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Department of Sustainability, Environment, Water, Population and Communities

Environment Protection and Heritage Council

National Waste Report 2010

Evaluation workshops

August–November 2010

Disclaimer

This report presents the findings of waste management and resource recovery stakeholders as recorded during the *National Waste Report 2010* evaluation workshops held across Australia from August to November 2010.

The views and opinions expressed in this publication are those of the workshop participants and do not necessarily reflect those of their organisations or agencies, the Australian Government or the Minister for Sustainability, Environment, Water, Population and Communities.

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Executive summary

The *National Waste Report 2010* (NWR 2010) was launched by the Environment Protection Heritage Council on 7 May 2010. The report was written during 2009 in parallel with the development of the National Waste Policy: Less Waste, More Resources (NWP) and provided part of the evidence base for the policy.

The NWR 2010 is designed to 'assist government, businesses and the community to make sound policies and decisions, and ... help individuals to contribute to waste minimisation in meaningful and achievable ways'.* The development and publication of future reports is an integral component of Strategy 16 of the NWP. This strategy requires that reports be 'underpinned by a system that provides access to integrated national core data on waste and resource recovery that is accurate, meaningful and up-to-date and available on line'.†

NWRs are to be produced triennially. These reports on current and future trends in waste and recovery are to be developed and published by the Australian Government in collaboration with state and territory governments. The next report is due for release in 2013.

An evaluation process was developed and implemented to inform the development of the 2013 report. The evaluation sought to understand what is most useful and appropriate to NWR readers, and also to discover who has been using the NWR and how it is being used. It sought suggestions for changes to future reports, and background information on sector challenges, from as wide a cross-section of stakeholders as possible.

This report presents the findings of 10 face-to-face evaluation workshops conducted collaboratively by local governments, state and territory governments and the Australian Government. These were held across Australia between August and November 2010.

The evaluation workshops found that while there were jurisdictional differences in concerns and priorities, there was significant agreement on the most useful and least useful aspects of the report, as well as on the key suggestions. The most useful aspects included the fact that it was a useful and easy-to-understand overview and gave an opportunity for further collaboration. The most frequently stated useful aspects of the NWR 2010 were:

- for the first time, the data and information were in one place, consolidating knowledge
- it was a good, easy-to-understand overview and highlighted gaps
- the report was collaborative, reflecting a commitment to the issue
- it enables comparison of states' performance
- it raises awareness
- case studies reflected examples of what can be done
- it analysed the data, breaking it down into organic waste, contamination, benchmarking and landfill.

The NWR 2010 was considered to be a resource to inform practitioners, a catalyst for questions, and a useful tool for behavioural change. Other useful components which were frequently highlighted in discussions included an understanding of the history of waste in Australia and Australia's international responsibilities. Information on policy and regulation was appreciated, as was the commitment by governments to the triennial production of the NWR.

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* *National Waste Report 2010*, p. 1. The report is available at http://www.ephc.gov.au/sites/default/files/WasteMgt_Nat_Waste_Report_FINAL_20_FullReport_201005_0.pdf.

† *National Waste Policy: Less Waste, More Resources*, p. 15. The policy document is available at http://www.ephc.gov.au/sites/default/files/WasteMgt_National_Waste_Policy_Status_Report_Final-amended_201011.pdf.

The least useful aspects included that definitions were not consistent, data lacked detail, and its scope and dissemination were limited. Concern was also expressed about the lack of documentation of assumptions in the NWR 2010.

Challenges identified reflected the individual participants' professional and local issues, and provided context to the suggestions. They highlighted information which was missing from the NWR 2010 but considered necessary for future reports. At each workshop, participants raised concerns that the data was dated in the NWR 2010 and that high-quality, accurate data (and how to address the current problems with obtaining this) was needed. Participants confirmed, however, that they were using the data and information contained in the NWR 2010 for program planning.

Most of the suggestions on how future reports should be changed matched the least useful aspects identified in the NWR 2010. For example, they related to recycling, re-use, recovery and waste as a resource— and the need to capture and record this information, focusing on *resource recovery* rather than *waste*. Suggestions also highlighted the need for clear, consistent definitions, and legends for the graphs, as well as more information on organics, landfill, agriculture, commercial & industrial and construction & demolition. It was also felt that the report should be more widely publicised and distributed.

Six months after its release in May 2010, the NWR 2010 had already been identified by some academic institutions as a useful resource for its students, and by organisations as a useful information and planning tool. But its distribution and awareness of its existence were still very limited. For some stakeholders, the invitation to attend the evaluation was the first time they were aware of the report.

The need for the NWR was confirmed by participants at each workshop. They welcomed the availability of data, history and case studies in one document, and they applauded a collaborative approach to the development of the NWR 2013.

The workshops increased awareness of the NWR and the NWP. They highlighted local and regional waste and resource recovery issues and challenges facing participants, and the need for more information. Participants in every workshop raised the need for individuals, industry and government to take responsibility for their waste management behaviour. The NWR was considered to be a valuable resource and tool to assist with this. Including case studies of both successful and not-so-successful activities was considered imperative to encourage new thinking and to be a catalyst for waste management behavioural change.

In their evaluations, participants praised the workshop process, the bringing together of such a wide range of stakeholders, and the opportunity they provided for open and honest discourse among stakeholders. The workshop process was as important as the collection of comments it produced.

Participants welcomed the opportunity to share information among governments, businesses and communities, and noted that the workshops raised issues and provided information not available through other methods. They encouraged and supported ongoing collaboration across the sector and across jurisdictions. This included the development of interactive internet access to data and information, and more frequent regular releases of information on national waste and resource recovery and re-use.

1. Background

The National Waste Policy: Less Waste, More Resources (NWP) was agreed by governments across Australia and released on 5 November 2009. Building on earlier commitments and responding to the changing waste environment, the policy identified 16 strategies which cover gaseous, liquid and solid wastes, including hazardous wastes and substances, in the municipal, commercial and industrial, and construction and demolition waste streams.

On 7 May 2010 the Environment Protection and Heritage Council launched the *National Waste Report 2010* (NWR 2010). The report was written during 2009 in parallel with the development of the NWP and provided part of the evidence base for the policy. Strategy 16 of the policy requires the publication of a three-yearly waste and resource recovery report. It is to be underpinned by a system that provides 'access to integrated national core data on waste and resource recovery that is accurate, meaningful and up-to-date and available on line'.

In collaboration with the states and territories, the Australian Government Department of Sustainability, Environment, Water, Population and Communities is responsible for the production of future reports.

The NWR 2010 brings together, for the first time in one document, data and information on waste and resource management practices and activities from across Australia. It provides a comprehensive resource of waste management data, activities and ideas to be used by the community, institutions, organisations, private industry and government at all levels.

The next NWR is due for publication in 2013. To ensure that the NWR 2013 meets the expectations of the government and potential users, a process for evaluation of the distribution, reception and use of the NWR 2010 by waste management and resource recovery stakeholders was established.

To capture as wide an audience of potential users as possible, the evaluation process involved three strands of investigation:

1. evaluation workshops with small focus groups
2. emailed surveys
3. an online survey.

The evaluation workshops are the major evaluation method. Surveys were distributed to invitees who were unable to attend workshops but wished to be involved. In addition, to achieve the widest possible involvement and coverage, CD copies of the NWR 2010 and surveys were distributed to all natural resource management (NRM) bodies and catchment management authorities (CMAs) throughout Australia,* inviting them to participate. This was to gather feedback from on-ground community waste and resource recovery stakeholders. The online survey was designed to capture any interested people visiting the department's website.

This report covers the findings of the evaluation workshops facilitated across Australia during August to November 2010. Information provided by emailed surveys and the online survey will also be used to inform the production of future reports.

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* Australia is divided into 56 NRM/CMA regions. These organisations work with local government authorities and communities.

2. Evaluation workshop

Conducted by the Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC) in collaboration with state and territory governments and local government associations, the workshops were designed to consider the current and future use and content of the National Waste Report (NWR). The workshops provided opportunities for shared discussion, consideration and reflection, and enabled new ideas to emerge. They addressed the value and shortcomings of the *National Waste Report 2010* (NWR 2010). They also sought ideas for improving future reports and considered content in light of the associated challenges of the waste and resource recovery sector.

Small focus groups were used as the main vehicle for interaction and discussion on the NWR 2010, so as to take advantage of participants' wide variety of experiences and perceptions. Focus groups also provided the opportunity to:

- increase awareness of waste management issues generally
- increase awareness of challenges and opportunities locally and regionally
- increase awareness of individual and organisational activities and possible activities.

2.1 Purpose

The main purpose of the evaluation workshops was to provide, in a collaborative manner, a dedicated interactive opportunity for diverse groups of stakeholders to exchange and record ideas and information on the usefulness of the NWR 2010, and to consider and record suggestions for changes for future reports.

Other important goals of the workshops included:

- increasing awareness of the NWR and its potential use throughout the country and across sectors
- increasing participants' awareness of the activities and challenges of stakeholders in other regions/ jurisdictions
- gathering information to inform the implementation of other National Waste Policy (NWP) strategies.

2.2 Process

The development of the NWR is a collaborative process involving all levels of government. Therefore, underpinning the evaluation workshops process was a focus on genuine collaboration across jurisdictions. All workshops involved extensive discussions with state, territory and local governments, which assisted with advice on participants and hosted the workshops. Dates were determined by the jurisdictions. This was to achieve the highest level of participation in the workshops and ownership of the outcomes. The scheduling of a light lunch provided the valuable opportunity for participants to exchange ideas prior to, or following, the workshop.

2.2.1 Locations and dates

A pilot workshop was held in Hobart on Thursday, 12 August 2010. This was followed by nine NWR 2010 evaluation workshops across other jurisdictions throughout September to November 2010.

Two of the nine workshops were specifically held for representatives of regional councils—the North Queensland Local Authority Waste Management Advisory Committee (LAWMAC) and the New South Wales Regional Network for Effective Waste Management (RENEW). These two workshops also included other government, industry and community representatives. Northern Territory involvement was through survey instruments, as it was not possible to hold a workshop there during the evaluation period.

2.2.2 Invitees and participants

Participants in each workshop were recommended for invitation by local and regional councils, state and territory governments and the Australian Government. They were invited by email and via *Inside Waste,* the newsletter of the Waste Management Association of Australia (WMAA). Every effort was made to secure representatives of a broad cross-section of waste management and resource recovery stakeholders and report users more widely.

There were 283 registrations from representatives of the Australian Government, state and territory governments, local governments, large and small industry, non-government organisations, community based organisations, charities, national and regional business associations, consulting companies, sole traders, researchers, communities and educational institutions. Workshops were attended by 189 participants representing 160 organisations and agencies. Some registrants unable to attend at the last minute sent apologies and comments for inclusion in the discussions. See *Appendix A* for a list of the participants' organisations and agencies.

2.3 Program

All workshops consisted of five key components:

1. background information on the NWR 2010
2. general discussion and observations by participants
3. small focus group discussions
4. focus group reporting
5. individual voting and evaluation.

During the workshop each participant had three identified opportunities to comment on the NWR 2010 and to raise any concerns: during the general discussion; during focus group discussions; and in their personal evaluation and feedback.

Each participant also had the opportunity, via the voting process, to identify what they considered to be priorities from among the *Suggestions* and *Challenges* recorded by the groups in their workshop.

Participants were pre-allocated to specific focus groups, based on creating within each group the widest professional and gender range possible. The structure of each group was important to encourage optimum depth of discussion and consideration of issues.

Each group was asked to consider and discuss the NWR 2010 and record:

- the most useful aspects
- the least useful aspects
- suggestions for content and style of future reports.

To provide some background to their comments and suggestions, the focus groups were also asked to share, consider and discuss the major professional and sector challenges which affected their members. Following all group presentations, each participant was invited to vote on the displayed recorded *Suggestions* and *Challenges*, identifying their top priorities. The findings are discussed in Section 3.

Participants also had another opportunity to record their key concerns. At the end of each workshop they were invited to:

1. record the one key issue that they felt was most important in relation to the NWR (whether or not it had already been reported on)
2. provide feedback on the workshop and the process.

3. Workshop findings

The workshops sought to evaluate the use and application of the NWR 2010 to assist in the development of future reports, and to help implement other National Waste Policy strategies. While a detailed statistical analysis of participants' responses has not been undertaken, the trends across workshops have been plotted and the top priorities identified.

This section summarises the key findings of the workshops, and divides that information into two parts:

1. information specific to the *National Waste Report 2010* (NWR 2010) and the development and content of future reports
2. general information and comments provided which can inform the implementation of the National Waste Policy (NWP).

3.1 National Waste Report 2010

The following information presents the data from the voting system. It also provides the collated top-priority issues raised by participants within each category of investigation: *Useful, Not useful, Suggestions for change* and *Challenges*.

3.1.1 Useful

Each group was asked to consider and record the *most useful* aspects of the NWR 2010.

The most frequently stated useful aspects of the NWR 2010 were:

- for the first time, the data and information were in one place, consolidating knowledge
- it was a good, easy-to-understand overview and highlighted gaps
- the report was collaborative, reflecting a commitment to the issue
- it enables comparison of states' performance
- it raises awareness
- case studies reflected examples of what can be done
- it analysed the data, breaking it down into organic waste, contamination, benchmarking and landfill.

The NWR 2010 was considered to be a resource to inform practitioners, a catalyst for questions, and a useful tool for behavioural change. Other useful components which were frequently highlighted in discussions included an understanding of the history of waste in Australia and Australia's international responsibilities. Information on policy and regulation was appreciated, as was the commitment by governments to the triennial production of the NWR.

3.1.2 Not useful

There was significant debate about the *least useful* components and attributes of the NWR 2010. There were differences of perception of the information presented in the NWR 2010, possibly reflecting participants' depth of reading, familiarity with the topic and specific needs.

Although the size (383 pages) of the NWR 2010 was seen as large, most workshop participants identified some of the least useful aspects as being a current lack or limited inclusion of certain information, such as landfill, biosolids, agriculture, commercial and industrial (C&I) waste and construction and demolition (C&D) waste.

Concerns about style and lack of clarity were also highlighted, as was a desire for more case studies.

The six *least useful* components of the NWR 2010 were:

- definitions and classifications were not consistent
- concerns were raised about the accuracy of data, it currency, its lack of detail, and its lack of scope—for example, regional data was needed, not just state data
- its distribution was limited, reducing the opportunity for behavioural change
- it didn't pick up synergies and opportunities to link human behaviour with outcomes
- it excluded some sectors—e.g. biosolids, gaseous, mining, agriculture, hazardous
- the drivers for waste disposal options for different regions were missing or unclear.

Concern was also expressed about the lack of documentation of assumptions in the NWR 2010. Participants highlighted the need for graphs and maps to be accurate and clear in their presentations—for example, page 44 of the NWR 2010 requires a legend explaining what 'all' may actually include in relation to recycling plastics. Some of the graph calculations were also questioned. Participants suggested that clarification of the composition of recyclables as discussed in the report was also required.

When highlighting the *least useful* aspects of the NWR, most groups also identified the changes required to address these (in their *Suggestions)* or discussed how the report was still being used despite these perceived problems.

For example, in each workshop there was lengthy discussion about the quality, age and questionable reliability of the data. This was considered to be one of the least useful (most problematic) aspects of the NWR 2010. Comments about the datedness of 2006–07 baseline comparative data used in the report were frequently coupled with remarks that, because of its availability, it was nevertheless being used as information for planning. Focus groups also discussed the problems and variations in capture of data. This included consideration and understanding of responsibilities, existing and required resources, and how information about these need to be clear in the report.

Questions were asked about the target audience of the NWR as this was considered to influence length and content. It was generally felt that the distribution and marketing of the report had been inadequate, as many of the stakeholders—as a sample group—had been unaware of the NWR or its content until they were invited to participate in the evaluation. There were some suggestions that a shorter NWR summary could be developed and distributed to schools, but there was no agreement on the content required.

3.2 Future reports

3.2.1 Key suggestions

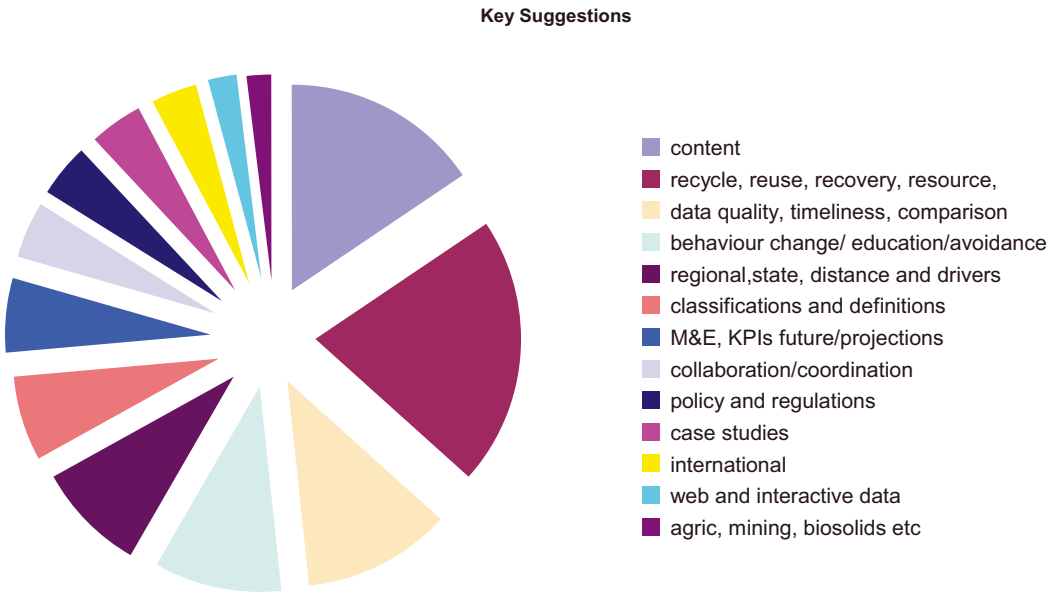
Promotion: The NWR 2010 was considered to be a good resource tool but one whose perceived lack of promotion and distribution limited its use. Adding a link to the NWR (both current and future reports) to stakeholder organisation and agency websites was suggested as one way of both promoting the report and increasing collaboration and ownership among stakeholders. Participants also strongly emphasised the need for interactive internet-based NWR information and continued sector collaboration, and for the promotion of this.

Involvement: Participants suggested that when report data is released in each state, stakeholders should be invited to attend seminars on it. These seminars could be made accessible by an advertised video link for those unable to attend. This was seen as a way of increasing awareness of the report and assisting with behavioural change.

Figure 3.2.1 below shows that the most popular categories of suggestions for changes to the report were:

1. recycling, re-use, recovery and waste as a resource
2. content style and distribution.

Figure 3.2.1: Focuses of suggestions for change



Positive approach: Participants recommended that future reports should place more emphasis on recycling, re-use, recovery and waste as a resource. More information on these areas, combined with related case studies, was seen as essential for future reports.

The third and fourth largest categories of suggestions for change were data quality, timeliness and accuracy; and the need for resource recovery education and behavioural change.

Educational resource: The NWR was considered to be a useful tool and resource for improved education of industry and the general public. The NWR 2010 is already being used as a resource in some Australian universities and other educational institutions, but its use was considered to be limited due to a lack of promotion.

Regional and state issues: The need for more emphasis and information on regional and state distance and driver issues was the fifth largest category of suggestions for change.

Following collation, all suggestions were sorted by order of raw score priority. The top four on this basis were:

- Needs to be more focused on avoidance rather than disposal—preference is for the term 'resource recovery', not 'waste'.
- A common/standard methodology for collecting and reporting data (for comparison) is required.
- Need the Commonwealth to drive consistency in definitions.
- Need more emphasis on cost—real costs—externalities, transport, government impost, and drivers.

All suggestions provide valuable insights into potential improvements to future reports.

The suggestions prioritised varied between workshops. The following are the top agreed suggestions by workshop.

Key suggestions from the Hobart workshop

- Metrics: ideas of sustainability/consumerism/growth.
- Provide case studies—success stories—online success.
- Indicators—tonnes, kilograms, jobs, returns per tonne in reuse.
- Practical strategies for **reducing** the amount being consumed, packaging, obsolescence i.e. focus on how to reduce.
- Strategies/data/representation of re-use industry (re-use not just recycling).

Key suggestions from the Perth workshop

- COAG to agree to definitions and data reporting scheme (e.g. as per National Water Commission).
- Ability to download spreadsheets containing raw data so we can do our own analyses.
- Define Aims: provide information on selected aspects of waste industry in order to assist decision making in government and non government sectors—to influence policy makers and as an educational tool. Translate information into this; and incorporate financial considerations.
- More information on the 'end' of the supply chain (e.g. where do recyclables go; who uses all the compost produced at AWTs [alternative waste treatment]; and what is treated here or overseas).
- Key suggestions from the Townsville workshop
- Report should comment on effectiveness of policy strategies.
- National reporting system with constant waste categories Australia wide.
- Performance of waste technologies.
- Key suggestions from the Brisbane workshop
- Need Federal Government to drive strategy for data collection down through the states.
- Use document as an accountability report—hold feds and state jurisdictions accountable for their waste strategies—page 28 table needs another column—KPIs for each state (national KPIs rather than state).
- Series of jurisdictional comparisons—refer to those that matter—e.g. Kilogram per person does not take into account regional differences. Suggestion kg/person MSW [municipal solid waste].

Key suggestions from the Adelaide workshop

- Evidence of data collection to ensure accuracies.
- Include behaviour change and community engagement and conclusions that outline challenges for the next three years.
- Need to be cross-references between the differences in each state's policies/strategies (i.e. SA is focused on waste hierarchy and Victoria's focus is on AWTs).

Key suggestions from the Sydney workshop

- Needs more focus on avoidance than disposal—relates to approach as 'waste' management rather than resource recovery (preference is for 'resource recovery' not 'waste').
- Definitions: consistent definitions.
- Drivers: highlight specific drivers for future development of policies i.e. drivers that are 'big picture' drivers e.g. carbon/energy/climate.
- [Use the] digital age.

Key suggestions from the ACT region workshop

- Need more emphasis on cost—real cost—externalities, transport, government impost.
- Cost of transport (CO_2 cost) must be considered—cost/benefit analyses.
- Better comparability of data on cost and benefits of different waste management options and across jurisdictions.
- Consumers and producer attitude and behavioural change & education.

Key suggestions from the RENEW NSW workshop

- Common/standard methodology for collecting and reporting data (for comparison).
- Reform sector—waste categories need to be consistent between states and territories.

- Develop national standard reporting system for a one-stop-shop waste reporting approach.
- More data on 'psychographics' to learn what drives people to do 'right' practice.
- Need to include wastes/recovery: e.g. textiles (NACRO Charities), shoes, tyres/mining, e-waste, mattresses
  - capturing 'avoidance' data; for example council shredded green organics reused on parks and gardens or goes back to residents.
- Reporting of recycling—batteries, e-waste etc.
- Include 'end of life' use of products/recycled materials/global; supply chain networks (ethics).
- Buy in participation to bring sector and industry together.
- Improved forecasting e.g. by materials/product types.

Key suggestions from the Melbourne morning workshop

- Definitions: Commonwealth to drive consistency in definitions.
- Data: detail in the data—data geared to data analyses to support decision making.
- Better international benchmarking: data; best practices.
- Data on resource use in society,
  - e.g. sales, use, by materials, by lifecycle
  - e.g. material flows similar to economics
  - reuse to be recorded.
- Expand hazardous waste **electronic** transport certificate to C&I and C&D.

Key suggestions from the Melbourne afternoon workshop

- Segregate by waste types data
  - sectors
  - material value
  - geography.
- Data: Make data collection compulsory for every registered business in Australia i.e. over 5 years phase in, like Water map reporting; start with behavioural change.
- Use consistent data (landfill gas DCC).
- Structure report based on Waste Hierarchy.
- Focus more on opportunities i.e. recycle because something is valuable.

3.2.2 Key challenges

Each group discussed and captured the challenges identified by its members. These reflected both sector challenges which participants wished to be considered in the report, and the perceived challenges of producing future reports. The latter particularly addressed the challenges of variations in data collection times and types, lack of or limited resources in government and industry, and the need for improved understanding of responsibilities and expectations in relation to waste management and recording of information.

The six major challenges relating to future report content which scored the greatest number of votes were, in order:

- Tyranny of distance—environmental impact of long distance transportation—it is not well recognised.
- Full life cycle costing—cost/benefit analysis; costs versus outcomes.
- Data timeliness—three years old is 'out of date'—aim for 6 to 12 months maximum with data quality and accuracy.

- Definitions: ability to accurately compare states/sectors/countries using consistent and commonly agreed definitions (in Australia).
- The lack of local manufacturing plants [and impact on sector].
- How to tie the report more explicitly to resource recovery and product stewardship imperatives.

Challenges varied by participants' professional backgrounds and locations. Those identified varied within and between workshops. Table 3.2.2 shows each workshop's top identified challenges.

Table 3.2.2 Primary waste/resource recovery challenges identified by each workshop

ACT	Full life cycle costing—cost/benefit analysis, data quality
Adelaide	Definitions and timely data
Brisbane	Data accuracy and national standards
Townsville	Tyranny of distance, lack of local manufacturing plants
Sydney	Resource recovery, report objectives and business needs
NSW	Four equal first: Capturing data from unregulated waste facilities Local solutions to local challenges Education and delivering a consistent message where jurisdictions differ Emerging waste issues e.g. e-waste and transport problems—distance to markets for regional areas
VIC am	Data timeliness and creating markets for recycled products
VIC pm	Definitions, metrics and measures

3.3 Information relating to the NWP and waste management generally

Challenges identified and suggestions offered were often related to priority issues with which participants were dealing in their day-to-day business. These were also issues which affected the content and use of the NWR and the implementation of the NWP. For example, issues of data collection and inconsistent classification of waste streams (NWP Strategy 4) were seen as a major concern both within the jurisdictions and for the collection and comparison of report data.

Other waste management and resource recovery challenges frequently raised by stakeholders were issues around transport distance and lack of markets, and the need for national education about recycling, re-use and waste management. The use of organics, biosolids, disposal of food wastes, and landfill content and management were considered. Also raised were concerns about hazardous waste, and the challenges of product stewardship. The need for effective legislation and its impact on communities and councils taking responsibility for resource recovery was also a major consideration.

The major agreed general challenges to doing business in the waste sector which relate to the NWP (and are not identified in 3.2.2) were:

- the environmental impact of long distance transportation to market, and limited choices of market
- creating a market for recycled products
  - the need to create 'pull through'
  - the need for government to lead and create
- the need for and recognition of local solutions to local challenges
- the need for national education—delivering a consistent message where jurisdictions differ—the demand and expectation that government should be acting on 'emerging waste issues' e.g. e-waste

- engaging with and educating industry on data to enable communities to take the initiative
- legislation—to assist effective behavioural change, education/awareness, responsibility, and 'duty of care'
- getting local councils to engage on ideas to recognise that the issues are social and economic, not just waste materials.

3.3.1 Key suggestions to meet challenges

Identified challenges were often coupled with suggestions for change. The main ones presented at workshops were as follows.

Education and behaviour change

The need for engagement within government, industry and the community was highlighted. Legislation, increased awareness and education about waste and resource recovery issues, and involvement with industry, were seen as the basis for enabling communities to actively participate in waste reduction practices.

Participants highlighted the general lack of awareness of the existence of the NWR and thus potential access to resource information for businesses, government, educational institutions, organisations and individuals. It was noted that universities already using the NWR as a resource for their students encouraged wider educational use of the report.

It was agreed that the NWR is a valuable tool to assist the change of consumer and producer attitudes and behaviours. The need to develop programs to educate the public and the need for increasing awareness of waste issues generally were seen as being of equal importance. The establishment of an active resource blog for updates and interaction by all stakeholders was suggested as an effective way to address the lack of information access and create a more informed and collaborative sector.

Landfill

Issues relating to landfill—both current and closed, and licensed and unlicensed—were raised by participants in every workshop. Major challenges were considered to be distance, gate fees, mixed loads, monitoring loads, data recording requirements, varied resources and capacity, and measurement issues of volume versus weight.

There were suggestions to model levy effectiveness to determine where change occurs within the industry and to consider a national approach to landfill levies, to avoid the state disparities and related problems. The related issues of landfill, energy capture and the carbon economy were all discussed and seen as important areas that needed to be addressed within the NWR as well as by the NWP. Problems of textile waste and different chemicals and their impact on landfills were considered important to the NWP. They were also seen as underrepresented in the NWR 2010 and an area which should receive greater attention in future reports.

Data quality and availability

The data presented in the NWR elicited significant discussion about data collection, analysis and use. The need for accurate, timely and consistent data and the potential for a standardised data recording template were raised by participants at each workshop.

Internet access to data was agreed to be a viable addition to the NWR that would enable timely, regularly updated data to be available to stakeholders. Participants suggested that because of the different needs of stakeholders, spreadsheets containing raw data could be downloaded so that specific analyses could be undertaken. Access to commercial data and issues of commercial-in-confidence were discussed in relation to accessing data or considering industry case studies without violating confidentiality, for example by specific interest groups and associations.

The need to invest in quality data and to have accurate regional data available for use was recognised, as was the potential need for capacity building to improve data collection and recording. It was suggested that key stakeholders should be involved in the planning for improved data collection, and that a national standard reporting system for a one-stop-shop waste reporting approach should be developed. The need to record re-use was strongly promoted.

Regulations and policy drivers

Key challenges were identified as the need for coordination, collaboration and consistent agreements between all levels of government. Also identified was the need for a national approach to reporting regulations. A policy feedback loop with all levels of government was suggested, and the need for ongoing active collaboration and information exchange was highlighted.

Standardised regulations were suggested for all waste streams. For example, this would help to solve the inconsistencies in licensing of waste/recycling depots and carriers. It was suggested that all waste and recycling carriers should be licensed by their state governments, and that hazardous waste electronic transport certification should extend to C&I and C&D waste.

Government behaviour

The behaviour of government as a role model in applying resource recovery and re-use principles was seen as an important foundation for wider behavioural change. It was noted that governments' use of recycled products should be clear and evident.

There was consensus on the need for consistent national definitions and approaches to waste classification. It was frequently suggested that the Australian Government should drive the timetable for bringing a consistent approach to data collection, resource recovery and waste management practices, and develop a national standard reporting system encompassing all waste data information.

Government hosting a website for public access was frequently discussed. This would enable the public and sector stakeholders to access interactive data as required and be able to manipulate it in the manner required.

The disparate approaches, activities and knowledge of local government councils and their officers and councillors was seen as a challenge to model behaviour in resource recovery. Consistency—even in the colours and types of kerbside bins—was seen as a start in improving public understanding, education and compliance.

4. Conclusion

The *National Waste Report 2010* (NWR 2010) states:

> ... if Australia is to continue to develop effective resource recovery and waste management policies in the future, policy makers need accurate, contemporary national data and trend information. Only with such knowledge will they be able to respond confidently to future needs.*

Participants agreed with the claim in the NWR 2010 that 'this and future reports will play a vital role in the implementation of the National Waste Policy'.† They acknowledged the momentum which the releases of the National Waste Policy (NWP) and the NWR have engendered and the need to keep that momentum in further development of resource recovery and waste management in Australia. It was agreed that future reports need to include more detailed information, as identified in the evaluation workshops.

4.1 Summary of key findings

The NWR 2010 evaluation workshops were acknowledged as a positive collaborative and educational step that helped to increase awareness of the NWR 2010 (and the NWP). Participants acknowledged the government's commitment to improving the utility of future reports.

The NWR was seen as a valuable resource for individuals, communities, organisations, industry, the Australian Government, state and territory governments and local governments. It was considered to be a resource which needs to be promoted more widely.

The idea of producing triennial reports was welcomed. The need for timely information, cooperation and collaboration to achieve the production of future reports was acknowledged. The need for access to data and information more frequently than the three-yearly NWR release (for example annually) was raised at all workshops.

Participants agreed with the need for a national classification of waste while at the same time acknowledging the work already undertaken by the jurisdictions and the challenges faced in reaching compromises.

There was overwhelming agreement that the NWR 2010 was a very valuable and greatly needed document: 'a great first step'. Participants considered that the report made a beneficial contribution in highlighting issues not previously known; providing comparative data, case studies and historical information about waste in Australia; and collating relevant information into one available document.

The inclusion of information on international issues and legislation was considered to be valuable in increasing awareness and understanding of Australia's actions, roles and responsibilities within a global context. Links to all relevant regulations and legislations were considered beneficial.

The ability to compare state data was seen as a catalyst to improve performance. It was suggested that state data could be attached as appendices, however, rather than being placed at the front of the NWR. The inclusion of maps and graphs was welcomed, but their inclusion also highlighted the need for clear and identified definitions and assumptions to enable correct interpretation.

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* *National Waste Report 2010*, p. 4.

† *National Waste Report 2010*, p. 4.

In summary, the NWR:

- is 'a good start'
- is a good resource
- is a tool for positive behaviour change
- needs to use a positive message—'resource recovery', not 'waste'
- needs wider/better distribution
- needs accurate and timely data
- needs more case studies
- needs to include biosolids, agriculture, mining waste, and more landfill information.

4.2 Next steps

The workshops were part of the larger evaluation of the NWR 2010. The data from the workshops will be combined with the results of returned surveys and information provided via the online survey. This combined information will be considered in the development of the NWR 2013.

The key workshop messages for future reports are:

- the need for improvement in clarity of–
  - definitions and legends
  - data—state and regional (including information on drivers)
  - case studies as examples of what can be done and how to avoid pitfalls
- the additional inclusion of–
  - more information on landfill
  - bio-organics, composting and agricultural issues
  - an update on the implementation of the NWP strategies.

Participants also strongly emphasised the need for interactive internet-based NWR information and continued sector collaboration.

There was unanimous agreement that the NWR needs to be published regularly with accurate data; that its role as a valuable resource across the sector needs to be promoted; and that it is a valuable enabling tool for industry and the general public, with the potential to influence behavioural change through education and collaboration. It was agreed that future reports require clearer utility to more stakeholders.

Considering the information gained through the NWR evaluation process will be essential when developing and producing future reports. Doing so will ensure that the NWR fulfils its claim to 'assist governments, businesses and the community to make sound policies and decisions and ... help individuals to contribute to waste minimisation in meaningful and achievable ways'.‡

‡ *National Waste Report 2010*, p. 1.

Shortened forms

Shortened forms

ACT	Australian Capital Territory
AWT	alternative waste treatment
C&D	construction and demolition
C&I	commercial and industrial
CMA	catchment management authority
COAG	Council of Australian Governments
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities
EPHC	Environment Protection and Heritage Council
e-waste	electronic waste
KPIs	key performance indicators
M&E	monitoring and evaluation
MSW	municipal solid waste
NRM	natural resource management
NSW	New South Wales
NT	Northern Territory
NWP	National Waste Policy: Less Waste, More Resources
NWR	National Waste Report
QLD	Queensland
RENEW NSW	Regional Network for Effective Waste Management New South Wales
SA	South Australia
TAS	Tasmania
VIC	Victoria
WA	Western Australia
WMAA	Waste Management Association of Australia

Appendix A: List of participating organisations and agencies

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NB: This list does not include apologies or absentees.

ACT NOWaste

ACT Region Catchment and Landcare Association

AMCOR

Australian Bureau of Statistics

Australian Council of Recycling

Australian Customs and Border Protection Service

Australian Dental Association Victorian Branch

Australian Food and Grocery Council

Australian Hotels Association

Australian Industry Group

Australian Landfill Owners Association

Australian Local Government Association

Australian National University

Australian Sustainable Built Environment Council

Australian Sustainable Business Group

AZPI Tyre Recycling

BCD Technologies Pty Ltd

Belconnen Community Council

Brisbane City Council

Burdekin Shire Council (North Queensland Local Government Association)

Canberra Commercial Waste

Cassowary Coast Regional Council

Central Murray Regional Waste Management Group

Chamber of Commerce and Industry

Chamber of Commerce and Industry QLD

Chemistry Centre (WA Government)

City of Sydney Council

Clayton Utz

Cleanaway

Climate Sense

Clover Technologies Group

Compost NSW

Compost WA

Conservation Council of the ACT and Region

Conservation Council of WA

Conservation Council QLD

Conservation Volunteers Australia

Consumer Electronics Suppliers Association

Cook Shire Council

Council of Mayors for South-East QLD

Department of Defence

Department of Education, Training and the Arts QLD

Department of Environment and Conservation WA

Department of Environment and Resource Management QLD (Environmental Sciences)

Department of Environment and Resource Management QLD (Office of Climate Change)

Department of Environment and Resource Management Queensland (Waste Reform Division)

Department of Environment, Climate Change and Water NSW

Department of Families, Housing, Community Services and Indigenous Affairs (Office of Remote Indigenous Housing)

Department of Finance and Deregulation

Department of Foreign Affairs and Trade

Department of Innovation, Industry, Science and Research

Department of Resources, Energy and Tourism

Department of the Environment, Climate Change, Energy and Water ACT

Eastern Metropolitan Regional Council WA

Eco Waste Pty Ltd

Encycle

Energetics

Environment Protection Authority SA

Environment Protection Authority TAS

Environment Protection Authority VIC

Environmental Defenders Office ACT

Facility Management Australia

Geocycle

Glenorchy City Council TAS

Global Recycling

Global Renewables

Golder and Associates

Griffith University

Hanson Landfill Services

Hi-Quality Group VIC

Hornsby Shire Council

Hyder Consulting Pty Ltd

Institute for Sustainable Futures, University of Technology, Sydney

Integrated Waste Services

John B Cook & Associates Pty Ltd

Keep Australia Beautiful National Association

Keep SA Beautiful

Kingsborough Council TAS

Lanyon School ACT

Local Government and Shires Associations of NSW

Local Government Association of QLD

Local Government Association SA

MacKay Regional Council

MBS Environmental

Metropolitan Waste Management Group (Australia)

Midwaste Regional Waste Forum (Mid North Coast NSW)

Mike Ritchie and Associates

Mindarie Regional Council WA

MS2

Murdoch University WA

National Association of Charitable Recycling Organisations

Nature Conservation Council NSW

Net Balance

NetWaste

Nextek

North East Waste Forum NSW

North Queensland Local Government Association

Northern Inland Regional Waste NSW

Norton Rose Group

Office of Best Practice Regulation

Office of the Waste Authority

Oneworld Environment Solutions

Orange CIM / Chair RENEW NSW

Parkes Shire Council

Perth Region Natural Resource Management

Planet Ark Information Centre

Plastics and Chemical Industry Association

Publishers National Environment Bureau Ltd

Queanbeyan City Council

Queensland Regional NRM Groups Collective

Regional Development Australia (ACT)

Renewable Processes

Resource Work Cooperative TAS

Riverina and Murray Regional Organisation of Councils NSW Waste Group

Riverina Eastern Regional Organisation of Councils NSW Waste Forum

RMIT University

Samarkos ACT Recycling

Sinclair Knight Merz

SITA Environmental Solutions / Australian Landfill Owners Association

South East Regional Resource Recovery of Councils NSW

South West Regional Councils

St Vincent de Paul / NACRO

Sunshine Coast Council

Sustainability Victoria

Sustainable Solutions Pty Ltd

Tailormade Specialized Recycling P/L Nowra

Territory and Municipal Services ACT

TEX-AMM Australia Pty Ltd

Thiess Services Pty Ltd

Townsville City Council

Transpacific Cleanaway Ltd

TRC

Treasury

TSR E-Waste

Tuggeranong Community Council

University of New South Wales

University of Queensland

University of South Australia

University of Southern Queensland

University of Technology, Sydney

Urban Development Institute of Australia

URS

Veolia

Victorian Waste Management Association

Waste Contractors and Recyclers Association

Waste Contractors and Recyclers Association of QLD

Waste Management Association of Australia

Water Corporation WA

Western Australian Local Government Association

Wingecarribee Shire Council

WSN Environmental Solutions

Zero Waste Australia

ZeroWaste SA


National Waste Report