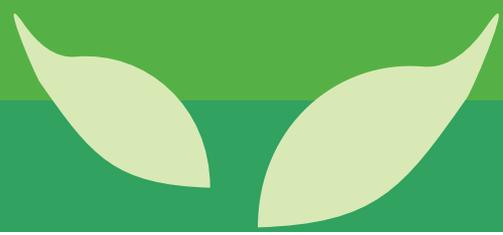




Climbing the little green steps

How to promote sustainability within early childhood services in your local area



NSW GOVERNMENT PROGRAM



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foreword

Early childhood services are ready to take up the challenge of education for sustainability. As convener of the NSW Early Childhood Environmental Education Network (NSW ECEEN), I have witnessed a surge of interest and commitment from early childhood educators across New South Wales.

Climbing the Little Green Steps is a comprehensive guide for the people who are best placed to assist them in their endeavours - local government environmental educators.

This manual highlights and builds on the success of Wyong Shire and Gosford City Councils' Little Green Steps, Preschools Sustainability Program, which was developed specifically for early childhood services. Following on from this program, ***Climbing the Little Green Steps*** takes a very practical and multi-faceted approach to working alongside early childhood educators to promote sustainability education. It provides the information, strategies and resources which were so effective in initiating and sustaining change in early childhood service practice.

Another key feature of the manual is the value it places on building partnerships between local government environmental educators and early childhood educators with benefits to all involved. By working together we can make education for sustainability a priority.

Children develop positive attitudes and values by engaging in open-ended learning experiences, by joining in discussions that explore solutions to the issues that we face, and by watching the adults around them model sustainable practices. By bringing together early childhood best practice, supported by the ***NSW Curriculum Framework***, and education for sustainability initiatives, this manual provides the essential tools required to embed sustainability education into early childhood services.

Climbing the Little Green Steps goes a long way towards making early childhood environmental education mainstream.

Helen Nippard

Helen Nippard,

Convener, NSW Early Childhood Environmental Education Network (NSW ECEEN).



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about this manual

This manual is not definitive, but aims to demonstrate the many possible steps that can be taken to promote sustainability within early childhood services¹ in your local area, using the **Little Green Steps** program as an example of a leading practice project.

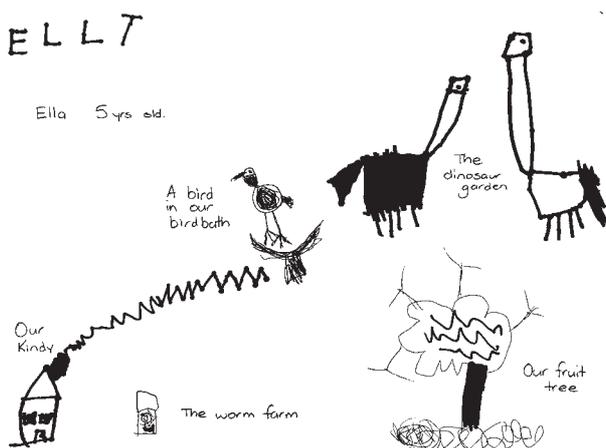
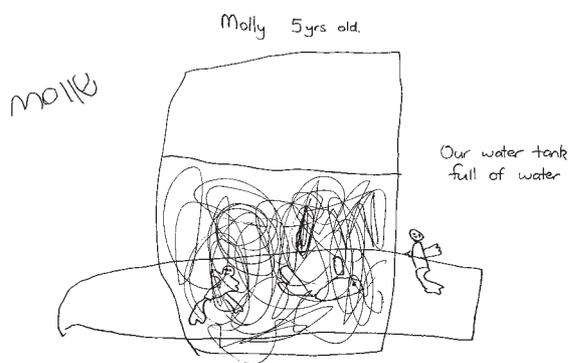
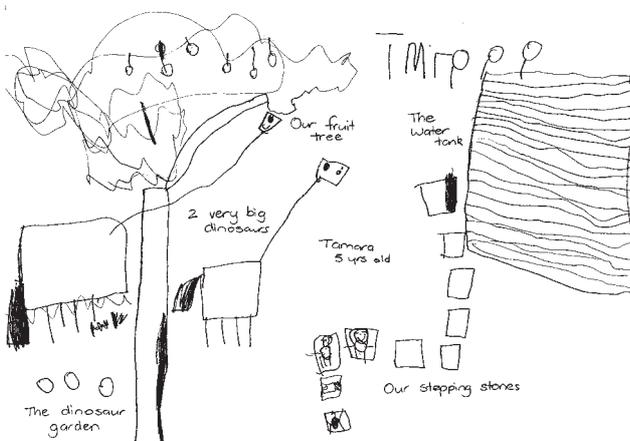
Climbing the Little Green Steps has been made possible through the Local Council Partnership Showcase Grants Program administered by the Department of Environment and Climate Change NSW, and has been written primarily for local government environmental educators who:

- have considered the need for promoting sustainability and environmental education within their local early childhood services, and/or;
- are in the process of developing their own early childhood sustainability program, and/or;
- have had early childhood practitioners in their local government area express the need for support in the area of environmental education and sustainability, and/or;
- have been or would like to provide support and communication to early childhood services in the area of environmental education and sustainability, and/or;
- have made contact with others working in the field of early childhood sustainability education.

Other stakeholders, including early childhood services staff within councils and in the broader community, as well as others working in the field of early childhood sustainability education, parents and caregivers, may also find this document useful.

This document has been developed in consultation with others working in the field of early childhood environmental education with a shared goal of making early childhood environmental education mainstream.

¹ The term 'early childhood service/s', wherever it occurs in the manual, is inclusive of Family Day Child Care, Long Day Child Care, Preschools and Playgroups.



Drawings prepared by children from Terrigal Childcare Centre



how to use this manual

This manual may be used in several ways. For example, you may:

- use parts of, or the whole document, depending on available resources, local priorities, and the needs and interest amongst early childhood practitioners and the children and families at their centres.
- have it readily available as a reference for contacts, resources, and ideas, and add your own, as you take steps towards developing an early childhood sustainability education program.

objectives

The aim of ***Climbing the Little Green Steps*** is to:

- describe and showcase *Little Green Steps* as a leading practice program in the field of early childhood sustainability education in NSW.
- provide a useful resource for local government and other organisations interested in promoting sustainability and environmental education in their local early childhood services.

- encourage local government organisations to take steps towards providing ongoing support and communication to early childhood services with a passion for environmental education and a commitment to improving the sustainability of their centres.
- provide examples of the practical components of a successful early childhood sustainability program, including:
 - ~ information about the development of resource kits and newsletters;
 - ~ facilitating professional development opportunities;
 - ~ developing the program collaboratively, including establishing links with others in the early childhood environmental education field;
 - ~ facilitating the sharing of knowledge and ideas; providing ongoing support;
 - ~ encouraging clean, green, and environmentally healthy practices;
 - ~ assisting in the sustainable design of natural outdoor play spaces;
 - ~ assisting in the development of environmental policies and management plans;
 - ~ other program ideas.
- provide a list of resources on various topics related to early childhood environmental education.

background

[Early childhood environmental education] is about encouraging in children and adults, ways to be creative, empowered and positive about the futures we are creating...[it] involves children, teachers, and communities working collectively and democratically towards the resolution of environmental questions, issues and problems.

(Davis, 1996, p.38)

The level of support for early childhood environmental education is growing. More individuals and organisations are realising the importance of developing sustainability programs and initiatives that specifically target the early childhood sector. There is awareness that research, resources, training, policy and regulatory standards are needed to ensure that all early childhood services operate sustainably, and provide an everyday environment for learning where children are immersed in education for sustainability.

In *Patches of Green*, published by the NSW Environmental Protection Authority (EPA) in 2003, Sue Elliott conducted a review of early childhood environmental education in Australia, identifying the 'exemplary individuals, organisations and centres that share a passion and commitment to the importance of early childhood environmental education' (NSW EPA, 2003, p.1). At that time, Elliott also identified a lack of support and resources and a need for, 'a greater emphasis to be placed on this area of learning'.

In the 2003 report, Elliott states that 'with support from policies, curricula, resources and training, there would be no excuse for any early childhood educator or centre not to embrace environmental education' (NSW EPA, 2003, p. 37).

Four years on, Elliott observes that, 'recently the pace has quickened as some national professional organisations and various government authorities have begun to support early childhood environmental education initiatives' (Elliott, 2007, p.9).

Local government, through their interpretation of Education for Sustainability (EfS), have provided assistance that has meant significant progress for early childhood centres, especially, but not restricted, to those auspiced by local government. Gosford City and Wyong Shire Councils, for example, developed the *Little Green Steps* program in response to an identified lack of resources and support for early childhood services in the area of environmental education and sustainability.

Extension education services around Australia continue to provide early childhood education programs with an environmental focus, including some botanic garden sites and museums.

The business sector has also recognised the potential to work locally with early childhood services, as has been done by Rous Water (www.rouswater.nsw.gov.au) in northern NSW, by developing a water conservation education program. Fresh Green Clean in Victoria (www.freshgreenclean.com.au), are supporting early childhood services in implementing safe and sustainable cleaning practices through in-service training and the development of the Safe and Sustainable Indoor (SASI) Cleaning project (Gardner, 2007, p.28).

At the state level, four professional associations offer support and networking opportunities including Environmental Education in Early Childhood (EEEC), formed in Victoria in 1992, the Queensland Early Childhood Environmental Education Network (QECEEN), established in 1995 (Qld), the NSW Early Childhood Environmental Education Network (NSW ECEEN) formed in 2003, and most recently, the Early Childhood Australia Special Interest Group in Victoria (ECA VIC SIG) which began meeting in 2006.

In NSW, the recently released *Learning for Sustainability: NSW Environmental Education Plan 2007 - 2010* includes as one of its strategies to 'provide and where possible, expand the availability of environmental education to early childhood, school, TAFE, and university students' (NSW Council on Environmental Education, 2006, p. 41), and most states now have curriculum guidelines for early childhood that are inclusive of some environmental education.

A number of other state government departments and organisations have been supporting and promoting a holistic approach to sustainability in the early childhood sector. Examples of projects include:

- the *Sustainable Schools and Children's Services Initiative* (SSACSI) in South Australia (www.decs.sa.gov.au);
- the creation of a *Design Guide for Children's Services* (Department Of Human Services, Vic, 2005) that is inclusive of sustainable design principles;
- the provision of professional development programs, such as 'Promoting Environmental Sustainability in Early Childhood Services', funded by the NSW EPA and implemented by Helen Nippard from the Sydney Lady Gowrie Child Centre in 2004-05.



Organisations such as Early Childhood Australia (ECA) and KU Children's Services based in Sydney, have supported their early childhood member services through the creation of environmental policy documents and other resources. (The NSW branch originally auspiced the NSW ECEEN, and were instrumental in the establishment and launch of the NSW network.)

At the national level, the Australian Association for Environmental Education (AAEE) has within it a number of special interest groups. One of these is the AAEE Early Childhood Special Interest Group (AAEE EC SIG) which advocates and promotes early childhood environmental education and advises the AAEE council.

Several federal government documents have acknowledged the role of early childhood environmental education (EE) and learning for sustainability initiatives, including a national review by the Australian Research Institute in Education for Sustainability (ARIES) which states: 'in recent times, momentum for these initiatives has risen from both within the early childhood sector, as well as from environment organisations' (Tilbury, et. al, 2005, p. 41). The review also recognises the way in which documents that form part of the recently revised *National Childcare Accreditation Council Quality and Improvement Accreditation System* act as, 'a starting point for refocusing early childhood curriculum and pedagogical practices towards environmental concerns' (Tilbury, et. al, 2005, p. 43).

Early childhood environmental education has now been introduced in tertiary training of early childhood teachers through the 'Early Childhood Society, Environment, and Health' unit offered at the Queensland University of Technology, and in 'Young Children Exploring their World', offered through the University of New England. Studies in maths, science, technology and environment are also included in 'Investigating in the Sciences' at RMIT University.

In 2006, Swinburne University of Technology introduced a one-year *Diploma of Sustainability* that can be gained through enrolment in any Swinburne diploma course. The course is run through the National Centre for Sustainability and has 30 *Diploma of Children's Services* students enrolled for 2007, who are set to graduate with a double diploma. A proposal has also been put forward for the inclusion of a core competency on environmental sustainability in the Children's Services training package for 2008 (Young, 2007, pers. comm, 27 March).

International links have also been created within the early childhood environmental education field, most recently with New Zealand environmental educators who hosted the first Australasian early childhood environmental conference at the Christchurch College of Education entitled 'Hand-in-hand: Pathways to a sustainable future in the early years through environmental education'. The conference program included keynote speakers from Australia and New Zealand and featured the EnviroSchools program, a three-year facilitated national pilot program in NZ, that is inclusive of early childhood centres, and supported by local government.



Photo 1 - Save Our World pantomime produced by the Community Environment Network.



why develop an early childhood sustainability program?

One of the most significant responsibilities that [early childhood] professionals have is to support children to retain the sense of awe and wonder that they are born with, to add to that a desire to nurture and protect what is beautiful, and to encourage them to appreciate that there are many possibilities for honouring life and wonders that the world holds.

(Stonehouse, 2006, pp. 72-73)

It is in the early childhood years that the foundations are laid for the development of environmentally responsible adults. And, in this UN Decade for Sustainability 2005-14, it is our responsibility, as adults, to provide all the support we can to the youngest members of our community. As expressed by Elliott and Davis (2004, p. 4) there is a window of opportunity in which, 'early childhood educators have an active and significant role to play ensuring children experience connections with the natural environment in meaningful ways, ways that will assist their understanding of connectedness both with and in the natural environment and ultimately, promote action for sustainability'.

This idea is now supported by most states in Australia through education curricula that are inclusive of some early childhood environmental education.

As specified in the *NSW Curriculum Framework for Children's Services*, for example, children need to, 'experience an environment where they develop working theories for making sense of the natural, social, physical, and material worlds' (Stonehouse, 2006, p. 164). To do this, children need their environment to provide a range of experiences and opportunities for learning about the world from different perspectives, so that they may develop:

- an understanding of the nature and properties of a range of substances;
- spatial understanding;
- familiarity with stories from different cultures about the living worlds;
- working theories about Planet Earth and beyond;
- a knowledge of features of the land which are of local significance, such as the local river or mountain;
- theories about social relationships and social concepts;
- a relationship with the local environment and a knowledge of their own place in the environment;
- respect and a developing sense of responsibility for the well-being of both the living and the non-living environment;
- working theories about the living world and knowledge of how to care for it.

(Adapted from Stonehouse, 2006, p. 164).



Photo 2 - Discovering worm farms and compost bins.

The early childhood curriculum is geared towards experiential, open-ended learning and is, therefore, compatible with any programs that encourage a holistic approach to sustainability education.

Local government organisations are well placed to develop sustainability programs that help meet the needs of young children. By supporting early childhood services in this way, local organisations have the opportunity to really apply the principles of 'lifelong learning' to their education for sustainability (EfS) projects.

By developing a sustainability education program involving local early childhood services, councils can potentially reach up to 90 families for each centre involved in the program. This means great exposure, and the opportunity to create awareness about all kinds of environmental priority issues in a target audience that might otherwise miss out on important environmental messages.

As noted by Tilbury, Coleman, and Garlick (2005, p. 45), 'early childhood settings are recognising the potential of their role in parent and carer (community) education. The regular presence of additional adults in early childhood settings means that early childhood staff have regular opportunities to raise issues and discuss topics of relevance to parents and carers and their children'.

Each day, parents or guardians drop their children off and collect them inside the entrance of centres, an ideal place for sustainability messages to be set up as displays. These can change according to need and interest. During the *Little Green Steps* program, for example, a council officer was in

attendance at peak times to talk with parents and caregivers about water conservation. This was seen as very valuable by the participating centres.

A successful early childhood program is also inclusive of early childhood staff and directors who may benefit from the increased knowledge and awareness of environmental issues as well as the economic, health (human and environmental), and social benefits that may be associated with a change in behaviours and practice. Sound environmental values are then instilled in children at centres where the adults who care for them are modelling positive environmental attitudes and behaviours, and sharing with them their positive interactions and connections with the natural environment.

Bohling-Philippi (2006) understands that interacting with nature reduces stress, increases attention-span, and fosters brain development and believes that 'one of the great gifts we can give children through their frequent interactions with nature is a sense that they are connected to something larger than themselves' (2006, p. 50).

The wider community and the environment may also indirectly benefit from the development and implementation of an early childhood sustainability program that encourages such things as efficiency in the use of energy and water, better waste management, and environmentally friendly policies and practices.

More broadly, any support given to early childhood sustainability programs will help to make early childhood environmental education mainstream, and set an example for other local government organisations around Australia.



Sustainability education in the early years: a holistic approach

An environmental education program developed for the early childhood field must encourage a holistic approach to promoting sustainability. That is, the program must be concerned with more than just environmental education, taking a 'whole of centre' and 'whole of child' approach to education for sustainability. For example, if the children's program in a centre promotes sustainability, but the centre's operation is unsustainable in a variety of ways, then effective learning in this area is limited.

Also, there is the potential for more links to be made between the health of the environment and the physical health of young children in a sustainable early childhood setting. It has been astutely observed that, 'with shared socio-ecological foundations and transformative perspectives, it would seem that liaison between health promotion advocates and those concerned with the advancement of learning for sustainability is an area for new synergies and renewed action for healthy and sustainable futures' (Tilbury, et. al, 2005, p. 48).

Environmental education can be defined as, 'learning about the environment and how natural systems function; the interconnectedness of plants, animals, humans, and the planet we inhabit'. Sustainability education is: 'education for the environment, and more broadly acknowledges the complexities of social, environmental and economic systems, and their implications for sustaining life' (ECA, unpub. final draft, p. 2).

Sustainability education underpins everything that happens in the day-to-day running of an early childhood service, and must be implemented as part of the ongoing education in the centre, rather than as isolated activities. While having a nature table, providing opportunities for outdoor play, or having a recycling system, may be positive steps in the right direction, they do not, on their own, sufficiently reflect the principles of ecologically sustainable development (Elliott, 2007 pers. comm. 28 January).

Providing opportunities for children to play in the outdoors and engage with the natural environment are an important part of an early childhood sustainability program, but, 'critical curriculum approaches which involve democratic problem-solving and reflective strategies are also needed to develop EE (Environmental Education) knowledge, attitudes and skills' (Tilbury, et. al, 2005, p. 43).

It is well understood that we need to model appropriate behaviours and values with respect to the environment, and that our interactions need to be positive and allow for shared experience with the young children in our care. McCrea writes, 'there is growing recognition across the early childhood field generally, amongst environmental educators and in the broader community for the importance of 'mainstreaming' environmental practices within our everyday routines and our curriculum decision-making (McCrea, 2006, p. 29)'.

The Point Preschool in Oyster Bay, for example, is a place, 'where environmental education and wonder is embedded in preschool philosophy and curriculum; where there is a celebration of learning which enables children to develop not just a readiness for the transition to school, but also a knowledge of being part of our environment and community' (Lee, 2007. p. 11).

As clearly stated in the *NSW Curriculum Framework for Children's Services*, 'children's services are microcosms of the larger community. If the values and perspectives that children are supported to adopt as their own are the ones that will serve them for life in the larger community, then it is the responsibility of the children's service to actively nurture appreciation of the [sic] beauty and power in all its manifestations - in nature, music, art - wherever it is found' (Stonehouse, 2006, pp. 73-74).

As explained in Early Childhood Australia's *Environmental Sustainability Policy* (unpub. final draft, p. 2), 'the aim of education for sustainability is to promote a sense of responsibility, respect, empowerment, active participation, enquiry, and social change'.



Local government organisations are in a position to help empower early childhood services to actively participate in becoming more sustainable. A mainstream, holistic approach to sustainability in early childhood services may be promoted through:

- including the early childhood sector in all education for sustainability (EfS) initiatives that are developed in response to local environmental priorities.
- making FREE kerbside recycling available to early childhood services wherever possible.
- encouraging clean, green, and environmentally healthy practices in regard to cleaning and pest management (see page 25).
- assisting with the development of environmental policies and management plans (see page 27).
- including the application of sustainable principles in the design of new council-run centres or in any redevelopment of indoor or outdoor areas in existing centres (see page 29).
- adopting the concept of 'health-promoting' childcare settings (derived from the WHO Global Strategy on diet, physical activity and health - refer to www.who.int for further information), supported by programmes such as *Go for your life*, a Victorian Government initiative (www.goforyourlife.vic.gov.au).



linking with others

For a sustainability education program to be most effective, it must be developed collaboratively so that all stakeholders may benefit from the sharing of knowledge, ideas, enthusiasm, and available resources. For local government sustainability/environmental educators, this may include:

- making contact with early childhood environmental education networks in NSW and Australia-wide, including the NSW ECEEN, EEEEC Vic., QECEEN and the AAEE EC SIG (see **Other contacts and resources** on page 38 for further information).
- developing links with Children's/Community Services staff, Bushland/Biodiversity Officers, Parks and Gardens, Environmental Health, Water, and Waste Education Officers, Council Librarians, Rangers, Landscape Architects and Botanical Garden staff.

The collaborative approach that was adopted in the development of the *Little Green Steps* program, led to Gosford City Council's Children's Services revising their policy and procedures document to include an Environmental Education Policy Statement (refer to **Appendix A: Sample policy statement**).

- linking with council nursery staff (and Natural Resource Management staff) who may be able to do audits of plants in centre gardens for water-efficiency and general suitability, and provide free native plants.
- collaborating with early childhood educators in the creation of resources so that they are both sensitive to early childhood pedagogy and developmentally appropriate.
- communicating with parent bodies linked to centres about the importance of sustainability. Parents and carers may be targeted through centre newsletters and displays of sustainability education materials at the entrance of centres. They may be involved in collaborating on the development of new program ideas, environmental policies and management plans, and other sustainability initiatives at centres. They may also be encouraged to participate in other sustainability-related programs or workshops available to them in the community.

- involving children wherever possible in the development and implementation of sustainability strategies and considering children's prior knowledge and expertise as a valid and worthwhile contribution. This will: 'enable children to practise critical and creative thinking, problem-posing and problem solving, decision-making, action-taking, reflection and communication' (Davis & Elliott, 2003, p. 4).
- developing relationships with members of the local Aboriginal community to promote understanding of their connectedness to the land, the sharing of knowledge, and to provide the opportunity to experience aspects of Aboriginal culture and storytelling through art, song and dance.
- helping facilitate community involvement in making the centre more environmentally sustainable e.g. by linking with organisations/individuals involved in visual or performing arts, computer recycling, science shows.
- developing partnerships with local primary and/or high schools (e.g. Terrigal Childcare Centre enlisted the help of Terrigal High School students in the production of water-themed garden art installations in the grounds of the centre).
- linking with the Department of Education, wherever possible, to support the transition of children from sustainable childcare centres, into the school environment.
- encouraging staff and students at local tertiary education facilities to engage in and develop projects that relate to your early childhood sustainability program.
- enlisting the help of experts, including non-profit organisations and others in the local community concerned with environmental issues, e.g. Bushcare and Landcare groups, to help deliver elements of your early childhood sustainability program. Representatives of a local community garden, environment centre, native plant society, wildlife rescue or permaculture group could also be involved.
- acting as a facilitator for a network of early childhood centres in your local government area, e.g. providing information-sharing opportunities and in-services with staff from other centres.
- increasing general community awareness about the program to encourage a flow-on effect at home in regard to recycling and other practices.

about little green steps

Little Green Steps, an initiative of Gosford City and Wyong Shire Councils, is a sustainability education program for early childhood centres and preschools on the Central Coast of New South Wales.

Coordinated by Maree Whelan, former Sustainability Communications Officer at Gosford City Council, and Danielle Hargreaves, Environmental Health Officer at Wyong Shire Council, the program was funded through a grant from the Department of Environment and Conservation from July 2004 to May 2005. The program was developed in response to an identified lack of environmental education resources and support available to local early childhood services for communicating sustainability messages to very young children (aged three to five years).

When *Little Green Steps* was first launched, there was an overwhelming level of interest shown in the program. As a result, the initial target of implementing the program into only six centres, was extended to include all forty centres who submitted an expression of interest.

Note: *The Little Green Steps* program is inclusive of council-run, community, and independent early childhood centres. Resources have also been made available to local Family Day Care administrators.

The *Little Green Steps* program has promoted sustainability education in local early childhood services by:

- developing resource kits on the topics of water, waste, wildlife, energy and stormwater.
- providing in-service training to early childhood educators through professional development workshops.
- producing a bi-monthly newsletter providing centres with up-to-date information on a range of topics relating to sustainability and environmental education.
- providing on-going support to centres in relation to sustainability education and initiatives.

In May 2005, all participants were invited to an awards evening to bring together staff from a variety of centres, and to acknowledge their efforts during the first stage of the *Little Green Steps* program. About 35 staff from 13 different childcare centres and preschools attended, enjoying an evening of food and wine, and sharing ideas in an informal and relaxed setting. Everyone who attended received a small gift and a participatory certificate.

A recent evaluation of the *Little Green Steps* program and subsequent report prepared by Micromex Research (October 2006), identified that the centres who were engaged with the program were committed to the concept, used the resource kits regularly, and valued the training given.

Service staff expressed the desire to receive more information on a regular basis to assist with their ongoing commitment to developing a sustainable environment and educating the children in sustainability and environmental issues.

The evaluation showed that participants had a high level of involvement with initiatives promoted through the program, and were implementing many positive changes in regard to the sustainability of their centres. In particular, the program has:

- increased the level of awareness in children, parents and staff about environmental issues and sustainability.
- increased the level of composting, recycling, water saving and other sustainability activities.
- increased the level of involvement of children in centre gardens through 'nature walks', education about plants and gardening and growing food to use in the centre kitchen.
- increased the level of care and concern for native animals amongst the children in centres.
- assisted services in implementing changes for sustainability including in regard to cleaning products and procedures.
- motivated centres to develop environmental policies and environmental management plans.
- encouraged centres to submit environmental grant applications.

Of the 25 centres interviewed, 18 (72%) were actively involved in *Little Green Steps*, indicating a very good take-up rate of the resources.

Those centres not actively involved in *Little Green Steps*, expressed a desire for future involvement. Non-involvement was generally not due to lack of interest or commitment to the concept, rather, that ownership or staff changes had taken place after the initial training and workshops, and the knowledge had not been passed on to the new staff.

Overall, the *Little Green Steps* program was viewed as a very positive initiative, with centres grateful that a program had been developed specifically for them.

Photo 3 - Maree Whelan and Danielle Hargreaves with Little Green Steps Resource Kits.





future directions for little green steps

Gosford City and Wyong Shire Councils have begun developing a water education program for early childhood services on the Central Coast, which will tie in with the *Little Green Steps* program.

The water education program will provide centres with:

- a 30-minute water activity suitable for children aged three to five years.
- assistance with undertaking a simple water audit to review current water usage and assist them to better manage their water supply.
- water education resources and information about water that will be supplied in digital and hard copy format.

Note: This program will be rolled out to all council childcare centres during 2007 and a further 14 centres during 2008.

A possible future direction identified through the evaluation of the *Little Green Steps* program includes the potential to work more broadly across early childhood service types, for example, Family Day Child Care, Long Day Child Care, and Playgroups.

As previously mentioned, centres engaged with the *Little Green Steps* program expressed the desire to receive more information on a regular basis to assist with their ongoing commitment to developing a sustainable environment and educating children in sustainability and environmental issues. It is hoped that centres will continue to be supported in this way.

Above Photo 4 - Artwork from the *Wildlife Resource Kit*, produced as part of *Little Green Steps*.



what does an early childhood sustainability program look like?

There are a number of components that may be included in an early childhood sustainability program including:

- resource kits;
- newsletters;
- training (i.e. in-services or professional development opportunities); ongoing support;
- encouragement of clean, green, and environmentally healthy practices;
- assistance with the development of environmental policies and management plans;
- assistance with the sustainable design of natural outdoor play spaces.

Note: It is important to work collaboratively with early childhood educators so that resources and other aspects of a sustainability program are developmentally appropriate and take into consideration the unique philosophy and pedagogy of early childhood, distinct from that of school education.

However, this does not mean that an early childhood sustainability program needs to be developed completely separately from other sustainability education programs supported by local government. Young children and the early childhood sector should always be included in 'education for sustainability' initiatives that are relevant to all members of the community.

An early childhood sustainability program should:

- be flexible enough to cater for each centre's specific needs;
- include resources that are developmentally appropriate;
- focus on the positives in environmental education, rather than the 'doom and gloom';
- be fun, exciting, even awe-inspiring;
- include locally relevant issues and information e.g. local plants and wildlife, local bin colours and recycling systems;
- encourage and help facilitate children's contact with the natural world;
- adopt a holistic approach to promoting sustainability (refer to page 10);
- help facilitate a link between preschools and schools;
- include some form of ongoing support, where possible, to cater for turnover of staff, new directors;
- take into account the financial and time constraints of many early childhood services;
- consolidate changes, celebrate achievements, and make changes step-by-step;
- be effective in the long-term. Expect changes over years, rather than days and weeks.

Example of a successful early childhood sustainability program:

In New Zealand, four kindergartens (preschools) have undertaken a three-year facilitated pilot program with the Enviroschools Foundation, Christchurch in which teachers and children explored their physical surroundings, operational practices, organisational principles, and a 'living curriculum'. According to the Enviroschools Foundation, an effective learning process would aim to:

- help people think creatively AND not just from their own world view but acknowledging other perspectives;
- lead to action on current sustainability issues AND involve planning and decision-making by people of all ages;
- Result in long-term behaviour change AND critical reflection on lifestyle choices, attitudes and values (www.enviroschools.org.nz).



Photo 5 - Early Childhood staff at the *Little Green Steps* Awards Dinner, 2005.





where to start?

These are some of the possible steps that may be taken in the development of an early childhood sustainability program:

1. Look at funding options available to your local government organisation including state or federal government sources, or the possibility of linking with other departments within council to achieve shared goals, e.g. in regard to waste, water, or biodiversity education strategies. Also, factor in the cost of providing ongoing support to early childhood services in the form of training and mentoring so that your program continues to be effective in the long term.

Refer to **Funding opportunities** on page 31 for further information.

2. Conduct an initial survey of your centres (including staff, children, parents and carers) to find out what they are already doing, what they are particularly interested in, and to identify needs, then adopt a collaborative approach for the development of the program. At this point, you could identify what resources are already available, for example, staff and carers with particular skills or knowledge of sustainability principles.

Note: In some centres, you may need to find ways to help staff understand the issues surrounding education for sustainability and its relevance to themselves and young children. Therefore, there may need to be an emphasis on professional development well before anything can happen around children's learning or centre practices (McCrea, 2007, pers. comm. 19 February).

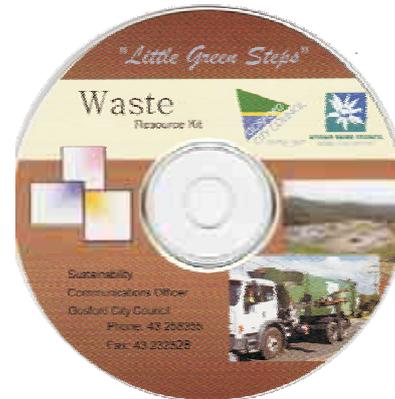
3. Look at your council's environmental management plans and local issues to determine priority areas for environmental education.
4. Engage with early childhood service directors, staff, parents and council staff in genuine consultation and draw up a plan.
5. Gauge the level of interest. Invite all stakeholders to a presentation of the proposed program.

Each element of the *Little Green Steps* program is described in the following pages. Suggestions about how to effectively design each element based on evaluation of the *Little Green Steps* program are also included.

1. resource kits

The development of resource kits was seen as an important and necessary component of the *Little Green Steps* program, as they each form a specialised collection of materials that most early childhood centres would not purchase. As noted in *Patches of Green*: 'particularly for centres where other factors preclude excursions, these kits are a vital resource for early childhood environmental education' (NSW EPA, 2000, p.25).

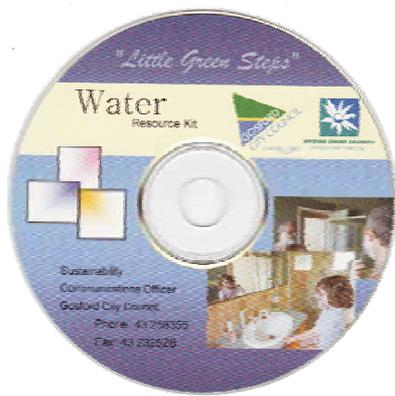
Three resource kits were produced as part of the *Little Green Steps* program and provided to centres free of charge. The kits were first promoted, then presented to those who expressed an interest in obtaining them for use in their centres, with the exception of the *Library Kit*, which was placed in the main library for borrowing as required. Council staff personally presented the initial kits to centres on delivery, with training of staff in their use as required. *Little Green Steps* targeted parents and extended families of centres by setting up information display stands at 19 centres during March, April and May of 2005. These displays were based around the topic of water conservation, and directly complemented the *Water Resource Kit* designed for the children attending the centres. The project coordinator was in attendance during drop-off and pick-up times to discuss the information with centre visitors. Following is a list of each resource kit and its components:



The Little Green Steps Waste Resource Kit

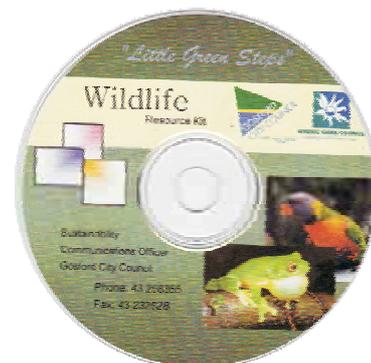
- a laminated poster of a very full garbage bin;
- laminated posters of bins used for the local kerbside collection;
- laminated photos of a worm farm, compost bin, garbage truck, materials recovery facility and landfill;
- information about the Gosford and Wyong Council's residential waste system;
- information about composting and worm farming;
- information about the Gedeye Compost bin (supplied to some centres);
- laminated cards with photos of waste examples;
- information sheet to accompany the waste cards.

Worm farms and compost bins were also issued to many centres to accompany the *Waste Resource Kit*.



The Little Green Steps Water Resource Kit

- a water activity and outcomes relating to the resources in the kit;
- laminated posters (with captions) of a family saving water in the bathroom, kitchen, in the garden, etc;
- a laminated storyboard to accompany the posters;
- background information sheets about water supply, restrictions, hints, tips;
- a reader titled 'Water' (Longman);
- a list of relevant picture books;
- line drawings depicting water use around the home e.g. taps, shower, bath.



The Little Green Steps Wildlife Resource Kit

- a wildlife activity and outcomes relating to the resources in the kit;
- laminated photos of animals with descriptions of 'food', 'habitat' and other information on the back;
- illustrated bushland setting (local artist) with a variety of food and habitat examples;
- leaflets including 'Be a backyard buddy' (DEC);
- a list of relevant picture books;
- 'How to keep your cat safe and sound indoors' - fact sheets and stickers
- 'Keeping wildlife wild' brochure (DEC).



The Little Green Steps Library Resource Kit

A large range of resources is included in the *Library Resource Kit* including resources for children, as well as adult references on environmental education (books, teaching resources, example policy and curriculum documents, articles, fact sheets and a video).

Note: For a full list of resources included in the *Little Green Steps Library Resource Kit*, please refer to **Appendix B: Library resources** on page 41.



The Little Green Steps Energy Resource Kit

- *teacher's notes on energy including 'What is energy?', energy safety tips, and activities and outcomes relating to the resources in the kit;*
- *a 'Big green book about energy' and a set of 14 green cards showing types of energy and things that need energy to work;*
- *a set of blue energy cards, showing original sources of energy and everyday things that use energy;*
- *laminated photos (with captions) of a family saving energy around the home;*
- *a laminated storyboard to accompany the photos;*
- *stickers to accompany an energy efficiency activity;*
- *instruction sheet and patterns for 'How to make a pinwheel';*
- *instruction sheet on 'How to grow sunflowers' with a packet of sunflower seeds;*
- *a list of energy-related resources;*
- *'Energy-saving tips for your centre' list.*

The Little Green Steps Stormwater Resource Kit

- *teacher's notes on stormwater including 'What is stormwater?', stormwater safety tips, and activities and outcomes relating to the resources in the kit;*
- *a stormwater poster showing how stormwater becomes polluted;*
- *laminated photos (with captions) of a family doing things around the home to help keep stormwater clean;*
- *a laminated storyboard to accompany the photos;*
- *a stormwater maze;*
- *'The drain is just for rain' poster;*
- *'Best practice stormwater tips for your centre' list.*

Note: Each kit also contains a contents list and ideas for how the kit could be used.

What worked?

The resource kits were considered by all centres who had used them to be of very high quality, age-appropriate, and easy to use. Large, realistic pictures (e.g. photos of wheelie bins, local fauna, an ordinary family using water around the home) in each kit directly relate to the centres' local environment on the Central Coast. Each kit contains a variety of elements that can be used separately or as a whole, depending on the situation and developmental stage of the child or group of children, and were seen to be very adaptable in this way. The activities in the kits were all outcome-based and were seen as a valuable inclusion in the kits.

Many commented on the durability of the kits and the practical way in which they are presented (i.e. many laminated inserts are included, and the kits are presented in a see-through library bag with a hard plastic handle that could be hung up on a hook).

The kits are mostly used in formal teaching situations, as prompts for day-to-day behaviours and to a lesser extent, to educate parents and staff. For example, the kits have been used in displays and during group time, but have also been used for spontaneous education, indoors and outdoors, to encourage environmental awareness in children. They have inspired activities, paintings, drawings, songs and poems; been used during free play; incorporated into nature walks; and used as a tool to guide the development of new waste management systems and water-conservation campaigns in centres.

Sections of the kits have also been photocopied for parents, and staff members have specifically used them with children to develop links with home. The kits have also been used as evidence of centres, incorporating environmental education into their programs for accreditation.

The water displays were also seen as very valuable, particularly for their ability to target parents who may not be exposed to this information elsewhere.

What else could be done?

- Workshop ideas for kits at a meeting with a community or children's services officer, ranger, waste, biodiversity, or water officer to link across council departments where possible.
- Include additional items such as puppets, poetry, drama, music CDs, DVDs, storybooks and craft materials to further improve kits and their usability.
- Include laminated fact sheets for centres with an emphasis on reminding staff about the importance of modelling positive environmental behaviours.
- Develop some resource kits specifically for the birth to three years age group with greater emphasis on sensory materials and familiar visuals.
- Include a 'Teachers' Exchange' section in any kits available on a rotational basis, such as the *Little Green Steps Library Resource Kit*, so that successful activities or other ideas may be shared between centres. The ideas may then be compiled into a book to be shared amongst all centres in the program (Rous Water, 2006).
- Include 'real' items, e.g. water saving devices like tap-timers, watersaving shower heads and hose nozzles, tap water restricting devices, toilet flush water saving devices, or aquaspikes, so that children and carers can look at each item and use them for discussion. These items are also included in Rous Water's *Bucket of Resources* (2006).
- Give away resource kits as lucky door prizes, e.g. in conjunction with a launch of newly included library resources on the topic of sustainability, as was done by Randwick Council (library resources and kits were supplied by NSW ECEEN).

What other topics/information could be included in resource kits?

- Natural gardening; indigenous food plants; growing herbs and vegetables - including seed collection and propagation.
- The natural food cycle: where our food comes from; how it is grown; how food waste can be processed in a worm farm/compost, etc. Incorporate a lunch activity, e.g. a wholefood, waste-free picnic in the garden (especially for transition into school), and have children prepare food grown in the centre's garden, and/or bring food from home.
- Biodiversity; ecosystems; Australian landscapes; natural features of local significance; appreciation of the land and natural environment - 'using the setting in which the service is located as inspiration for experiences, for materials' (Stonehouse, 2006, p. 73).

- Creative reuse activities, e.g. using recycled containers and materials for paint pots, sorting games, and recycled craft; tyre gardens; paper-making; ideas about how to incorporate recycling practices into dramatic play; information about where to find recycled items in the local area.

How can local government best assist early childhood centres with using sustainability education resources?

- Provide in-services (with staff from other centres) on kits and sustainability education in general.
- Provide hands-on professional development workshops where staff can try out some sustainability education activities.
- Present kits at staff meetings when all staff are in attendance, and repeat this over time so as to cater for instances of staff turnover.
- Introduce kits to staff with a holistic approach, providing simple tips and ideas about how to incorporate them into existing activities.
- Introduce kits to children in an entertaining way, as is done by Rous Water, through the *Water Aware Centre Program* on the north coast of NSW. Story and song is incorporated in the water education session, which is complemented by a water audit of the centre, and the creation of a water conservation action plan. The parent community is also informed about the program and the staff are supported with the loan of a *Bucket of Resources* including a CD, posters, books, tapes, a folder of information and ideas, and a bag of water saving devices (go to www.rouswater.nsw.gov.au for further information).
- Loan larger kits, such as the *Little Green Steps Library Resource Kit*, on a rotation basis between centres e.g. on a fortnightly basis.

Photo 6 - Contents of Library Resource Kits available for loan from Council libraries.





2. newsletters

The bi-monthly *Little Green Steps Newsletter* was developed to assist early childhood services with their understanding and awareness of sustainability issues and how they relate to everyday life. Many of the stories and snippets were inspired by and built on the information gathered during professional development workshops (refer to page 23, **Training**). The newsletter has also been a forum for the sharing of stories and ideas about sustainability initiatives and activities used in participating centres.

The newsletters have covered a range of topics, including:

- making sustainability 'resolutions' for the new year;
- links to environmental websites;
- water-saving tips;
- green cleaning recipes and ideas;
- composting tips;
- information about networks and groups such as EEEEC Vic., NSW ECEEN, and the AAEE EC SIG;
- indigenous plant species;
- environmental calendar days/weeks such as Clean Up Australia Day, World Environment Day, National Tree Day, National Recycling Week;
- how to set up a tyre garden;
- what different centres are doing: the sharing of stories and activities related to sustainability education initiatives, e.g. poems, craft, project walls, songs, green bag campaign, rainwater tank, water art garden;
- ECEEN SPRouts Practice Awards;
- the *Little Green Steps Awards Dinner*;
- review of the Pocket Guide: *The Chemical Maze*;
- in-services (workshops) e.g. on natural gardening and green cleaning;
- grant opportunities, e.g. NSW Government Community Water Grants;
- lists of 'Green Events' in the Gosford and Wyong local government areas.

Note: A hard-copy of the *Little Green Steps Newsletter* is sent to each service bi-monthly, and is available to download from the council website, along with a list of environmental and animal awareness picture books, and a link to the NSW ECEEN website.

What worked?

The bi-monthly newsletter has been very well received by centres, with readership levels very high, both among those who are actively involved in the program and those who are not. Those who read the newsletter especially liked to see what other centres are doing in relation to sustainability education (photos with simple captions were seen as ideal), and enjoyed the variety of topics covered and website links included in the newsletter. Water-saving tips and activity ideas were especially favoured.

The *Little Green Steps Newsletter* is used during staff meetings, incorporated into the centres' own newsletters to parents, and has acted as a prompt for early childhood services to extend their knowledge and ideas.

What else could be included in an early childhood sustainability newsletter?

- Information that can be easily copied and pasted into centres' own newsletters. The information directed at parents may correspond with issues/activities that have been included in the children's program that day, week, etc.
- A list of environmental 'calendar days' (included at the end or start of the year);
- Craft activities that relate to sustainability topics.
- Input from children e.g. things they have said, or pictures they have drawn that relate to sustainability issues.
- Fact sheets that can be used for display in centres (near the entrance for parents, or in centre rooms as reminders for staff).
- Separate information brochures, or fliers, directed at parents.
- Assistance with developing Environmental Management Plans and policies.
- Ideas about how to encourage respect for native animals.
- Details about chemical collection days being held in the local area.
- Information about recycling programs for ink cartridges and other printing equipment.
- Information about asbestos, especially in older services, i.e. identifying and managing it, e.g. not putting tacks in the walls.
- Information about lead, and how to avoid lead poisoning, especially in older services.
- How to clean up and dispose of glue, paint and 'goop'.
- Energy-efficiency tips.
- Planting guides.
- Waste-free lunches. This information may also be useful for centres that provide lunch, especially when preparing children for transition into school.
- Snack ideas and food choices that have nutritional and environmental benefits, and ideas about how to incorporate 'food cycle' learning (refer to page 32, **Food cycle learning**).
- Information to help parents and educators better understand and monitor children's access to various media, to promote health, age-appropriate physical activity, and meals filled with wholesome foods, e.g. *Mind over media* (www.youngmedia.org.au).

It was also suggested during the evaluation of the program that notices on events, workshops, and awards, etc. could be faxed to centres as reminders throughout the year, so that this information is seen in time to make bookings or submissions.

3. training

The *Little Green Steps* program has helped promote sustainability by facilitating external professional development opportunities for early childhood centre directors and staff, and by training staff at centres during the delivery of the initial resource kits.

Four, one-day, professional development workshops titled 'Promoting Environmental Sustainability in Children's Services', were funded through *Little Green Steps*, and delivered by Helen Nippard from Lady Gowrie Child Centre. The workshops, held in four centres in different geographical areas within the region, were designed to be capacity-building for centre staff. Over 50 staff members from centres across the whole of the Central Coast attended a session of this workshop.

A workshop titled 'Living with Less Chemicals', delivered by Teresa Rutherford, and promoted through *Little Green Steps* was also attended by some centre staff.

What worked?

Early childhood staff who had taken part in training offered through the *Little Green Steps* program valued this very highly. The professional development workshops were especially valued, due to the benefit of allowing staff to be directly involved in the program, as well as providing the opportunity to share ideas between centres on sustainability education initiatives.

Note: Those who had not taken part in any training through *Little Green Steps* felt that training would have assisted them.

What else could be done?

- Provide in-service training after hours with other centres also attending. It is recommended that these sessions be catered, with food and light refreshments provided to participants.
- Provide small training sessions in each centre and invite parents to attend. This would be especially helpful in regard to sharing knowledge and information about chemical-free cleaning for accreditation purposes.
- Hold small group workshops on council premises with a few dates to choose from so that most staff members have the opportunity to attend.
- Incorporate short training sessions into staff meetings to ensure that all staff in a centre can attend.

These short training sessions could be fairly informal, allowing staff to discuss their personal responses to specific environmental issues e.g. global warming. You could then build on this to discuss how the individual service could take steps towards 'making a difference'.

- Provide on-going training opportunities, especially to cater for new staff or ownership changes.
- Organise individuals in the local community with specific skills/knowledge to present training and /or workshops to staff and children.
- Green cleaning training for early childhood staff that is in line with early childhood service regulations, accreditation, and health and safety standards could be provided. Bridget Gardner has offered this type of training to early childhood professionals in Melbourne for over two years (www.freshgreenclean.com.au).
- Facilitate workshops to explore changing lifestyles of families, staff, and day-to-day life within the early childhood service.
- Extend professional development opportunities to parents and carers wherever possible and/or appropriate.



Photo 7 - Centre staff at a Green Cleaning Workshop presented by Teresa Rutherford.



4. ongoing support

The *Little Green Steps* program provides ongoing support in the form of assistance offered to services in their implementation of more sustainable practices. Various offers of assistance with sustainability initiatives are communicated through the newsletter.

The project coordinators have visited and liaised with centres to assist with:

- plant selection and placement, including the supply of indigenous plants;
- ideas in regard to the design of natural outdoor play spaces;
- incorporating water-saving devices into centres;
- sourcing worms, water tanks, etc;
- training of staff on the use and maintenance of worm farms and compost bins;
- presenting resource kits to the children;
- further research into topics covered in the newsletter e.g. toxin-free plants and suitable plants for a sensory garden;
- environmental grant applications and award submissions.

Note: Several centres who had not yet asked for assistance from the *Little Green Steps* project coordinators had considered doing this for upcoming projects.

What else could be done?

- Be specific about what help you can provide, and update staff with this information regularly through newsletters, to cater for new staff.
- Take every opportunity to visit centres to promote the importance of early childhood sustainability education, including presenting information to the children.
- Offer to do simple environmental audits of centres in the areas of waste, energy and water to help educate staff about how to make their centre more sustainable. This could be supported by funding from other departments within Council.
- Provide support with efforts to increase parental involvement.
- Assist with showcasing environmental activities and sustainability initiatives in centres (e.g. visit centres to take photographs, etc. to be included in newsletters).
- Identify the main priorities for environmental education in your local government area, and tap into the funding resources available to ensure that your program may continue over the long-term.



5. encouraging clean, green, and environmentally healthy practices

Gosford City and Wyong Shire Councils have been aware of the need to look 'holistically' at the promotion of sustainability in early childhood services including, among other things, encouraging centres to adopt safer and more sustainable cleaning practices and low-risk strategies for pest control to reduce the chemical load in centres.

A commitment to environmental health has already been adopted by various organisations in the early childhood field including Early Childhood Australia (ECA), who recognise, 'the positive health implications of sustainable practice' and the alarms that are 'increasingly being raised about children's health issues in relation to environmental hazards' (ECA, unpub. final draft, p. 5). In their *Environmental Sustainability Policy*, the ECA has even recommended that 'organic food supplies are used where possible, and processed foods are minimised'.

There are also several texts, such as *The Chemical Maze*, warning that, 'some chemicals that are part of our everyday lives may play a part in ill health' (Statham, 2005, p. xi). The Pesticide Action Network North America has released a report on the level of pesticides found in people's bodies. The report found that: 'the most vulnerable members of the population - our children - are exposed to the highest levels of the organophosphorus family of pesticides, which damage the nervous system' (Schafer, et. al., 2004, p. 6). Publications, such as *The Toxic Playground*, specifically targeted at schools and childcare centres, provide a starting point to help you understand how you can reduce the impacts of chemicals on children (Immig, 2000, p. x).

Often, the cleaning and pest management staff in council-run early childhood centres are contracted through the local government body, so there is an opportunity to have a direct influence on what products are used, and how cleaning and pest management is done.

Green cleaning

'Green cleaning' was one topic area in the *Little Green Steps* program that generated a great deal of interest. In order to meet accreditation standards, centres benefit from learning about what to use, and how to clean, to ensure a healthy and safe environment for all.

Professional development opportunities, such as the Lady Gowrie workshop, called 'Promoting Environmental Sustainability in Children's Services', as well as the 'Living with Less Chemicals' workshop, provided *Little Green Steps* participants with simple and practical ideas for cleaning, using fewer products and safer alternatives, therefore reducing the need for harmful chemicals.

Green cleaning tips were also included in the *Little Green Steps Newsletter*, to encourage centres to work towards reducing the chemical load in their centres while adhering to regulations, such as those developed by the Department of Community Services (NSW) which state that: 'the premises of a children's service, and all equipment and furnishing used in providing the children's service, must be maintained in a safe, clean, and hygienic condition and in good repair at all times' (DOCS, 2004)³.



Publications such as *Health and Safety in Children's Centres: Model Policies & Practices - Second Edition Revised* (UNSW, 2003) advocate the use of 'neutral detergent and water for general environmental cleaning'. The document states that, 'it is not recommended that bleach or other disinfectants be used in childcare settings for general environmental cleaning including cleaning of faeces, urine, blood or other body fluid spills' (UNSW, 2003, p. 40).

There is a growing understanding of the damage that toxic chemicals can do to the environment and human health, but many are still reluctant to give up using the 'brand they trust'. Their worries about hygiene and bacteria are fuelled by, 'aggressive and often misleading advertising campaigns for disinfectants and antibacterial agents' (Gardner, 2003, p. 26), so it takes a conscious decision and commitment from staff, as well as some sound advice and encouragement, to change people's habits.

While it is important that high standards of cleanliness must be maintained in all early childhood services, especially due to the level of infection risk, 'the impact on children's environmental health from the toxicity of cleaning chemicals and the overuse of disinfectants, is often overlooked in the desire to achieve high hygiene standards' (www.freshgreenclean.com.au).

As stated on the website of professional 'green cleaner', Bridget Gardner, 'there is growing international concern that early childhood exposure to chemicals may be linked to the increasing incidents of asthma, allergies and chemical sensitivities, behavioural and learning disorders' (www.freshgreenclean.com.au). Through in-service training sessions designed specifically for childcare professionals, Gardner shares simple and practical ideas for drastically reducing exposure to disinfectants and cleaning chemicals while still achieving high standards of hygiene.

Fresh Green Clean have also received funding to develop the Safe and Sustainable Indoor (SASI) Cleaning project for early childhood services. It intends to deliver a website in 2007, and the SASI Cleaning certified program in Victoria by 2008, and nationally by 2009 (Gardner, 2007, p.28).

In a recent issue of *EveryChild*, Bridget Gardner shared the following cleaning tips:

- Warm soapy water can remove dirt and bacteria from most surfaces. Mix a little readily biodegradable and pH neutral detergent or pure liquid soap into warm water.
- Basic products such as bicarbonate of soda and vinegar are very effective cleaners.

- Window and surface sprays can contain toxic solvents in order to quickly evaporate. Instead of using these products, wash surfaces with basic agents, then remove moisture with squeegees, microfibre glass cloths or flannelette rags.
- Always make sure bathrooms are well ventilated, and use essential oil sprays instead of air-fresheners, which often contain highly toxic compounds. (Gardner, 2007, p. 28)

Environmentally friendly pest management

A component of early childhood education may be to teach children about the wonders of insects and spiders in the natural world, and the complexities of natural systems. Wouldn't it be inconsistent then, to destroy them unnecessarily in the school grounds?

Early childhood services are required, under the regulations, to: 'use their best endeavours to ensure that any buildings and grounds on the premises are kept free of vermin and pests' (DOCS, 2004), but this does not mean that regular pesticide applications need to occur.

According to Immig (2002, p. 17), 'we need to equip future generations with the tools to manage problems such as pests in complex environments, without resorting to the use of environmentally and socially destructive technologies'.

While pesticides are still commonly applied to kitchens, bathrooms, gardens, and common areas on a regular basis, 'there has been a fundamental shift in awareness about the dangers of exposing children to hazardous pesticides' (Immig, 2002, p. 6). Many people, parents and health professionals alike, are now recognising that children are especially vulnerable to the health impacts of pesticides, and believe that a precautionary approach is required to reduce their exposure.

Because of this, centres are encouraged to use an Integrated Pest Management (IPM) system, 'a holistic approach to pest control that aims to achieve management of pest problems using common sense and low-risk treatment strategies' (Immig, 2002, p. 8). Typically, a childcare centre using an IPM would:

- have a policy statement for their pest management program that clearly states the aims and objectives, the decision-making process, and guidance for the education and involvement of children, staff, parents, and pest managers;
- designate 'pest management roles' and identify an IPM coordinator to oversee the IPM program;
- establish pest management objectives for various areas within the premises;
- inspect, identify and monitor pest problems, and choose low-risk strategies for their management, including making the environment unfavourable to pests (through understanding their needs), so that they are less likely to establish in large numbers, or localised treatment for infestations where necessary;
- set action thresholds based on tolerance levels for each pest, and objectives set;
- apply indirect and direct treatment strategies where required. The timing of treatments should take into account the life cycles and seasonal variations for each organism as well as its natural enemies.

(Adapted from Immig, 2002)



6. developing environmental policies and management plans

Local government organisations are well placed to assist early childhood services to develop appropriate policies and practices to promote environmental sustainability. The existence of environmental policies and Environmental Management Plans (EMPs) are an integral part of the commitment made by early childhood services to the implementation of sustainable practices in the everyday running of their centres. EMPs are also a way to deliver environmental improvements as well as cost savings in early childhood services.

Policy documents and management plans are especially important for ensuring that a service's commitment to sustainability initiatives are maintained into the future, for example, when a particularly enthusiastic staff member leaves. It is for this reason also, that these documents should be developed as collaboratively as possible, through consultation and active participation with all the stakeholders involved in an individual centre or group of centres, 'including children, families, staff, carers, the local community and where appropriate, government and environmental advocacy organisations such as Planet Ark' (Boyle, 2006, p. 14-15).

Boyle (2006, p. 14) suggests that: 'conducting an "environmental audit" of the service to determine what environmentally sustainable practices are already occurring is a good way to commence the development of an environmental policy'. An audit may be undertaken in such areas as:

- water use;
- energy use;
- waste minimisation and management (including in regard to purchasing policies);
- chemical use;
- biodiversity;
- purchasing.

A policy document could then be developed to include various goals, based on the environmental priorities identified. It is recommended that a staff member within the service is nominated to be responsible for the development of this policy statement, and that children, other staff and families are involved in its development wherever possible.

Then, to ensure the goals within the policy are actively pursued, the centre would need to document an Environmental Management Plan (EMP) to support the policy. This plan encourages a holistic (whole of centre) approach to promoting change towards sustainable values and practices. An EMP should generally include environmental commitments or steps to be taken, dates for the implementation of each action, review dates, and comments on savings/improvements.

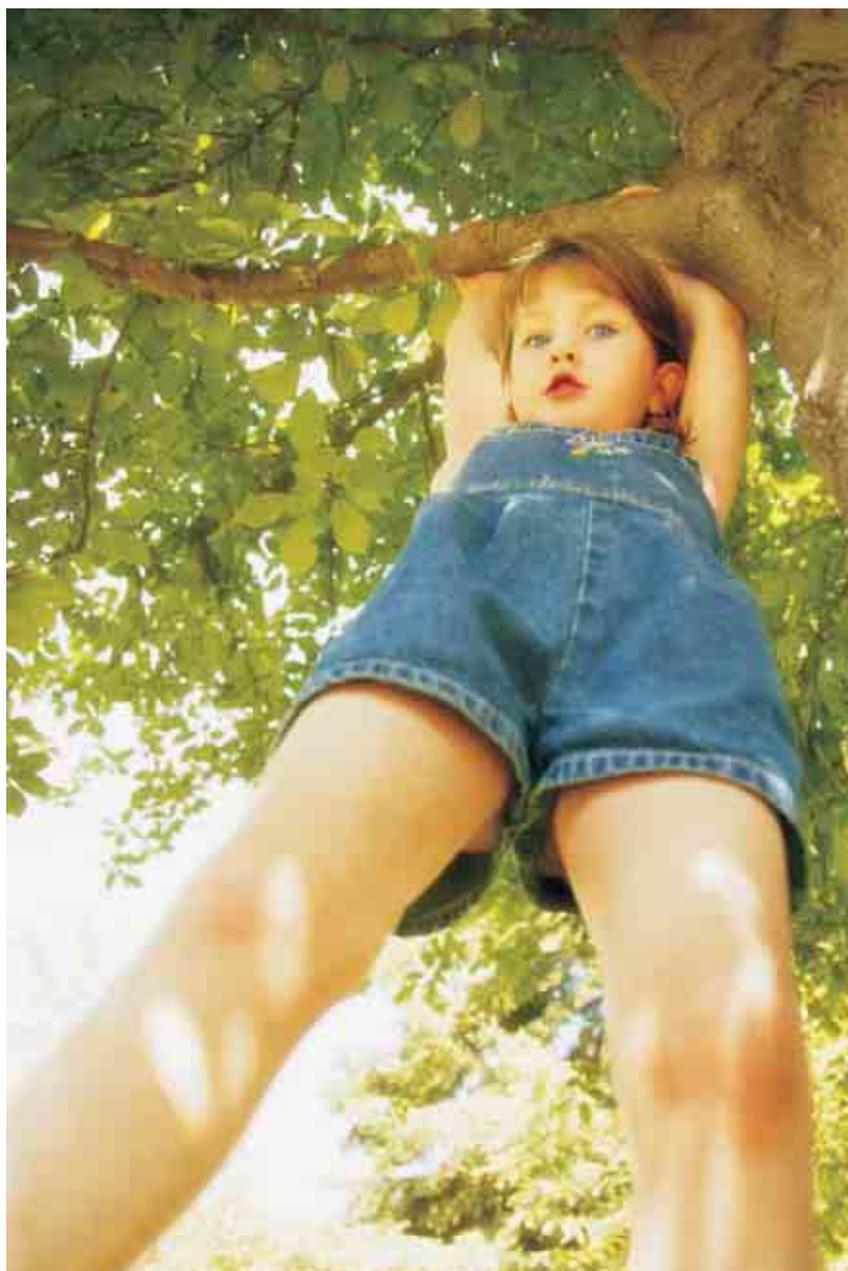
Some resources that may be adapted or assist in the development of EMPs include:

- an 'Environmental Education Policy Statement' included in *Gosford City Council's Children's Services Policies and Procedures* document (see Appendix A). This demonstrates a clear commitment to undertake various sustainability initiatives within council-run centres in the Gosford area;
- Early Childhood Australia's (ECA) *Environmental Sustainability Policy*, Early Childhood Australia;
- 'Going green in early childhood centres' in *EveryChild* Vol. 13, No. 1, 2007 by Rachael Kinsella from Carinya Children's Services Centre. This article outlines the service's Environmental Management Plan, the SPROuts Practice Award winning project for 2005. (See page 41, **Awards and recognition**, for further information about the SPROuts Practice Awards.)
- *ECO-OOSH in action: A whole of centre approach to sustainable living - checklists*, for Out of School Hours centres, developed by The Network of Community Activities, based in Surrey Hills (available at www.netoosh.org.au);
- *KU Environment Policy*, KU Children's Services, 2004;
- *Eco-friendly Communities: Promoting Sustainable Living and Working*, LCSA & NSW EPA, 2003;
- *Environmental Education Policy for Schools*, NSW DET, 2001;
- *On Holy Ground: An Ecological Vision for Catholic Education in New South Wales* (available at www.catholicearthcareoz.net/resources.html).

As advised by Early Childhood Australia (ECA), the process of incorporating an environmental sustainability policy into an early childhood service could take some time. 'Many of the changes need ongoing reflection and readjustment as adults and children adapt to the changes and re-evaluate what works and does not work within each setting' (ECA, unpub. final draft, p. 5).

One way to reinforce environmentally responsible practices is to develop an environmental 'Code of Practice' that outlines the service's, policies, practices, and philosophy with regard to environmental sustainability, and to display this in a prominent position where it may be viewed by all visitors.

Awards and other incentives, such as a local certification process, may be used to showcase the efforts of early childhood services that have developed their own environmental policies or management plans. This may also assist with the longevity of sustainability programs and the commitment to education for sustainability within your local early childhood services. (See page 31, **Awards and recognition**, for further information).





7. natural play spaces and sustainable playground design

From time to time, early childhood services in your local government area, may be looking at designing or re-designing their outdoor play spaces. Local government may assist in ensuring that this is done as sustainably and thoughtfully as possible, especially in council-owned facilities.

The first step may be to evaluate the current outdoor environment and how it is used. Nelson (2006, p. 41) suggests that the following areas need to be evaluated by individual staff members in the early childhood setting, and then discussed in a group, where a variety of perceptions may be safely expressed:

- amount of time children spend outdoors;
- frequency with which children are outdoors;
- types of activities in which children are engaged and the frequency and duration with which they engage in them;
- quality of children's outdoor play;
- attitudes of staff toward the outdoor program and being outdoors;
- behaviour of the staff outdoors;
- quality of the outdoor environment. (Nelson, 2006, p. 41)

An overall project plan may then be developed collaboratively with individuals and organisations in the community for the physical design of an outdoor classroom that is: 'As important as the physical design of the indoor classroom' (Wike, 2006, p. 44).

A sustainably designed outdoor play space may include elements such as:

- safe and easy access from adjacent indoor play areas encouraging open indoor-outdoor flow.
- large enough spaces to contain the full variety of activities children require for healthy development outdoors.
- a large, grassy, central space where children can run freely, with activities around the perimeter, including wide-ranging opportunities for physical activities.
- a number of areas with each supporting a different kind of activity e.g. separate active and quiet play spaces, with: 'signage and other visual cues to help children intuitively know how to use each space productively' (Wike, 2006, p. 46).
- pathways to explore that are surrounded by interesting vegetation.
- a constantly changing supply of materials and flexible play equipment with an emphasis on recycled items and natural materials (like wood and stone) and loose, moveable elements the children can manipulate, e.g. large balls, outdoor blocks, milk crates, trikes, ladders, A-frames, planks of wood, tyres, durable plants in pots, and adequate storage space to support the provision of this equipment.
- plants used in a creative way, e.g. in a sensory walk; at different heights depending on the age of children using different areas, and the need for areas to be visible for safety reasons and to facilitate play such as tree climbing (at an appropriate level) and hiding.
- local indigenous plants, water-efficient plants, non-irritating plants, scented and flowering plants, plants that encourage birds, butterflies and other insects, culturally significant plants, e.g. kangaroo apple, lemongrass, Vietnamese mint, and plants that provide shade and shelter from the wind.



- areas of garden where children can grow and collect food for snacks or lunch e.g. herbs, vegetables, native bush food plants, and fruit trees.
- areas for digging in sand or bare earth with props that can be used for imaginative play.
- diverse and natural ground surfaces.
- stepping stones through gardens.
- special features such as trickle streams and ponds (with or without native fish), bush cubbies, butterfly houses, chickens, music areas, nesting boxes.
- an area for dealing with organic waste via a worm farm and/or compost.
- a potting bench, gardening tools, and small watering cans.
- nature and a natural environment as the dominant environment outdoors.

(Adapted from Elliott and Davis, 2004; Department of Human Services VIC, 2006; Wike, 2006; and Young and Elliott, 2003)

Elliott and Davis (2004) believe that play spaces that include such elements as those listed above, have the potential to become, 'a sea of natural sensory stimuli for children'. A leafy green outdoor setting has also been shown to have a restorative function, 'allowing us to return to tasks and other stimuli refreshed and focused' (Elliott and Davis, 2004, p. 5), therefore benefiting both the children and carers within the early childhood setting. And, as stated in Early Childhood Australia's Environmental Sustainability Policy, 'early childhood services that include natural elements encourage a sense of well being, evoke curiosity and generally provide an environment where adults and children are happy to spend time' (ECA, unpub. final draft, p. 4).

It may be useful to consult the following checklist to assess whether an outdoor area has all the essential elements of a natural play space.

Our play space:

- reflects the local landscape and climate, though may be a reconstruction of the indigenous environment;
- is dominated by natural elements, e.g. trees, shrubs, sand, soil, flowers;
- invites open-ended interaction, exploration, and manipulation;
- provides opportunities for risk-taking, spontaneity and discovery;
- stimulates the senses in all respects;
- is alive and unique;
- is accessible at all times and in all weathers;
- promotes a sense of place for children and adults;
- contains multiple 'habitats' within the overall space;
- promotes a sense of wonder;
- is always evolving and never finished.

(Elliott, in press)

Following are some examples of natural play spaces that have been, or are in the process of being developed in a sustainable way:

- In Woongarra, NSW, Wyong Shire Council is working collaboratively with a number of other stakeholders (including Darkinjung Land Council, Wamberal Public School, Woongarra Public School, Kids Academy Childcare Centre) on a community development project that involves the re-design of a playground. Local children have participated in the design and creation of some of the items to be incorporated within the playground, e.g. a hop-scotch mosaic, snake's head mosaic for the path, and symbols to be inserted within the park that they identify with. They have been involved in education about local Aboriginal (Darkinjung) culture and language and the natural environment in the local area. They have also been encouraged to express their collective sense of local identity through art. The project has facilitated a relationship between the school and childcare centre, benefiting the younger children in their transition to school.
- At Abbotsford Long Day Care Centre, a council-owned facility, an active parent group and committed staff chose to engage a design and construct team, with a fixed budget, to recreate their play space. The result was: 'a better organised and robust space with a range of flexible opportunities for active and explorative play.' (www.ricren.com.au).
- Kinma Preschool in Terrey Hills has fostered positive attitudes towards the environment and a holistic approach to environmental education for over 30 years. This is evident in the range of sensory experiences available to the children who attend the service, where: 'there is a noticeable absence of red, yellow, and blue plastic - the wooden blocks are unpainted and a trough of sawdust has replaced the rainbow rice' (Hamilton, 2003, p. 6). A worm farm on the verandah, where much of the preschool's waste is consumed, provides castings to the: 'lettuces and flowers peeping over the edge of the tractor tyres, which form an evolving no-dig garden, planted with bush foods, vegetables, aromatics and flowers at different times of the year' (2003, p 6.).
- Tom Stone Preschool and Children's Services in Berkeley Vale are in the process of coming up with a vision of what their outdoor space could become. During this collaborative process, service staff have engaged with the children, enlisted the help of parents and friends with various skills, created mind maps during staff meetings, and even offered prizes for families who come up with the most inspiring or creative designs. Ideas about what elements could be included in the space have been displayed in the foyer, including compost bays, worm farms, a vegie patch, tyre gardens, strawberry pots, a herb spiral, and a potting bench.



8. other program ideas

Funding opportunities

Grant funding opportunities may be available to assist with developing and/or implementing some aspects of your early childhood sustainability education program. Contact your Council's Grants Officer for assistance, if available. Otherwise, you could:

- consult the *Molino Stewart Green Grants Guide* that is updated each year (go to www.molinostewart.com.au for more information), and/or;
- apply for a Community Water Grant through the Australian Government Water Fund, and/or;
- apply for a Mitre 10 Junior Landcare grant (go to www.landcareonline.com/funding_opportunity_details.asp for more information);
- apply for an NRMA Community Help Grant;
- seek Federal Government support through the National Environmental Education Council and the Department of Environment and Heritage for initiatives in accordance with *A National Review of Environmental Education and its Contribution to Sustainability in Australia* (Tilbury, Coleman and Garlick, 2005);
- secure sponsorship for your program through local businesses, clubs, and other organisations who may be able to contribute funds, and/or materials to community projects.

Awards and recognition

There is scope for developing a system of recognition or certification for early childhood centres making efforts towards implementing sustainable practices. This could be done at a local level through providing awards and other incentives for centres who have, for example, developed an Environmental Management Plan. This would also provide the opportunity to showcase the efforts of particular centres who are setting an example for others to follow.

Information about NSW ECEEN's SPROuts Practice Award could also be disseminated through your early childhood sustainability education program. An entry form is available at: www.earlychildhoodaustralia.org.au/nsw_branch/eceen.html.

Environmental calendar events

Following are some of the environmental calendar events that could be promoted through your early childhood sustainability education program:

- Clean Up Australia Day - March 4, 2007 (go to www.cleanup.com.au for further information)
- World Environment Day - June 5 (go to www.deh.gov.au/events/wed/index.html for further information)
- National Tree Day - July 29, 2007 (go to www.planetark.com.au/treeday for further information)
- International Day of World's Indigenous People - August 9 (go to www.unesco.org/culture/indigenous for further information)
- National Biodiversity Month - September (go to www.deh.gov.au/biodiversity/month.html for further information)
- National Threatened Species Day - September 7 (go to www.wwf.org.au/tsn for further information)
- Earth Science Week - 2nd week in October (go to www.ga.gov.au/about/event for further information)
- National Water Week - October 21-27, 2007 (go to www.savewater.com.au/waterweek for further information)
- National Recycling Week - 2nd week in November (go to www.planetark.com.au/nrw for further information).



Food cycle learning

Including resources and ideas that encourage children to be sustainable gardeners and wise consumers from an early age may be one of the most important components of an early childhood sustainability program.

Developing a 'food cycle framework' within the daily emergent curriculum can provide: 'many valuable opportunities for interactions between adults and children while they carefully consider the world around them' (McCrea, 1996, p. 10). Growing vegetables, herbs, and fruit trees, preparing and cooking food, processing food wastes, and even sharing the experience of role-playing shopping for food ingredients, can all help young children better understand how to care for the environment and themselves.

Sensible eating may be encouraged by routinely providing children with widely varied, balanced meals across a week, including ingredients that they can grow and pick fresh from the kitchen garden in an early childhood centre. 'Developing healthy lifestyle habits begins from infancy and results in children having able, active bodies and enjoying food tastes' (McCrea, 2005, p. 9).

Early childhood services that are taking steps towards becoming more sustainable, may specifically encourage and support the use of natural and/or organic food production systems and edible landscapes that allow natural cycles to occur. For example no-dig gardening, permaculture and/or companion-planting principles and water-efficient garden design.

Purchasing policies may reflect a commitment to the environment and children's health by including predominantly certified organic and vegetarian food, locally grown foods, foods grown in season, and food bought in bulk wherever possible. The cost of buying organic food may be offset by buying less or no meat products, and by minimising or excluding processed or highly packaged foods.

Note: The food purchasing choices outlined above also have positive implications for the management of waste in early childhood settings.

Some 'food cycle learning' examples:

- Children at University of New South Wales child care centres will now have the opportunity to learn about the safe production of food in the Eco Living Centre's permaculture garden, as part of their daily program of activities. They will grow organic vegetables, care for chickens and native fauna such as frogs and birds, and eat the seasonal vegetables that they produce (UNSW, 2006). The UNSW garden may be quite large and well-established, but, as Bohling-Philippi (2006, p. 50) explains, 'the size of the project is not as important as the time invested in watching the garden unfold'.
- The importance of the cycles of life and the rhythms of nature have already been realised at Carinya Children's Services Centre in Newcastle, where infants up to three years old and their educators have been active in the exploration of growing, harvesting, cooking, and sharing of food. The early childhood staff at Carinya believe that extending children's understanding and experiences of the natural world in this way helps them learn to: 'nurture and care for nature and each other' (Kinsella and McMahon, 2006, p. 3).

Excursions

Some early childhood services may invite families, through their centre newsletters, to join an excursion, which may be as simple as a nearby 'nature walk' or a walk around the block. While excursions offered at various locations in the local area may be an important way to expand children's experiences and their understanding of our social, technological and natural worlds, it is up to each centre to decide whether to make them part of their program, and is dependent on several factors.

For example, there must be adequate parental involvement to meet the required adult-to-child ratios, funding may be an issue, and the distance that some centres would need to travel may not make an excursion viable.

However, for the exceptions, it would be useful to extend current education programs involving visits to local waste and recycling facilities, botanic gardens, museums, or community gardens, to an early childhood audience. In addition, any extension education programs for early childhood that are supported by local government, should be developed in collaboration with early childhood educators.

Another option is to arrange for centre visits by local residents or parents with specific environmental knowledge, or early childhood environmental educators who offer a variety of programs. For example, the St George Zoomobile from Taronga and Western Plains Zoos provides young children with a unique hands-on learning experience and the opportunity to meet native animals - such as a carpet python, possum, green tree frog, or echidna - up amazingly close (go to www.zoo.nsw.gov.au for further information). Springboard Science, in Toronto NSW, is another educational business that brings hands-on science shows to childcare and vacation care centres.

Swap meet

As part of your early childhood sustainability program, Council could facilitate a 'swap meet', where goods that may be valuable to early childhood services (e.g. play equipment, various materials), could be exchanged. Parents and the wider community would be involved in this initiative.

It may also be worthwhile to promote the free exchange of items in your local area by joining or starting an internet group such as those that make up the Freecycle Network. The non-profit network provides individuals and non-profit organisations an electronic forum to 'recycle' unwanted items (go to www.freecycle.org for further information).

Toy libraries and natural play materials

The establishment of toy libraries in the local area, as well as the promotion of the thoughtful purchasing of toys and other materials and equipment, may be included in an early childhood sustainability program supported by local government.

The use of toy libraries is an idea that can be promoted to early childhood centres as well as families in the local area.

When selecting toys, there are many considerations that relate to play and sustainability, from what they are made of, to the types of experiences offered through particular play materials. For example, open-ended play materials: 'encourage imaginative and creative play and promote the lateral thinking and problem-solving skills important in a sustainable lifestyle' and 'natural materials, such as gum nuts, sand, or logs, and waste materials such as boxes, old curtains, or kitchen utensils further extends the sensory experience' (Elliott, 2005, p. 8).

Young and Elliott (2003) suggest that waste materials can be used for play experiences wherever possible, and offer examples such as cloth for sewing, collage or cubby building; corks for pretend people, collage or rolling; and timber offcuts for sanding, polishing, nailing or construction.

The use of natural play materials that can easily be found in the garden, bush, or at the beach, may be promoted for the spontaneous, constructive, and creative play experiences they offer, and should always, 'reflect attitudes of care and respect' (Elliott and Emmett, 1997). Children may need to be told about the need to return items after borrowing them from the environment for a short time, or encouraged to appreciate them for their inherent properties in their natural environment.

Elliott and Emmett (1997) believe that, 'it is the role of the early childhood educator to consider why they are using natural materials and what uses are acceptable in terms of the environment'. The constructive use of natural materials may include, for example, 'seed pods to float on water, soil to make mud pies, small logs for construction, gravel for pouring and so on' (Young and Elliott, 2003, p. 44).

When choosing toys for a toy library, or for use in an early childhood setting, consider whether they are:

- locally-made or Australian-made. Visit local craft markets as these are often a good source of toys.
- made from renewable, reused or recycled materials. Choose wooden, soft wool or cotton toys, or materials collected in the natural environment, e.g. pine cones, instead of plastics and synthetics. Create toys by reusing waste materials, e.g. sanded, and beeswaxed wood off-cuts for blocks, washed op-shop clothes for dress-ups, or old saucepans for mud, water and sand play. Look for inexpensive and well-made second-hand toys in op shops and second-hand toy shops.
- repairable. Choose something made of wood that can be sanded, re-screwed or glued if needed, rather than a plastic toy that has little chance of being repaired if it is broken.
- durable and able to be washed or wiped over. Check that it is strong enough to be used by the intended age group and can be easily washed and maintained.
- open-ended. Choose toys such as wooden blocks, push-along trolleys, or a selection of toy animals that have many play possibilities and can be used by children according to their specific needs and interests.
- as natural as possible. Toys made from wood, fabric, cardboard, and metal, provide a range of sensory experiences in a world that is increasingly dominated by plastic.

(Adapted from Elliott, 2005.)

Green fundraisers

As an alternative to fundraisers where, for example, boxes of chocolates are often sold, councils could provide advice about raising money through healthier, and more environmentally friendly means. For example, funds may be raised via a green bag campaign, or through an organisation such as Green Canary, that specialises in 'ecological fundraisers' (www.greencanary.com.au).

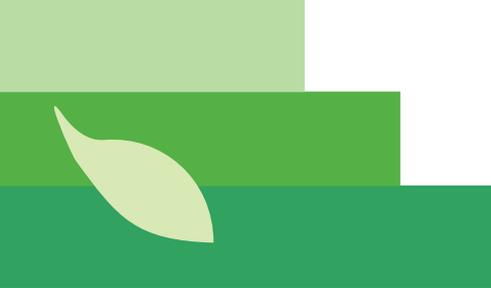
Pat Simmons, of Gynea Bay Care and Leisure Centre tells of a: 'fantastic Phasmid fundraiser' with a difference, where over a thousand dollars was raised selling stick insects with a tank and care sheet for \$10 each. 'Not only is this a fun way to raise funds, but it has also been a wonderful environmental activity which has increased the children's respect for, interest in, and knowledge of the insect world', she said. (For the full story, go to www.netoosh.org.au/eco/resources.htm.)

Some childcare centres, such as Parklands Community Preschool in Kariong, have realised the value of the liquid fertiliser or 'worm wee' produced via the centre's worm farm. The liquid gold is a constant fundraising source, and is being sold by the centre to parents and keen local gardeners for \$3 a bottle.



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other contacts and resources

Early Childhood Environmental Education Networks

NSW Early Childhood Environmental Education Network (ECEEN):

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Little Green Steps

For a list of picture books and other resources you may find useful to support your early childhood sustainability program go to: www.gosford.nsw.gov.au/library/children/preschool/environment.html

Australian Museum

Kidspace - Mini museum for under 5s:
Kidspace features five 'pods': ('bug', 'marine', 'volcano', 'observation', and 'imagination') that stimulate under-5s to investigate the natural world - with animal textures, wall puzzles, real materials to investigate, space to create, read, put on a puppet show or don a tail and transform into something amazing.

Education bookings line: (02) 9320 6163.

Museum in a Box - Outreach program, Over twenty different boxes containing a treasure trove of real museum specimens, casts, artefacts, dioramas, photographs, video and audio tapes, games, books and computer software. For more information: Ph (02) 9320 6197, fax (02) 9320 6069 or go to www.amonline.net.au/museum_box/.

Street address:

6 College Street Sydney (opposite Hyde Park) NSW 2010
General enquiries: Ph: (02) 9320 6000

websites

Australian City Farms and Community Gardens Network (incl. information on school gardens):
www.communitygarden.org.au

Early Childhood Australia Inc. (early childhood advocacy):
www.earlychildhoodaustralia.org.au

Enviroschools (NZ - a whole school approach to environmental education):
www.enviroschools.org.nz

Freecycle (networks of people swapping free stuff):
www.freecycle.org

Fresh Green Clean (green cleaning in-service training):
www.freshgreenclean.com.au

Go for your life (promoting healthy eating and physical activity):
www.goforyourlife.vic.gov.au

Green Canary (ecological fundraisers):
www.greencanary.com.au

“Our environment - it’s a living thing” (learn how to live more sustainably at home, at work and at play):
www.livingthing.net.au

Rous Water (water conservation education program for early childhood):
www.rouswater.nsw.gov.au

Sustainable Schools NSW:
www.sustainableschools.nsw.edu.au

Stephanie Alexander Kitchen Garden Foundation:
www.kitchengardenfoundation.org.au

Taronga and Western Plains Zoos:
www.zoo.nsw.gov.au

World Health Organization ('Global strategy on diet, physical activity and health'):
www.who.int/dietphysicalactivity/en

Young Media Australia (information about media and children):
www.youngmedia.org.au



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appendix a: sample policy statement

From Gosford City Council's Children's Services Policies and Procedures

ENVIRONMENTAL EDUCATION

Policy Statement

Centres provide a high quality, educational-based early childhood program of activities and experiences, which reflect and respond to each child's needs, strengths and interests. Children will be encouraged to develop a respect for and enjoyment of the natural environment and living things whilst furthering their appreciation of beauty in its many manifestations.

Procedures:

1. At least one staff member from each service will participate in professional development workshops, which focus on 'Promoting Environmental Sustainability in Children's Services' and learn about the philosophy behind the Little Green Steps Project (a jointly administered Wyong Shire and Gosford City Council initiative).
2. Staff will help children connect with nature, and work towards helping the centre become more environmentally sustainable by incorporating environmental education and practices with play-based learning experiences such as:
 - Constructing a worm farm, building a veggie patch and/or herb garden, composting fruit scraps.
 - Incorporating natural and/or recycled materials into children's learning centres and activities.
 - Growing plants and flowers from seeds.
 - Responsible recycling.
 - Utilising outdoor environments and the efficient use of natural resources.
 - Using the *Little Green Steps* Project resource kits and teaching aids including picture books, posters and activity books on the topics of waste, water, wildlife and biodiversity (importance of native flora in our environment) to communicate environmental messages to children.
3. Staff will provide families with environmental sustainability displays, hints, articles, and fact sheets which promote sustainability on such topics as recycling, saving water and environmentally-friendly alternatives for cleaning purposes.

4. Staff will make attempts to celebrate aspects of environmental awareness events such as National Science Week, National Tree Planting Day, National Recycling Week, Clean Up Australia Day, and Walk to Work Day.
5. Staff will endeavour to equip the centre with and implement water-saving strategies, green cleaning and recycling. Where applicable, grants will be applied to aid in the implementation of these effective environmental strategies.
6. Staff will keep up-to-date with the latest research and teachings on environmental education through newsletters, journals, and support agencies and in-servicing, sharing this information to enhance the children's program and families' knowledge.

This policy is based on information and/or recommendations from/by the references and sources listed below:

- **New South Wales Department of Community Services (2002). NSW Curriculum Framework for Children's Services - The Practice of Relationships, Essential Provisions for Children's Services, Office of Childcare, New South Wales**
- **National Childcare Accreditation Council (NCAC). (2005). Quality Improvement and Accreditation System Quality Practices Guide. (1st Ed.). Surry Hills: NCAC**
- **Curtis, D and Carter, M (1996). Designs for Living and Learning - Transforming Early Childhood Environments. Redleaf Press, Saint Paul, MN**
- **Early Childhood Environmental Education Network (Seeds for the Future Network News) (www.earlychildhoodaustralia.org.au) 11 August 2006**
- ***Little Green Steps Environmental Program* (www.gosford.nsw.gov.au) 11 August 2006**



appendix b:

Library resources

The following resources are included in the Little Green Steps Library Resource Kit:

Crook, S. (ed.) 2004, *Just Improvise: innovative play experiences for children under eight*. Tertiary Press, Croydon VIC.

Crook, S. and Farmer, B. 2002, *Just Imagine: creative play experiences for children under six (2nd Ed.)*. Tertiary Press, Croydon VIC.

Davis, D. and Elliott, S. *Environmental Education Making it Mainstream*. Early Childhood Australia, Watson ACT.

EEEC VIC Inc. *Weaving Webs: an approach to environmental education for young children (video and in-service training notes)*. EEEEC VIC Inc.

Elliott, S. and Emmett, S. 1997, *Snails live in houses too: environmental education for the early years (2nd Ed.)*. RMIT Publishing, Melbourne.

Gosford City and Wyong Shire Councils *Little Green Steps Waste Management Kit*.

Gould League of Victoria Inc. *Outdoor Environmental Games*.

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Immig, J. 2002, *Safer Solutions: Integrated pest management for schools and childcare centres*. Total Environment Centre, Sydney.

Immig, J. 2000, *The Toxic Playground: a guide to reducing the chemical load in schools and childcare centres*. Total Environment Centre Inc., Sydney.

KU Children's Services 2004, *KU Environment Policy (2nd Ed.)*. KU Children's Services.

NSW Environmental Protection Authority (EPA) 2003, *Patches of Green - Early Childhood Environmental Education in Australia: scope, status and direction*. NSW EPA, Sydney.

Parish, S. 2002, *Steve Parish Story Books Series: Bilby's Burrow; Clever Clownfish; Cockatoo Calling; Cranky Crocodile; Little Devils; Pelican's Pride; Tree-Frog Tangles; Turtle Tricks*. Steve Parish Publishing Pty. Ltd., Archerfield QLD.

Parish, S. *Steve Parish Nature Kids Australian Animals Series: 123; ABC; In action; In my backyard; Opposites; Parents and babies; Safe at home*. Steve Parish Publishing Pty. Ltd., Archerfield QLD.

Reece, J. 2003, *Lester and Clyde's catastrophic adventure*. Scholastic Press, Sydney.

Reece, J. 1995, *Lester and Clyde running scared*. Scholastic Australia Pty. Ltd, Gosford.

Suid, A. 2004, *Love the Earth: activities and patterns for an ecology unit*. Hawker Brolow Education, Victoria.

Targowska, A. 1991, *An Environmental curriculum for pre-school children (The Gowrie 2nd Ed.)*. The Lady Gowrie Child and Neighbourhood Centre (WA) Inc.

Toft, K. M. and Sheather, A. 1997, *One Less Fish*. University of Queensland Press, St Lucia QLD.

Wawrychuk, C. and McSweeney, C. 2003 *Insects & Spiders: Active learning about insects and spiders*. Hawker Brownlow Education, Victoria.

Young, T. and Elliott, S. 2003, *Just Discover: connecting young children with the natural world*. Tertiary Press, Croydon VIC.



Climbing the little green steps

our environment



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