Learning Together for Sustainability: The Value of Group Based Peer Learning
Jade Herriman, Juliet Willetts & Emma Partridge
Institute for Sustainable Futures, University of Technology Sydney, AUS

This paper reflects on a particular approach to community education for sustainability that has emerged in Australia in recent years, following successful examples elsewhere. Group based peer learning sees people coming together for extended periods to learn from each other, and in the process, inspiring one another, and acting as witnesses to commitments made to change. We examine a selection of examples of such learning programs both in Australia and overseas, and identify some of their predominant features. We consider the benefits of this learning approach, examine some of the challenges to using this technique in public programs, and consider how to overcome barriers and maximize benefit. The paper highlights the value of this approach as one that provides less formal, less ‘expert’-based, less extensive compared with other more conventional learning approaches, but possibly more significant learning experiences.

Introduction
“Environmental Education must be holistic and about connections. In order to address environmental challenges, people need to think broadly and understand systems, connections, patterns and causes. The challenges themselves frequently have social, scientific, cultural, economic and ethical aspects, all of which must be considered for their effective management.” (Environment Australia, July 2000)

Local government in Australia has had, over the last few decades, an emerging interest in supporting residents to ‘live more sustainably’. Waste and environment focused programs1 have primarily relied on incentives (such as discounted compost bins), compliance (enforcing legislation against illegal dumping or stormwater pollution) or structural change (implementing domestic recycling services, introducing greenwaste collection). Education or social marketing campaigns have tended to be primarily information based, mass communication campaigns (brochures, material on Council websites) or ‘face to face’ programs such as lectures or workshops delivered by experts on single issues or topics.

In contrast, much of the literature on effective processes for changing values, habits, and attitudes highlights the value of ‘word of mouth’ messages, and the norming of new behaviours by uptake and role modeling by early adopters (Rogers, 2003) Work on voluntary behaviour change for sustainability stresses the value of people having ‘trusted others’ to discuss change. Similarly, health promotion work has shown that programs that use peers as teachers or facilitators are effective in

1 A distinction between waste and environment programs is often made due to the structural arrangements of Councils in Australia, where environmental management and waste management are commonly different operational units, environment often located within planning and waste within in capital works.
influencing change (e.g. Baldo 1998).

This paper is written from a practitioner perspective, reflecting on practice in environmental education (EE) and education for sustainability\(^2\) (EfS) within local government. The objective of this paper is to investigate a range of group based peer learning programs that cover the spectrum of approaches available. To this end we utilize a set of case studies of group based peer learning programs to examine the ways in which these programs have brought people together to learn, reflect and discuss their lifestyles through the lens of sustainability. We discuss the typical characteristics of the case study programs and highlight the range of possible benefits they have delivered. In doing so, we also acknowledge some of the barriers faced, including those related to the culture within institutions which tend to pay for and deliver community education programs. We conclude with a discussion of a range of ways to maximize the benefit of group based peer learning programs as tools for change towards sustainability.

**What is group based peer learning for sustainability?**

“Specialist discipline-based knowledge, while contributing critically, is no longer adequate by itself - an holistic appreciation of the context of environmental problems is essential.” (Environment Australia, July 2000)

“Australian society is diverse and apparently ever changing. As such a participatory process that is learning and responsive to community needs is a step in the right direction” (Voronoff 2005, p.21).

Group based peer learning for sustainability is a term used loosely in this paper to mean a style of learning in which small groups of people come together to learn with and from each other on some topic of mutual interest, with an underlying objective of change – either personal change (attitudinal, conceptual, behavioural), social change or both. Peer group education is a tool that has been used effectively in public health and health promotion, especially in sexual health (Baldo 1998), sexually transmitted disease (Norr, Tlou, and Moeti 2004), and women’s health (Haider, Ashworth, Kabir, and Huttly 2000).

Public programs designed to achieve environmental education objectives have historically taken many forms – from mass communication campaigns to small skill-development workshops for householders (on composting or green cleaning for example), to public and community art projects (such as murals, sculptures, or theatre). In the last 10 years or so group based peer learning has also been used for environmental education, or more recently, education for sustainability objectives.

Clearly, people learn about sustainability in a range of formal and informal ways, both in groups and individually. Many situations exist where people learn from peers, including through informal interactions like significant conversations in social groups or homes. This paper does not refer to all of these situations, but

\(^2\) It is recognized that Education for Sustainability (EfS) is a distinct approach to community education and possesses features that some traditional environmental education may not have – the terms are by no means automatically interchangeable. For a discussion of the differences in these approaches, see Tilbury and Cooke (2005) and ARIES 2006.
specifically to those community education programs which have been designed to feature ongoing group engagement and that value the exchange that happens between participants.

For the purpose of discussion, it is assumed that a program designed to facilitate learning for sustainability may have change objectives along a spectrum from simple exposure to information, to measurable personal change in a desired direction (e.g. water conservation), to more systemic personal change with an empowerment focus and no targeted specific behavioural change. In this context, group based peer learning methodologies are considered as tools for achieving all of these objectives. They are considered from the perspective of case studies and also from theory about learning, group processes and reflection.

Case study examples
The examples of the peer based learning approach to sustainability education have been selected with a view to demonstrating the breadth of possible approaches. In addition, they include two programs (Living Waters Living Communities, Leichhardt Cool Communities) with which the authors have had direct experience. The case studies included in this paper are by no means an exhaustive list. Appendix 1 contains a description of these programs and others, providing relevant details and references. The case studies included in this paper fall into two main categories, the first focused on sustainable approaches to living, and the second are more narrowly focused on a particular environmental issue.

The ‘sustainable living’ case studies combine a broad range of thematic perspectives such as waste, energy, water, toxics in the home and household purchasing. Our case study examples include:

- international programs,
  - Global Action Plan (GAP) EcoTeam Program, and
  - the New Zealand Sustainable Households Program,
- Australian programs,
  - Living Waters Living Communities program in NSW,
  - Living for Our Future in Victoria, and
  - Sustainability Street in Victoria and NSW).

The case studies with an environmental theme or aspect of sustainable living are:

- Leichhardt Cool Communities program (energy and greenhouse)
- Watermark Australia, (water).

How do they work? Characteristics of the programs
Reflecting on the Leichhardt Cool Communities program, Tilbury and Ross (2006) give a sense of how group based peer learning programs operate:
“After the group decided on their joint answer, each group would tack their answers up for everyone to see, and the entire group would perhaps laugh and discuss the variety of answers. This type of process – placing questions, discussing, and sharing - is important for exchanging ideas and creating understanding of other people’s thought processes and assumptions. This process also allows participants’ ideas to evolve and be expanded on.”

Some of the case studies identified above have a greater emphasis on action, others on exposure to information, others on creating a space for reflection and inspiration for personal change. There are also differences in the degree of inward or outward focus of the group – whether seeking to change some structural aspect of society or focused more on enriching the experience of the individuals present. However, there are a range of common characteristics to these programs. These commonalities and differences are described below based on our case study examples. Broadly, group based peer learning programs may:

Focus on a single theme or more broadly, on sustainability
Leichhardt Cool Communities program had a specific ‘greenhouse’ focus. Whilst this enabled topics such as sustainable transport, water efficient appliances, and composting to be covered, it tended to have a strong ‘in the house’ focus, and did not engage with broader questions of consumption, or complex issues such as embodied energy, focusing rather on direct, measurable greenhouse gas reductions. In comparison, Living Waters Living Communities covered a broad range of themes and enabled participants to spend time considering global as well as local issues of concern.

Meet regularly
Living Waters Living Communities participants met for eight sessions (including a wetland walk and celebration event). Participants in the Sustainable Households Program in NZ met for between six and ten 2-hour sessions. Watermark Australia suggests teams meet monthly.

Recruit and support groups over a short or longer period of time
A feature of the Watermark program is that it is national and groups can be set up anywhere and run by any interested community member. It is an ongoing program and so new groups can be established at any time to suit participant interest. The Leichhardt Cool Communities program on the other hand had a more tightly defined timeline, due to the grant funding it received. The evaluation noted that these types of programs require long timeframes for implementation (Hole 2004).

Be existing or purpose-built using existing facilitators or training community members to facilitate
In some programs community volunteers are recruited and trained to be team leaders/facilitators in the program and recruit participants (e.g., Living Waters Living Communities, GAP). Some programs are delivered by program leaders/facilitators and advertised to the broader community (Sustainable Households, Sustainable Liv-
ing at Home). These may result in groups of people who do not share a geographical region or an existing social connection. In some cases existing groups may be used – in the Leichhardt Cool Communities program existing community groups were offered the program as a ‘guest speaker’ arrangement.

Reflect on experiences, emotional responses and underlying values, not just knowledge

Peer based groups typically consider information, values, attitudes, behaviours and feelings. The format is open to members articulating ‘big picture’ issues, exploring connections or emotional responses. People can share their personal experiences of changing lifestyles – both successes and challenges. This results in strengthened relationships between participants and supports critical thinking, dialogue, self-diagnosis and action.

Be supported with information, activities and recognition

Programs run with centralised support and varying degrees of devolved responsibility. Examples of the range of support offered by organisers or facilitators include expert speakers, handbooks, information materials, access to utility data, feedback on the quantifiable impacts of changes, templates for ‘commitments’ or eco-goals, ongoing email communication email between meetings, case studies, media articles, quizzes and surveys, comparison data and tools to benchmark consumption (e.g., the ecological footprint approach – http://www.footprintnetwork.org/). Field trips (for example wetland walks in Living Waters Living Communities, industry visits in Sustainable Living at Home) are often offered as a way to make abstract issues ‘real’ and emphasise the local context – revealing aspects of the local environment which may have been hidden to participants previously. Recognition may also offered, with profiles of participants, ‘good news stories’ in local media, certificates and presentation and celebration ceremonies being examples of tools used.

Provide opportunities for and encourage ‘outreach’

Often participants identify opportunities for extending their learning, sharing their learning with others or creating structural changes in their local area (e.g.. Living Waters Living Communities participants organising a public seminar on sustainable investment, or lobbying for an area of park to be converted into community garden).

What are the benefits of these programs for sustainability?

“The program gave our family the feeling that we really can help improve the quality of life in our family, our neighborhood and our city.” (Columbus Ohio GAP Eco Team participant)

“There is a continual expression of a desire for ‘community’. This may or may not be a false hope or idea of the past – but it does point to something perceived as missing – perhaps: local connections.” (Paine 2004)

3 Empowerment Institute website: http://www.empowermentinstitute.net/files/Studies.html

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Group based peer learning programs have delivered a number of benefits in the communities in which they have been used. General social benefits such as ‘involvement’ and social cohesion, or ‘knowing the neighbours’ are often cited, and are perhaps signs that such programs fulfil the ‘desire for community’ and local connection that Paine notes is so common. Other benefits cited are behavioural change outcomes related to reduced resource consumption, and individual benefits such as development of group skills, critical thinking or facilitation.

Most programs are reported on favourably by their organisers, although it must be said that many have not been subject to independent evaluation. Further, the causes of long term social or behavioural change are notoriously difficult to measure and the complex relationships between cause and effect are often overlooked in the monitoring of project outcomes. However, longitudinal study that was carried out in the Netherlands measured the durability of the short term effects of the EcoTeam Program into the long term, with particular attention to improvements in environmentally relevant behaviour, intensified environmental investments in the household, and quantitative savings on environmental resources. This analysis found that effects seen just after the EcoTeam Program was completed were maintained for up to two years after the intervention had ended.

The acceptance of these programs in communities speaks of the value of informal as well as more formal styles of education. Time for discussion, questioning, reflecting and thinking about material between sessions provides opportunities for shifts in thinking. They also demonstrate value in the ‘non-expert’ as well as the expert opinion - where community members are recognised to possess a broad range of insights that can be the basis of learning for others. As such, they value the importance of relationships between participants in facilitating changes in perspective.

Another benefit of these programs for sustainability is that they feature a high degree of integration. For example, through integrating learning across ‘topics’ (which may otherwise be tackled in separate programs and campaigns) participants are able to draw connections between different processes (social, economic, technical, environmental, political) that impact on environmental problems and influence their own behaviours. The programs also integrate learning with doing, providing opportunities for a range of learning styles and learning experiences. Importantly they also integrate social outcomes with environmental outcomes – combining objectives for community development with objectives related to reducing ecological ‘footprints’.

Discussion: How can the benefits of peer group based learning be maximised?

This paper has shown that there are a range of characteristics common to group based peer learning programs, and a range of possible benefits to this approach. However, if these processes are to be used to best advantage there are a number of barriers that may need to be overcome. Barriers and challenges to this approach include organizations perceptions and expectations of education programs based on their organizational culture, the achievement of appropriate timing, flexibility and resourcing, and the lack of an overarching sustainability initiative across Australian councils. Opportunities to maximise benefit include ways to overcome
such barriers as well as methods such as collaborative approaches across traditional organizational ‘silos’, an ongoing timeframe to allow successive waves of community involvement, realistic staffing and integrating group processes from other fields such as community consultation and deliberation.

**Barriers, sources of resistance and their resolution**

One of the most significant barriers to using this approach to learning for sustainability or incorporating this type of program into formal environmental education programs may be the culture within institutions. The flexible, responsive nature of support needed for such a program does not always align with the work planning and outcomes focus of public institutions. It also challenges the single issue focus for many programs, where staffing and funding is often tied to a single issue (such as ‘water conservation’, ‘social isolation for aged residents’) so partnerships or innovative programs which cross boundaries require more coordination and commitment from individual staff to justify new approaches. Quantitative evaluation of programs, as is often required, may result in performance indicators such as the number of participants, the number of meetings, the number of direct, short-term measurable changes in consumption, the duration of the program. In such an evaluation, more subtle community development outcomes, or long term shifts in environmental behaviours are likely to be overlooked.

One way to address this may be to deliver such programs as a joint initiative between environmentally focused and community focused organizations and sections of Council. This may result in broadening the range of performance indicators for the project, and providing useful social science or qualitative research perspectives to be applied to what could otherwise be seen merely as a vehicle for technical, quantifiable change.

Timing could also pose a challenge, as change towards sustainability requires programs to be supported over a long-term. Ampt (2003) suggests that 6 months might be the minimum time frame needed to run an effective voluntary behaviour change program on transport. The US GAP EcoTeam program runs for only 4 months, but the infrastructure for support is ongoing, with staffed offices to support the Eco Program. The challenge in organizations such as councils, is that there is often interest in running short-term programs with demonstrable immediate impacts. Maintaining education programs for a period of years is potentially a challenge in the face of pressure to deliver ‘new’ outputs and take part in the many newly devised programs and projects which Councils are exposed to.

One of the case study examples demonstrates a way to overcome this barrier regarding timing. A feature of the Watermark program is that it is designed to allow for successive waves of involvement rather than only recruiting for groups at the start of a program dictated by grant or program funding (a common feature of participatory education programs in the public sector). Programs that are designed to capitalise on the interest that participant involvement will generate in the community may maximise involvement and ease of recruitment compared to those that run intensely over a shorter period.

Flexibility of program content may be both a potential strength and challenge for programs like these. Education programs focused on voluntary behaviour
change in transport reinforce the importance of an approach where ‘people can identify their own problem or frustration and find a solution to it rather than trying to align their own value system with that of the client’ (Ampt 2003). Developing and sourcing content in response to the needs of participants requires ongoing support throughout the project, but means that the program can be most meaningful for the participants involved. In the Leichhardt Cool Communities program for example, this involved conducting further research into Green Power options for residents.

Resourcing may also be a barrier, with significant establishment and preparation time required to create materials, structure sessions, train community volunteer ‘team leaders’ or staff facilitators, provide incentives, and provide ongoing communications and support for teams. These outlays may be a large proportion of total project cost especially when projects are running for a short duration. This often seems to be the case with grant-funded programs, despite the best intentions of initiating staff that may see the initial phase as a pilot, to be built on and incorporated into the organization’s core programs.

One of the key challenges facing practitioners in the local government or community sector wanting to implement group-based peer learning programs for sustainability, in NSW, may be the lack of an overarching program structure to ‘tap into’. Whilst the NSW Government initiated EarthWorks program provides some structure and resources for those wishing to carry out waste focused community workshops, the broader mantle of sustainability or sustainable living is not addressed through this program. As a result, many individual sustainable living programs are being designed and implemented without coordination or effective sharing of lessons learnt. This may be resulting in lost opportunities for shared learning and common resources to draw on. The NZ experience of pooling financial contributions between Councils to fund the creation of a centrally designed and evaluated program, with flexibility for regional differences in implementation may be a useful model for consideration in Australia.

Conclusions

We have demonstrated the group-based peer learning approach to be a useful tool to add to the set of approaches that sustainability practitioners might use to engage with the community. The case study scenarios show the approach to be valuable in achieving significant changes in both how people interact with the natural environment and how they interact with each other in neighbourhoods and communities. Based on the importance of this type of learning approach for sustainability, there is a need for further research into such interventions. Some suggestions would be to situate them on a spectrum depending on their structure, to consider factors such as the degree to which learner experience is leader-dependant, sources of resources and openness to changes in direction.

Conceptually we have shown that group-based peer learning is consistent with many existing action-based approaches to community development and social change. The learning is guided to a greater or lesser extent by participant-identified priorities, the strong role that social relationships play in influencing behavioural norms is recognised, and the connections and interplay between different themes of concern in relation to sustainability are recognised and explored rather than being
considered in isolation through rigidly defined and separated topics. The way that this approach recognises community and individual expertise is aligned with a decentralised model of ‘authority’ and information transfer; where agencies facilitate and support citizen action rather than dictating and directing.

We conclude that there is scope for this approach to be used more widely in Australia, and that use of the approach will benefit from the reflections presented in how to overcoming likely barriers and to maximise effectiveness.

References


City of Port Phillip. 2003. Sustainable Living at Home Workbook


Voronoff D., 2005, Community Sustainability, A review of what works and how it is practiced in Victoria, prepared for Environment Victoria


**Acknowledgements**

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**Jade Herriman** has 6 years experience in sustainability research and project management within Local Government. She has worked with leading NSW Councils to deliver innovative sustainability programs across many technical disciplines. She has worked on municipal greenhouse gas reduction and energy efficiency programs, urban biodiversity conservation, water management planning and community engagement projects. She has designed and delivered a variety of community education and engagement programs such as the Whites Creek Wetland community education program for Leichhardt Council and the Youth Environment Forum for Warringah Council. Her current research interests include decision-making frameworks for sustainability, participatory processes and social, institutional and economic drivers for consumption.
Juliet Willetts is a Research Principal at the Institute for Sustainable Futures, UTS. Juliet works towards sustainable change in practice and policy through learning. She has assisted with coordination of the Institute’s postgraduate program since 2002, and has a keen interest in transdisciplinary research and what it takes to achieve integration across disciplines and knowledge systems. Her particular areas of focus and expertise are sustainable water management and international development, particularly monitoring and evaluation. Her previous publications span technical fields (for example wastewater management processes) and the social sciences (for example innovative qualitative monitoring systems for international aid).

Emma Partridge is a qualitative social researcher with extensive experience in policy, research and consulting contexts. Her work with a range of stakeholders focuses on the social and cultural dimensions of creating change towards sustainability. Emma has worked in various senior research and policy development roles in the state and commonwealth public sector prior to joining ISF. This work focused particularly on issues relating to women, children and young people, juvenile justice and community services. Emma’s research interests focus on the social dimensions of sustainability, the interrelationship between environmental issues and social and cultural issues, the links between sustainability, health and social justice, and strategies for achieving sustainability in the urban environment.
Appendix 1 – Community Sustainability education programs which use or have used group based peer learning (Alphabetical by title)

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<th>Community Sustainability education programs which use or have used group based peer learning</th>
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| Living Waters Living Communities | **Sustainable living focus**  
GAP Eco Team style program delivered by Warringah Council and OzGreen funded through NSW Government Stormwater Trust. Eco teams were lead by facilitators who had volunteered from the community, the group met on an ongoing basis over a period of months, and a full range of sustainability topics were covered in a group setting, and supported with materials such as information, surveys, guest speakers, group exercises and opportunity for reflection and discussion. Participants: EcoTeam Leaders are recruited and trained from the community. Teams included both existing groups (workplaces, churches, neighbourhoods) and custom made teams (in response to advertisements and information nights) | Australia: NSW, Warringah Council. Organisers: Warringah Council, OzGREEN, NSW Stormwater Trust | Warringah Council & OzGREEN (2001), Paine 2004 |
| Living for Our Future | **Sustainable living focus**  
Vic sustainable living program run in the City of Boroondara using community based social marketing principles, as a pilot, with 120 residents in small groups over 6 months (Donlen, Condon and Tourney 2005). | Australia: Victoria, City of Booroondara | Donlen, Condon and Tourney 2005 |
| Sustainability Street | **Sustainable living focus**  
Community Sustainability education programs which use or have used group based peer learning

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| Sustainable Living at Home | Sustainable living focus  
A series of 5 workshops with guest speakers, surveys and the opportunity for participants to make short, medium and long term plans to carry out sustainability actions in the home. The project is staffed by one full-time environment projects officer supported by the Environmental Programs Team and other City of Port Phillip officers as required. Six monthly "SLAHminars" are held at council offices featuring a range of guest presenters and council staff who share their knowledge with participants about the topic of the month. Following the monthly SLAHminar, teams of up to 20 households meet to learn from each other and develop practical solutions to environmental problems from the SLAH workbook. This resource book provides easy to follow guidelines on environmental sustainability and the five program themes. A range of practical exercises in the workbook helps participants audit their waste and travel habits, detect water leaks, and change their energy consumption habits. The SLAH program has involved 364 City of Port Phillip households (representing 875 people) since December 2001. (source: ICLEI global – members in action [http://www.iclei.org/index.php?id=1192](http://www.iclei.org/index.php?id=1192)) | Australia: Victoria, Port Phillip  
| Sustainable Households Pilot Program | Sustainable living focus  
The Sustainable Households Program was developed as an action research project at multiple locations in NZ. The program consisted of a facilitator managing either a series of individual community study groups and tutored classes on different sustainability issues such as implementing insulation, improving green waste management and reading product labels. The programme design uses adult education and social marketing techniques to bring groups of interested adults together repeatedly for a timetabled study series (2hours, between 6 and 10 sessions). These are led by tutor-facilitators and supported by reference material, quizzes, activities for the group and home, measurement and questionnaires (Taylor 2005).  
The program was linked with existing media and environmental marketing campaigns in New Zealand. The three year pilot ended in 2004, and a transition to national availability was underway in 2005. | New Zealand  
Organiser: Marlborough District Council on behalf of 12 partner Councils  
Participants: interested individuals coming together in groups in a community college environment | [MacDonald and Taylor 2004, Taylor 2005](http://www.iclei.org/index.php?id=1192) |
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**UK: London**

Organisers: AntiApathy

Participants:

| Community Sustainability education programs which use or have used group based peer learning |
|-----------------------------------------------|---------------------------------|---------------------------------|-------------------|
| What                                          | How                             | Where, Who                      | More information   |
| Watermark Australia                           | Water focus                     | Australia                       | Website: http://www.watermarkaustralia.org.au/home.asp |
|                                               | Watermark is an Australian water education and action project which uses centralized support – education materials, website – to support small groups of people who want to meet regularly for group based learning on water issues and specifically achieving reduced water footprint. The essence of the Watermark Australia process is that ordinary people bring together small groups of people, meeting monthly to discuss water, then sharing their thoughts, anecdotes and ‘folk-wisdom’, bringing it all back to the Watermark Australia team. Funding: To date, a small number of private citizens have contributed their own money towards the project. As well, The Myer Foundation has made two grants at key stages of the project’s development - supporting the early concept work, and helping to implement the project. Participants: Over 200 group convenors spread throughout Australia have joined the project and are bringing other citizens into the process. | Organisers: Watermark Australia operates out of the office of the Victorian Women’s Trust in Melbourne, and is comprised of: the Watermark Australia team, the Victorian Women’s Trust staff, a small group of volunteers, and a Reference Group. | Results: http://www.theage.com.au/news/national/cutting-consumption-street-by-street/2006/08/04/1154198331857.html |
|                                               | Wanting to engage a ‘non-green’ audience in Leichhardt the project focused on working with existing community groups to increase understanding of the connection between energy use and greenhouse gas emissions, and the options available to householders for change. The workshops were delivered to five pre-existing community groups, usually at their regular time and place of meeting Participating groups included a seniors group and Spanish women’s group. A series of 3 workshops featured quizzes, games, discussions and prizes. The Cool Communities commitment sheet had boxes where residents committed to ways they personally would reduce greenhouse gas emissions by changing their actions involving hot water, energy use, car fuel use, and waste. | Organiser: Leichhardt Council, NSW Cool Communities facilitator, funded through the AGO’s Cool Communities Program (round 1) | Partner organizations: http://www.watermarkaustralia.org.au/info.asp?pg=convenor_submissions |