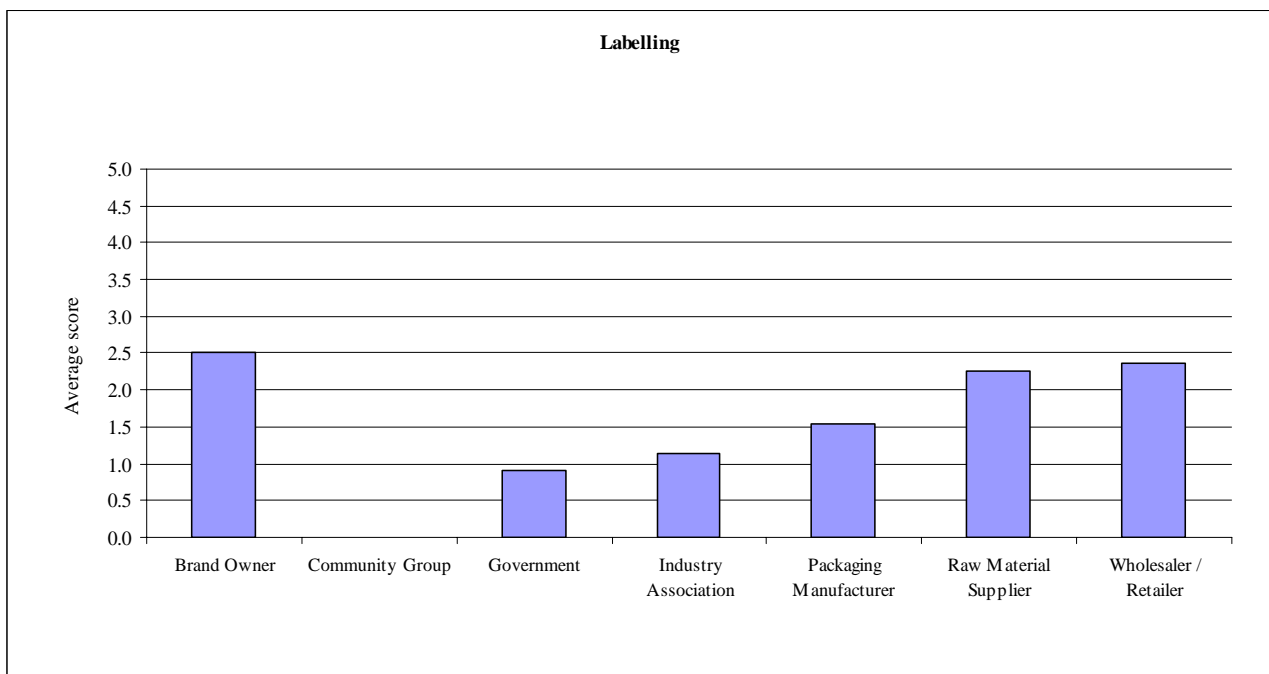
#### 4.2.4.8 Labelling

##### **Labelling (Product Stewardship – Section 4 of Covenant)**

Accurate consumer information and labelling on packaging is important to encourage appropriate recycling and/or disposal. To this end, packaging should bear appropriate information either on the packaging itself or on the label.

Figure 10 presents the average scores for all signatories in the product stewardship labelling category. The weighted average score was 1.8, indicating a general intention of signatories to comply with the category, though the majority still lacking in either detailed actions or measurable targets. The trend of failing to address specific resources (e.g., money, time, responsible department) continues. This category was not applicable to waste management and community group signatories.

**Figure 10 Average score for all signatories in the product stewardship labelling category**



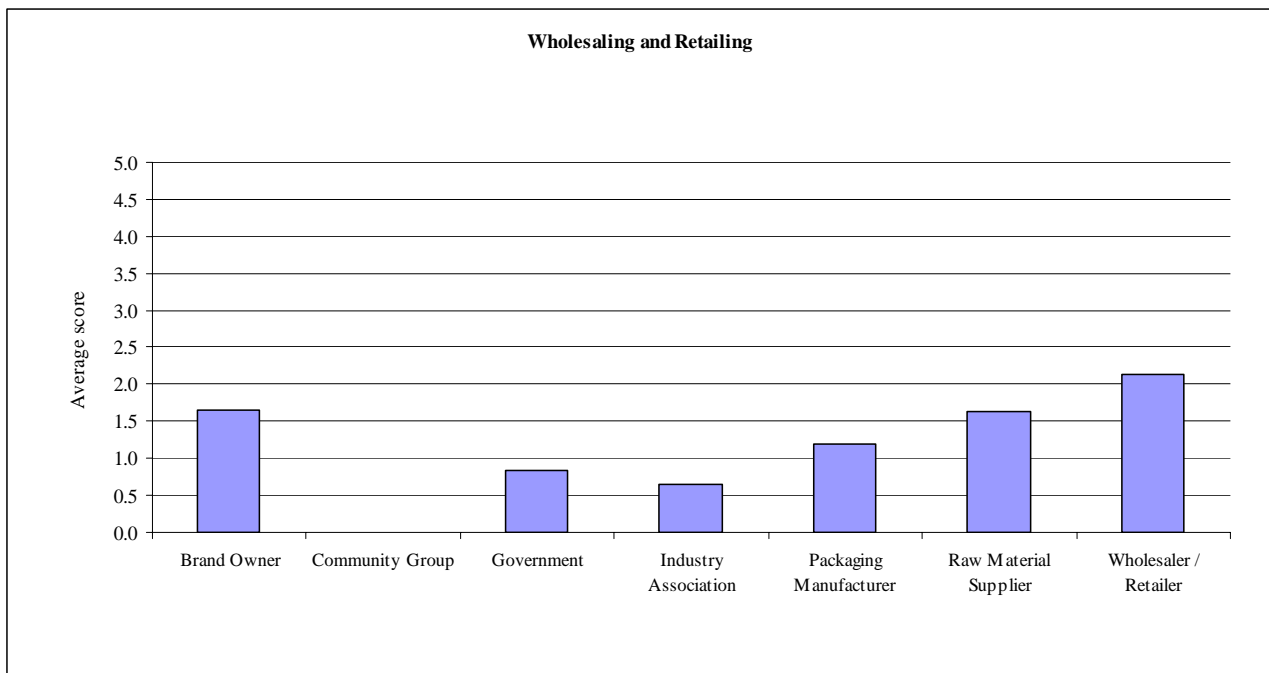
#### 4.2.4.9 Wholesaling and retailing

##### **Wholesaling and retailing (Product Stewardship – Section 4 of Covenant)**

Contribute data on changes in packaging made in response to changes in consumer demand and assist in educating the community on the role of packaging and the best way to handle packaging waste consistent with the specific requirements of local conditions. Ensure point-of-sale, display and promotional materials are designed so as to minimise the quantity of materials used and to maximise their re-utilisation.

Figure 11 presents the average scores for all signatories in the product stewardship wholesaling and retailing category. The weighted average score was 1.9, indicating a very low level of intention by the signatories to comply with the category. The trend of failing to address specific resources (e.g., time, money, responsible department) continues. This category was not applicable to waste management signatories.

**Figure 11 Average score for all signatories in the product stewardship wholesaling and retailing category**



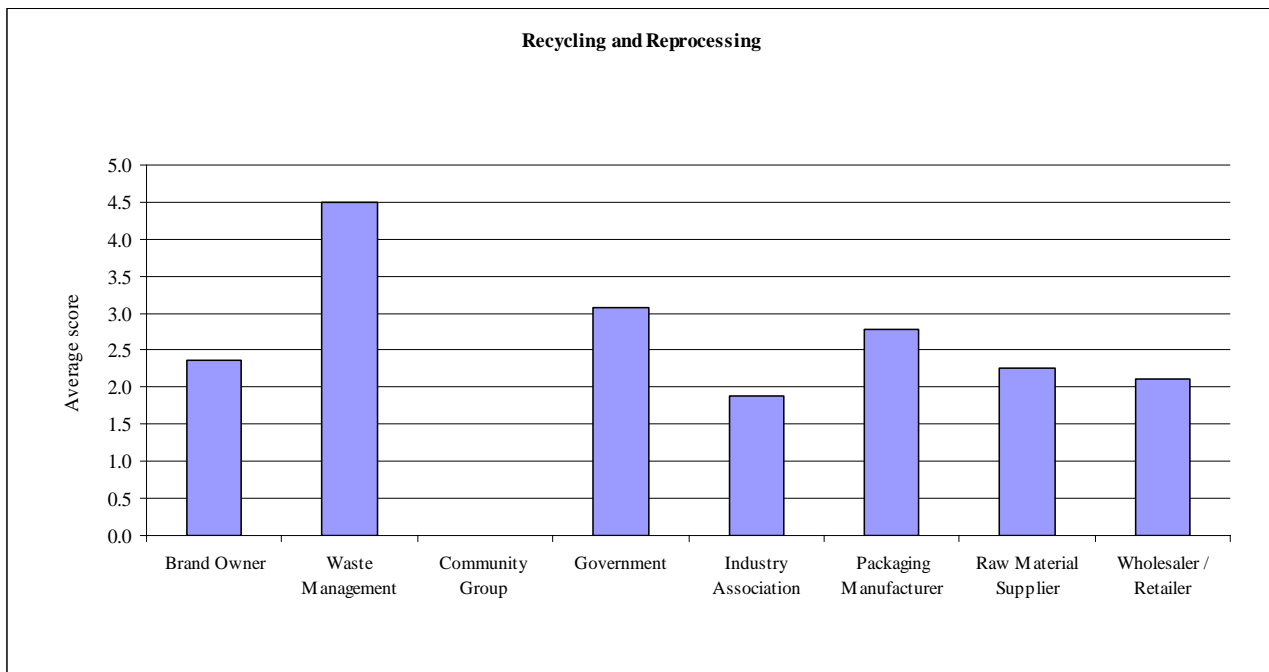
#### 4.2.4.10 Recycling and reprocessing

##### **Recycling and reprocessing (Product Stewardship – Section 4 of Covenant)**

Assist the packaging supply chain by providing data on quantities of packaging recovered and design issues affecting material recoverability. Report on the utilisation of recovered material by secondary markets and the disposal of residual packaging waste to landfill.

Figure 12 presents the average scores for all signatories in the product stewardship recycling and reprocessing category. The weighted average score was 2.1, indicating a general intention of signatories to comply with the category, though the majority still lack in providing either detailed actions or measurable targets. The trend of failing to address specific resources (e.g., time, money, responsible department) continues.

**Figure 12 Average score for all signatories in the product stewardship recycling and reprocessing category**



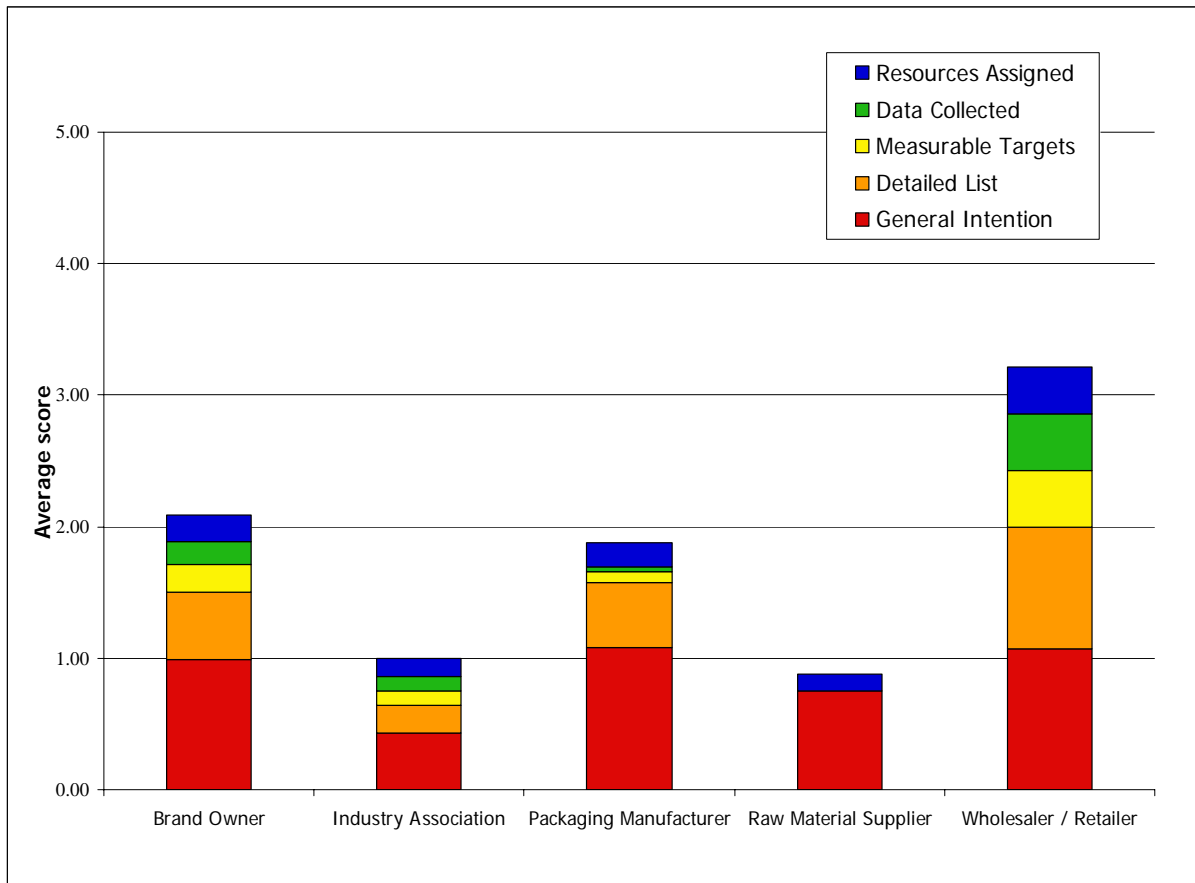
#### **4.2.5 Schedule 5 of the Covenant – Environmental Code of Practice for Packaging**

Similar to the evaluation process undertaken for the Product Stewardship section of the Covenant, the presence of the Environmental Code of Practice for Packaging (ECoPP) was assessed signifying the level of integration. Additional points were awarded for sections of the reports that provided greater levels of written commitment, including detailed actions, measurable targets, collection of data, and assigning resources. The values in brackets indicate the weighting given to each to arrive at a total of 5 possible points per sub-element in an annual report:

- A. A general intent to comply with the issue (1.5)
- B. Detailed action/s addressing the issue (1.5)
- C. Setting measurable (numerical) targets and/or dates and outcomes (0.75)
- D. Providing a system for collecting the relevant data to assess what progress has been made in addressing the issue (0.75)
- E. Assigning specific resources/responsibilities to addressing the issues (0.5).

Figure 13 presents the average score of reference to the ECoPP integrated by signatories. The average score across signatories was 1.6 indicating that there is only general intent to comply with the ECoPP. Generally no detailed actions, measurable targets, or assigning specific resources are provided. As the ECoPP is an integral component of the Covenant and all signatories are required to implement and adopt it, there is still little activity or recognition of its use to inform decision-making. The wholesalers/retailers are performing better than brand owners or packaging manufacturers. The ECoPP is not applicable to community group, government or waste management signatories.

Figure 13 Average score of reference to ECoPP integration by signatories



All signatories were reviewed for their level of integration of the Environmental Code of Practice for Packaging. Four categories were identified:

- A. Not Mentioned – ECoPP not mentioned anywhere in annual report;
- B. Simply Mentioned – ECoPP mentioned, uncertain about level of integration;
- C. Use as a Tool – Elements of ECoPP identified as used by signatory; and
- D. Formally Integrated – ECoPP has been formally integrated by signatory.

Table 23 and Figure 14 provide details on the degree to which ECoPP has been integrated within signatories.

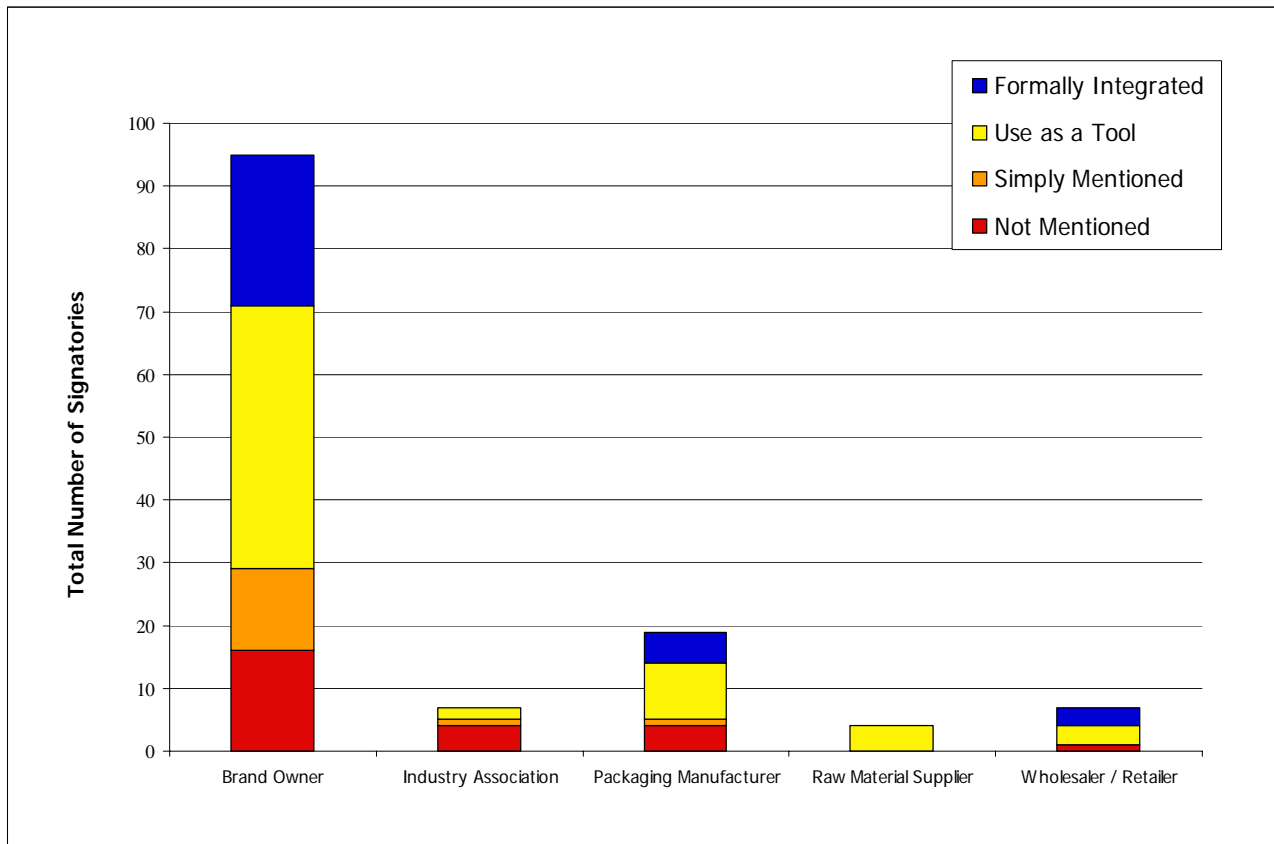
Table 23 Degree to which ECoPP is integrated by signatories

	Not Mentioned	Simply Mentioned	Use as a Tool	Formally Integrated
Brand Owner	16	13	42	24
Packaging Manufacturer	4	1	9	5
Raw Material Supplier			4	
Wholesaler / Retailer	1		3	3
Industry Association	4	1	2	

There are encouraging signs among brand owner signatories with 42 (44%) indicating that they use ECoPP to some degree and 24 (25%) who have formally integrated it as a tool. Though 13 (14%) just mention ECoPP without specific reference on how it is used and 16 (17%) do not

mention it at all. In the case of packaging manufacturers, 5 (26%) have formally integrated ECoPP and 9 (47%) have indicated that they use the tool. Wholesalers/retailers are also using ECoPP with 3 (42%) who have formally integrated it and 3 (42%) who use it as a tool.

**Figure 14 Degree to which ECoPP is integrated by signatories**



For many of the signatories, reporting of ECoPP was often discussed as being in initial planning stages or requiring further review before formal integration. Most annual reports provided no supporting evidence, but simply stated as “being reviewed for future implementation” or in an “on-going” basis. Signatories who identified as utilising elements of ECoPP often mentioned ECoPP in reference to new product development, or specifically stated that “key elements of

#### Examples of how signatories are using ECoPP

- Signatory has encouraged its suppliers and other parties to read and understand our commitment to the covenant and the ECoPP.
- Packaging systems are designed to be separated easily so as to minimise the risk of contamination during the recycling process.
- At all stages, recycled materials considered for use. Hazardous and toxic materials are not to be used within packaging processes.
- *All new products assessed against “ECoPP” checklist. During the New Product development process, we identify opportunities to educate suppliers and staff and implement design improvements to re-use or reduce packaging and advertising materials*
- Signatory Environmental Checklist embodies objectives of the old and new ECoPP.
- Project Task Database tracks completion of environmental checklist, and new process requires completion of the environmental checklist for all new products and major changes to existing products.
- All documentation checklists relating to packaging design/modification include references to the completion of the ECoPP.

ECoPP were being used". Additionally, although waste management and community group signatories have not been included in the ECoPP discussion, the one community group signatory reviewed mentioned that they used elements of ECoPP, a positive sign that all signatories, regardless of the type of industry, can gain from implementing and utilising such frameworks.

#### **4.2.6 Section 5 of the Covenant - Roles and undertakings**

Section 5 of the Covenant details a list of roles and undertakings for all signatories. This section provides a summary of how signatories as a whole are performing against their roles and undertakings.

**Table 24 The degree of performance by signatories as a whole to the roles and undertakings of the Covenant**

<b>Roles and undertakings</b>	<b>Summary of performance</b>
Produce Action Plans, which the Covenant Council will make available to the public, in accordance with Schedule 4 for evaluating and improving environmental outcomes, as appropriate, in their production, usage, sale and/or reprocessing and recovery of packaging materials.	Given the repeated re-sampling that was required to obtain 140 signatories that had successfully reported and submitted both an action plan and annual report, it is difficult to conclude that the majority of signatories are meeting the requirement to report annually to the Covenant Council. The majority of action plans did not specify goals, objectives, and targets. This is reflected in low scores against many KPIs, and reflects that signatories – regardless of size or industry type – are not complying with Covenant reporting requirements.
Work together to achieve the overarching targets set out in Schedule 2.	Difficult to conclude as many signatories have not reported the required quantitative data for specific KPIs.
Report annually to the Covenant Council, by 31 October each year, on performance against Covenant undertakings, Action Plan commitments, relevant Key Performance Indicators, baseline data and targets.	The majority of annual reports do not report against the commitments, relevant KPIs, baseline data or targets. This is reflected in low scores against many KPIs, and reflects that signatories – regardless of size or industry type – are not complying with Covenant reporting requirements.
Adopt appropriate waste management pricing policies and provide appropriate financial and other support to optimise materials recovery systems.	Limited documentation to provide conclusions to be made.

<p>Apply the principles of this Covenant in their own operations in relation to:</p> <ul style="list-style-type: none"> <li>- the purchase of raw materials</li> <li>- the manufacture and use of packaging materials and paper</li> <li>- the purchase of packaged goods and paper</li> <li>- the disposal of used packaging and paper</li> <li>- materials recovery and the purchase of recovered materials</li> </ul>	<p>With regard to recycled content goods policies, Signatories were either attempting to address this as stated by quantitative and qualitative data, or just beginning to address the policy. Many stated current programs or exploring programs directed at:</p> <ul style="list-style-type: none"> <li>• Establishing source separation and recycling programs for wastes</li> <li>• Undertaking waste audits</li> <li>• Establishing waste management teams</li> </ul> <p>Many of the Food and Beverage Signatories cited health-related issues when considering recycled material in food packaging, whilst many Signatories had no written evidence in either the Action plans or Annual report of any commitments on formal market structures for recycled-content products. Signatories on average have successfully implemented strong recycling programs for their onsite facilities. Many identify and state levels and recycled materials which often consist of more than just general office paper and plastic waste.</p>
<p>Work co-operatively to develop good practice collection systems and to develop end markets for recovered materials.</p>	<p>Local government and waste management groups have lead responsibility. Low rate of reporting of KPIs (refer Table 10, Table 13 and Table 15) therefore difficult to make strong conclusions to progress.</p>
<p>Facilitate the implementation of purchasing policies for recycled content goods.</p>	<p>As reported in Table 18 there is a low level of implementation of buy recycled content policies and practices.</p>
<p>Promote the adoption of the principles and undertakings set out in this Covenant and the benefits of becoming a signatory to the Covenant.</p>	<p>All signatories should be promoting the benefits of being a signatory. Industry associations should play an active role in this, though with limited documentation supplied in reviewed action plans and annual reports it is difficult to provide conclusions.</p>
<p>Co-ordinate education and promotion programs and establish a communications framework to facilitate information collation and dissemination to signatories and stakeholders.</p>	<p>Industry associations and government should play an active role in this, though with limited documentation supplied in the reviewed action plans and annual reports it is difficult to provide conclusions.</p>
<p>Facilitate the development of programs that optimise the value for recycled materials.</p>	<p>Industry associations, government and waste management companies should play an active role in this, though with limited documentation difficult to provide conclusions.</p>

<p>Agree that where a formal industry waste reduction agreement/plan or de facto agreement exists under State or Territory legislation or policy, and meets the undertakings of the Covenant, the commitments contained in that agreement/plan shall not be superseded by national Action Plans under the Covenant in that State or Territory. The industry parties may, however, seek to propose that the commitments contained in an individual State or Territory-based agreement/plan be enshrined in relevant national Action Plans under the Covenant.</p>	<p>No comment.</p>
--	--------------------

#### 4.2.7 Schedule 4 of the Covenant – Action plans and annual reports

According to Schedule 4 of the Covenant, action plans and annual reports must be provided by each individual signatory. The Covenant recognises that particular actions will vary among the different signatories depending upon their sector and the specific roles and functions they undertake. Each action plans must report against a number of essential components, as outlined in Table 25. Comments are also made as to the degree to which signatories are compliant.

**Table 25 The degree to which signatories have reported against the essential components of an action plan according to Schedule 4 of the Covenant**

Essential components of an action plan	Degree to which this is reported
<p>Information about the signatory, including a description of where they reside in the packaging supply chain, any brand names owned, a summary of their size (measured in turnover or market share), their location and full contact details for an appointed Covenant officer</p>	<p>Refer to Section 4.2.1 and Table 4 on page 13 for details. Summary:</p> <ul style="list-style-type: none"> <li>• Signatory name (100% reported)</li> <li>• Sector in supply chain (100% reported)</li> <li>• Company size/turnover (33% reported)</li> <li>• NPC officer name (95% reported)</li> </ul>
<p>Specific actions that will be undertaken to improve environmental and waste minimisation aspects of the production, use, sale and/or reprocessing and recovery of packaging materials, including specific actions that will contribute to the environmental goals and targets of the Covenant</p>	<p>Refer Table 26 on page 53 for examples of actions.</p> <p>Refer section 4.3 which documents the comparison of action plans across the different signatory sectors.</p>
<p>Identification of the specific Key Performance Indicators (see Schedule 2) and the appropriate baseline data and targets that will be included and reported against in subsequent annual reports</p>	<p>Refer section 4.2.3 for details on each KPI associated with one of the NPC goals.</p>
<p>The processes and nomination of responsibility for data collection and reporting</p>	<p>69% of signatories provide details on nominated person or department responsible for action.</p>
<p>The commitments, resources and arrangements that will be put in place to address all Covenant undertakings relevant to the signatory</p>	<p>82% of signatories either report commitments, resources and/or arrangements</p>
<p><b>Industry signatories must also:</b></p>	

<ul style="list-style-type: none"> <li>• Provide data for each element of the Company Data Set as per Schedule 2.</li> </ul>	Refer Section 4.2.3 for details on each KPI
<ul style="list-style-type: none"> <li>• Demonstrate clear evidence of the adoption and implementation of the Environmental Code of Practice for Packaging (see Schedule 5).</li> </ul>	Refer Section 4.2.5 for details. Summary: <ul style="list-style-type: none"> <li>• 42 (44%) indicating that they use ECoPP to some degree; and</li> <li>• 24 (25%) who have formally integrated it as a tool.</li> </ul>
<ul style="list-style-type: none"> <li>• Report on and explain significant changes to packaging affecting weight, compound or materials, e.g. Shelf life, cost, technology, environmental benefits, OH&amp;S issues.</li> </ul>	30% of signatories provides examples such as: <ul style="list-style-type: none"> <li>• A trial was conducted to distribute product on cardboard trays. This trial has proven successful and all shrink wrap has been removed.</li> <li>• Adapting product compatibility to Australian kerbside collection</li> <li>• Use of a new multi-material extending the shelf-life by 10%</li> <li>• Down gauging of barrier sealant film from 54um to 38um – saving of 137 tonnes/annum.</li> </ul>

Action plans and annual reports provided by signatories in the packaging supply chain demonstrate that there is a significant amount of work being undertaken to reduce the life cycle impacts of packaging. While in some cases this change may have been spurred from within the individual companies, it is reported that much of this activity has been initiated or facilitated as a result of the Covenant process.

The overall quality of action plans was not found to be related to organizational size. Some of the plans submitted by small to medium sized companies were as good as, or sometimes better, than plans submitted by very large organizations.

Many of the commitments listed in action plans relate to cleaner production or waste minimization within operations, for example:

- Undertaking waste audits;
- Establishing waste management teams; and
- Establishing source separation and recycling programs for wastes.

Many signatories have also committed to actions designed to achieve change within their supply chains, for example:

- Educating suppliers about their own action plan and encouraging them to participate; and
- Providing guidelines to suppliers about environmental performance.

As described in the 2003 evaluation of action plans and annual reports (Lewis and James, 2003), it was viewed that the Covenant would act as an integral mechanism that would facilitate the integration of environmental design in the product development process. This was particularly evident in plans submitted by brand owners and fillers, who are clearly responsible for specification

of packaging. However, the majority of action plans reviewed during this round shared many similarities to those reviewed in 2003 such as:

- Preparing guidelines and checklists based on the ECoPP;
- Amending their product development process to include assessment against the guidelines / checklist; and
- Involving the environmental manager in sign-off for major materials purchasing decisions.

Although truly incorporating environmental design and ECoPP into the product development process is expected to take some time to translate into widespread changes in product design, the action reported indicated that many of the signatories remain in the beginning stages of incorporating environmental design elements into the development process.

### **4.3 Compare action plans**

#### **4.3.1 Overall summary of reported actions by signatories**

Two general themes emerge with regard to signatories and reported actions. Firstly signatories reported many positive actions that addressed some or all the NPC goals and targets. Examples reported by all sectors include changing over to and/or increasing the use of recycled materials and the introduction of biodegradable packaging; developing databases on packaging materials and flows; incorporating recycling logos and labels; developing educational programs (e.g., littering); and a general overall increase in recycling.

Secondly there was a general absence of explicitly stated targets and milestones. Although signatories as a whole indicated great promise and stride in their actions, many of the action plans failed to address all of the required areas, Product Stewardship being a primary one. While not every product stewardship category is applicable to each sector, the lack of discussion by many of the signatories, coupled with a general absence of targets and milestones, resulted in actions failing to address all of the NPC requirements.

This issue could be quickly addressed if signatories understood how each requirement was connected (e.g., combining Goal 1 with related KPIs and product stewardship objectives). The action plans and annual reports that were organised in such a manner were often better organised, easier to read and review, and almost never left out required data.

Table 26 presents examples of actions that signatories are implementing.

**Table 26 Examples of actions being implemented by signatories as documented in their action plans**

<b>BRAND OWNERS</b>
<ul style="list-style-type: none"> <li>• Refining and expanding environmental performance monitoring systems.</li> <li>• Analysing, reviewing and acting on performance indicators.</li> <li>• Investigating opportunities for packaging material reduction.</li> <li>• Packaging design review to improve recycling and re-use.</li> <li>• Driving improvements in re-use, waste minimization and recycling.</li> <li>• Increased recycling and removal of recyclables from landfill waste through waste audits.</li> <li>• Enforcing paper recycling in all offices.</li> <li>• Purchasing office paper with recycled content.</li> <li>• Establishing aluminium can and tube recycling from packaging waste, canteens etc.</li> <li>• Furthering education and awareness of staff, suppliers, customers, and consumers in packaging re-use, recycling and appropriate disposal.</li> <li>• Investigating complete process water filtration and re-use system to significantly reduce mains water usage in production.</li> <li>• Cleaning of paint damaged packaging and recycling where contamination is not excessive.</li> <li>• Increase use of returnable packaging systems with suppliers.</li> <li>• Replacing where possible non-recyclable plastic with recyclable.</li> </ul>

Table 26 continued

<b>PACKAGING MANUFACTURERS</b>
<ul style="list-style-type: none"> <li>• Will promote the beneficial features of our products and the recycling of finished products.</li> <li>• Subject to financial constraints we will implement technology which enhances the properties of its products, in particular the environmental impact.</li> <li>• Will seek to minimise the impact of pollution, emissions, resource use and final disposal through improved practices, procedures, product design and distribution.</li> <li>• Will make all of its employees aware of its environmental policy and will distribute the policy to all its customers.</li> <li>• Will continually monitor its environmental policy and review as necessary responding to continual changing community attitudes towards environmental issues.</li> <li>• Will improve energy, water and waste efficiency per units of product.</li> <li>• Will educate its employees, contractors and suppliers ensuring that environmental responsibility is integrated into work practices, training, decision making and will be included in individual performance appraisals.</li> </ul>
<b>WHOLESALE / RETAILER</b>
<ul style="list-style-type: none"> <li>• It is the role of this team to direct innovation and ensures expectations are met; Environmental Code of Practice for Packaging (ECoPP) and NPC commitments are met by suppliers, including designers. It is the role of the NPC team to ensure that they are understood by all teams and their consultants.</li> <li>• Asks suppliers to report quarterly and annually on agreed aspects of environmental performance including packaging volume, recycled content, source reduction and EMS initiatives associated with the NPC.</li> </ul>
<b>GOVERNMENT</b>
<ul style="list-style-type: none"> <li>• Industry and Local Government Support via grants and education programs</li> <li>• Implementation of the National Environment Protection Measure to provide regulatory underpinning to the Covenant</li> <li>• Shaping Covenant policy and developing/delivering projects as member of the National Packaging Covenant Council</li> <li>• Delivering improved environmental performance across government departments</li> </ul>

Similar to Table 26 above documenting examples of actions implemented, there were good examples of continuous improvement by signatories with almost every signatory able to provide at least one example of continuous improvement (Table 27).

**Table 27 Examples of continuous improvement by signatories as documented in their annual reports****BRAND OWNERS**

- Optimization of the recycling system, shown for instance by an increase of the weight of post-consumer packaging waste sent to recycling: 300t sent to recycling in 2005-2006 and 400t in 2006-2007
- Reduction of the amount of package used for the manufacture of a product, illustrated with data of the weight of materials avoided: 1.5t of plastic bag used in 2005-2006, 0.4t in 2006-2007
- Trial of new materials, illustrated with the results of the trials
- Halved volume of waste to landfill and increased recycled volume by 75% in recent years.
- 9000L/week of wastewater is chemically treated with alum and used for garden and grounds
- New packaging using less non-recyclable packaging, potential reduction by 29-43%
- Increasing of the package assessed against ECoPP (from 0 to 15%)
- Design of new packaging incorporating recyclable materials
- Improvement of the “Buy-recycled” policy
- Implementation of re-use, for example for drums containing chemicals (cleaned and re-use)
- Improving the consumer education programs

**PACKAGING MANUFACTURERS**

- Down gauging of barrier sealant film from 54um to 38um – saving of 137 tonnes/annum.
- Two Scrap Utilisation projects have been commercialized (Protective Sheet for packaging & Builders Black film).
- Increased recycled content in cartons purchased from supplier – range from 40% to 100% recycled content.
- Introduced larger capacity cartons for shrink barrier bags used on robotic bag loaders – reduction in carton numbers.
- Barrier extrusion down gauging and yield improvements – saving of 174 tonnes/annum.
- Light weighting of thermoformed tubs – saving of 33 tonnes/annum.
- Replaced virgin resin with recycled resin in sheet extrusion – 400 tonnes/annum recycled resin used.
- Introduced bulk packaging of barrier trays – elimination of cardboard carton packing.
- Introduced reuse of cardboard cores for extruded barrier sealant film.
- Extruder 2 yield improvement - saving of 110 tonnes/annum
- Introduced returnable cartons for reuse of up to 5 times – reduction in carton numbers.
- Use of scrap regrind into the process – reduction of waste to landfill by 10 tonnes/week.

Table 27 continued

GOVERNMENT
<ul style="list-style-type: none"> <li>• Approx 83% of waste generated by govt departments is recycled</li> <li>• 12 additional councils participated in Best Practice Kerbside Recycling Program bringing the total to 54.</li> <li>• In 2006-07 4 councils introduced organic collection services bringing total to 32</li> <li>• Existing kerbside collection services recover 250,000t per year. 38% of households with access to organics collection utilise it.</li> </ul>
WHOLESALE / RETAILER
<ul style="list-style-type: none"> <li>• Increase use of paper for wrapping paper bags from 50% to 70% of total (68% reported)</li> <li>• Introduce a new reusable/recyclable “product” identified with positive feedback, pursuing opportunities</li> <li>• Sales of “...®” biodegradable products continue to increase.</li> </ul>

The assessment of signatory action plans and annual reports utilised a combination of qualitative and quantitative assessment as previously mentioned. A summary of reviewer comments with respect to good reporting practices and where improvements are required are as follows:

- **Examples of Good Reporting Practices**
  - Clear reporting of the KPI's, easy to follow;
  - Clear report, easy to read and can obtain information;
  - Report addresses the goals and overarching targets directly;
  - Good justification of decisions made;
  - Excellent layout, detailed report; and
  - Indication of contact person responsible for each KPI's.
- **Examples of Bad Reporting Practices That Require Improvement**
  - Unclear report;
  - No discussion of the product stewardship categories;
  - No quantitative results;
  - Reporting of wrong KPI's - no mention of the product stewardship categories;
  - No reference of the KPI, or evidence of implementation;
  - No measurable outputs;
  - Insufficient baseline data provided; and
  - Reporting on KPI's that are not required for that sector, however no data reported for required KPI's.

### 4.3.2 Comparing the equivalence of actions of signatories of similar size and supply chain position

This section briefly summarises the types and range of actions by similar sized signatories within similar supply chain positions. As section 4.3.1 demonstrates, signatories overall are making some headway towards achieving NPC goals and targets. However, it is also important to compare similar sized signatories within their respective supply chain positions. Four brand owner signatories (two large, two small), two wholesalers/retailers, and two packaging manufacturers were identified for internal comparison.

The conclusion that emerged during the comparisons was that regardless of industry type or size, a strong correlation exists between the effort and detail applied to an action plan and the results reported in an annual report. The comparison indicates Signatories benefit strongly from employing a comprehensive approach that integrates product stewardship categories, targets, strategies, and goals, in addition to identifying key contacts for each KPI in their action plan. Signatories that applied this reporting technique generally had stronger, more detailed annual reports.

#### 4.3.2.1 Brand owner signatories

##### **Two large brand owners**

Four brand owner signatories consisting of two pairs in similar industry sectors were compared. The first set compared two large companies and the second set compared two small companies.

The scores calculated for the action plans and annual reports for both of the large brand owner signatories were average. Both signatories reported on most KPIs, but relied on vague statements and neither reported on KPI 3 and 4. The action plan for the first signatory relied on generally vague statements about future actions, whilst the second signatory did a better job using some milestones/targets. The use of targets by the second signatory in their action plan is highlighted by a much stronger and more detailed annual report. Although both signatories are able to report some actions undertaken, the second signatory's annual report benefits from the broader comprehensive approach utilised in their action plan. Details on the extent of reporting for a selection of KPIs are presented in Table 28.

**Table 28 Comparison of reporting against a selection of KPIs for two large sized brand owner signatories**

	<b>Signatory 1</b>	<b>Signatory 2</b>
KPI 1	197 tonnes Total domestic weight sold 288 tonnes Total imported weight sold 3,682 tonnes Total weight of products packaged	559 tonnes Total domestic weight sold 393 tonnes Total imported weight sold 1,177 tonnes Total weight of products packaged
KPI 3	Did not report on KPI	Did not report on KPI
KPI 4	Did not report on KPI	Did not report on KPI
KPI 6	147 tonnes non recyclable paper /cardboard (waxed/high wet strength)	58 tonnes Plastic – 5 302 tonnes composite

Examples reported by the first large brand owner signatory on actions undertaken were:

- Office paper recycling systems have been instituted and paper recycling bins provided on each floor;
- Separate paper recycling and general waste bins are provided at each employee's desk;
- Cartridge recycling is undertaken in partnership with Australia Post; and
- Import pallets are sent to a pallet recycler.

Examples reported by the second large brand owner signatory on actions undertaken were:

- In 2003, 35% by weight of the packaging products sold into the Australian market was "non-recyclable". In the previous financial year, the percentage increased to 39%.
- Conduct a waste audit to identify the type and quantities of waste being generated at all sites and identify opportunities for redirection from landfill. Completion date moved from June 2007 to April 2008.
- Conduct a materials audit to identify type and quantity of packaging material consumed as a result of business operations. Completion date moved from September 2007 to April 2008.
- Increase recycling rate of packaging materials consumed as a result of business operations to 100%. Completion June 2010.

Both signatories have formally integrated ECoPP, but neither provided any evidence of how ECoPP had been utilised.

### ***Two small brand owners***

Both action plans for the small brand owner signatories were clearly written and identified specific requirements. However, the first small sized signatory integrated product stewardship categories, used targets, and identified key contacts for each KPI in their action plan. This differentiated from the use of vague language by the second small signatory in their respective action plan. The first small signatory benefited from a more detailed action plan, highlighted by a much stronger and more detailed annual report. Although both signatories are able to report some actions were undertaken, the second small signatory's annual report benefits from the broader comprehensive approach utilised in their action plan. Details on the extent of reporting for a selection of KPIs are presented in Table 29.

**Table 29 Comparison of reporting against a selection of KPIs for two small sized brand owner signatories**

	<b>Signatory 1</b>	<b>Signatory 2</b>
KPI 1	<ul style="list-style-type: none"> <li>• 1,226 tonnes total domestic weight sold</li> <li>• 0 tonnes total imported weight sold</li> <li>• 375 tonnes total weight of products packaged</li> </ul>	<ul style="list-style-type: none"> <li>• Did not report on KPI</li> </ul>
KPI 3	<ul style="list-style-type: none"> <li>• Continue to down gauging cartons &amp; film when possible.</li> <li>• Better efficiencies of material usages &amp; energy will be considered.</li> </ul>	<ul style="list-style-type: none"> <li>• Reviewing lightweight materials for bottles, should provide significant saving in glass (ongoing)</li> <li>• All waste generated during the production process is separated into recyclable bins and taken to the recycling depot located directly across the road from the factory.</li> <li>• General paper recycling</li> </ul>
KPI 4	<ul style="list-style-type: none"> <li>• Did not report on KPI</li> </ul>	<ul style="list-style-type: none"> <li>• Most design/production changes have already been completed, and further change would lead to degradation of product. Exploring other options.</li> </ul>
KPI 6	<ul style="list-style-type: none"> <li>• 375 tonnes BoPP</li> </ul>	<ul style="list-style-type: none"> <li>• Did not report on KPI</li> </ul>

Examples reported by the first small brand owner signatory on actions undertaken were:

- Current practice to buy cardboard 100% recycled. Signatory claims through its suppliers to have optimal corrugated box packaging in terms of 100% recycled material which is recyclable.
- Developed Access database system utilising sales information from accounting system and production usages data to assist in collecting baseline data.

Examples reported by the second small brand owner signatory on actions undertaken were:

- Although no formal Buy Recycled purchasing policy is in place, the two main contributors to packaging are sourced from suppliers that use recycled materials in their process, equating to a minimum of 97.9% of all packaging used containing recycled material

Both signatories discussed ECoPP in their action plans and annual reports, although the references used broad vague sentences that didn't provide evidence of how, and neither has formally integrated ECoPP.

#### 4.3.2.2 Packaging manufacturing signatories

Two medium sized packaging manufacturing signatories were chosen for comparison. The action plans and annuals reports for both were generally easy to understand, and each provided some clear strategies, objectives, and reported on all required KPIs. Specifically, the second signatory provided only one or two examples of actions undertaken compared to the first signatory which reported more, however many of the statements provided by the first signatory were of a vague nature. Details on the extent of reporting for a selection of KPIs are presented in Table 30.

**Table 30 Comparison of reporting against a selection of KPIs for two medium sized packaging manufacturer signatories**

	<b>Signatory 1</b>	<b>Signatory 2</b>
KPI 2	<ul style="list-style-type: none"> <li>• 31,012,000 mega joules of energy</li> <li>• 62,00 kilolitres of water</li> </ul>	<ul style="list-style-type: none"> <li>• 10,407 mega joules of energy</li> <li>• 1 kilolitres of water</li> </ul>
KPI 3	<ul style="list-style-type: none"> <li>• Reduced gauge peelable sealant for thermoform application</li> <li>• Downgauged uncoated &amp; coated substrate films</li> <li>• Reduction in barrier product weight</li> <li>• Downgauging FS film structures. - 20% gauge reduction - Customer trials in progress</li> </ul>	<ul style="list-style-type: none"> <li>• Did not report on KPI</li> </ul>
KPI 4	<ul style="list-style-type: none"> <li>• Introduce one piece cartons instead of two piece cartons - a) Reduction in weight of cardboard used per carton - 40% completed.</li> <li>• Introduction of Pool Pallet system - c) Reuse of pallets, eliminate use of one-trip pallets - On hold.</li> <li>• Use of reusable roll cradles to store mill rolls in-plant - e) Eliminate use of wooden roll supports, improve hygiene - Completed. 40% more rolls packed per pallet.</li> <li>• Work with carton supplier to maximise recycle content of cartons (2006/2007 recycle content ranges from 40% to 100% depending on board - h) Increase recycle content by 5% and reduce carton weight by 5%.</li> </ul>	<ul style="list-style-type: none"> <li>• Did not report on KPI</li> </ul>
KPI 5	<ul style="list-style-type: none"> <li>• Did not report publicly on KPI</li> </ul>	<ul style="list-style-type: none"> <li>• 5% of post-consumer recycled content in packaging manufactured</li> </ul>

Examples reported by the first medium sized packaging manufacturer signatory on actions undertaken were:

- Down-gauging of barrier sealant film from 54um to 38um – saving of 137 tonnes/annum
- Barrier extrusion down-gauging and yield improvements – saving of 174 tonnes/annum
- Introduced bulk packaging of barrier trays – elimination of cardboard carton packing

Examples reported by the second medium sized packaging manufacturer signatory on actions undertaken were:

- The second signatory reported total packaging waste packaging recycled on site was 2.5 times higher than in the previous year.

Neither signatory had formally integrated ECoPP, but both mentioned they used aspects of the tool. The first signatory did not provide any evidence of how ECoPP had been utilised, whilst the second signatory reported using a questionnaire form in product improvement /re-modelling.

#### 4.3.2.3 Wholesale / Retail signatories

It was difficult to locate two signatories, from the random sample, in similar industry sectors that were also of similar size. Because of this, two medium sized signatories that were in different industry sectors were chosen for comparison. The action plans and annual reports for both were generally easy to understand. However, both signatories failed to report on all required KPIs, reflected in heavy reliance on vague sweeping statements in both the action plan and annual report by both signatories. Details on the extent of reporting for a selection of KPIs are presented in Table 31.

**Table 31 Comparison of reporting against a selection of KPIs for two medium sized wholesaler/retailer signatories**

	<b>Signatory 1</b>	<b>Signatory 2</b>
KPI 3	<ul style="list-style-type: none"> <li>Ongoing - Work with suppliers to ensure packaging is either made from recyclable material, is recyclable (or can be reused) or is biodegradable</li> </ul>	<ul style="list-style-type: none"> <li>Report states (1) current practice - Christmas Gift boxes purchased use a percentage of recycled content and are designed to be reused.</li> </ul>

Examples reported by the first medium sized wholesaler/retailer signatory on actions undertaken were:

- Purchased cartons are manufactured from a mix of material from plantation forests and recycled material, and are fully recyclable
- Filling material, used in cartons is a mix of green fill that is fully biodegradable and air pillows that are recyclable
- Fragile products are wrapped in bubble wrap that is biodegradable and breaks down to dust over an 18 month period
- The stretch wrap for cartons on pallets is made of biodegradable material

Examples reported by the second medium sized wholesaler/retailer signatory on actions undertaken were:

- Beginning implementation of the [product] management plan

Neither signatory had formally integrated ECoPP, but both signatories mentioned they use aspects of the tool, with the second signatory reporting using a Supplier Screening Questionnaire during contract negotiation with local suppliers.

#### **4.3.3 Contribution of signatories to NPC goals and targets**

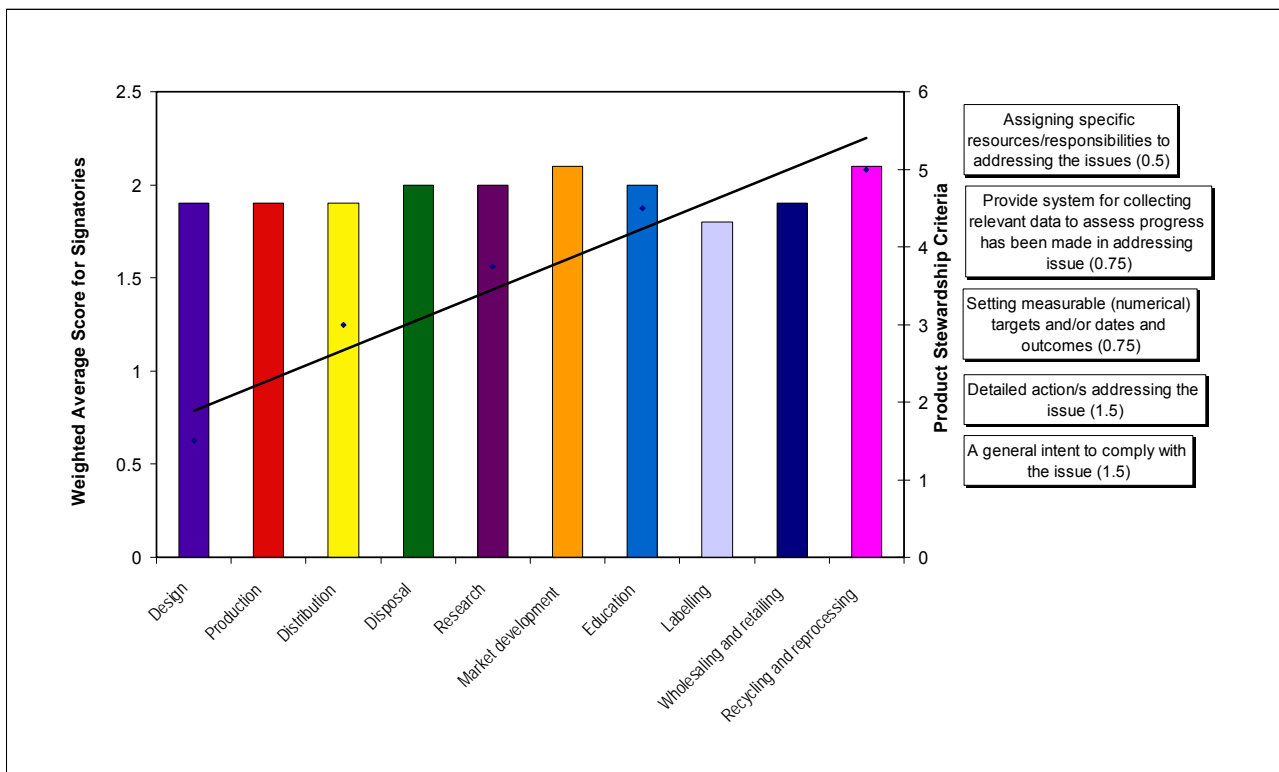
Viewed as a whole, signatories were generally able to positively report specific actions aimed at one or more of the goals or targets. The rate of addressing each goal remained between 60-70%, demonstrating that actions outlined in one action plan were then reported in their related annual report (Figure 1, p 31). Any divergence amongst specific goals and targets was directly related to the large variation in data reported for specific KPIs (Table 10, Table 13, Table 15, Table 19, and

Table 21) and Product Stewardship objectives (Figure 15) by signatories.

However, of the five goals, goal 4 received the lowest score with only 36% of all signatories able to demonstrate how their actions contribute to Goals (1) – (3). Signatories were able to substantiate how their actions meet each goal, providing lists of actions, targets, and data. However, when analysed from a broader perspective and compared as an overall set of goals, the overall low score for goal 4 does seem to indicate that significant work is still required.

This is most apparent when reviewing the action plans of signatories. Many commitments stated in action plans were disconnected from a larger picture, and not developed within a longer-term 3-5 year perspective utilising specific targets and milestones. Those signatories using milestones and targets were usually able to successfully translate proposed actions in their annual report in a seamless way that allowed for easy comprehension, comparison, and tracking in their annual report. Signatories that failed to develop action plans utilising milestone and targets often reported against only baseline data, and were unable to connect a longer-term vision and corresponding actions with the five goals and three overarching targets of the NPC.

**Figure 15 Weighted average score against product stewardship categories**



#### 4.4 Effectiveness of current action plan and annual report process

An evaluation of the effectiveness of the current process for preparation, lodgement and follow-up of action plans and annual reports was undertaken using a range of data sources:

- Schedule 4 of the Covenant – action plans and annual reports;
- Assessment of plans and reports page<sup>3</sup> and the assessment criteria sheets for action plans and annual reports;
- Your Covenant action plan document<sup>4</sup>;
- National Packaging Covenant Industry Association (NPCIA) Action Plan Review, Public Report, March 2004;
- Evaluation of NPC action plans and annual reports for NPC Mark I (Lewis and James, 2003);
- Telephone interviews with a number of people involved in the process of preparation, lodgement, assessment and follow-up; and
- Findings from the current review (2008) for NPC Mark II.

The evaluation also considered the adequacy of the action plan and annual report assessment criteria utilising the above mentioned data sources.

Table 32 presents the main findings from the review of action plans and annual report conducted in 2003 as part of NPC Mark I. With the passing of five years the same trends have been observed.

---

<sup>3</sup> <http://www.packagingcovenant.org.au/page.php?name=assessment>

<sup>4</sup> [http://www.packagingcovenant.org.au/documents/File/Action\\_Plan\\_Kit\\_.pdf](http://www.packagingcovenant.org.au/documents/File/Action_Plan_Kit_.pdf)

**Table 32 Comparison of findings from NPC Mark I and Mark II review of action plans and annual reports**

2003 Review <sup>5</sup> Findings (NPC Mark I)	2008 Review Findings (NPC Mark II)
Many plans include commitments that are expressed in general terms using vague or noncommittal language, without providing detailed lists of actions.	This trend continues.
There is an almost universal lack of measurable (quantified) targets in action plans.	This trend continues.
Most action plans do not indicate how data will be collected to measure progress.	This trend continues. Please refer to Section 4.2.4 for discussion on Product Stewardship for more details.
Most action plans do not include resources allocated to implement specific activities.	This trend continues. Between 60%-70% of signatories documented some level of resource commitment. A small number referred to specific funding levels, and less than half identified a contact person or department.
Many of the Annual Reports do not specifically report against the original actions and measures.	Refer Figure 1 and Figure 2 where comparison of action plan against annual report for Goals and overarching Targets respectively are presented. Observed trend demonstrates that what signatories stated in action plan did not materialise in annual report.
Some reports include a list of achievements, but many do not, and some report on activities rather than outcomes (e.g., reports, feasibility studies, meetings etc).	This trend continues.

There are encouraging signs that signatories are improving upon their reporting of actions and activities. Table 33 presents a comparison of the product stewardship categories with the review undertaken by the National Packaging Covenant Industry Association (NPCIA) in 2004.

<sup>5</sup> Lewis and James (2003)

Table 33 Comparison of scoring for activities by sectors between 2003 review and current 2008 review

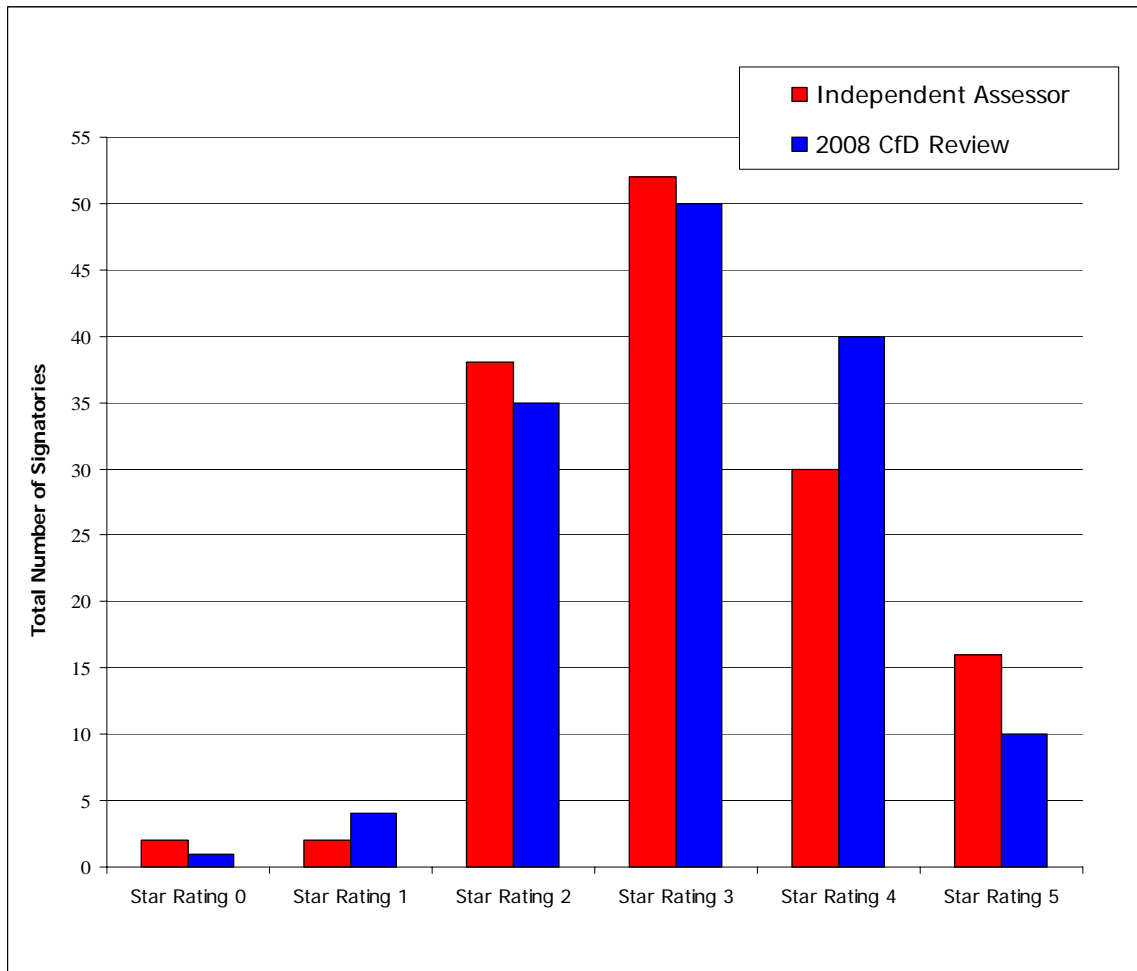
Activity	Brand owners		Government		Industry associations		Packaging manufacturers		Raw material suppliers		Retailers	
	2003	2008	2003	2008	2003	2008	2003	2008	2003	2008	2003	2008
Design	3.01	2.94	1.38	NA	0.0	1.29	2.22	2.96	2.00	2.25	2.4	2.14
Production	2.93	2.66	0.00	NA	0.0	1.29	2.25	2.68	2.00	2.75	1.8	2.36
Distribution	2.21	2.17	0.00	NA	0.0	0.86	1.22	2.54	1.50	2.25	2.1	1.64
Disposal	2.54	2.35	0.00	1.92	0.0	1.36	2.81	2.63	1.00	2.75	2.1	2.00
Research	1.77	2.08	1.34	1.42	0.0	1.36	2.53	2.03	1.50	2.63	2.4	1.50
Market development	1.48	1.81	2.66	2.08	0.75	1.36	3.56	1.63	1.50	2.19	1.5	1.93
Education	2.03	2.31	2.66	3.79	0.75	1.36	2.81	1.89	2.50	2.75	2.1	1.43
Labelling	2.74	2.50	0.00	0.92	0.0	1.14	1.31	1.54	1.50	2.25	2.1	2.36
Wholesaling and retailing	NA	1.65	NA	0.83	NA	0.64	NA	1.20	NA	1.63	NA	2.14
Recycling and reprocessing	NA	2.36	NA	3.08	NA	1.89	NA	2.78	NA	2.25	NA	2.11

**Notes:**

- Evaluation of NPC action plans and annual reports for NPC Mark I (Lewis and James, 2003).
- Orange shading indicates that 2008 score is lower than 2003 score, while green shading and bold numbers indicates an improvement from 2003.

The current review combined qualitative and quantitative data variables weighted according to 40% Goals, 10% Targets, and 50% Product Stewardship. These star ratings were then compared with the star rating of signatory reports given by the independent assessor (Figure 16). Similar scoring is achieved which provides one process of validation of the methodology employed in the current study. It also provides support for the current classification procedure used in the Star Rating of action plans and annual reports undertaken by the independent reviewer.

**Figure 16 Comparison of star rating score from the independent assessor with the current review**



### The process of lodgement and review of action plans and annual reports

- Signatory submits action plan or annual report to NPC Secretariat.
- Quick overview undertaken to ensure all the mandatory information (contact officer, company type, place in packaging chain, etc) is included. Follow-ups made (via phone and email) with those who have not submitted their respective documents in due time.
- Action plans and annual reports are submitted for review by an independent assessor. The assessment criteria for specific signatory sectors' action plans and annual report are used. The result is a star rating from 1 to 5 – the more stars the better the plan/report. The star rating has a more accurate measure initially, but is then rounded up or down. So a 2.6 or 2.8 are credited as a 3, but a 2.4 is given a 2 star rating.

- Signatories are notified two months prior to remind them of deadline for lodgement of annual report (31 October each year).

### **Positive outcomes**

- Most signatories who had signed on for NPC Mark 1 were doing the right thing and reporting to a satisfactory level. It was the more recent additions to the NPC who need to ensure they are fulfilling the necessary requirements in their reporting.

### **Performance of signatories**

- Executive summaries need to be clearer and have basic information rather than spin.
- Poor overall planning & reporting by signatories.
- All levels of business are generally not reporting well.
- The performance of company signatories vary hugely; the government sector varies moderately with State government performing better than local government; and the industry associations seem to have low reporting standards.
- The use of targets is simple but some companies showed a level of incompetence with not addressing said target or reporting on it inaccurately.

### **Areas for improvement**

- Many signatories are still confused as to what they are required to do. This leads to requirements not being met to a satisfactory level.
- All signatories need to provide a concise plan/report that details actions and outlines where improvements have been made and targets have been achieved.
- Introduce a standard reporting style that acknowledges the differences between signatory sectors, to ensure reporting requirements are met and to aid in review of action plans and annual reports.
- Signatories should incorporate simple case studies into their final report as an indication of how their programs and schemes are progressing, rather than just a simple “goal completed” and no direct evidence to support this.
- Publicly listed reports should be what are assessed to ensure that they still meet mandatory requirements.
- Product stewardship warrants additional attention & needs to be adopted more across the supply chain.
- Signatories are not reporting against the resources section so this should be addressed.
- Some companies have their own schemes & are forming alliances with others, so the relevance of certain initiatives (e.g., Buy-Recycled) may need addressing.
- The goals and targets of the NPC should be re-visited to incorporate a more sustainable approach. E.g., Is the wording of “no new packaging to landfill” in the

current climate the right way to go?

- Introduce a 3-5 year rolling plan. For example, signatory completes Year 1 report, and then writes a plan for Year 4. A report for Year 2 is then written, followed by a plan for Year 5. This would allow flexibility when setting targets and reflects changes in the organisation. It may encourage signatories to become more active and alert.
- There should be more emphasis on continuous improvement and signatories should be documenting achievements through the use of case studies. These could then be used by the NPCC to communicate to the packaging supply chain and the wider community on the achievements being made.
- Increase the level of transparency and quantification in action plans and annual reports.
- Ensure that contact details for the NPC Secretariat in the “Your Covenant Action Plan” document are up to date.
- The action plan checklist, Table 1, in the “Your Covenant Action Plan” document (NPC 2006) indicates a number of mandatory fields. This should be enhanced with the fields under ‘specific requirements’ also being identified as mandatory. If these sections are not completed then they should be returned to the signatory for completion.
- If KPI data is not reported then the annual report should be returned to the signatory for completion.

## 5 Recommendations

There is a need to place greater importance on the Environmental Code of Practice for Packaging (ECoPP). ECoPP was produced to assist signatories to implement the principles of the code in their product development process and to provide guidelines to help evaluate the environmental impact of new and existing packaging. If signatories are not using and reporting their use of ECoPP then they should be deemed non-compliant until they can clearly demonstrate its use. Given the significance of ECoPP within the Covenant, further investigation of why signatories are choosing to either not use the code or to only use aspects of ECoPP instead of fully integrating it into the packaging development process needs to be completed. This could be completed with in-depth interviews and identifying the reasons for why ECoPP is not being used by all industry signatories. A review of the actual wording, structure and delivery format of ECoPP should also be undertaken. Signatories should also be required to submit completed ECoPP reports to allow for cross-referencing that the checklist is being used and to demonstrate its implementation.

There is a need to allocate additional resources to ensure effective monitoring and follow-up of signatories. There remains a universal lack of measurable (quantifiable) targets in both action plans and annual reports. The majority of signatories fail to indicate how data will be collected to measure progress in the action plan, and many do not specifically report against actions and

measures in the annual reports. Additionally, whilst most signatories identify their name and the sector they represent in the supply chain, most are still failing to provide basic information such as NPC Contact Officer details and company size/turnover, and/or do not include resources allocated for implementation of specific activities. By signing up to the Covenant, signatories are making a public declaration that they are intending to comply with the principles and requirements of the Covenant. They should therefore allocate sufficient time, money and human resources to implement their commitments, to monitor, and report. Allocating additional resources would help ensure action plans are completed correctly and submitted at least every three years, that annual reports contain measurable data and are lodged by 31 October each year to enforce non-compliant policies.

There is a need for clearer explanations, and improved communication with signatories, of the NPC goals, targets & KPIs. The current wording of many of the goals, targets & KPIs leaves too much interpretation for the individual signatories & creates confusion. Simplifying and providing clearer wording would help improve the situation and ensure action plans and annual reports are completed correctly. Signatories should also understand how the key performance indicators are linked to the goals and targets and how their packaging designs and decisions impact upon them.

Enhancing the existing standard checklist and introducing a standardised document format for signatories to fill in for both action plans and annual reports is recommended. Action plans need to contain detailed actions, targets or outcomes, timelines, responsibilities, funding allocations and indicate how data will be collected to measure performance. Annual reports need to reference action plans and report with sufficient transparency and quantification, eliminating signatory's reliance on reporting "ongoing" and "yes/no" responses that provide no direct evidence of actions or continuous improvement. A standard format would simplify the process for all concerned (signatories, covenant committee and external reviewers). The format could provide for specific company information, but contain standardised locked fields prohibiting editing, moving or deleting sections, highlighting areas not addressed. This would save signatories time in reporting, and streamline performance review.

The National Packaging Covenant Council (NPCC) should also direct more funds into providing a greater level of training and workshops for signatories to guide them on how to compile action plans and annual reports. A large number of signatories just do not clearly understand what is required of them which results in them providing insufficient information or reporting incorrect information.

Many signatories are doing the right thing and are making significant improvements in reducing the life cycle impact of packaging. These good achievements should be celebrated and communicated, not only through the packaging supply chain, but also to the wider public including consumers. Reward those signatories who are making significant contributions to the NPC,

product stewardship, and the environment.

## 6 Conclusions

The findings in this report, mirror very closely with the findings presented in the 2003 evaluation of action plans and annual reports. The vast majority of action plans and annual reports reviewed failed to systematically report against the specific requirements of the Covenant (i.e. they did not address all requirements). The general low scores across the different types of signatories reflect this trend, which was also found in the 2003 report. This is highlighted in the general absence of explicitly stated and use of targets and milestones, and overall deficiency in the breath of recorded improvements.

As noted in the 2003 report, it is recognised that action plans and annual reports may not actually reflect the level of activity in organizations (i.e. the fact that a plan does not mention education on waste minimization does not necessarily mean that this does not happen). In addition, some categories of the Covenant are not applicable to some signatories (e.g., production of packaging materials not applicable to government). However, the appearance of similar trends between the 2003 report and this current report would seem to signal the positive predictions discussed in the 2003 report have not materialised to the extent that was anticipated.

## 7 References

GHD (2002) Independent Review of Action Plans and Annual Report. Final Report to the National Packaging Covenant Council. Gutteridge Haskins and Davey Pty Ltd, Sydney, November.

Lewis, H., and James, K (2003) Report on the National Packaging Covenant Action plans and Annual reports from NPC Signatories. Part of the evaluation of the 1<sup>st</sup> National Packaging Covenant, November. Report to National Packaging Covenant Council. Centre for Design, RMIT University, Melbourne.

NPCC (2005) 'The National Packaging Covenant - Strategic Partnerships in Packaging. A Commitment to the Sustainable Manufacture, Use and Recovery of Packaging, 15 July 2005 to 30 June 2010.' National Packaging Covenant Council, Melbourne.

NPCC (2006) Your Covenant Action Plan. How to prepare and submit an action plan for the National Packaging Covenant. National Packaging Covenant Secretariat, Melbourne.

NPCIA (2004) Action Plan Review. Public Report March. National Packaging Covenant Industry Association.