



WMAA

**2006 National Waste Education Needs
Survey**

Data Report

May 2006



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Summary of the WMAA Waste Educators' On-line Survey

Introduction

The Waste Educators' Working Group Victoria (WEWGV) first designed a draft print-based questionnaire which was piloted in May 2005. Using the questionnaire developed by the WEWGV, the WMAA National Waste Education Division reviewed, modified and developed a print-based questionnaire. This questionnaire was developed into an online survey by a company contracted to develop the survey, collate the data and provide a report. The company used was *Transcend-Ability*.

The survey was conducted online over a period of four weeks from 5 April to 11 May 2006. The link to the survey was emailed to WMAA members across Australia with the advice to forward to other colleagues who have a role in waste education.

1. General information

- 50% of respondents were male and 50% were female.
- 26% of respondents were between the ages of 20-29. The majority of the respondents were aged between 20 and 59.
- 84.6% of respondents indicated they are members of WMAA. 15.4% indicated they are not members of WMAA.
- The highest representation was from NSW (35%) with Victoria (20%) and Queensland (19%). The remaining respondents were from South Australia (15%), Western Australia (10%) and Tasmania (1%) with no respondents from ACT or NT.
- Local Governments 27.2% and Industry 18.7% were the two highest groups represented.
- Waste Educators 42% and Local Government 21% were the two most common WMAA groups with which respondents were most involved.

2. WMAA support

- Respondents were asked to describe their view of the level of support from WMAA. 39.4% described the support as good. 51% described the level of support as poor or fair.
- Respondents were asked to indicate if they required further support from WMAA. 68% indicated they required further support and 32% indicated they required no further support.
- Respondents were asked to rank their top five choices for education and training they expected from WMAA. 'Behaviour change information' ranked highest with 'Half-day seminars / workshops' ranked second and Website-based information ranked third. 'Formal/informal accredited training' and Professional development ranked 4th and 5th respectively.
- Respondents were asked to identify the level they mainly worked. 76.3% of respondents worked at the metropolitan or regional/rural level for their State/Territory.
- 63% respondents indicated their role focused on a combination of internal and external work rather than primarily internal within, or primarily external, to their organisation.



3. Waste Educators: Qualifications, Training, Experience and Needs

- Respondents were asked to indicate their highest level of education. 36.8% had completed a Post Graduate and 35.5% had completed a University degree/diploma.
- Respondents were asked to indicate how many years they had been involved in their role as waste management or resource recovery education. A significant number (45%) had only worked in their role up to 5 years.

4. Key target groups

Respondents were asked to indicate their key target groups, providing details in relation to Business, Community, Schools and Government.

- 82% of respondents that worked with **business**, worked with commercial businesses.
- 82% of respondents that worked with the **community**, worked with households.
- 79% of respondents that worked with the **school**, worked with primary schools, while 57% of respondents identified Secondary Schools as a key target group.
- 92% of respondents that worked with the **Governments**, worked with Local Governments.

5. Topics included in education programs

Respondents were asked to indicate the topics that are included in their education programs in the broad areas of 'Solid waste', 'Water', 'Energy', 'Air', 'Environmental Management Systems', 'Biodiversity' and 'Urban and regional planning'.

The most frequently included topics were:

- *Solid waste area*: 'Recycling (97%), Waste Avoidance (90%), Reuse (90%), Reduce (86%), Composting / Organics (85%)
- *Water area*: Water conservation 70%, water pollution 76%
- *Energy area*: Energy conservation 88%
- *Air quality area*: Greenhouse issues 88%
- *Biodiversity area*: Habitat restoration 88%
- *Environmental Management System area*: Auditing and assessment 82%
- *Urban and regional development area*: Natural resource management 71%

6. Priority areas for solid waste education

Respondents were asked to rank five priority areas for solid waste and resource recovery education from 1 to 5. 'Waste avoidance' and 'Recycling' were both ranked highly. 'Composting/organics' was ranked third. 'Reduce' and 'Reuse' ranked fourth and fifth respectively.

7. Barriers for waste and/or litter educators

Respondents were asked to indicate the extent to which they agreed or disagreed to barriers that may be faced in the role of a waste and/or litter educator. The most common barrier was 'I would like to know more about the theories of behaviour change' (86% of respondents agreed or strongly agreed) followed by 'Waste education is only part of my job' (71% of respondents agreed or strongly agreed). 'The lack of consistency in waste management across different regions is a challenge for me personally' (60% of respondents agreed or strongly agreed).



8. Information required as a waste educator

Respondents were asked to indicate the type of information they need in their job as a waste educator. The most common forms of information required were: Education programs and activities (81.7%), Case studies of education initiatives (80.3%) and Results of research / surveys (78.9%).

9. How respondents currently find out information

Respondents were asked how they currently find relevant information for their role. The most common ways identified included 'Internet (89%), Personal contacts (82%) and conferences and seminars (72%).



10 Areas requested for extra training

Respondents were asked to rank, from 1-5, the areas in which they would like extra training. Overwhelmingly 'Evaluation continual improvement and reporting' and 'Strategic planning for learning and behaviour change' were ranked highly by most respondents. Ranked third was 'Community engagement' with 'Technical waste management' and 'Action learning (participative action research)' ranked fourth and fifth respectively.

11. Types of website information that would be useful

To assist WMAA in determining the structure and content of a National Waste Education website, respondents were asked to identify types of information that would help them in their role. The most responses included 'A list of Website links' (90%) and 'Case studies of education initiatives' (89%).

12. The top 5 waste and resource recovery education resource materials programs projects

Overwhelmingly the most commonly identified program was Wastewise (9). Several other programs rated highly among respondents. A complete list is provided as an Appendix.



Survey method

Background

There are many people working in the waste and resource recovery industry as educators, with a variety of qualifications, training and experience. Education is seen increasingly as a powerful way to bring about widespread cultural and behavioural changes in sustainable consumption and in the way that our society deals with solid waste. Waste educators are working together with other specialists in the waste and resource recovery industry to help implement effective waste strategies in their region / state / territory. The online questionnaire was designed to gather information to assist the WMAA to support their members based on their needs.

Online survey

The Waste Educators' Working Group Victoria (WEWGV) first designed a draft print-based questionnaire which was piloted in May 2005. Using the questionnaire developed by the WEWGV, the WMAA National Waste Education Division reviewed, modified and developed a print-based questionnaire. This questionnaire was developed into an online survey by a company contracted to develop the survey, collate the data and provide a report. The company used was *Transcend-Ability*.

The survey was conducted online over a period of four weeks from 5 April to 11 May 2006. The link to the survey was emailed to WMAA members across Australia with the advice to forward to other colleagues who have a role in waste education.

The following report provides data related to the questions on the survey which can be analysed and interpreted by WMAA to inform their operations and support their membership.

This survey had two goals:

1. To identify who you are, where you are, what your current and future needs are and what resources you use and value; and
2. To use this information as the basis for providing structural and resource support for waste educators and identify these for the WMAA and its membership.

Limitations of the study

State-by-state comparisons are not part of this survey data as there are limited numbers across each of the states and territories. Some comparisons can be made to the WMAA pilot survey conducted in Victoria 2005 and similar surveys conducted in other states.

The online survey was completed by 148 respondents however towards the end of the survey most questions were answered by approximately 70-75 respondents.



General information

Respondents are waste educators

To ensure all responses for this survey were submitted by waste educators, respondents were asked to indicate whether their job includes education about solid waste and resource recovery. 148 respondents out of a total of 170 answered in the positive with these respondents being allowed to complete the survey. The remaining 22 respondents were not able to take any further part in the survey.

Contact details distributed to other waste educators

Respondents were asked for their contact details and whether they agreed to have their details distributed to other waste educators in their state/territory. Of the 120 respondents that supplied their contact details, 110 (92%) agreed to have their details distributed, 10 did not agree and 28 skipped the question.

Respondents by State/Territory

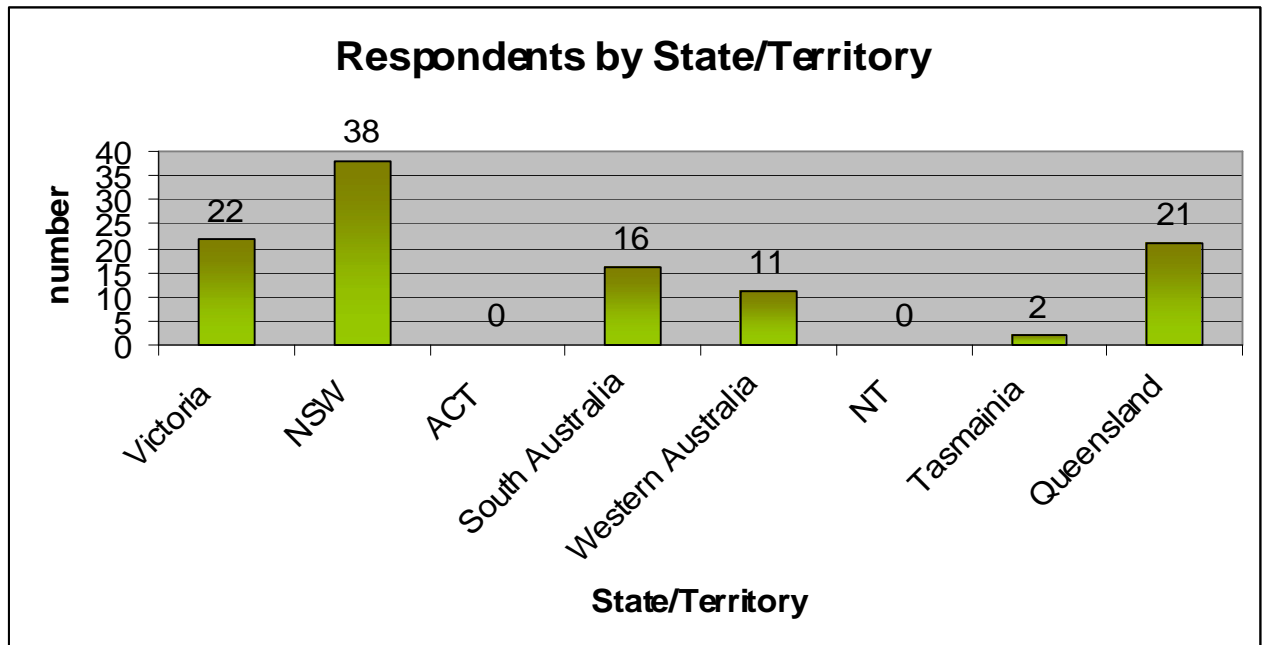


Figure 1 Number of respondents by State/Territory

110 respondents indicated their state/territory, 38 did not complete this question. The highest representation was from NSW (38) with Victoria (22) and Queensland (21). The remaining respondents were from South Australia (16), Western Australia (11) and Tasmania (2) with no respondents from ACT or NT.



Gender

A total of 122 respondents answered this question which included 61 (50%) male and 61 (50%) female respondents. 26 respondents skipped the question.

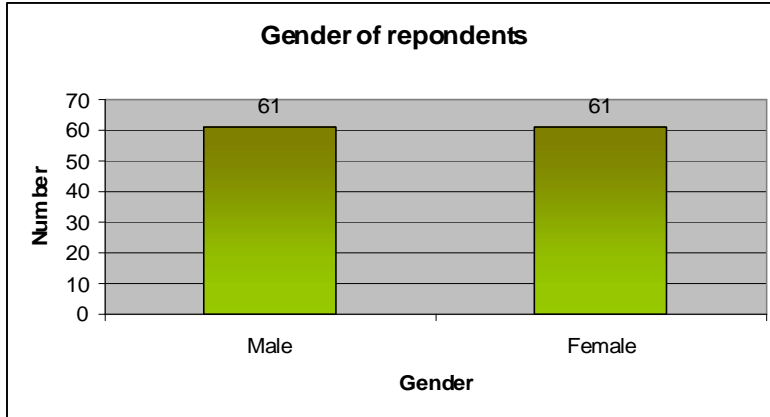


Figure 2 Number of respondents by gender

Age range

Respondents were asked to indicate their age range. 121 respondents completed this question. 27 respondents skipped this question. 32 (26%) respondents were between the ages of 20-29. The majority of the respondents were aged between 20 and 59.

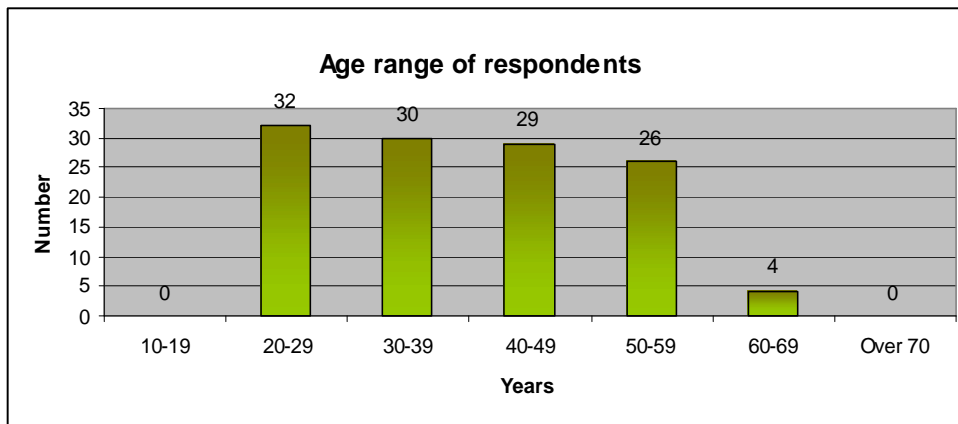


Figure 3 Number of respondents by age range



Membership with WMAA

104 (84.6%) respondents indicated they are members of WMAA. 19 respondents (15.4%) indicated they are not members of WMAA.

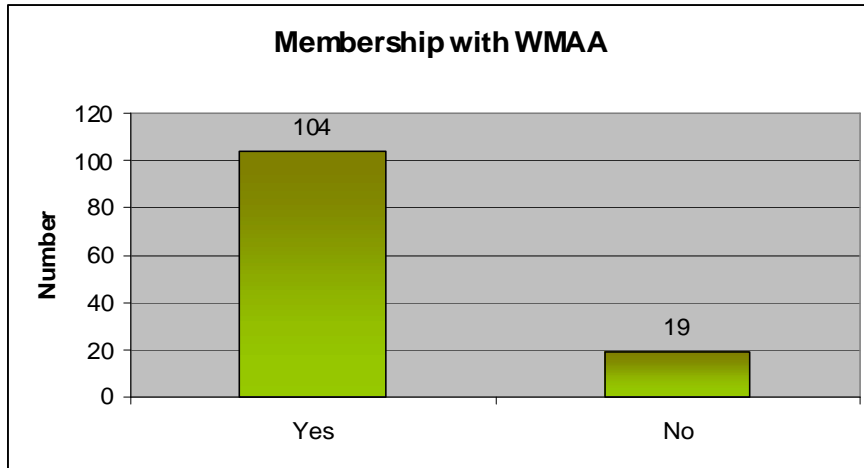


Figure 4 Number of respondents with WMAA membership

Type of organisation represented

Respondents were asked to indicate the organisation which they represent. 123 respondents completed this question. Local Governments 58 (27.2%) and Industry 23 (18.7%) were the two groups most commonly represented.

Industries specified include Publishing, Equipment supplier, Organics Recycling, Waste Management/Recourse Recovery/Recycling (11), Manufacturer of Eco products, Consulting (2), Mining, Recycling equipment, Hazardous Waste Treatment, Recycling/Disability Service, Municipal Waste Industry, Info and Advertising (product stewardship role)

Table 1 Respondents by organisation type

| Organisation type | Response Total | Percentage |
|---------------------------------|----------------|------------|
| Local Governments | 58 | 47.2 |
| State Government | 11 | 8.9 |
| Federal Government | 0 | 0 |
| Certification body | 0 | 0 |
| Educational institution | 8 | 6.5 |
| Consultant | 10 | 8.1 |
| NGO | 4 | 3.3 |
| Regional Waste Management Group | 7 | 5.7 |
| Statutory body | 2 | 1.6 |
| Industry (please specify) | 23 | 18.7 |
| Total respondents | 123 | 100% |
| (skipped this question) | 25 | |



Most common involvement with WMAA groups

Respondents were asked to indicate their most common involvement with special interest group of WMAA. 117 respondents completed this question. Waste Educators 49 (42%) and Local Government 25 (21%) were the two most common WMAA groups with which respondents were most involved.

13 respondents identified other areas that included Community sharps and household medical waste, None of the above, All/several of the above (4), Training, Education [on waste minimisation and waste management to public, private and catholic schools in Western Australia focusing on reducing waste sent to landfill which includes organics], Hunter Branch, Mining, Commercial Waste Minimisation, Hazardous and Industrial Waste, Recycling.

Table 2 Respondents most common involvement with WMAA Groups

| In which special interest group of WMAA in your state/ territory are you most involved? | Response Total | Percentage % |
|---|----------------|--------------|
| Clinical Waste | 4 | 3% |
| Compost / Organics | 11 | 9% |
| Construction / Demolition | 1 | 1% |
| Energy from waste | 4 | 3% |
| Landfill | 10 | 9% |
| Local Government | 25 | 21% |
| Young Professionals | 0 | 0% |
| Waste Educators | 49 | 42% |
| Other (please specify) | 13 | 11% |
| Total Respondents | 117 | |



WMAA support

Expectations of WMAA in regard to education and training

Respondents were asked to rank their top five choices for education and training they expected from WMAA. 107 respondents completed this question. The responses have been supplied as an index together with their ranking.

'Behaviour change information' ranked highest with 'Half-day seminars / workshops' ranked second and Website-based information ranked third. These three responses have been highlighted in Table 3. 'Formal/informal accredited training' and Professional development ranked 4th and 5th respectively.

Table 3 Respondents Expectations of WMAA in regard to education and training

| | Index | Ranked |
|---|-------|--------|
| 2-3 Day Conferences | 46.9 | 11 |
| 1 Day Conferences | 57.6 | 9 |
| Behaviour change information | 100.0 | 1 |
| Discounts on conferences & publications | 13.0 | 16 |
| E- Newsletter | 59.9 | 7 |
| Email: national/global updates | 43.5 | 12 |
| Email: local updates | 50.8 | 10 |
| Formal/informal accredited training | 70.1 | 4 |
| Half-day seminars / workshops | 94.9 | 2 |
| Industry tours | 59.3 | 8 |
| Professional development | 67.8 | 5 |
| Publications | 42.9 | 13 |
| Professional journal | 14.1 | 15 |
| Professional magazine | 22.0 | 14 |
| Professional networking | 66.1 | 6 |
| Student industry tours | 7.3 | 17 |
| Website-based information | 72.3 | 3 |
| | | |

Other suggestions for education or training required from the WMAA included:

- Localised Training and Conferences in Country Areas, not just capital cities (3)
- Subsidising tours or workshops for regional TAFE students and resource recovery workers
- Don't expect WMAA to supply training programs, rather inform members of the opportunities out there.
- Need to lobby for enforceable standards to ensure waste streams are economically recyclable
- Day Workshops that bring Educators together who work collaboratively on developing Education Resources.
- On-line sponsorship of website based training e.g. beeducated.com.au
- education specific to NESB or CALD communities
- Anything related to professional development - training, workshops, networking, information-sharing



Involvement in WMAA

104 Respondents described their view of the level of support from WMAA. 41 (39.4%) described the support as good. 53 respondents (51%) described the level of support as poor or fair. Views of respondents across States appeared to be consistent however the samples were too small to note any clear trends.

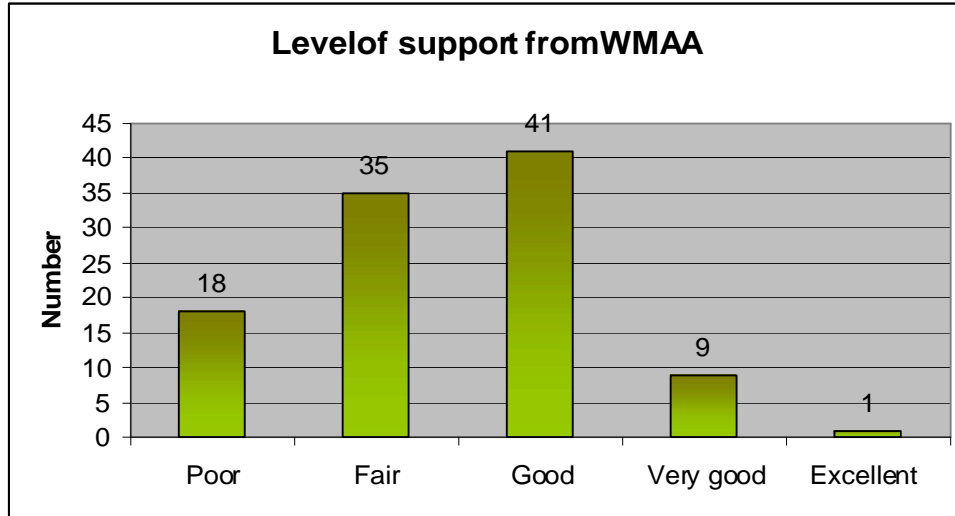


Figure 5 Respondents view of level of support from WMAA

Further support from WMAA

104 respondents responded to the question 'Do you require further support from WMAA?' 71 respondents indicated they required further support.

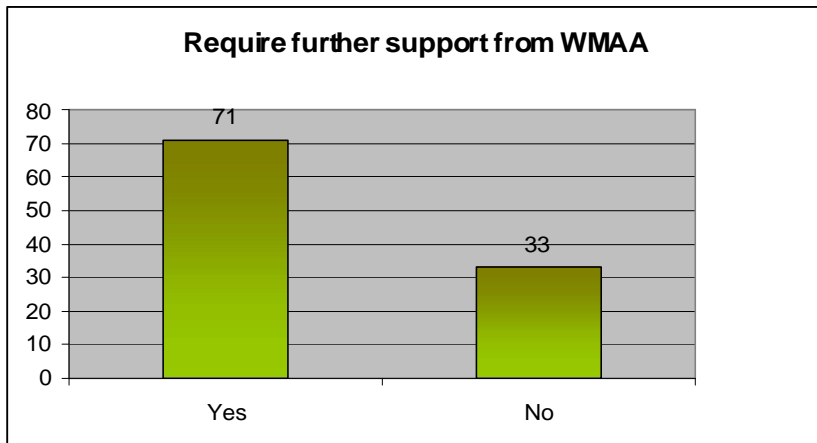


Figure 6 Respondents requiring further support from WMAA



Level at which they work

Respondents were asked to identify the level they mainly worked. A significant number of respondents 58 out of the 76 (76.3%) respondents that answered this question worked at the metropolitan or regional/rural level for their State/Territory.

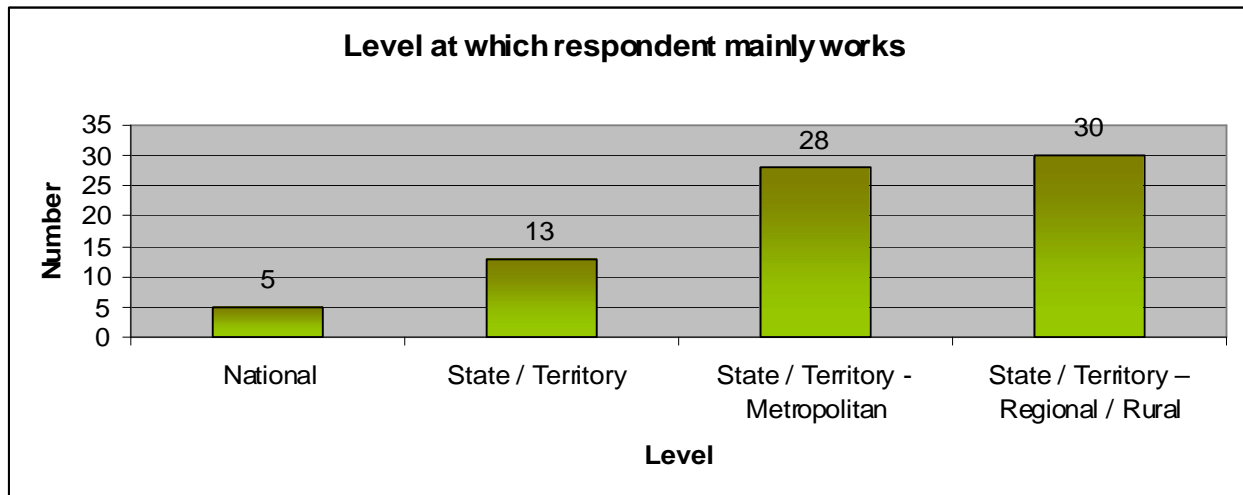


Figure 7 Respondents level at which they mainly work

Respondents were asked the question, Is the focus of your work primarily (internal or external)? 76 respondents answered the question. The majority 48 (63%) respondents indicated their role focused on a combination of internal and external rather than primarily internal or primarily external to their organisation.

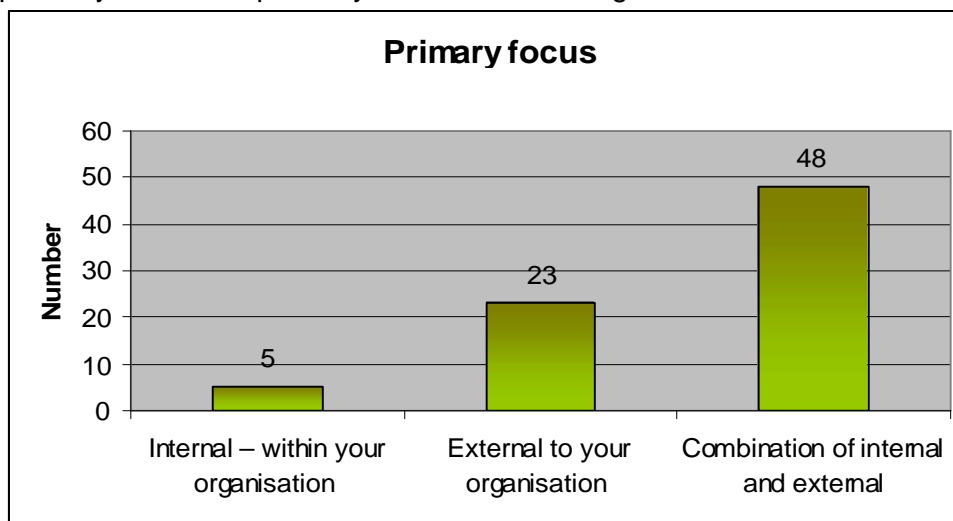


Figure 8 Respondents' primary focus



Waste educators: Qualifications, Training, Experience and Needs

Level of education

Respondents were asked to indicate their highest level of education. Of the 76 respondents that completed this question, 28 (36.8%) had completed a Post Graduate and 27 (35.5%) had completed a University degree/diploma.

Other education levels identified included currently undertaking under/Post Graduate Course (3), Business Management, 3rd year high school, Work Experience, Masters Environmental Education (2).

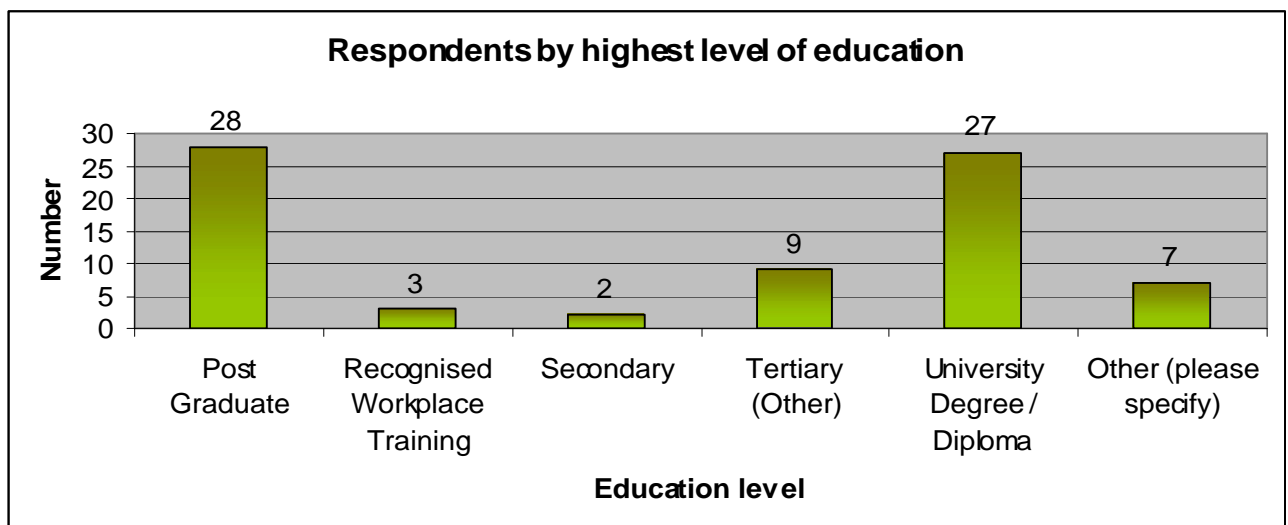


Figure 9 Respondents by highest level of education reached

Respondents were asked to indicate how many years they had been involved in their role as waste management or resource recovery education. 76 Respondents completed this question. A significant number (45%) had only worked in their role up to 5 years.

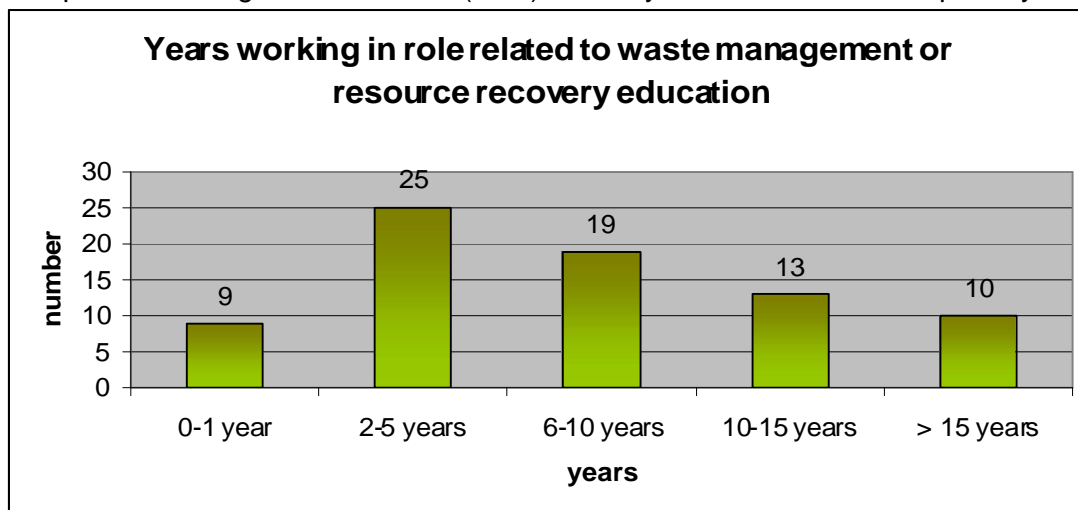




Figure 10 Respondents by years working as a waste management or resource recovery education

Key target groups

Respondents were asked to indicate their key target groups providing details in relation to Business, Community, Formal Education and Government.

In summary:

- 50 (82%) respondents that worked with **business**, worked with commercial businesses. 'Hospitality', 'hospital staff, patients, community,' 'small business' was identified as other key target groups.
- 58 (82%) respondents that worked with the **community**, worked with households, while 44 respondents identified that community groups were a key group with whom they worked others included 'Youth Centres and young people', Health Services and 'Sporting groups'.
- 53 (79%) respondents that worked with the **school**, worked with primary schools, while 38 respondents identified Secondary Schools as a key target group.
- 59 (92%) respondents that worked with the **Governments**, worked with Local Governments.

Table 4 Working with key target groups across Business, Community, Formal Education and Government

| | | Response Total | Percentage |
|------------------|-----------------------------|----------------|------------|
| Business | Commercial | 50 | 82% |
| | Industrial | 31 | |
| | Construction and demolition | 24 | |
| | Other (please specify) | 11 | |
| | Total Respondents | 61 | |
| | | Response Total | Percentage |
| Community | Households | 58 | 82% |
| | Special events | 32 | |
| | Community groups | 44 | |
| | Other (please specify) | 4 | |
| | | | |
| | | Response Total | Percentage |
| Formal education | Pre-school / kindergarten | 18 | |
| | Primary | 53 | 79% |
| | Secondary | 38 | |
| | Tertiary | 15 | |
| | Adult Education | 21 | |
| | | | |
| | | Response Total | Percentage |
| Government | | | |



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| | | |
|-------------------|----|-----|
| Local | 59 | 92% |
| State | 22 | |
| Federal | 9 | |
| | | |
| Total Respondents | 64 | |



Topics included in education programs

Respondents were asked to indicate the topics that are included in their education programs related to the broad areas of 'Solid waste', 'Water' 'Energy' 'Air', Environmental Management Systems', 'Urban and regional planning' and 'General sustainability'.

Solid waste

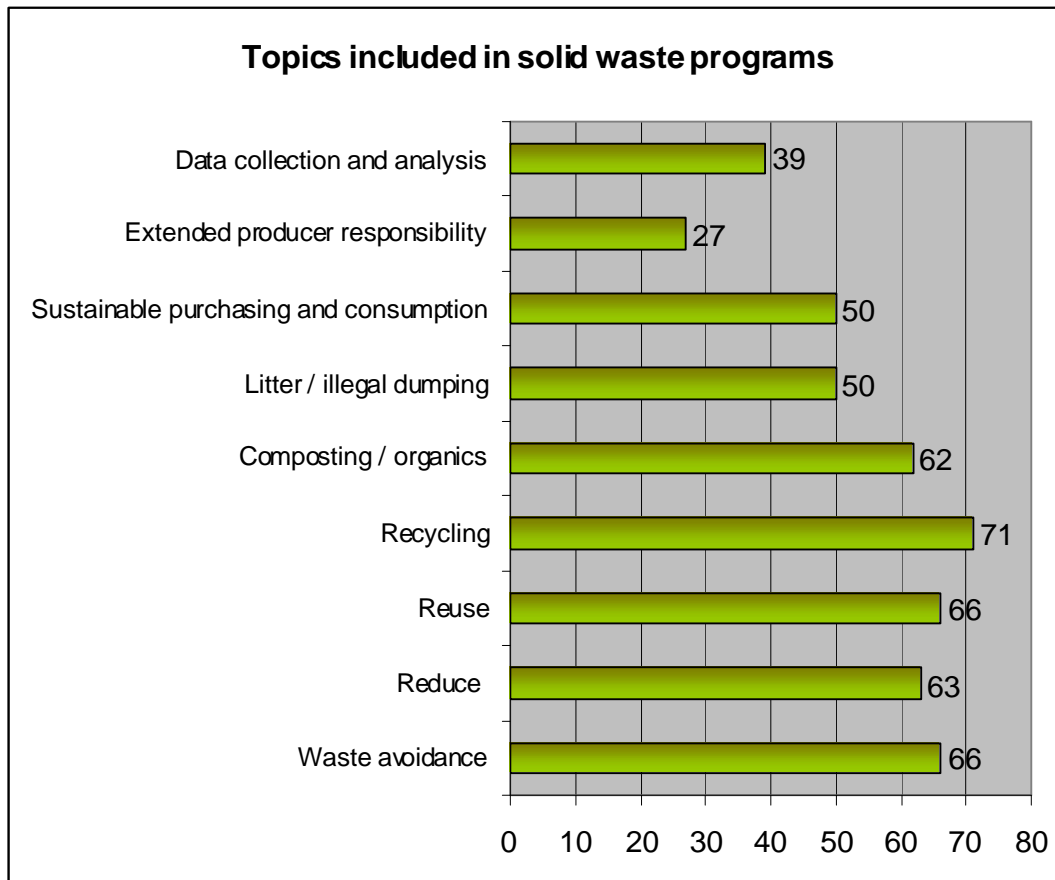


Figure 11 Topics included in education programs related to solid waste

73 respondents answered this question. Recycling (97%), Waste Avoidance (90%), Reuse (90%), Reduce 86%, Composting / Organics (85%) with Extended Producer Responsibility (37%).



Water

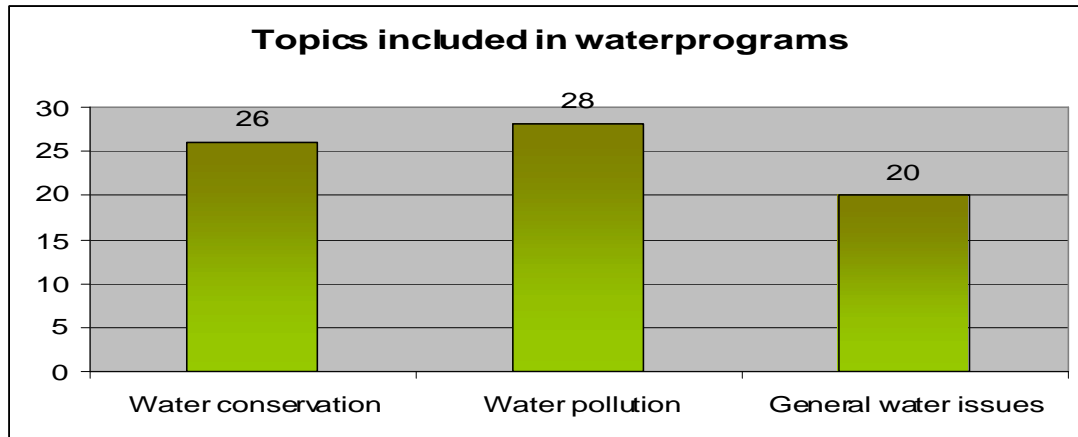


Figure 12 Topics included in education programs related to water

37 respondents answered this question. Water conservation 70%, water pollution 76% and general water issues 54%.

Energy

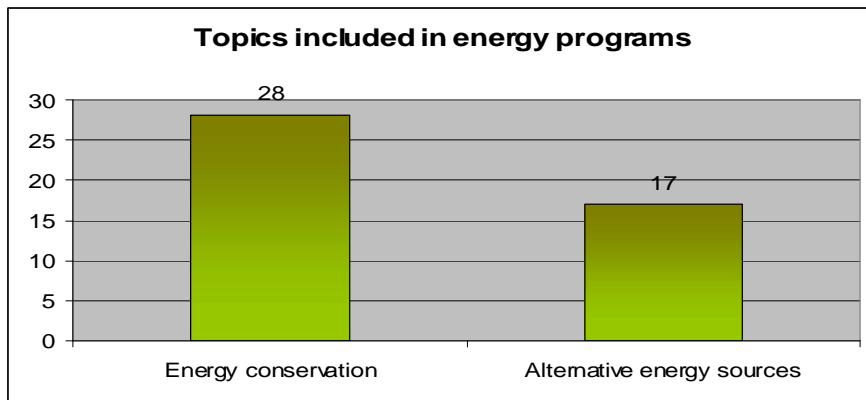


Figure 13 Topics included in education programs related to energy

32 respondents answered this question. Energy conservation 88% and Alternative energy sources 53%.



Air

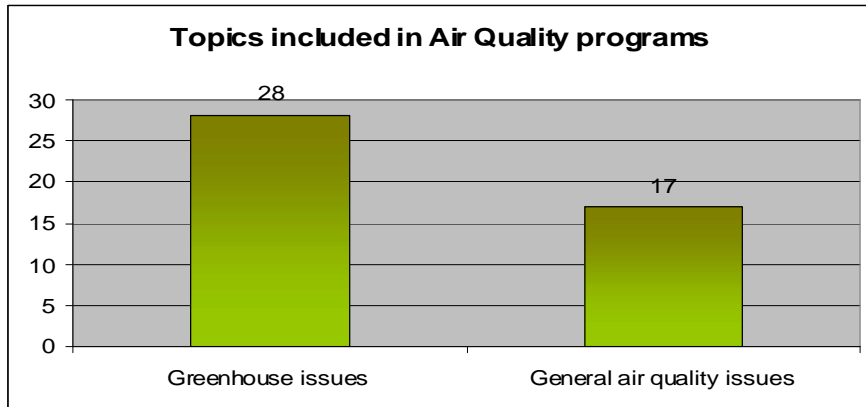


Figure 14 Topics included in education programs related to air

32 respondents answered this question. Greenhouse issues 88% and General air quality issues 53%.

Biodiversity

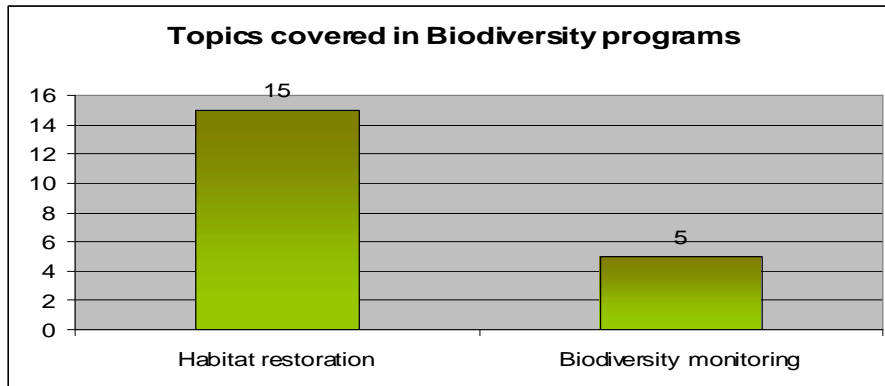


Figure 15 Topics included in education programs with a focus on biodiversity

17 respondents answered this question. Habitat restoration 88% and Biodiversity monitoring 29%.



Environmental management systems

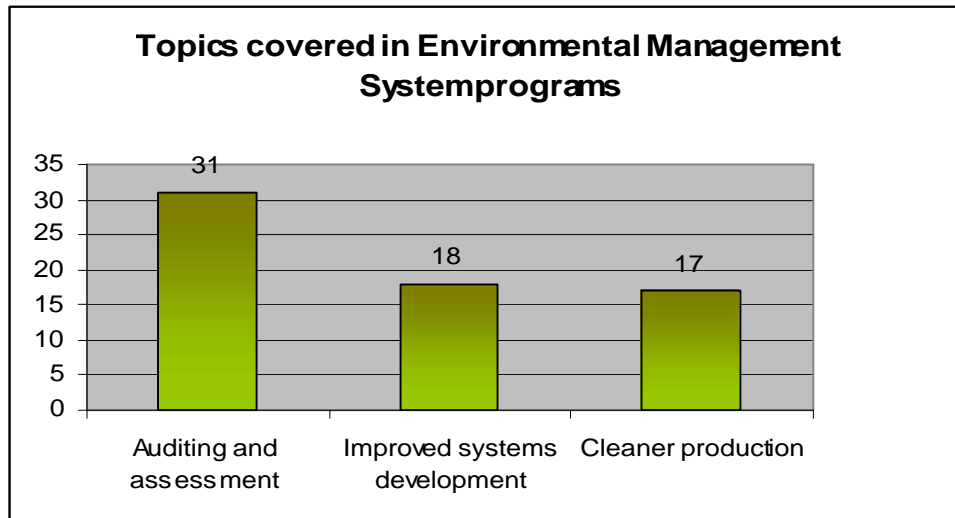


Figure 16 Topics included in education programs related to Environmental Management Systems

38 respondents answered this question. Auditing and assessment 82%, Improved systems development 47% and Cleaner production 45%.

Urban and regional planning

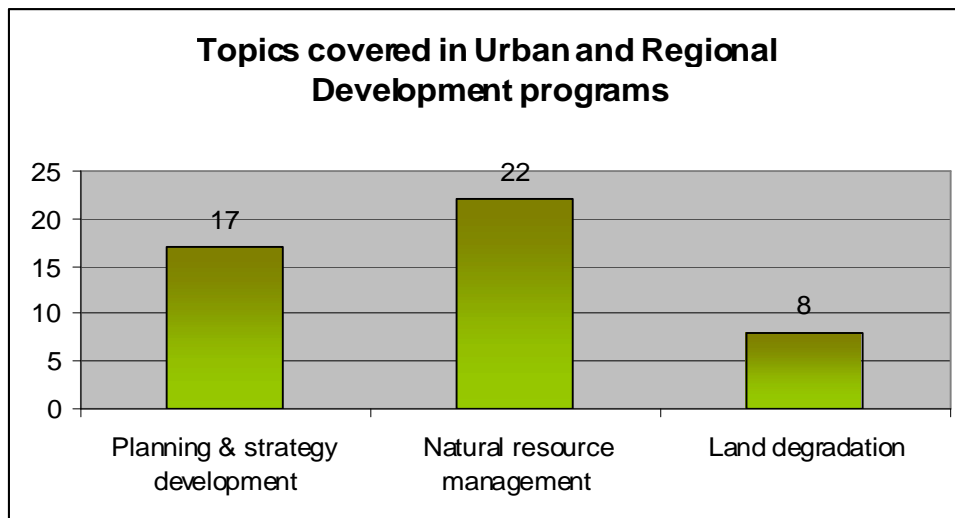


Figure 17 Topics included in education programs related to Urban and regional development

38 respondents answered this question. Planning & strategy development 55%, Natural resource management 71% and Land degradation 26%.

Note the percentages relate to the number of respondents that chose to answer each section. It would be reasonable to assume that as more respondents answered topics covered in solid waste then this area is covered more often by educators. In each of the other sections i.e. Biodiversity, Water and Energy etc, less respondents overall provided



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information. The information provided shows a trend for that section. Note the sample size in most cases is quite small, in particular Biodiversity (n=17).



Priority areas for solid waste and resource recovery education

Respondents were asked to rank five priority areas for solid waste and resource recovery education from 1 to 5. Waste avoidance and recycling were both ranked highly. Composting/organics was ranked third. Reduce and Reuse were ranked fourth and fifth respectively.

Table 5 Program priority areas for solid waste education, ranked

| | Indexed | Ranked |
|--|---------|--------|
| Waste avoidance | 100.0 | 1 |
| Reduce | 62.4 | 4 |
| Reuse | 53.4 | 5 |
| Recycling | 90.2 | 2 |
| Composting / organics | 64.5 | 3 |
| Litter / illegal Dumping | 22.2 | 8 |
| Sustainable purchasing and consumption | 40.6 | 6 |
| Extended producer responsibility | 10.3 | 9 |
| Data collection and analysis | 27.8 | 7 |

Possible barriers

Table 6 Respondents degree to which they agree or disagree to barriers that may be faced in the role of solid waste and resource recovery educator

| | Strongly disagree | Disagree | Unsure | Agree | Strongly agree | Response Total |
|---|-------------------|----------|--------|-------|----------------|----------------|
| I feel geographically isolated | 18 | 37 | 5 | 9 | 5 | 74 |
| I am not aware of what our state is planning / doing | 6 | 34 | 12 | 16 | 5 | 73 |
| I am only in a temporary position | 46 | 10 | 4 | 8 | 4 | 72 |
| I would like to know more about the theories of behaviour change | 0 | 5 | 5 | 46 | 18 | 74 |
| I feel I lack awareness of waste and resource recovery education programs and resources | 11 | 39 | 4 | 14 | 6 | 74 |
| I have a good understanding of the technical aspects of waste management/minimisation | 2 | 5 | 7 | 44 | 16 | 74 |
| I have adequate knowledge and skills to be effective in my role | 1 | 2 | 5 | 46 | 19 | 73 |
| I feel supported by my management | 2 | 7 | 10 | 33 | 18 | 70 |
| The lack of consistency in waste management across different regions is a challenge for me personally | 1 | 20 | 8 | 30 | 14 | 73 |
| My manager understands the role of waste education | 2 | 4 | 5 | 36 | 22 | 69 |
| There are adequate waste education networking opportunities | 4 | 20 | 20 | 26 | 4 | 74 |
| I have enough time and support to fulfil my role in waste education | 8 | 26 | 8 | 25 | 7 | 74 |
| Waste education is only part of my job | 8 | 12 | 1 | 28 | 24 | 73 |
| Total Respondents | | | | | | 74 |



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The most common barrier was 'I would like to know more about the theories of behaviour change' (86% of respondents agreed or strongly agreed) followed by 'Waste education is only part of my job' (71% of respondents agreed or strongly agreed). 'The lack of consistency in waste management across different regions is a challenge for me personally' (60% of respondents agreed or strongly agreed).

Information requirements and locating relevant information

Respondents were asked to indicate the type of information they need in their job as a waste educator. 71 respondents completed this question. The top three areas are highlighted however the remaining areas of support are all quite highly rated. Education programs and activities (81.7%), Case studies of education initiatives (80.3%) and Results of research / surveys (78.9%). Other suggestions included 'Funding opportunities for training of operational staff', 'an on-line resource for all staff' and 'Notification when grants are offered'.

Table 7 Information required as a waste educator

| | Response Total | Percentage % |
|---|----------------|--------------|
| Case studies of education initiatives | 57 | 80.3 |
| Contact details of waste educators | 43 | 60.6 |
| Education programs and activities | 58 | 81.7 |
| Education resources from industry (posters AV and electronic) | 52 | 73.2 |
| Examples of waste education strategies | 55 | 77.5 |
| Graphics artwork and images | 53 | 74.6 |
| Information about behaviour change | 51 | 71.8 |
| Information about training courses | 49 | 69.0 |
| Results of research / surveys | 56 | 78.9 |
| Statistics | 48 | 67.6 |
| Upcoming conferences / seminars | 51 | 71.8 |
| Waste and litter resources | 47 | 66.2 |
| Other (please specify) | 3 | 4.2 |
| | | |
| Total Respondents | 71 | 100 |

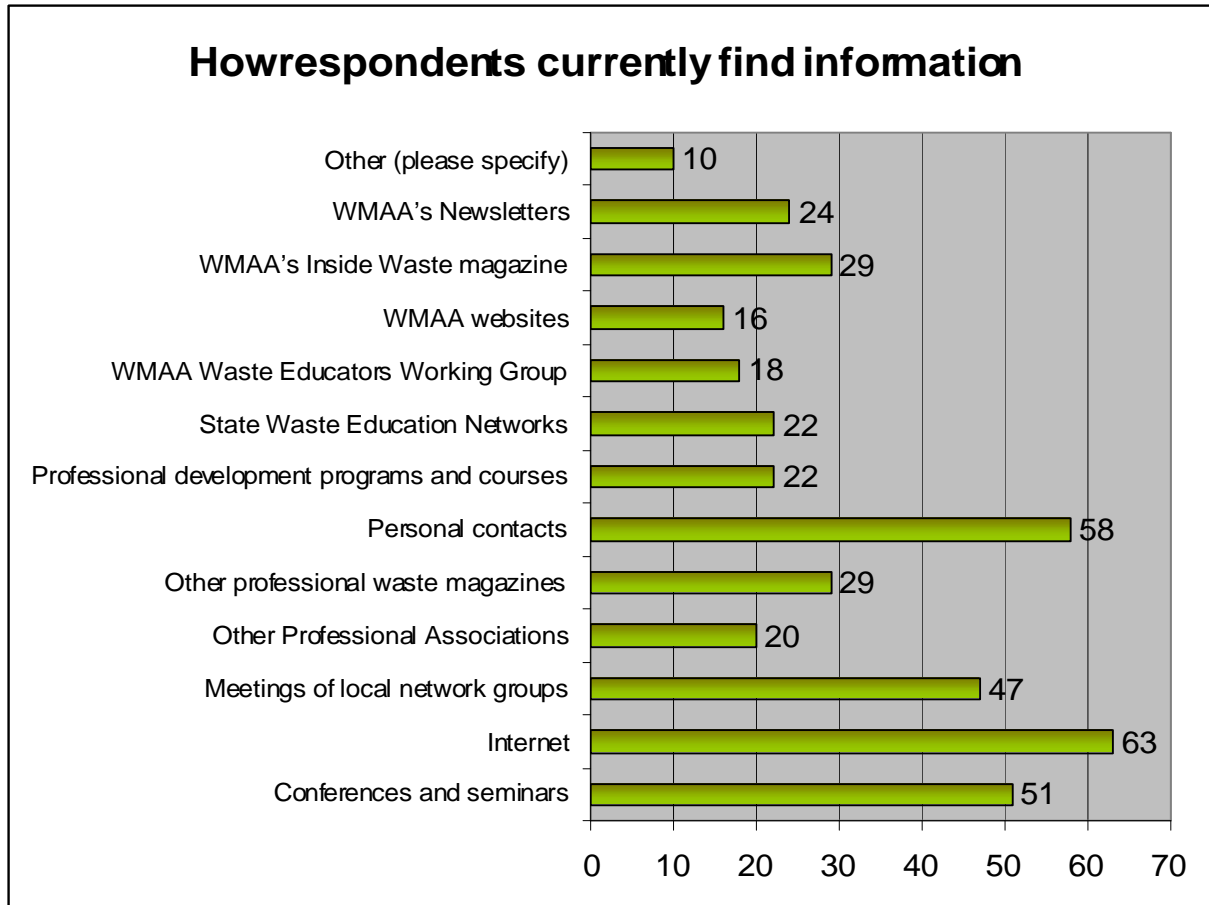


Figure 18 How respondents currently source information

Respondents were asked how they currently find relevant information for their role. The most common ways identified included 'Internet 63 (89%), Personal contacts 58 (82%) and conferences and seminars 51 (72%).'.

10 respondents indicated 'other' for sourcing information their responses included 'working on projects, VLAA, Site visits and previous projects, Personal R & D, websites – general, Waste_Ed chat group, local educators network, surveys conducted and funded by Solo resource recovery, State Government, Local Government and previous education examples, other websites.

Training

Respondents were asked to rank, from 1-5, the areas in which they would like extra training. 69 respondents completed this question. Overwhelmingly 'Evaluation continual improvement and reporting' and 'Strategic planning for learning and behaviour change' were ranked highly by most respondents.

Ranked third was 'Community engagement' with 'Technical waste management' and 'Action learning (participative action research)' ranked fourth and fifth respectively.



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Table 8 Areas requested for extra training (ranked)

| | Index | Ranking |
|--|-------|---------|
| Action learning (participative action research) | 48.0 | 5 |
| Advocacy and liaison | 14.2 | 17 |
| Assertiveness training | 1.6 | 20 |
| Communication skills | 32.3 | 11 |
| Community consultation | 41.7 | 9 |
| Community engagement | 78.0 | 3 |
| Conflict resolution | 15.0 | 18 |
| Contract management | 29.1 | 12 |
| Curriculum | 42.5 | 8 |
| Evaluation continual improvement and reporting | 100.0 | 1 |
| Events management | 23.6 | 14 |
| Leadership | 17.3 | 16 |
| Presentation skills | 19.7 | 15 |
| Project management | 38.6 | 10 |
| Public relations | 24.4 | 13 |
| Strategic planning for learning and behaviour change | 96.1 | 2 |
| Team and group dynamics | 11.0 | 19 |
| Technical waste management | 63.0 | 4 |
| Transformative education | 44.1 | 6 |
| Working with the media | 43.3 | 7 |
| Total Respondents | 69 | |



Related websites

Respondents were asked to list the top five websites they would recommend for use on a regular basis to other waste and resource recovery educators. Commonly ranked websites have been listed with a complete list provided in Appendix 4.

| | |
|--|---|
| Sustainability Victoria which includes: EcoRecycle, Eco-buy, Wastewise, Zero Waste | www.sustainability.vic.gov.au www.ecorecycle.sustainability.vic.gov.au http://www.ecorecycle.sustainability.vic.gov.au/www/html/416-eco-buy.asp |
| Zero Waste SA, Zero Waste WA (Live the vision) Zero Waste (EcoRecycle) | www.zerowaste.sa.gov.au http://zerowastewa.com.au http://www.ecorecycle.sustainability.vic.gov.au/www/html/253-towards-zero-waste.asp |
| Wastewise | www.wastewise.wa.gov.au |
| The Gould League/Group | www.gould.edu.au |
| Planet ark includes Recycling near you | www.planetark.com http://www.recyclingnearyou.com.au/ |
| NSW DEC | http://www.environment.nsw.gov.au/index.htm http://www.environment.nsw.gov.au/education/recyclingandwaste.htm |
| Victorian Litter Action Alliance Queensland Litter Alliance | http://www.litter.vic.gov.au/www/html/20-home-page.asp http://www.qldlitter.com/ |
| NSW Waste Educators Network NSW North East Waste Forum | http://www.wmaa.asn.au/nsw/eduA.html www.northeastwasteforum.org.au |
| VISY | www.visy.com.au |
| Wastenet | http://www.wastenet.net.au/ |
| Social Change Media | http://media.socialchange.net.au/ |
| The Climate Group | http://www.theclimategroup.org/ |
| Midwaste | http://www.midwaste.org/ |
| Enabling change | http://www.enabling-change.com.au/7_doors_page.html |
| Victorian Waste Management Association Northern Regional Waste Management Group. | http://www.vwma.com.au/ http://www.nrwmg.vic.gov.au/ |
| Ministry for the Environment NZ | http://www.mfe.govt.nz/publications/waste/ |
| Clean up Australia | http://www.cleanup.com.au |
| Can Smart | www.cansmart.org |
| Be educated | http://www.beeducated.com.au/ |



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| | |
|--|---|
| Department of the Environment and Heritage (DEH) | http://www.deh.gov.au/ |
| Healthy Waterways (QLD) | http://www.healthywaterways.org/ |
| QLD Sustainability | http://www.epa.qld.gov.au/environmental_management/sustainability/ |
| Table of waste resources | http://files.thereafter.com.au/swsa/WasteEdResources.pdf |
| Your Home | http://www.greenhouse.gov.au/yourhome/ |



Waste Education Website

To assist WMAA in determining the structure and content of a National Waste Education website, respondents were asked to identify types of information that would help them in their role. The top five responses are highlighted in the table below with 'a list of Website links' (90%) and 'Case studies of education initiatives' (89%) rated most highly.

Other suggestions include Industry training resources, Upcoming awards, Relevant Calendar of Events & Meetings, Link to state/local networks – e.g. AWARE (www.aware.asn.au), RWMGs,

Table 9 Areas requested for information on a National website

| | Response Total | Percentage % |
|--|----------------|--------------|
| A list of Website links that other educators commonly use | 64 | 90% |
| Access to preferred-practice education programs and activities | 55 | 77% |
| Case studies of education initiatives | 63 | 89% |
| Contact details of other waste educators | 48 | 68% |
| Education resources (posters graphics artwork and images) | 59 | 83% |
| Examples of waste education strategies | 59 | 83% |
| Information on industry standards and policy updates | 46 | 65% |
| Information / resources on behaviour change | 49 | 69% |
| Information / resources on professional development | 41 | 58% |
| Online chat room or forum for informal information exchange | 23 | 32% |
| Results of research / surveys | 57 | 80% |
| Statistics | 44 | 62% |
| Upcoming conferences / seminars | 54 | 76% |
| Waste and litter resources | 47 | 66% |
| Other (please specify) | 4 | 6% |
| | | |
| Total Respondents | 71 | |

Case studies

Respondents were asked to identify the top three programs and or projects that they consider should be developed into case studies. A list of these programs / projects is provided in Appendix 4.

Top five waste education programs

Overwhelmingly the most commonly identified program was Wastewise (9). Several programs rated highly among respondents these included:

| | | |
|---|--------------------------------|--|
| Waste Wise Schools Program VIC, NSW, WA, ACT | Sustainability Street | Site Tours such as VISY Recycling tours |
| Green Office Guide/Green shop/ | Sustainable Schools Initiative | SCRAP NSW |



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The remaining programs identified by respondents are listed in Appendix 6.

Gaps in resources for waste and resource recovery education

Respondents were asked to identify and describe any gaps in resources for waste and resource recovery education. A list of responses to this question is provided in Appendix 5.



Appendix 1

| Are there other barriers that have you experienced? Please describe. | |
|--|---|
| 1. | There is more to Queensland than Brisbane and the South East |
| 2. | Businesses are too time-poor to be able to receive training in eco-efficiency / waste reduction. The days of formalised training are disappearing and we have to find new ways of getting the message out there. |
| 3. | Previously isolated however since the establishment of Qld Litter Prevention Alliance have come in contact with large network of Local Gov staff. |
| 4. | Waste industry and councils hesitant and sometimes reluctant to subsidise staff training in waste management qualifications at a Cert 11-1V level. Operational staff appear to have less opportunity for training than staff at other levels. Operational staff are restricted in their exposure to different forms of resource recovery due to the costs of arranging tours. There is no one-stop shop of resources and information - technical and legislative - for trainers/teachers within the industry, and no State-based forum for exchanging ideas and resources. |
| 5. | Lack of opportunity to attend seminars etc which are mainly held in capital city (Sydney). More rural opportunities |
| 6. | Local government boundaries and different political agenda create barriers to effective implementation of regional systems. Lack of good data, and difficulty in benchmarking across LG boundaries is a big problem. |
| 7. | I am relatively new in the role of Waste Education Officer and I am not currently aware of what resources are available out there and networking opportunities. The lack of consistency in waste management across different regions is a challenge for the industry to unit/standardise rather than a challenge for me personally. Education is only a component of the role, there is also a lot of project management involved when implementing national campaigns and tailoring them to your own region. |
| 8. | 1. Most programs still targeting innovators with promotions etc. Need proven data to reinforce TBL business case plus easy tools for a range of target groups to get the less enviro minded people on board. 2. For most organisations, Enviro Champions are still in the vast minority. Challenge is active involvement across departments etc of an organisation (includes govt.) 3. Evaluation is seen as an afterthought rather than key component of planning. Programs need a strong integrated monitoring and evaluation component for positive feedback and continuous improvement. |
| 9. | The Compost industry is still very young and the lack of enforceable regulations specifying what is compostable and suitable for this waste stream is allowing very mixed (and false) messages to be made to the public. This is very confusing for them and unhelpful for the industry who needs a clean waste stream in order to produce a marketable product for resale. |
| 10. | Having time to educate, doctors and nurses often are not available for education sessions. A website such as beeducated.com.au was presented as an option to train staff on-line in their own time and keep records of staff participation. This would assist in targeting waste assessments of areas and further education needs. |
| 11. | - smoothly blending "waste" issues with broader sustainability issues. - Waste is less 'sexy' than habitat or water issues (waste education is the ugly step sister of environmental ed). - time to plan quality education in overall project timeframes |
| 12. | Lack of support from broad based state wide awareness raising program. Lack of adequate funding and knowledge to conduct more effective behavioural change based projects. Difficulty targeting various sectors of the community, ie. often preaching to the converted. Regional Council's understanding of waste education is limited. |



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| | |
|------------|---|
| 13. | Internal communication issues |
| 14. | Confusion over what can and can't be recycled, even coming from the MRFs, Lack of responsibility towards packaging and the constant influx of new packaging, governments appear to be moving towards controlling this with some sort of product stewardship arrangements but the packaging council seems to still hold sway. (personal views not company policy). This lack of (<i>leadership</i>) by govt. makes a mockery of education programs |
| 15. | Most state education seems to focus on big picture paradigm shift stuff, however (my experience is) waste educators at local government level can have the best environmental outcome focussing on service delivery issues, such as reducing contamination and increasing recovery through kerbside systems. There should be more grant funding for service delivery issues. |
| 16. | There is too little co-operation and mutual support between the 'Waste Educators' and other divisions within WMAA. Two examples: 1. The Home composting Workshop in QLD late last year 2. The forthcoming Compost Awareness Week (beginning of May) I can only speak from a compost perspective, and it is obvious that in many cases we would be served well, if we could enlist the support of qualified educators. |
| 17. | Working in a remote mining environment with fly in/out personnel with only a short term view on term of employment |
| 18. | Lack of national coordination Lack of national finance for priority R&D |
| 19. | Education is not always considered a priority within the waste management industry. |
| 20. | Lack of funding to attend conferences/workshops. Registration fees too high. Only business people can afford it. |
| 21. | I think if the WMAA education group was able to support waste educators in a similar capacity to the Water industry, then it would be much more successful. Use the model they are using - it's already there and it works! There is limited accredited training available for environmental educators. Such a range of different people with different experience. Funding is also a huge barrier that isn't listed above. |
| 22. | Lack of uniformity within the waste education sector, in other words each organisation is doing it's own thing. |
| 23. | Limited commitment by council CEO. |
| 24. | LACK OF STATE PLAN FOR EDUCATION OF TERTIARY STUDENTS AND OPERATORS IN WASTE MANAGEMENT |
| 25. | 1. Obtaining written reports of programs and results been undertaken in Victoria/Australia. 2. Due to lack of consistency in waste management across diff regions Councils it is difficult to work with other Councils to target similar issues. |
| | |



Appendix 2

Websites respondents would recommend for use on a regular basis to other waste and resource recovery educators.

| | |
|--|---|
| Sustainable Living | http://www.sustainableliving.wa.gov.au |
| United Nations Environment Program Division of Technology, Industry, and Economics | www.unep.fr/en |
| Plastics Education | www.teachingplastics.org |
| Resourceful Schools Project | www.resourcefulschools.org |
| World Business Council for Sustainable Development (WBCSD) | http://www.wbcsd.org |
| CBSM | www.cbsm.com |
| Ollie Recycles | www.ollierecycles.com.au |
| Onsite RMIT | http://onsite.rmit.edu.au/ |
| Sustainable Gardening Australia | http://www.sgaonline.org.au/ |
| David Suzuki | http://www.davidsuzuki.org/WOL/Challenge/10steps.asp |
| Clearwater | http://www.clearwater.asn.au/ |
| University of Oregon Campus Recycling | http://darkwing.uoregon.edu/~recycle/site_map.htm |
| Publishers National Environment Bureau | www.pneb.com.au |
| EPA Victoria | http://www.epa.vic.gov.au/ |
| WSN Solutions | http://www.wsn.com.au/ |
| Northern Ireland Regional Waste | www.nirw.org.au |
| KESAB Litter, Waste and Recycling Education | http://www.kesab.asn.au/edservices/ |
| National Training Information Service (NTIS) | http://www.ntis.gov.au/ |
| International solid waste association | www.iswa.org |
| Butt Litter Trust | http://www.buttlitteringtrust.org/about_the_trust.html |
| Environmental Management Tools | http://www.inem.org/htdocs/inem_tools.html#Anchor-Environmental-49575 |



Appendix 3

Case study suggested areas of focus

| |
|--|
| QED Training Customer Service Officers dealing with public queries re: waste & recycling |
| CQLGA Schools Waste Competition |
| packaging minimisation |
| Butt out bins/ littering behavioural study |
| Primary Education " Waste Notts" |
| wipe out waste SA |
| Commercial & Industrial Waste |
| Sustainability Street |
| waste minimisation |
| Waste Wise Schools Program WA |
| Greenwaste contamination reduction |
| Composting and Worm Farming Promotion Darebin City Council |
| Better Bag Program SA |
| School training |
| Sustainability workshops |
| Rural collection of waste, recycling and garden organics |
| Multi-lingual graphically based anti-littering |
| Building & construction waste |
| Gordon Institute International Waste Training |
| Top 10 ways of getting the waste message across to communities |
| www.beeducated.com.au |
| Organic waste recovery |
| Sustainable Schools |
| Rockhampton City Council's Green Street Program |
| waste separation education |
| schools program |
| Sustainability Now Program |
| greenwaste matters |
| Communities without a collection service & rely on drop off service |



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| |
|--|
| GreenShop |
| "environmental economics" |
| Schools under this program for case studies include Amaroo Primary School, Collie and West Leeming Primary School, Leeming |
| Waste audits |
| Waste Wise Schools |
| Sustainable Schools- Aus |
| Community ed. |
| Waste as Art |
| HHW collections in rural areas |
| Attitude to litter surveys for traders and shoppers regarding shopping centres |
| Shopping Centre waste |
| Kimbriki Waste and Recycling |
| How much would Councils save and what effect would it have on the community if there was consistency in waste education, bins, programs etc. |
| Waste Avoidance |
| Waste Wise Schools |

| |
|--|
| Livingstone Shire Council's Waste to Art Competition |
| composting |
| Stormwater Audits in Schools |
| Community Education Programs |
| ontario ecoschools |
| Differences between Urban & Rural Landfills & also Unmanned sites |
| on-site reuse of waste |
| kerbside recycling |
| Banyules truck artwork project |
| events |
| Illegal dumping |
| Central waste facilities in rural areas |
| Information for tenants and landlords to reduce dumping by tenants |
| Cigarette butt waste |
| Local government training |
| C&I sector |
| Gould Sustainable Communities(for local governments) |



Appendix 4

Gaps in resources for waste and resource recovery education

| | |
|------------|--|
| 1. | A National and State Strategy A focus on Recycling (should be on Avoidance) Meetings in Capital Cities (should be some in the Country Areas) A one access point to all resources. |
| 2. | Not real sure yet - I have only been in this role for a few months and I'm still trying to get my head around it all. |
| 3. | The Qld Litter Alliance was established in July 2005 to address the need for a common voice in litter reduction. I believe this will go a long way to filling the gap and believe there is mutual benefits in working together as the QLPA is working with VLAA. |
| 4. | There is a plethora of resources on a wide range of subjects but it takes an enormous amount of time to find them - so it's really about access rather than resources themselves. |
| 5. | Access to information/pictures for promotional materials. |
| 6. | updates of changes in waste management |
| 7. | centralised, industry-funded education facility / classroom specifically for waste education |
| 8. | the lack of availability of data and material that can be applied to the education of indigenous people in regional WA on the merits of household waste minimisation and the reduction of waste into landfill. |
| 9. | Case Studies that go across Env Aspects (ie include waste, energy & water etc) rather than treated in isolation. Also need to include baseline and good TBL performance info to reinforce benefits. |
| 10. | lack of enforceable guidelines |
| 11. | lack specific reference to particular industry |
| 12. | Community participation and incentives. |
| 13. | waste avoidance education methods, strategies and materials |
| 14. | Practical, available & ongoing support for individuals, schools, businesses to translate knowledge into action. |
| 15. | Lack of human resources. |
| 16. | Confusion over the different systems available to schools, business' and homes. This creates a major obstacle to education of people about recycling, what can be recycled and ultimately waste reduction. A useful resource would be a bit of 4 x 2 |
| 17. | Lack of education material and programs on avoidance. |
| 18. | Ease of access, duplication, lack of regional/state specific coordination among local government and education programs, potential to improve National Networks to address the previous listed issues |
| 19. | Availability of federal financing for waste education and R&D Availability of accurate & reliable statistics |
| 20. | Funding for smaller Councils to afford a Waste Min./Education officer. Existing staff do not have time/training to do it even half properly |
| 21. | I have developed most of my own resources from reading and research. It would be good to be able to share resources with other educators. |



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| | |
|------------|--|
| 22. | Avoidance and sustainability information for industry and commercial businesses. Illegal dumping campaign strategies. |
| 23. | A set of visual tools for presentations related to waste avoidance, resource recovery - eg. images to blow-up of smart shopping examples, reuse, recycling processes, life-cycle etc. These images should be free for everyone to access. People also like to know about what has worked and what hasn't worked in particular programs - what about case studies which included any materials which had been developed as part of that program as well. Good research data is also required. |
| 24. | no |
| 25. | Suggested training such as certificate IV in workplace training, train the trainer etc and where to get this training from. |
| 26. | lack of site tours and specific waste management courses for tertiary level |
| 27. | Low profile in waste industry Lack of professionals |
| 28. | Newsletters on what is happening around Vic, Australia, globally. |
| 29. | 1. Activities book to replace the out of print Waste Matters 2. Online waste activities (linked to the curriculum in each state / territory 3. Professional learning / training in waste and resource education for waste educators |



Appendix 5

Waste education programs identified by respondents

| | | |
|--|--|--|
| CERES teaching programs | Providing the Links (EnviroCom) | QLD Waste Educators Group (Networking) |
| Mentoring (APC Consulting) | Existing information on file | Web searches |
| Previous staff's presentation | Who Cares About the Environment? Surveys | interactive games developed by Coordinator |
| Warmer Bulletin Information Sheets | Schools programs | DEC/EPA hazardous waste information |
| Personal ashtrays & Butt Out Bins | Murphy program | Sustainability Now Program - Community Workshops |
| NSW Legislation | Community Education - Power Point Presentations | Clear Water |
| Development of the "Waste Nott Family" Primary Education Program | VLAA Toolkits | Clean Up Australia Day , 'Kids clean Up Kit' |
| USA EPA Decision makers guide to solid waste management | Warmer Bulletins | Interactive |
| Cleanaway 'Watch Out Waste' Program | Waste Educators Network Group - WA | signage |
| Ontario Ecoschools | greenwaste matters | providing the links |
| Visual | Audio | Clear images (e.g. what can and can't be recycled) |
| Exhibiting at Expo and talking direct to the public | mail out information when filling orders | VISY and Vic Ed Dept Green Schools |
| orientation sessions | timely short training sessions | Face to face de. |
| CBSM workshops | Eco recycle Victoria | Don't be a tosser campaign kit |
| Newspaper articles | Programs targeted at specific groups (e.g. Children's Centres) | Radio advertising |
| Science Direct | IBAW | Festivals and street fairs |
| Industry | No Waste events | compost Australia |
| Teralba Worm Farm | DEC Easy Guides | Workshop presenters for community |
| Brochures | Media releases | Codes of Practice and other legal |
| Earthworks | National Recycling Week | Guidelines for public place recycling bin signage |
| internet | personal contact | Public displays |
| Commonweath Games Litter | Zero Waste SA resources | Gould Green Maths Levels 2-4 |



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| | | |
|-----------------------------------|--|--|
| Grants | | |
| KESAB resources | Sustainability website | AWARE |
| Cleanaway own education program | Networking | Tidy Towns WA |
| Waste watchers (KAB) | Community presentations | WasteQ (Conference) |
| WMMA (schedule 4 premises) | 2 hour workshops | other agencies - govt |
| Waste Management Training Package | websites | Greenhouse Challenge Plus Fact Sheets for SME's |
| Educators Network meetings | Gould Composting and Minibeasts Activities | Interactive displays developed by Coordinator |
| www.beeducated.com.au | leave it in the crate if non recycle | Corporate Recycling Program |
| Conferences | Sustainability Workshops | Do something Environmental Education in Action for Primary Schools kit |

| | | |
|---|---|----------------------------|
| Gould Waste Matters (now out of print) | Giveaways/remembrance tools | Waste data collected by SV |
| EPA Publications | Earth Works | Wipe OUT Waste- Qld |
| business associations | lanyard displays | Do It Right On Site |
| DEC Waste Reduction in Office Buildings | Green Stamp Program | posters |
| Resource library | Program: school waste audits, compost workshops, greenwaste contamination, kerbside recycling | Magazines |
| High School Education Program - Power Point Presentations and information on Global Warming | Slogans, statistics and other information | door knock |
| Recycling tours | KESAB - SA | Waste as Art |
| DEC - it's a living thing | waste education plans for other councils | Events displays |
| Various webpages | | |

Researcher's note

Unfortunately not all respondents provided accurate information about the programs such as title and creator.