



**A National Review of Environmental
Education and its Contribution to
Sustainability in Australia**

Community Education

This report is Volume 3 in a five part series that reviews Environmental Education and its contribution to sustainability in Australia. The research which underpins it was undertaken between May and July 2004 by the Australian Research Institute in Education for Sustainability (ARIES) for the Australian Government Department of the Environment and Heritage. The series is titled *A National Review of Environmental Education and its Contribution to Sustainability in Australia* and covers the following areas:

Volume 1: *Frameworks for Sustainability*

Volume 2: *School Education*

Volume 3: *Community Education*

Volume 4: *Business and Industry Education*

Volume 5: *Further and Higher Education*

This volume is the first national review undertaken in Australia and one of few attempts to capture needs and opportunities in this area. It provides a snapshot of the current context and identifies a number of key themes which assist with constructing a picture of Environmental Education experiences in the community sector. These themes reflect how programs targeted at the community vary considerably from having a main focus in providing environmental information through to more action orientated approaches. The document provides analysis as well as recommendations to improve sustainability practice through Environmental Education.

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Abbreviations

| | | | |
|--------------|--|---------------|--|
| AAEE | Australian Association for Environmental Education | ICLEI | International Council for Local Environmental Initiatives |
| AFFA | Agriculture Fisheries Forests Australia | LA21 | Local Agenda 21 |
| ARIES | Australian Research Institute in Education for Sustainability | NCEA | National Community Education Association |
| BGCI | Botanical Gardens Conservation International | NEEC | National Environmental Education Council |
| CALD | Culturally and Linguistically Diverse | NESB | Non-English Speaking Background |
| CBO | Community Based Organisation | NGO | Non-Government Organisation |
| CE | Community Education | NHT | Natural Heritage Trust |
| CERES | Coalition for Environmentally Responsible Economies | OEILT | Our Environment: It's a living thing |
| CLC | Community Learning Centre | PCE | New Zealand Parliamentary Commissioner of the Environment |
| CRC | Cooperative Research Centre | UN | United Nations |
| DEC | NSW Department of Environment and Conservation | UNCED | United Nations Commission on Environment and Development |
| DEH | Australian Government Department of the Environment and Heritage | UNEP | United Nations Environment Program |
| DEST | Australian Government Department of Education Science and Training | UNESCO | United Nations Educational, Scientific and Cultural Organisation |
| EDO | Environmental Defenders Office | UTS | University of Technology Sydney |
| EE | Environmental Education | WSSD | World Summit for Sustainable Development |
| EPA | NSW Environmental Protection Authority | WTO | World Trade Organisation |
| ESD | Ecologically Sustainable Development | WWF | Worldwide Fund for Nature, formerly World Wildlife Fund |

3.1 Overview of Community Environmental Education

Although contested and open to wide interpretation, the term ‘community’ here goes beyond simply categorising people into social or demographic groupings, to consider how people engage and interact within their local and regional environments. In 2002, there were almost 2.3 million adults undertaking community education courses in Australia, with community organisations providing the majority of these courses⁸. Courses ranged from general interest, recreational and leisure activities, personal development, social awareness and craft, to vocational, remedial and basic education⁹. Increasingly, however, community education is focusing on learning and action for the environment and issues of sustainability. Programs which deal with such environmental themes are often referred to as Community Environmental Education.

Community Environmental Education is critical to raising awareness, building partnerships, and influencing the course of action in relation to issues of sustainability in local areas¹. In recent years, environmental education programs targeted at the community have changed from being narrowly focused and didactic towards favouring more holistic and interactive approaches aligned with sustainability². Environmental Education (EE) in the community aims to enhance social capital, build community capacity for decision-making, build community leadership capabilities and improve the environment³.

Increasingly, a range of government and non-government organisations are educating and learning from communities through non-formal⁴ learning approaches. The non-formal education of the community is an important component of lifelong learning, and plays a significant role in creating an informed, empowered and just society⁶. Educators attempt to address community needs by creating learning opportunities for community members, including individuals, families, schools, businesses, religious institutions, non-government organisations and community groups, as well as government authorities. While community-based education can take many forms, most programs are bound by the local context and directed by community knowledge and understanding. Communities are tied together by place but their diversity cannot be underestimated. The National Community Education Association has identified key characteristics associated with community education (see Box 3.1). These characteristics often associated with community education are also applicable to community based EE.

The International Context

The Tbilisi Declaration (1977) gave international recognition to the importance of community EE in creating change for the environment¹¹. The declaration supported the involvement of the community in environmental problem-solving and management¹². Building upon this declaration, the ‘Rio Declaration’¹³ and ‘Agenda 21’¹⁴ promulgated the

■ Box 3.1

Key characteristics associated with community education⁵.

- 1. Community Education is learner-centred:**
 - Actively involves community members in decisions about their learning; and
 - Influences people’s attitudes and values;
- 2. Community Education is based on lifelong learning:**
 - Implements the principle that learning continues throughout life; and
 - Provides formal, non-formal and informal learning opportunities; and
 - Offers programs and services for all community members, often in an intergenerational setting;
- 3. Community Involvement:**
 - Responds to community learning needs; and
 - Promotes a sense of civic responsibility; and
 - Provides leadership opportunities for community members; and
 - Includes diverse populations in all aspects of community life; and
 - Encourages democratic procedures in local decision-making.

■ Box 3.2

International Declarations

'A basic aim of environmental education is to succeed in making individuals and communities understand the complex nature of the natural and the built environments resulting from the interaction of their biological, physical, social, economic, and cultural aspects, and acquire the knowledge, values, attitudes, and practical skills to participate in a responsible and effective way in anticipating and solving environmental problems, and in the management of the quality of the environment.'

Tbilisi Declaration UNESCO / UNEP (1978)

'Countries should facilitate and promote non-formal education activities at the local, regional and national levels by cooperating with and supporting the efforts of non-formal educators and other community organizations.'¹⁰

Chapter 36, Agenda 21, UNCED (1992b, Chapter 36.5)

'Environmental issues are best handled with the participation of all concerned citizens, at the relevant level.'

Principle 10, the Rio Declaration UNCED (1992a, p.2)

The **Aarhus Convention** '... stresses the need for citizen's participation in environmental issues and for access to information on the environment held by public authorities. As such it is the most ambitious venture in the area of environmental democracy so far undertaken under the auspices of the United Nations.'

Kofi A. Annan, Secretary-General of the United Nations United Nations Economic Commission for Europe (Undated, p.1)

role of community EE in establishing sustainable communities. These policy instruments, together with the 1998 Aarhus Convention¹⁵ (see Box 3.2), have provided the impetus for governments and non-government organisations to define their roles and establish priorities for community EE.

National EE strategies are shifting away from a focus on formal education towards more diverse approaches that encompass community EE¹⁶. The 'Canadian Framework for Environmental Learning and Sustainability'¹⁷, for example, identifies the community as a key agent of change for sustainability. In fact, the very process by which the framework was created involved intense collaboration among the Government of Canada, community groups and its citizens¹⁸. This reflects a global trend to use participation and learning approaches as the basis for developing national strategies in EE.

The Framework for Community EE in Australia

The 'Environmental Education for a Sustainable Future: National Action Plan'²⁰ commits the Australian Government to the development and implementation of community EE. It recognises the importance of non-formal education as key to learning for sustainability. The document is underpinned by principles that encourage the involvement of community stakeholders through practical and relevant approaches²¹. The plan recognises the array of different stakeholders, and the complexity of competing interests. The plan has also established funding to a grant scheme for EE programs led by community organisations.

Other policy instruments also provide a framework for the design and implementation of community EE. These include, for example, 'Local Agenda 21'²² (see Box 3.3) which has informed the Australian Government, Western Australia's 'Hope for the

Future: The Western Australia State Sustainability Strategy'²³ and the NSW Government's EE strategy 'Learning for Sustainability: Environmental Education Plan 2002-05'²⁴ (see Box 3.4) as well as many local government EE strategies from across Australia (see Box 3.5).

In practice, community EE has evolved over time to result in diverse programs initiated in Australia by government and non-government organisations. Programs range from having a main focus on information-sharing through to participatory programs that focus on action and lifelong learning²⁵.

Traditionally, while citizens have been active in the alleviation of environmental problems, they did not usually address issues of sustainability at their source²⁶. Increasingly, however, it is being recognised that learning and action for sustainability are steeped in the politics of justice and equity, involving democratic, negotiated and pragmatic engagement²⁷, and that community (re)action alone will not achieve the level of change required to achieve sustainability.

Community EE promulgates the importance of the capacity of participants to direct their own learning and recruit educators who can support this process²⁸. This factor separates traditional participation in community action (where the community may be involved in a preset activity such as planting, weeding or making interpretive signs) from participation in learning and action for sustainability. It is the values clarification embedded in the learning process that ensures that the community own and protect their actions. Increasingly, and as a result of the sustainability agenda, community EE is concerned with the ability of the community to participate, influence, share and/or control the decision-making process²⁹.

Inherent in this ability are the skill sets, motivations, and capacities of the community to effectively and efficiently contribute to processes of change. Building these capacities is a core objective of learning for sustainability³¹ and what differentiates it from previous community education approaches. (see Table 3.1). Capacity building in this sense is an essential component of sustainability, as highlighted in 'Agenda 21'³². It involves people, institutions and societies building upon existing capacities through dialogue, 'critical reflection' and the sharing of knowledge³³. Capacity building is premised upon minimising inequity. The learning process aims to redress these inequities by empowering the individual, institution or society through a process of questioning the assumptions and beliefs that underpin their current unsustainable practices³⁴. It is these factors that tie capacity building to sustainability and learning for sustainability.

Stakeholders in Community EE

Successful community environmental educators involve stakeholders in effective participation throughout decision-making concerning the conception; planning; implementation and management of the learning process as well as the monitoring and evaluation of the project⁴⁴. The range of stakeholders involved in community EE programs in Australia is diverse. The context of each community EE program determines the role and purpose of community stakeholders in contributing to the successful process.

■ Box 3.3 Local Agenda 21¹⁹

Local Agenda 21 (LA21) is derived from 'Agenda 21', and in Australia aims to build upon existing local government strategies and resources to implement sustainability goals. LA21 aims to involve the whole community in open discussion, collaboratively creating a shared vision for sustainability, and develop partnerships for change. Potential outcomes from a successful LA21 partnership project include:

- strong, ongoing partnerships between government and community;
- ongoing community participation in decision-making;
- integrated decisions;
- successful implementation of long term sustainability action plans; and
- sustainable outcomes for the community.

■ Box 3.4 Statewide EE Strategies

'Hope for the Future – Western Australia State Sustainability Strategy'

Vision for Education and Community Awareness for Sustainability:

'Education becomes the means by which current and future generations are inspired to live more sustainably and find innovative solutions for the future.'

Government of Western Australia (2003, p.247)

The Strategy recognises the importance of developing innovative community education programs to engage and empower people for change towards sustainability. A key objective is to develop a clear strategy for developing a community that embraces and works to achieve sustainability.

■ Box 3.4 (continued...)

'Learning for Sustainability – The NSW Government's EE Plan'³⁰

Vision: 'Effective and integrated environmental education, which builds the capacity of the people of NSW to be informed and active participants in moving society towards sustainability.'

NSW Government (2002, p.6)

The plan has adopted a three pronged approach to community social change through non-formal EE and lifelong learning. It has:

- Established *Our Environment: It's a Living Thing* community education campaign.
- Ensured that roles for the community are built into new Government environmental initiatives.
- Supported local and regional community needs in environmental plans developed through *planFIRST*.


■ Box 3.5 Local Government EE Strategies

Many local government strategies have been informed by Local Agenda 21 and other international documents. 'The Manly Education for Sustainability Strategy' is an example of this:

'promote and guide a holistic, strategic and coordinated approach to education for sustainability, which builds the capacity of the community to be informed and active participants in moving Manly towards sustainability.'

Manly Council (2003, p 6)

Table 3.1 | Typology of Community EE in Australia*

| ■ Table 3.1 Typology of Community EE in Australia* | | | | |
|--|---|---|--|---|
| Increasing Community Empowerment | Description/Typology | Example | Components | Methods of community EE in Australia include (but are not restricted to) |
|  | Information sharing and awareness raising | Greenpeace True Food Guide 2003: How to Shop GE Free | <ul style="list-style-type: none"> ● Problem presented through monologue ● Options for behaviour change may be provided ● Often a unilateral announcement, with no room for response | <ul style="list-style-type: none"> ● Lectures and talks³⁵ ● Outdoor education³⁶ ● Interpretation³⁷ ● Advocacy³⁸ |
| | Material incentives in participation | Volunteer Green | <ul style="list-style-type: none"> ● Community engages in program for potential cost-saving or reward ● Limited ownership of issue once program concludes | <ul style="list-style-type: none"> ● Social Marketing³⁹ |
| | Community consultation | Development of the ACT Government Community Engagement Strategy National Environment Consultative Forum | <ul style="list-style-type: none"> ● Information extracted through surveys, questionnaires, meetings ● Problems identified and options presented by consultant ● No obligation to accept community views ● Limited option for community to influence decisions | <ul style="list-style-type: none"> ● Seminar, and conferences |
| | Community action | Clean Up Australia, EDO Workshops on Environmental Legislation, EcoSTEPS, and Landcare Projects. | <ul style="list-style-type: none"> ● Participants form groups to meet pre-determined project objectives ● May involve some capacity building component as aim is to empower community ● Groups may continue after project ends ● Address issues at the 'pipe end' | <ul style="list-style-type: none"> ● Workshops⁴⁰ ● Community Learning Centres (CLCs)⁴¹ ● Volunteers in Community Action Programs |
| | Community capacity building | Local Agenda 21, Catchment Management Programs, Community Greening. | <ul style="list-style-type: none"> ● Participants develop skills and capacity to effectively engage in community decision-making ● Long term commitment, is transformative for participants and community | <ul style="list-style-type: none"> ● Partnership programs⁴² |
| | Learning for sustainability | OELT Mentoring Program; Cool Communities | <ul style="list-style-type: none"> ● Stresses importance of process ● Focuses on collaborative and action learning ● Participants gain skills in 'critical' thinking and 'critical reflection' ● Participants may initiate action independently of the project (selfmobilised) ● Change is embedded | <ul style="list-style-type: none"> ● Mentoring and Facilitated support⁴³. |

* Adapted from James and Blamey (1999)

i) Community Participants

Community EE targets a wide social demographic. Participants include professionals, individuals, women, youth, specific groups, elderly, unemployed, industry, local government, users/consumers, community leaders and others.

Community participants engage in EE programs for a variety of reasons. Many experience EE as part of their everyday lives, including farmers, pet owners, or recyclers - while others seek out learning opportunities, including conservation volunteers and leisure seekers (see Box 3.6).

Large scale community EE programs are usually targeted at a broad cross-section of the community or a specific group (such as home owners or consumers). These programs typically focus on raising awareness and disseminating information concerning a particular topic. As such they do not ask community participants to step away from their usual environments and ways of life but to take action in their everyday lives. Volunteers and leisure seekers, however, are different in this respect. Volunteers seek out involvement in order to satisfy altruistic needs⁴⁵. Across Australia, volunteering has an increasing profile. Currently around 4.4 million Australians volunteer their time to a variety of causes⁴⁶, including action-oriented, non-formal learning opportunities in environmental conservation and sustainability actions (see Box 3.7).

Leisure seekers include those who actively seek out leisure opportunities from which they can learn. They enjoy visiting museums and exploring interpretive trails. They want to learn and to enjoy the learning experience. Increasingly, community environmental educators are attempting to actively involve leisure seekers in the learning process.

Consistently, community EE is beginning to be recognised as a cost-effective alternative to other end-of-pipe solutions. Elton Consulting⁴⁷, for example, found that 'well designed and carefully targeted environmental education is more cost-effective in the short and the long term than other environmental measures⁴⁸.

ii) Community-based EE Providers

A community EE provider is any organisation or group of organisations offering community EE programs. Providers may include local, state, or federal government agencies, community organisations and NGOs, networks and associations, businesses and higher learning institutions operating from national to local scales (see Box 3.8).

Directing these organisations, are different policies and strategies, which identify different priorities and resources resulting in a diverse range of EE programs being offered to communities.

Importantly, the focus of many community EE providers is not actually on community learning - rather EE is a secondary activity resulting from many organisations and institutions recognising the importance of education in achieving their overall goals. The goal of the Australian Government's Department of the Environment and Heritage, for example, is 'to protect and conserve Australia's natural environment and cultural heritage'⁴⁹. To achieve this overall aim, the Department offers funding and support to community EE programs. This reiterates the focus of 'Agenda 21' on education as a key process by which cultural and structural change can occur for sustainability⁵⁰.

■ Box 3.6 Shape of a Community

'The shape of a community begins with its citizens and ultimately with their participation in making the key decisions about its future.'

Davis (1997, p.1)

■ Box 3.7 Community Volunteers

'Last year community involvement coordinated by Conservation Volunteers Australia totalled over 100,000 volunteer days and contributed practical assistance valued at more than \$16 million to the preservation of the Australian environment. Conservation Volunteers Australia planted more than 1.6 million trees in 2003 and more than 10 million trees over the past decade.'

*Conservation Volunteers Australia
(undated, p.1)*

■ Box 3.8 Examples of Community EE Providers

Government

- Federal Government – Landcare, Bushcare, Rivercare, Coastcare;
- State Governments -
 - Queensland: ‘Adopt a Waterway’ ;
 - Western Australia: ‘Airwatch’, ‘Ribbons of Blue/Waterwatch’, Alcoa Wagerup Tripartite Group, Community Involvement Project;
 - South Australia: ‘Greening Australia’ and ‘Wetland Care’
- State Government museums, zoos and botanic gardens
- Local Government – Northern Rivers Regional Strategy, NSW; Hastings Council; Hornsby Council

Networks and Associations

- NSW Central Coast Community Network – ‘Coastal Communities’ caring for seagrass
- Master Plumbers Association of NSW - Sustainable alternative rainwater tanks

Business

- Elton Consulting – Community capacity building and consultation projects
- Australian Environmental Labelling Association – urges sustainable consumption in communities
- Australian Free Trade Information Network – ‘WTO Education Kit’

NGOs

- Nature Conservation Council – ‘Cool Communities’
- Oz Green – Stormwater management community education programs
- Clean Up Australia – Community education program targeting plastic bags
- The Wilderness Society – weekly wilderness action meetings for community members
- Keep Australia Beautiful – ‘Tidy Towns’
- Greening Australia

■ Box 3.8 (continued...)

Higher Learning Institutions

- UTS – ‘Youth Challenge for Community Development Program’

Partnerships

- Sydney Catchment Authority and Macquarie University - ‘Education for Sustainability Professional Development Program’
- Botanic Gardens Trust, Sydney and NSW Department of Housing – ‘Community Greening’

■ Box 3.9 Funding Bodies

Natural Heritage Trust EnviroFund

(Federal) offers up to 3 years funding to community organisations for EE.

Criteria Include:

- Community capacity building for natural resource management at either the local or regional level;
- On-ground improvements in the management of the environment and natural resources ;
- Good value for taxpayers’ money; and
- Feasible and technically sound options.

NSW Environmental Trust fund offer 1-3 years funding for community and / or government organisations for EE programs.

Criteria Include:

- Proven needs and tangible benefits to the environment of NSW;
- Consistency between program aims and objectives;
- Demonstrated ability to deliver projects to a high standard;
- Efficiency and effectiveness; and
- Value for money.

iii) Community EE Funding Bodies

Funding for community EE programs can be obtained from a variety of sources in Australia. While some grants for EE projects and programs are offered through general environmental grants programs (such as Victoria’s Sustainability Fund, Tasmania’s Community Fund and the ACT Environmental Grants Program), increasingly EE specific funding programs are emerging (see Box 3.9).

The Australian Government’s Envirofund, for example, is innovative in targeting activities that promote awareness raising, capacity building and partnerships in its funding requirements. As a result, community-based organisations (CBOs) and other funding recipients are focusing their attention towards education and capacity building for sustainability.

Funding bodies are important in shaping the focus and processes adopted by many community EE programs across Australia. There is a need to evaluate the impact of the funding bodies on the direction and outcomes of community programs. An assessment of how criteria for funding has influenced the reorientation of EE towards learning for sustainability approaches would be valuable and would ensure a more effective use of available funding. It should also be recognised that a major impediment to the future of community EE activities will be the rising costs and increasing complexity associated with public liability insurance. As such funding bodies will need to be aware of its impact on community EE and help to develop mechanisms to overcome these issues.

Typically offered either through competitive processes or as one-off gifts, funding generally requires measurable outcomes-based performance indicators and is determined by a competitive application process. As a result, emphasis often remains focused on short-term tangible environmental outcomes, rather than on longer term educational goals, not easily measured, that can help sustain environmental improvements (see Box 3.10).

Despite these limitations, funding from various bodies has been important to the development of CBOs in improving their outcomes and accountability. Funding often requires CBOs to develop project management and reporting mechanisms that might otherwise have been overlooked. As a result some CBOs have been able to achieve much more strategic and beneficial outcomes than would otherwise have been achieved without these criteria.

Partnerships in Community EE

Community participants, providers and funding bodies are recognising the importance of partnerships in understanding the interconnectedness and political nature of sustainability and in achieving systemic and structural change for sustainability.

Partnership projects have been important in addressing imbalances in program content and methodology. Partnerships for community EE in Australia are established in one of two ways:

1. they stem from community concern and commitments, and aim to address local issues or problems; or
2. they are initiated by agencies external to local communities, with a view to developing and/or supporting particular functions within those communities⁵².

Partnerships have been instrumental in generating community capacity (see Boxes 3.11 and 3.12). They should be responsive, flexible, respectful and reflective⁵⁴, whilst ensuring mutually beneficial outcomes and the sharing of work and information across partner organisations and sectors⁵⁵.

The Challenges for Community EE

Over the past decade, trends in community participation have improved in Australia⁵⁶. However, research by Butterworth and Fisher (2000) shows that the rate of, and degree to which, this improvement has occurred is marginal, and that community EE should begin to address the lack of apparent impact on substantive reforms⁵⁷. One challenge for community EE in Australia is for governments, in partnership with community groups and local businesses, to develop new criteria for the evaluation of the effectiveness of community participation in achieving sustainability outcomes. Such reorientation needs to go beyond focusing only on project level outcomes, and look towards contributing to reshaping organisational and institutional responses to the complex issues associated with sustainability.

Overall community EE has the potential to be among the most effective tools for community involvement and empowerment. Where communities are meaningfully involved in decision-making and on-ground action, a stewardship ethic for environmental conservation and sustainability can develop. Community EE should strive to be a continuous, lifelong process that focuses on the values, skills and capacity that communities need to affect change for sustainability.

■ Box 3.10 Challenges of Obtaining Funding for Community EE

(Excerpt from a NGOs joint submission for 2003 Grants for Voluntary Environment and Heritage Organisations⁵¹)

‘The Federal Government’s Grants to Voluntary Environment and Heritage Organisations provides a small but unbelievably important and unique funding support for the administration of conservation councils as the key NGOs that not only undertake their own work programs across the country but also provide administrative and infrastructure support for, and education and advice services to, an amazing array of other groups and individuals.

What supporters we do have are understandably less attracted to supporting the basic, and profoundly unromantic, operational functions of Conservation Councils, such as stakeholder representation, capacity building in local and regional environment groups and participating in government consultation processes and advisory committees.

Indeed, the onerous - and entirely appropriate - accountability and reporting obligations routinely included in contracts associated with grants for such projects, customarily consume a large proportion of our Executive Officers’ time in project management... and of our offices’ resources.’

Conservation Councils (unpublished, p.1)

■ Box 3.11 Mittagong Forum⁵³

The Mittagong Forum, a group of 25 Australian environmental NGOs, was funded in its first 5 years from a one-off, un-tied grant from the Poola Foundation, a philanthropic organisation. The grant enabled its members to focus intensively on leadership development and capacity building within the Australian Environment Movement, and to successfully leverage over \$400,000 of pro bono support from its partner organisations. One result has been a reorientation of focus to establishing learning cultures within the environment movement by prioritising education and capacity building as a key to successful environmental campaign outcomes.

■ Box 3.12 Collaborative Partnerships

The *WA Collaboration* is a partnership of Western Australian non-government organisations that shape and promote the sustainability agenda for WA.

The *WA Collaboration* uses dialogue as an education tool by encouraging broad community discussion on important regional sustainability issues. Community engagement workshops and sustainability summits resulted in the development of the document '*Community Sustainability Agenda: Creating a Just and Sustainable Western Australia*'⁵⁸.

Funding bodies, environmental educators and policy makers are confronted by issues surrounding resourcing community capacity building and education programs, as well as the institutional barriers and misconceptions of sustainability which inhibit the effectiveness of community EE programs.



3.2 The EE Experience in Community Education: From Principles to Practice

EE in the community plays a crucial role in influencing the course of action in relation to issues of sustainability, particularly in local areas. This document builds upon the few previous studies and provides a review of EE and its contribution to sustainability in the community sector in Australia. It represents a snapshot of the current context through a review of programs and emerging trends.

A number of key themes are identified to assist in constructing a picture of EE experiences in the community and their contribution to sustainability. The themes are inextricably linked and need to be read in conjunction³⁰⁰:

- i) Local Agenda 21 and Local Government;
- ii) Community Action Programs;
- iii) Social Marketing;
- iv) Interpretation;
- v) EE in Communities of Culturally and Linguistically Diverse Backgrounds; and
- vi) Facilitation and Mentoring.





i) Local Agenda 21 and Local Government

■ Box 3.13

Documents Informing LA21 Initiatives in Australia

- **International**
Agenda 21 (1992)
- **National**
National Strategy for Ecologically Sustainable Development, (1992), Newcastle Declaration
- **Regional**
State government sustainability policies and strategies: South Australian Partnership for LA21; Regional strategies: Murray Darling Basin Agreement (1992)
- **Local**
Local Agenda 21

■ Box 3.14

LA21 Initiatives

'Alexandrina Council has successfully integrated its environmental, economic and social goals into its strategic planning process. The project is a solid demonstration that smaller, rural councils are able to engage in and benefit from ... applying Local Agenda 21...

The Council's willingness to open up decision-making processes to the community is testimony of an open and inclusive Council... Engagement of younger people, older people and indigenous people is a reflection of intent to communicate effectively and be open to receiving criticism.'

Department of Transport and Regional Services (2003, p.1)

Across Australia, Local Agenda 21 (LA21) has had a profound influence on the way in which communities have been engaged in local issues of sustainability⁵⁹. LA21 is an international sustainability planning process that provides an opportunity for local governments to work with their communities to create a sustainable future. Currently, over one third of all local governments are involved in LA21 and its associated processes⁶⁰. Education is a critical component of any LA21 process⁶⁴.

LA21 is a planning process that provides opportunities for local governments to work collaboratively with their communities to create a more sustainable environment. LA21 recognises that local governments and the wider communities they represent are ideally positioned to take the lead in achieving sustainability through tackling environmental, social and economic goals on a local level. 'Agenda 21'⁶¹, which arose from the United Nations Conference on Environment and Development held in June 1992, provided the impetus for LA21 by recognising that most environmental challenges have their roots at the local level. Chapter 28 of 'Agenda 21' identifies local government as a major group, and promulgates the significant role of the local authorities and community in achieving change for sustainability⁶². It proposes that local governments all over the world develop their own local Agenda 21⁶³.

LA21 attempts to develop strategies to implement sustainability at the local

level in a way that is meaningful to the community⁶⁷. Chapter 28 of 'Agenda 21' also recognises the importance of community EE in developing a LA21⁶⁸. It focuses on participation and involvement of the community throughout its process, and relies on an extensive web of partnerships amongst all stakeholders to embed change⁶⁹.

It promotes the idea that local governments educate their communities, raise awareness about issues of sustainability, engage in dialogue to learn from and exchange information with their communities⁷⁰. Each of these factors supports processes of learning for sustainability (see Box 3.14 and 3.15).

The Australian Government recognised the significance of LA21 to EE in its 'Environmental Education for a Sustainable Future: National Action Plan', which encourages local government authorities to develop their own LA21 and ecologically sustainable development programs⁶⁵. Professional associations such as the International Council on Local Environment Initiatives (ICLEI) and Environs Australia – the local government environment network – also support local governments in their adoption of LA21 (see Box 3.13). Initiatives, including the *Local Leaders in Sustainability* and the *National Awards for Innovation and Excellence in Government – Local Agenda 21 Awards*, have also encouraged the promotion of LA21 initiatives across Australia⁶⁶.

The principles underpinning LA21 include⁷²:

- community **participation** in the resolution of issues of sustainability;
- integrated **decision-making** that considers the future and sustainability;
- strong **partnerships** between the community and local government;
- development, implementation and evaluation of an **action plan** for sustainability; and
- **change** for sustainability.

Community participation in all stages of the LA21 process increases community learning for sustainability (see Box 3.16). It involves raising community awareness of sustainability issues and improving democratic decision-making for change⁷⁴. Community participation encourages the construction of knowledge through processes of dialogue and building communities' capacities, whilst challenging social and political constraints⁷⁵. Further, capacity building is a key element for building consensus, and community ownership of LA21 processes⁷⁶. By involving the community in such processes a more complex collective understanding of issues and more innovative strategies of action may emerge⁷⁷. LA21 is placing a clearer focus on community participation in envisioning, planning, management and decision-making for sustainability at a local level⁷⁸ (see Box 3.17).

Capacity building is a critical component of learning for sustainability approaches to EE - both within and across councils. It is a vital component of initiating the change process towards a more informed and active public.

The International Council for Local Environment Initiatives (ICLEI) conference *'Pathways to Sustainability: Local Initiatives for Cities and Towns'* (1997) and its subsequent *'Newcastle Declaration'*, highlighted the role of community EE in capacity building for effective participation in LA21 processes⁸¹. Participation in decision-making enables greater ownership over process, and greater personal responsibility to create change, whilst increasing local leadership, informing debate and building social capital for sustainability⁸².

Consistently, international documents such as Agenda 21⁸³ and the WSSD Plan of Implementation accept partnerships as integral to sustainability⁸⁴, and a fundamental element of LA21. Partnerships also underpin learning for sustainability, and are a core aspect of the United Nations Decade for Education for Sustainable Development plan⁸⁵. Partnerships have the ability to challenge the worldviews and assumptions of the partners, particularly those who have conflicting interests. Partnerships increase the impact of LA21 processes⁸⁶.

Various types of partnerships can be adopted in the Local Agenda 21 process (see box 3.19). While the ICLEI⁸⁷ supports partnerships that are voluntary, multi-stakeholder, democratic and mutually beneficial, the Australian Government recognises three types of partnerships found in LA21 programs across Australia⁸⁸:

1. Community driven LA21 programs with resources from local government;
2. Community as equal partner with local government;
3. Community involved strategically or on a case by case basis.

■ Box 3.15 LA21 Process⁷¹:

The LA21 process involves a number of stages:

1. Background research.
2. Establish and build partnerships.
3. Determine visions and goals.
4. Create local action planning document.
5. Implement the action plan.
6. Monitor and evaluate the action plan.
7. Periodically review the plan.

■ Box 3.16 Democracy and Sustainability

'Participation is vital for democracy and sustainability. Changes that support sustainability are more likely to be implemented if people have a clear understanding and commitment to them.

Parliamentary Commissioner for the Environment (2004, p.44)

■ Box 3.17 Benefits of Partnerships⁷³

Partnerships play a vital role in creating opportunities in learning for sustainability. These partnerships often assist with:

- refining the concept and application of learning for sustainability;
- building on existing competence to create synergy;
- demonstrating commitment; and
- ensuring implementation.

■ Box 3.18 Northern Rivers Regional Strategy⁸⁰

The development and implementation of the Northern Rivers Regional Strategy demonstrates a participatory approach that involves all stakeholders in all decision-making and action.

The first step was to undertake envisioning workshops in which 150 community participants from a variety of backgrounds and interest groups attended. The results were submitted to the Strategy Management Committee, who identified six core themes, from which discussion papers were prepared for review by six technical working groups. Three local governments' 'Valley Committees' then considered the revised discussion papers, who prepared a broad outline of priority issues and strategies for the region.

The process was jointly managed by the NSW Department of Urban Affairs and Planning, the Northern Rivers Regional Economic Development Organisation and the Northern Rivers Regional Organisation of Councils, with additional input from other state government departments.

The development of the strategy included wide consultation and involvement of the community within the three local government areas covered by the region.

■ Box 3.19 Partnerships for Local Agenda 21

'A recent ICLEI/CSD survey shows that more than 1800 local authorities in 64 countries have begun work on Local Agenda 21 - or on equivalent processes for sustainable development. Progress has been greatest in countries where national campaigns have been set up. As of June 1996 these included Australia, China, Denmark, Finland, Japan, Netherlands, Norway, South Africa, Sweden and the UK.'

Mills (1997, p.1)

Partnerships formed through LA21 attempt to engage the 'usual' stakeholders, and actively seek partnerships with members of the community who have previously had little involvement in planning processes⁸⁹. An example of this in action was the development of the Northern Rivers Regional Strategy (see Box 3.18). This process involves building partners' capacity to effectively engage them in the decision-making processes required for sustainability.

South Australia is innovative in their approach to LA21 partnerships. In their document '*Local Agenda 21: The South Australian Experience*'⁹⁰ the South Australian Government and Local Governments Association identify community ownership and active community participation in decision-making and implementation as core features of LA21. With over half of all local governments in South Australia now participating in LA21, there are many examples of strong partnerships and learning for sustainability initiatives within communities across the state (see Box 3.20).

In Australia however, these examples are exceptional, most often LA21 is rarely effectively implemented, because of:

- The non-statutory nature of LA21;
- Nationally reduced funding at the local level; and
- A lack of understanding of sustainability principles, and of stakeholder engagement by local authorities⁹¹.

The involvement of the community is the biggest struggle amongst local governments working towards the Newcastle Declaration⁹². While the literature recommends a high level of community participation, in practice

local authorities often overlook the democratic aspects of LA21 at the local level⁹³ (see Box 3.21). David Mercer and Benjamin Jotkowitz claim that community consultation by local government is 'at an extremely modest and tokenistic level'⁹⁴. They suggest that communities have limited access to quality information as well as relatively little power and diminishing rights, restricting their ability to make informed and effective decisions⁹⁵.

This lack of emphasis on effective community participation may be a legacy from the '*Commonwealth's Ecologically Sustainable Development Policy*'⁹⁶, which does not promote broad community participation in the same manner as found in international documents such as '*Agenda 21*'⁹⁷ and the '*WSSD Plan of Implementation*'⁹⁸. Across Australia a reorientation of the way participation is viewed is required to shift it from one of *consultation or involvement*⁹⁹ with the community (which often leaves the community with little or no decision-making power¹⁰⁰), towards one that values *participation in decision-making*¹⁰¹.

Despite assumptions in national and state government policies that local governments have a good knowledge of sustainability, many local governments lack education or expertise in sustainability processes¹⁰² and there are few educational opportunities for local government officers and representatives to learn for sustainability.

While many LA21 Plans support the idea of community education, local government staff rarely have the knowledge and skills to effectively engage the community in learning for sustainability processes. Although LA21 plans across Australia emphasise awareness raising and capacity-building, some local governments are often unable to

effectively build community skills in 'critical reflection' or values clarification¹⁰³, essential elements of learning for sustainability (see Volume 1). These skills enable communities to critically question the social, historical and economic assumptions underpinning decision-making and actions towards the environment. They enable the community to take informed action for change towards sustainability.

■ **Box 3.20**
Reducing Energy Use through Partnerships: Local Government and Industry Sector (South Australia)

'More than 3,000 businesses operate in the City of Charles Sturt... Under the auspices of the *Cities for Climate Protection Program*, the City initiated a pilot project [which] aimed to assist businesses to reduce their energy use and greenhouse gas emissions and was funded by the *Australian Greenhouse Office Challenge Allies Program*. The project was the first of its kind in Australia.'

Through the project the City coordinated workshops and training to educate industry about the advanced technologies as well as environmental auditing and planning. Experienced companies Pierlite Pty Ltd and Clipsal/Gerard Industries were involved as mentors and trainers, guiding smaller to medium sized businesses in this change, while the local government closely assisted the businesses in their audits.

Savings and benefits:

- The companies total annual energy bills were reduced by \$311,222.
- An investment of \$157,110 was required from the companies to achieve the savings.
- Council, small and large businesses cooperated, learning from and assisting each other.
- The companies' total annual CO₂ emissions were reduced by approximately 2,711 tonnes a year, an average reduction of 11.4%.'

Vivian (2002, p.2)

■ **Box 3.21**
Public Participation

'Whereas *Agenda 21* clearly required public participation, in many instances the lack of public participation or inappropriate and inadequate public participation is still evident globally.'

International Association for Public Participation (2002, p.1)

ii) Community Action Programs

■ Box 3.22 Landcare

Landcare is a voluntary group movement that aims to improve natural resource management with around 4,000 groups operating nationally¹⁰⁶. Landcare operates largely in rural Australia, involving 40 percent of farmers who manage 60 percent of land and 70 percent of the nation's diverted water. When first initiated in 1982, the National Landcare Program provided direct funding for large-scale, on-ground work. However, in more recent times, funding and emphasis is being focused towards education and demonstration activities¹⁰⁷.

■ Box 3.23 Powlett River Catchment Landcare project, Victoria¹⁰⁸

The Powlett Landcare project is the result of the formation of partnerships among several local Landcare groups, local land managers and a number of NGOs and natural resource management bodies.

The project engaged in a unique partnership of the West Gippsland Catchment Management Authority ensuring that activities have targeted the priorities outlined in the Regional Catchment Strategy.

The activities have included stream bank planting, wetland protection and re-establishment, sand dune stabilisation, landslip control and weed eradication. Nutrient management strategies for farms have also been developed through workshops with local land managers.

Since 1996, the project's volunteers have worked on 488 sites, planted 870,000 trees and plants, constructed 225,000 metres of fencing and involved nearly 6000 people.

The project now includes community education initiatives, through activities in local schools and involves the wider community in revegetation activities such as the Wonthaggi Big Plant Fun Day.

The last ten years has seen hands-on community action EE programs growing in number. This movement began in the 1980s in Australia with the emergence of Landcare (see Box 3.22), a Victorian Government program addressing sustainable agricultural practices in rural areas¹⁰⁹. The Australian Government quickly recognised the success of the program in engaging the community, leading to its adoption on a national scale in 1982¹¹⁰. Since then a number of state and federal community action programs have emerged including *Coastcare*¹¹¹, *Bushcare*¹¹², *Dunecare*¹¹³, *Rivercare*¹¹⁴, *Greening Australia*¹¹⁵, *Reefwatch*¹¹⁶, *Waterwatch*¹¹⁷. A number of volunteer groups have been emerging in parallel, with the support of national parks associations and environment oriented NGOs such as Australian Conservation Volunteers¹¹⁹. Since their beginnings, community participation in these activities has seen constant growth, which can be largely attributed to increased community concern about and awareness of environmental issues¹²⁰.

To date, community action programs have contributed considerably to environmental action in Australia. They engage participants in activities such as revegetation, weed control, habitat rehabilitation, and control of feral animals¹²¹, and have resulted in important on-ground work in conservation and resource management¹²². They have mobilised a large cross-section of the population¹²³ and in many areas have revived a sense of community¹²⁴ (see Box 3.23). The programs have also resulted in environmental management best

practice, enhanced skills and knowledge, and increased awareness of issues¹²⁵.

While, most community action programs have not primarily focused on education¹²⁷, learning amongst volunteers has been a subsequent and unplanned outcome. The experience of undertaking a project has provided an opportunity for learning¹²⁸ - the act of doing and interacting with peers enables volunteers to exchange dialogue, build confidence and enhance social cohesion, increasing opportunities for both individual and group reflection¹²⁹. Community action programs have shifted community attitudes and developed a stewardship ethic towards the environment¹³⁰. They have focused on a 'hands on' approach to community learning and have empowered communities to take responsibility of local environmental degradation problems¹³¹ (see Box 3.24).

Community action programs assume that a change in knowledge, attitudes and behaviour will result in the level of change required for sustainability¹³². While these programs are enabling some positive environmental outcomes, most volunteers have not built the capacity to envision and manage change (predominately social change) for sustainability¹³³. As a result, volunteers may not be able to participate in decision-making concerning sustainability issues at their core; rather they accept an end-of-pipe approach to environmental management, for example through their involvement in pre-determined restoration and conservation projects.

'Agenda 21'¹³⁴ and the 'WSSD Implementation Plan'¹³⁵ recognise the importance of involving the community in decision-making for social change needed to address the core issues behind environmental exploitation. Community action programs must afford communities with ownership and control of the learning process and engage them in decision-making processes to ensure effective learning for sustainability¹³⁶ (see Box 3.25). Community action programs must become more proactive by encouraging communities to become transformative thinkers, capable of communicative action based on shared understanding and democratic dialogue. This shift can enable the social change required to address issues of sustainability at their source.

While little funding is currently allocated to teaching of the volunteers involved, community action groups are increasingly eligible for funding to educate the broader community about their programs through awareness raising and capacity building processes¹³⁷. As a result, the wider community are being involved, educated and informed of the importance of managing natural environments by community action groups. These programs improve community knowledge and awareness concerning resource degradation and environmental management issues within the broader community¹³⁸ (see Box 3.26).

The role of community action volunteers as environmental educators, however, has two substantial limitations:

1) *The capacity of community action groups as environmental educators.* Community action groups are largely dependent on volunteers - as such it cannot be assumed that there is expertise among groups to understand the importance of pedagogical components such as

envisioning, 'critical reflective thinking', values clarification and systemic thinking, underpinning learning for sustainability. More over, despite their wide appeal, some community action programs lack the resources for effective coordination between sites; as a result community action groups do not deliver consistent EE learning outcomes. These factors result in ad-hoc and ineffective EE, which focuses on raising awareness and understanding of an issue, rather than generating systemic change for sustainability.

2) *Assumptions regarding awareness and action.* While awareness is an important aspect of EE, community action groups sometimes assume it alone will result in positive actions for the environment and sustainability. Learner participation in change, however, requires action competence (see glossary) in which learner choice, reflection, and critical decision-making are crucial¹⁴¹ (see Box 3.27). By using an action competence framework, community action groups will be challenged to consider the role of democratic engagement; the need to understand the context for action; and, the development of action-taking skills¹⁴².

Action learning is an approach to help reorient the focus of community action programs towards learning for sustainability. In action learning, *learning arises from the process* rather than the outcome¹⁴⁴. Action learning is suitable for volunteers of community action programs as it involves a learner-centred approach, which requires personal commitment and ownership¹⁴⁵. Action learning is a cyclical process involving planning, action and reflection¹⁴⁶. It is underpinned by dialogue and participation, and empowers community groups to apply their knowledge and skills to engage in decision-making for sustainability¹⁴⁷. A volunteer education program underpinned by a learning for sustainability approach to Environmental Education has recently been established as a collaborative initiative between the City of Sydney

■ Box 3.24

Community Action and Empowerment Programs

Tidy Towns Groups¹²⁶

In South Australia a large number of community action programs occur under the Keep South Australia Beautiful (KESAB) umbrella organisation. This organisation links community groups, schools and local government and assists in co-ordinating long term planning.

In 2004, 334 communities took part in the Tidy Towns 'Enviro action, education and sustainability programs' which resulted in further involvement from 2700 organisations and equivalent to 700 000 hours. For example the Port Vincent Tidy Towns Group collects and recycles glass containers taking advantage of SA container legislation. The group has also constructed a glass-crushing machine which allows the group to raise funds to extend their activities. The Tidy Towns program is a fully integrated rural environmental program with strong focus on sustainable practices and action based outcome in rural South Australia. They provide a focus that is relevant to current environmental issues, and is linked to sustainability. Voluntary efforts across the state have provided a sound base upon which ongoing and expanded commitments are being built, generating huge contributions towards environmental management, repair and preservation – as well as maintaining and improving community facilities and town appearances, and fostering civic pride.

■ Box 3.25 Community Action Programs Internationally

An effective community action program was developed by WWF Spain. The project trained volunteers in a range of skills including EE and involved them in action and change.

WWF-Spain Local Action Groups¹³⁹

WWF-Spain's *Local Action Groups Program* is a network of local volunteer groups that plan, execute and evaluate environmental action projects in their own communities.

The program has a strong education and focus, with a Central Team that provides a series of education and capacity-building workshops for members of the Local Groups. These workshops involve sessions on EE, project planning, monitoring and evaluation, and fundraising. The Central Team also facilitates regular meetings among the coordinators of Local Groups, providing opportunities for coordinators to reflect, build upon what they have learnt and plan for improving the effectiveness of their efforts.

To date, these groups have achieved a number of environmental conservation and education outcomes and impacts. These achievements have been attributed to the program's emphasis on education for change, motivating and empowering people to actively engage in environmental conservation, decision-making and change. Through educating for capacity building and not just providing information or financial support, WWF-Spain is enabling Local Groups to sustain their own efforts.

■ Box 3.26 Swansea Coastcare Group, Tasmania¹⁴⁰

Concern for declining numbers of shorebirds in the Meredith Estuary has motivated the Swansea Coastcare group to work towards their protection through a local community education initiative.

With Coastcare funding, the group has designed and constructed signs for two coastal Conservation Areas as a means of raising awareness within the community. The group has also hosted a shorebird discovery walk for local primary school children and carried out revegetation on the Meredith River.

■ Box 3.27 Action Learning

'Action learning is a continuous process of learning and reflection with the intention of getting things done; it aims to develop action competence in participants, and a critical, reflective and participatory approach by which the person can cope with future problems and issues.'

Beaty (1999)

■ Box 3.28 The Watershed Volunteer Education Program¹⁴³

The *Watershed* program educates volunteers to become environmental educators. Watershed staff mentor and engage volunteers in action learning and action research, building volunteer capacities in designing education programs. The programs engage and empower the communities to make informed decisions regarding change for sustainability. The approach is uniquely different from other volunteer programs as it encourages volunteers to explore and share their own learning experiences, contributing to sustainability. This freedom for volunteers has resulted in highly innovative, informed and energised education programs, and has enabled the *Watershed* to have a far greater reach than their permanent officers alone could achieve.

■ Box 3.29 Critical Reflection

'Critical reflection on action focuses interactively on the outcomes of action, the action itself and the intuitive knowing implicit in the event. Learners reflect on their experiences, thinking about what has taken place and inquire into it.'

Williamson (1997, p.97)

■ Box 3.30 Citizen Education

'Citizen education will be more effective where the learning is linked to a group action learning project where they have been empowered to identify the problem, plan and implement the action and evaluate its success.'

Jones (2000, p.21)

Council and Marrickville Council (see Box 3.28).

'Critical' thinking and reflection are crucial to effective action learning¹⁴⁸. Through this process, meaning is understood and reflected upon in continuous action which in turn generates further learning¹⁴⁹ (see Box 3.29). 'Critical reflection' is required to examine personal and social contributions to change and to examine issues of sustainability holistically and systemically¹⁵⁰. This aspect of the action learning process is the key to reorienting the focus of community action groups from end-of-pipe solutions to identifying opportunities for systems change.

While action learning offers promising outcomes for community action programs, studies suggest that funding priorities and restrictions have influenced many of the choices of on-ground activities for groups¹⁵¹. Funding priorities away from learning for sustainability has limited action learning's scope within community action groups.

Community action programs have made a significant contribution to community participation and sustainability. Traditionally, their focus has been on action, however, increasingly community organisations are recognising the importance of learning to embed change within communities. Action learning is offered as a suitable methodology to engage community volunteers in learning for sustainability, whilst continuing to generate action through conservation and restoration programs. By empowering local citizens to take action and develop ownership of learning in their own 'backyards', community action programs have the potential to address issues of sustainability at their source, generating systemic change for a sustainable community¹⁵² (see Box 3.30).

iii) Social Marketing

Social marketing has a growing presence in community EE in Australia. The concept of social marketing emerged in the early 1970s, when academics began to consider the potential of applying marketing techniques to social, political and health arenas in order to encourage new behaviours in groups of people¹⁵³ (see Box 3.31). While it is still most often associated with health and safety campaigns, community EE and behaviour change initiatives are increasingly using social marketing. It also features prominently in EE literature, workshops, seminars and resources¹⁵⁴.

Social marketing draws on commercial marketing principles to change the 'attitudes, beliefs and behaviours of individuals or organizations for a social benefit'¹⁵⁶ (see Box 3.32). It uses theories and principles from psychology, communication theory, advertising, public relations and market research¹⁵⁷ to target individuals' attitudes and behaviours, triggering a sense of personal and community responsibility. This individual behaviour change outcome underpins social marketing¹⁵⁸.

In Australia, a range of local and state government agencies, businesses, NGOs and community-based organisations apply social marketing techniques to a variety of community EE programs. These programs address sustainability issues such as pollution control¹⁵⁹, consumption and waste¹⁶⁰, stormwater education¹⁶¹, energy conservation¹⁶², environmental health

issues¹⁶³, wildlife conservation¹⁶⁴, transportation and travel practices¹⁶⁵, and sustainable lifestyles¹⁶⁶.

Federal and state government agencies in particular are directing spending towards social marketing in bigger and more striking programs¹⁶⁸ (see Box 3.33). The majority of social marketing programs in Australia focus on single environmental issues or topics, such as littering¹⁶⁹ or stormwater issues¹⁷⁰, and tend to target their messages to a specific audience, for example, ethnic communities¹⁷¹, home owners¹⁷² (see Box 3.34) and even pet owners¹⁷³. This narrow focus reflects traditional marketing theory, which attempts to deliver a single, simple message to an identified market segment on a single 'product' or issue¹⁷⁴.

However, one exception to this 'single issue – single audience' approach is the NSW Government's *Our Environment: It's a Living Thing program*¹⁷⁵ (see Box 3.35). The program, which is largely based upon a social marketing campaign, adopts an innovative approach in that it:

- a) seeks to address environmental issues more holistically – through a sustainability framework; and
- b) uses a range of tools to raise awareness, build capacity and promote change for sustainability.

The *Our Environment: It's a Living Thing* social marketing initiatives were supported by learning for sustainability workshops and mentoring programs

■ Box 3.31 Social Marketing

'Social marketing is the adaptation of commercial marketing technologies to programs designed to influence the voluntary behaviour of the target audience to improve their personal welfare and that of the society of which they are a part.'

Andreasen (1994, p.109)

■ Box 3.32 The Social Marketing Approach¹⁵⁵

Step 1 - Assessment - identifies why people behave the way they do, by providing insight into the benefits and barriers that people perceive about the proposed behaviour.

Step 2 - Design and Planning - compares the message to goals and selects the most effective and affordable medium. Prepares a draft script, storyboard, or rough tape to convey the message.

Step 3 - Pre-test and Revise - tests the draft campaign items with a small subset of the target audience and revises if necessary.

Step 4 - Implement - implements program and associated campaigns. Reworks campaign as necessary as community seek more information and respond to messages.

Step 5 - Monitor and Evaluate - monitors and evaluates the impacts and outcomes of the program and campaign once it has been implemented across a community.

■ Box 3.33 Australia's Top-Spending Social Marketing Organisations⁶

1. NSW Roads and Traffic Authority - \$11.2 million
2. Victoria Transport Accident Commission - \$5.9 million
3. Victoria Workcover Authority - \$3.1 million
4. Melbourne Water – \$2.5 million
5. Victoria Anti Gambling - \$2.4 million
6. NSW Workcover Authority - \$1.8 million
7. NSW Environmental Protection Authority - \$1.7 million
8. Sydney Water Corporation - \$1.6 million
9. WA Water Corporation - \$1.2 million
10. Victoria Anti-Cancer Council - \$1.1 million

* Figures indicate approximate media spend from 1 Dec. 2002 to 31 Nov. 2003.

AC Nielson Media Research in Imber (2004, p 17)

■ Box 3.34 Winter Air Pollution Campaign, South Australia¹⁶⁷

The South Australian EPA launched a community awareness campaign, targeted towards residents who use wood heaters. The program aimed at the single issue of reducing the smoke haze and air pollution caused by wood heaters. The campaign provides residents with free information packs to encourage alternative heating sources.

■ Box 3.35 Our Environment - It's a Living Thing, NSW¹⁷⁶

Our Environment – It's a Living Thing is a NSW Government community education program that aims to provide practical information needed to adopt environmentally sustainable lifestyles. The program was launched in 2001 with \$17.5 million funding over three years from the NSW Environmental Trust and the Waste Fund and is overseen by the NSW Department of Environment and Conservation¹⁷⁷.

The program uses social marketing to encourage people to make small changes in their everyday lives and includes issues such as reducing waste, conserving water and energy, volunteering and transport alternatives. The program uses traditional mediums such as television and radio for awareness raising, however, its innovation stems from its use of support tools that facilitate action for change, such as mentoring and workshops amongst key agents of change, ensuring change is embedded within important community systems.

■ Box 3.36 Key Issues and Assumptions Facing Social Marketing Techniques in EE:

- Social marketing focuses on individual behaviour change as opposed to structural change;
- Social marketing assumes a linear path from increased knowledge to behaviour change;
- Social marketing misrepresents the nature of environmental issues by emphasising individual human agency as the key factor in issue resolution.
- Change is influenced by several factors, both individual and structural;
- Campaigns often face limited funding and timeframes;
- Market research is often omitted or inadequate;
- Social marketing assumes a rational-economic model;

helped transfer interest and awareness raising (resulting from social marketing) into change outcomes.

Social marketing is underpinned by several key assumptions which are responsible for its limited success in getting to the core of unsustainable practice and creating social change for sustainability (see Box 3.36).

First, social marketing adopts a behaviourist approach by relying on the behaviourist modification theory (see Box 3.37) to achieve its goal of positive social change¹⁷⁸. This theory aims to identify the key factors that determine the behaviours of target audiences, operating at the individual, family, or community levels.

Second, its approach is strongly deterministic in character, and uses prediction and reinforcement to control the thinking and action of an individual¹⁷⁹. In this framework social marketers consider ways to make the new behaviour desirable and accessible to the target population by focusing on the benefits of, and barriers to, its adoption¹⁸⁰. Their strategies concentrate on the repetitive dissemination of information to increase knowledge with the aim of influencing an individual's behaviour (see Box 3.38).

Third, the desired predetermined outcome of a social marketing program is behaviour change based on the values of the expert / educator¹⁸¹. As such, the community have only two possible conditioned responses to the educators' suggestion: to follow or to ignore the message¹⁸². EE theorists such as Ian Robottom and Paul Hart¹⁸³ are critical of this approach as

they believe it disempowers citizens by imposing values upon them. It is ‘anathema to independent ‘critical’ thinking’¹⁸⁴.

Fourth, the behavioural responses sought in social marketing are usually targeted at the individual and relate to personal lifestyle decisions. Consequently, those who support EE question its effectiveness in sustaining change as social marketing programs often attempt to concentrate on individual knowledge and responsibilities without addressing broader social and political pressures¹⁸⁵.

Ian Robottom and Paul Hart suggest that collective action rather than individual efforts are far more effective when attempting to negotiate, manoeuvre and persuade for the environmental issues related to ‘quality of life’ or ‘social needs’ that underpin sustainability issues¹⁸⁶. Social marketing, conversely, often results in ‘blaming the victim’ rather than addressing the social, historical and political factors, which inhibit changes to behaviour¹⁸⁷ (see Box 3.39).

Fifth, most social marketing is also underpinned by the assumption that increasing knowledge through information dissemination will change attitudes and behaviour¹⁸⁸. A number of studies conducted on this relationship have established that while social marketing programs have enhanced knowledge and awareness of a large number of environmental issues, they have had little or no impact on attitudes and behaviour towards the environment¹⁸⁹.

Finally, social marketing adopts the ‘rational-economic model’, which assumes that individuals will **always** act in accordance with their financial best interest¹⁹⁰. However, research has shown that programs that have

provided information on the personal financial gains of a particular behaviour have been largely unsuccessful¹⁹¹. This assumption has stemmed from the oversimplification of human behaviour, disregarding factors such as cultural practices, social interactions and human feelings and values¹⁹².

Barriers to Individual Change

Lack of knowledge and unsupportive attitudes are only two of the barriers for individual change¹⁹³. Outside the capacity of social marketing techniques, barriers include a lack of services infrastructure or a lack of convenience. By eliminating the possibility for structural change, personal change is also limited. As a result, a growing number of EE academics and practitioners are rejecting social marketing’s exclusive focus on individual behaviour change as an approach to education and embedding change¹⁹⁴.

As such, social marketing is in conflict with the principles of systemic thinking embedded in sustainability. Systemic thinking attempts to view systems as a whole, rather than in fragments or parts. Systemic thinking has implications for how we construct understanding and therefore what we actually learn. For example, learning for sustainability promotes identifying relationships which can embed change as opposed to single actions which may not challenge root causes. For it to be effective, social marketing needs to be used in conjunction with learning for sustainability tools such as mentoring or action research, which challenge deeper assumptions. These techniques engage the learner more deeply in understanding systems and help to build capacity for change.

In light of these issues, social marketing campaigns have been found to have a short-term impact as they do not allow for:

■ Box 3.37

Behaviourist Modification Theory

‘Implementing a behaviour modification program involves a number of steps. The first one is specifying the behaviour to be changed. Next, its present frequency (the base rate) must be measured. Then various outcomes contingent on the desired behaviour are administered and changes in frequency observed. Most programs include frequent reports and feedback. The result is a determination of the rewards that work best and the best reinforcement schedule.’

Thomsen and Atchison (2002, p.1)

■ Box 3.38

Influencing Behaviour

‘A central premise of social marketing is that changing individual behaviour is central to achieving a sustainable future.’

McKenzie-Mohr (2000b, p.544)

■ Box 3.39

Towards Sustainable Lifestyles

‘The challenge for guiding people towards sustainable lifestyles is one of helping them to discover for themselves the changes which are most meaningful for them and helping them to develop the action skills or competence to create social change.’

Jensen and Schmack (1997, p.174)

■ Box 3.40 Action Orientated Approaches

While behaviour may be seen as a pre-determined outcome, an action is 'directed at solving a problem and is decided upon by those preparing to carry out the action'.

Jensen (2002, p.326)

■ Box 3.41 Action Competence

'The concept of action competence includes the capacity to be able to act, now and in the future, and be responsible for one's actions.'

Jensen & Schnack (1998, p.175)

■ Box 3.42 Action Orientated

'People are more likely to change deeply entrenched behaviours and beliefs when they conclude themselves that change is necessary rather than change because someone exhorted them to. This, in turn, is more likely to be facilitated when people are not just participants in a campaign but are also its architects and drivers.'

Flowers et al (2001, p.36)

■ Box 3.43 'It's How You Get There That Counts'²⁰⁵

TravelSmart is a Western Australian Government initiative that began in 1997 with the aim of stimulating people to voluntarily change their travel behaviour. The initiative aimed to complement existing transport infrastructure and service provision through providing the skills and information needed to empower people to use alternative forms of transport.

The initiative involved an Individualised Marketing campaign, along with Workplace, School, Local Government and Major Destination Programs. It largely utilised social marketing and commitment strategies for achieving change. The campaign involved home visits, providing respondents with either a reward or information materials about public transport. Program participants were also requested to consider making a small change in their travel behaviour, to use an alternative to the car as a 'driver only' for 2 to 3 trips out of 19 per week.

In the City of South Perth alone the program has resulted in 90% increase in cycling, 20% increase in public transport use, and 16% increase in walking trips. Consistently, it involved a 10% decrease in single occupant car use. These results have been found to be highly cost effective both for the city, and the citizens, and have been maintained for over two years. The outcomes from this program are also expected to contribute to a reduction in greenhouse gases and improved health.

a) reasoned consideration of evidence;

b) a conscious consideration of issues of context¹⁹⁵; and

c) societal structural change based on informed decisions and 'critical reflection.'

Growing evidence supports shifts towards more action-oriented approaches to EE¹⁹⁶, which support critical reflective and participatory approaches to addressing environmental issues¹⁹⁷. This shift is also emerging in some programs that include social marketing campaigns¹⁹⁸ (see Box 3.43).

An action-oriented approach is seen as the democratic alternative to behaviourist education programs. In this approach, the actions towards sustainability are selected and owned by individuals or groups and may be directed at lifestyle decisions or towards the transformation of the social structures and conditions that impede sustainability¹⁹⁹. This approach is helping alleviate many of the limitations of social marketing (see Box 3.41).

An action-oriented approach to community EE provides a number of benefits that are not possible with social marketing²⁰⁰. It does not rely on experts to determine how people should behave or how they should think, but promotes learners active engagement in decision-making and appropriate public policy²⁰¹. It helps people to feel a sense of ownership and commitment to the actions they choose and encourages long-term adherence to decisions, actions and policies²⁰². Action-oriented approaches provide opportunities for consideration of ethical issues and equip people to

make appropriate changes in their actions as circumstances change²⁰³ (see Box 3.42).

Associating social marketing programs with ‘critical’ thinking and reflective tools associated with learning for sustainability may help overcome some of its limitations. The Western Australian *Travel Smart*²⁰⁴ program, heavily based on social marketing, for example, has action oriented components and integrates aspects of ‘critical reflection’ and ‘critical’ thinking in its programs by encouraging families to keep travel journals, to reflect upon their choices and feelings in their changing travel patterns. In these journals, parents reported shifts in family dynamics by simply walking their child to school rather than battling traffic in the car. Not only did these parents understand that they were contributing to a cleaner environment as well as their families’ health, but they also began to capitalise on the opportunity to engage in conversation with their children, strengthening family relationships. The use of the journal as a mechanism for ‘critical reflection’ on their thinking and actions leads to a shift towards sustainability (see Box 3.43).

Although social marketing campaigns cannot be assumed to generate and embed change, one should not overlook social marketing’s key role in raising awareness and disseminating information. Access to accurate information is at the heart of the democratic process and is fundamental to the educational process²⁰⁶. To date, social

marketing in Australia has achieved success in increasing community knowledge about the environment and sustainability. However, as Alan Andreasen²⁰⁷ concedes, social marketing should not replace community EE, rather it should be a supporting component of the latter (see Box 3.44).

With this in mind, the diversion of government EE funding towards isolated social marketing campaigns is concerning. This trend is limiting the amount of resources available for learning for sustainability approaches to addressing environmental issues.

■ **Box 3.44**
**Social Marketing Supporting
Community EE**

‘Social marketers should not be tasked with the burden of carrying out either basic education or value change if these present massive challenges.

My fear is that, as social marketers are called in to achieve behaviour change objectives where massive changes in knowledge and values have not already been achieved, they will misapply their valuable skills, waste scarce resources, and show very limited success, at least in the short term.’

Andreasen (1994, p.111)



iv) Interpretation

■ Box 3.45

Interpretation

Environmental or heritage interpretation is 'an educational activity which aims to reveal meaning and relationships through the use of original objects, by first hand experience and by illustrative media, rather than simply to communicate factual information'.

Tilden (1977, p.8)

■ Box 3.46

Six Principles of Interpretation:

1. 'Any interpretation should somehow relate what is being displayed or described to something within the personality or experience of the visitor.
2. Information...is not interpretation... however, all interpretation includes information.
3. Interpretation is an art.
4. The chief aim of interpretation is not instruction, but provocation.
5. Interpretation should aim to present a whole rather than a part.
6. Interpretation addressed to children should ...follow a fundamentally different approach.'

Tilden (1977, p.9)

■ Box 3.47

Cleland Wildlife Park Yurridla Aboriginal Trail, South Australia²³³

The Yurridla Aboriginal Trail provides visitors with the opportunity to roam freely amongst native Australian animals while Yurridla Aboriginal guides provide an indigenous interpretive experience. The guides bring to life Dreaming stories of dingoes, emus, koalas and Yurrebilla, the Creation Ancestor.

Over the past two decades, interpretation of the natural environment and cultural heritage has had an increasing presence within community education in Australia. It is a communication process that attributes meaning to environmental and scientific information within a community or cultural setting. It ultimately seeks to build knowledge and awareness through a fun, leisure-based learning experience in the environment, be it natural or built²⁰⁸.

Freeman Tilden, a founder of modern modes of interpretation, saw the practice as a means of moving away from traditional information dissemination towards a process that stimulated thinking and development of meaning within a learning experience²⁰⁹ (see Box 3.45). He saw interpretation as being able to provoke learners into challenging their own beliefs and values, opening them up to new understanding²¹⁰.

In practice, interpretation is often associated with community EE by national park authorities, state forests, Aboriginal sites, visitor centres, museums, zoos, botanic gardens and heritage agencies as well as by outdoor, adventure and ecotourism ventures²¹¹. While the terms EE and interpretation are often used interchangeably, the prime goal of interpretation is to reveal the meaning about natural and cultural resources to an audience²¹² (see Box 3.46), rather than to create change towards sustainability. Interpretation is about communicating ideas and messages to help people understand themselves and their relationships with the natural and built environment²¹³. Interpretation is more than just the dissemination of information; it

involves a constructivist²¹⁴ approach to learning, and attempts to build relationships with the learner through processes of meaning making²¹⁵.

Interpretation can range from specific awareness of a site in natural area management through to general areas of interest that might include historical, scientific, wildlife or natural resource management information²²⁶. Furthermore, interpretation uses many tools including signage, displays, educational materials, electronic media, performances and guiding activities²²⁷. Text in the form of brochures, catalogues and labels is the dominant medium used in interpretation in Australia²²⁸. Guided interpretation can also be found offered in thousands of national parks and reserves across Australia²²⁹ (see Box 3.47). The vast array of options for interpretation has meant that its practice and quality varies widely²³⁰.

Formal recognition of excellence is offered by the Interpretation Australia Association through their National Award for Excellence in Heritage Interpretation. This award recognises organisational and individual contribution to interpretation and aims to foster greater professional interest in interpretation, increase community awareness of the nature and importance of interpretation and encourage the exchange of new ideas²³² (see Box 3.48).

For outdoor interpretive agencies, interpretation is closely aligned with Environmental Education *in* the environment (see Box 3.49). This paradigm of learning assumes that education requires a close experience with the environment to gain

understanding and build personal relationships and rapport with the environment²³⁴. Consequently, interpretation is historically and culturally bound and value laden²³⁵. Interpretation's emphasis on providing meaning, lead to the integration of the interpreter's cultural values into the interpretive activities or display. As such, a community's values may not be represented when an item is interpreted.

These assumptions and the dissemination of information from the expert to the learner in interpretation is often criticised for being instrumentalist²³⁶. This relationship lacks opportunities for the participants to engage in the information exchange²³⁷, a process critical to learning for sustainability. Further, interpretation cannot be assumed to stimulate 'critical thinking' and reflection amongst participants (see Box 3.50).

Interpretation assumes that when participants understand the significance of an item or place, they will appreciate and treasure it²³⁸. This, it is assumed, leads the individual to develop positive values and an ethic towards the item or place²³⁹. However, the limitations of this linear relationship can be best represented in the recent NSW Government report: *'Who Cares about the Environment?'*²⁴⁰. The report found that although citizens' care for the environment has increased, their actions do not consistently reflect this, and the environment continues to degrade. New approaches to community learning for sustainability are required to generate the social change associated with sustainability²⁴¹.

Interpretive agencies, such as museums, botanic gardens, parks and zoos, are beginning to take steps to invite learners to become more involved in the interpretive process, rather than merely consuming the interpretive experience²⁴². Interpretation programs at these sites are becoming more interactive (see Box 3.51), and are concentrating on engaging the public in conservation issues²⁴³. The location of regional botanic gardens, local museums and historical societies etc. within the community itself, and often run by community volunteers, can facilitate opportunities for EE and community engagement. This opportunity needs to be capitalised on further and professional educational support can often be provided for these organisations by the larger state and national institutions.

While this new approach engages visitors in the learning process, it does not necessarily create change for sustainability. The activities in which learners are participating are often found in a contrived environment, and require learners to adapt their learning experiences to action in their everyday lives.

Cultural institutions such as museums, zoos and botanic gardens as well as heritage agencies are ideally placed to support EE as their focus changes from their traditional role of amassing, taking care of, studying and displaying valuable collections to that of being learning institutions. This shift is in response to a growing perception that those who work in them are the stewards of cultural and natural heritage, which is seen as belonging to the people and is for the enrichment of the community²¹⁶. Such institutions build social capital and provide opportunities for education and learning. The public perceives they offer unique learning experiences including a visual dimension,

■ Box 3.48

Cadi Jam Ora – First Encounters Garden Royal Botanic Gardens, Sydney²²³

Cadi Jam Ora provides the starting point for the story of the Aboriginal People in Sydney (Cadigal). It aims to evoke the memory of the Aboriginal presence on the site and to convey a sense of difference in the attitudes to the natural environment between the Cadigal and the First Fleet Settlers. The success of the interpretive panels and garden plantings in conveying the story of the Cadigal has been recognised by the award of the Interpretation Australia Association National Award for Excellence in Heritage Interpretation in 2002.

As reported by one of the project assessors: 'This project has many outcomes beyond mere visitor interaction; the involvement of many people/groups, particularly Indigenous people, scientists, horticulturalists and schools builds ownership and relationships. It also makes a very real commitment to reconciliation²²⁴'

Kangaroo Island – Stories about change, nature, people and Mysteries Flinders Chase National Park, SA²²⁵

This interpretation program is based in the Flinders Chase Visitor Centre and offers visitors the chance to discover many facets of the park using a broad range of media involving sight, sound and touch. The centre provides multi-media interpretation for a wide variety of audiences and the nomination for the Interpretation Australia Association National Award for Excellence in Heritage Interpretation in 2003 was highly commended by the Association.

■ Box 3.49

Interpretation as Education in the Environment

'The role of environmental education is to provide the learner with a whole range of sensory experiences in, and with, environments so a sense of real empathy is developed with environments – almost to the point where learners will regard the environment as a friend and therefore be less likely to damage it.'

Robottom and Hart (1993, p.23)

■ Box 3.50 Critical Thinking?

'Interpretation contains an ideological imperative to present an image of the cultural and natural environment which is in accord with society's dominant values'.

Young (1995, p.4)

■ Box 3.51 EcoLogic, Sydney's Powerhouse Museum

EcoLogic is an innovative exhibition that focuses on demonstrating through interactive activities how average Australians' decisions impact on our environment.

'EcoLogic is a multi-layered exhibition that includes compelling objects, graphics, sculpture and artworks. EcoLogic presents videos, film and soundscapes that bring you face to face with extraordinary Australians who are changing the way we live, manufacture and work. EcoLogic has fun interactive displays to help explain complex issues.'

Powerhouse Museum (undated, p.1)

■ Box 3.52 Mission Statements of Cultural Institutions in Australia:

'To further its reputation as a museum that celebrates human creativity and innovation in ways that engage, inform and inspire diverse audiences.'

Powerhouse Museum

'To lead, inspire and empower everyone to connect with wildlife, build knowledge, develop skills and take informed action to conserve the natural world.'

Melbourne Zoo

'To manage the Botanic Gardens of Adelaide, their biodiversity and people, to advance plant conservation and sustainable horticultural practices, and to enrich South Australia's social capital and cultural fabric.'

Botanic Gardens of Adelaide

'To equip all Western Australians to better understand themselves, their environments (natural, social and built) and their place in the world.'

Western Australian Museum

■ Box 3.53 Community Greening²⁴⁴

In August 2000 a formal partnership, called *Community Greening*, was initiated between the Royal Botanic Gardens Sydney and the NSW Department of Housing to establish community gardens and green the urban environment. The aim of the initiative was to encourage residents in Department of Housing estates and associated school communities in urban and regional NSW to take ownership of their local environment, develop an understanding of sustainable horticulture and make friends with people from a diversity of backgrounds.

The relevance of *Community Greening* to community renewal was acknowledged with a Silver Award in the Social Justice Category in the NSW Premier's 2002 Public Sector Awards.

informality, a reflective atmosphere and ways to extend horizons²¹⁷.

The significance of cultural institutions as contributors to lifelong public learning is also being recognised internationally. For example, research funded by the Department of National Heritage²¹⁸ in the United Kingdom states that museums can only be successful if they accept that communities are a resource as well as a target for education, and if communities become rooted in museums, as well as museums in communities. Empowering members of their community to work on behalf of the institution has been a deciding factor in the success of many of the best museum community education projects.

Public education and community engagement are clearly evident in the current vision and mission statements of cultural institutions throughout Australia (see Box 3.52), with zoos and botanic gardens taking an active role in nature conservation and sustainability.

At the national level, Museums Australia has established sustainability guidelines for policy and practice. Its policy document highlights that the community will require a greater understanding of the interdependence of the economy, environment and social and cultural issues, to be able to identify sustainable and unsustainable practices. Museums are in a position to play a vital role in building collaborative relationships and using education and research to raise awareness and support the personal changes required to achieve sustainability²¹⁹.

Botanic gardens worldwide have a unique and vital role to play in EE²²⁰. This is internationally promoted by the professional body, Botanic Gardens Conservation International

(BGCI), which links botanic gardens to a co-operating global network that has developed a ten year strategy for effective plant conservation. BGCI has responsibility for coordinating target number 4 which specifically advocates the role of communication, education and public awareness programs in effective plant conservation²²¹. BGCI has also conducted research into learning for sustainability and has found that although there are some outstanding examples the majority of botanic gardens are weak in their implementation of these principles. Botanic gardens are ideally placed to work with their local communities and participate in resolving environmental problems²²².

Effective EE requires that learners have greater opportunities for developing critical thinking skills for reflection and participation in decision-making²⁴⁵. If visitor experiences are to provide opportunities for personal transformation, then what may be required is not more information but more opportunities for self discovery, reflection, provocation, and the questioning and clarification of values and assumptions²⁴⁶.

Ideally these opportunities take place 'in their own backyards' and to this end many of the larger cultural institutions run outreach education programs. By taking place where the people live and in response to community needs, local social and environmental issues can be addressed and resolved. The most successful programs are those delivered as partnerships with other agencies as well as community representatives and are initiated by the community itself (see Box 3.53). By positioning itself as a community partner local government could provide an additional link to for these institutions to their communities.

Cultural institutions are also becoming increasingly aware of social issues such as equity and are working towards being inclusive of all sectors of the community. Social inclusion should be part of their common corporate culture, not just in maintaining their relevance through exhibition programming, but also in planning across the board²⁴⁷ (see Box 3.54).

Increasingly, interpretation is moving away from the traditional and rather instrumentalist pedagogy towards activities which are more learner-centred²⁴⁸. In some instances, interpretation is becoming a process by which visitors can make sense of their visits within the wider context of their everyday lives and assists them in the clarification of their positions on issues such as environmental conservation²⁴⁹ (see Box 3.54). Interpretation is becoming increasingly aligned with the principles and processes of learning for sustainability.

While at this stage, alternative or complementary forms of interpretation involving higher levels of participation in decision-making and involvement in the educational process by visitors are less common²⁵⁰, the emerging shift towards more learner-centred approaches and engaging communities in the design and implementation of interpretation is encouraging. By redirecting interpretation techniques towards engaging the learner in a process of reflection and critical thinking, the interpretation approach can open up learners to new understandings and begin to reorient interpretation closer to the principles of sustainability.

■ Box 3.54

Communities Determining Interpretation

Communities are becoming more actively engaged in the development of interpretation²⁵¹. This shift is important in ensuring that the community, rather than the expert, determines the values, history and cultural aspects to be revealed in the interpretation. Indigenous communities around Australia, for example, are becoming increasingly actively involved in the planning, design and decision-making concerning the interpretation of their communities in its environments.

i) Kaurna Park Indigenous Interpretation Trail project

'The City of Salisbury and Kaurna Aboriginal Community are working together to develop an Indigenous interpretive trail at the Kaurna Park wetlands site... The Kaurna Park Project is designed to build community respect for Kaurna culture and history. It is also hoped that Kaurna Park will become a focus for reconciliation between Indigenous and non-Indigenous Australians... It is envisaged that through a partnership between the Kaurna community and the City of Salisbury, the unique Indigenous knowledge of wetlands can assist and improve future planning, management and interpretation of these unique spaces in the urban environment.'

City of Salisbury (undated, p.1)

*ii) Kodja Place Visitor and Interpretive Centre*²⁵²

From the outset the project to establish the Kodja Place Visitor and Interpretive Centre was community driven. Its community engagement was based on strong protocols, it employed good design and fostered capacity building. Its processes were as important as its outcome.

*iii) Children's interpretive web game*²⁵³

Discovernet on Australian Museums and Galleries Online provides an interactive interpretive website game for children, which enables them to design an exhibition and create interpretive labels in order for people to understand what the objects are and how they relate to the theme of the exhibition.



v) EE and Communities of Culturally and Linguistically Diverse Backgrounds

■ Box 3.55 NSW Ethnic Affairs Action Plan²⁵⁴

The NSW Government's *Ethnic Affairs Action Plan 2000* stresses the need for ethnic affairs policies and programs to be integrated into the core activities of Government organisations and reflected in all corporate planning and management tools.

■ Box 3.56 People from Non-English Speaking Backgrounds (NESB) concerned for the environment

A 1997 NSW social research study²⁵⁵ involving migrants and people from NESB found that more than 75 percent of respondents were concerned about the environment and more than half had made positive changes in their behaviour for environmental reasons over the past five years. However, this study also found that migrants and people from NESB have less involvement in environmental programs and less access to environmental information than the mainstream (generally English speaking) community.

Government policy is increasingly recognising the cultural diversity of Australia's population²⁵⁶ (see Box 3.55). This has resulted in greater involvement of communities of culturally and linguistically diverse (CALD) backgrounds in the strategic planning and delivery of community EE programs.

It is thought that some members of communities of CALD backgrounds, especially new arrivals and those for whom English is a second language, have had little exposure to Australian environmental concerns and limited access to mainstream EE programs²⁵⁸ (see Box 3.56). These communities are now being recognised as a target group for environment and sustainability programs.

It is not surprising to find that EE programs are most prevalent in communities with high cultural and linguistic diversity, particularly in NSW²⁵⁹. The NSW Government is now developing programs in recognition of these communities, and leads Australia in the EE of communities of culturally and linguistically diverse backgrounds (see Box 3.57).

The involvement of people of CALD backgrounds in community EE programs can have a number of benefits. First, the development of partnerships between communities of CALD backgrounds and government agencies is important in ensuring sustainability in a region. Partnerships have resulted from equal opportunity and equity policies²⁶⁰, and are

often developed by local and state government agencies in conjunction with community organisations of people from CALD backgrounds. These organisations are increasingly recognising the importance of sustainability issues in Australia, and are encouraging processes of learning for sustainability amongst their community members²⁶¹. These partnerships result in people of CALD backgrounds having increased access to information and services, as well as providing greater opportunities to contribute to their community²⁶².

Further, the involvement of people of CALD backgrounds in EE assists migrants in developing a sense of place and ownership in their new home. This can lead to a greater commitment by these communities to maintaining new relationships and to creating change for sustainability²⁶⁴ (see Box 3.58).

Two major barriers inhibit communities of CALD backgrounds from accessing EE programs and contributing to sustainability - language and culture²⁶⁵. At present, the vast majority of EE is delivered in English, providing people from NESBs limited opportunities for participation. In response, state and local government authorities are translating EE publications and information sessions into multiple languages to improve community access to information²⁶⁶. For some agencies, this process has been the extent of their EE to communities of CALD backgrounds. (see Box 3.59). This approach to EE is predominantly focussed on

disseminating information based on the assumption that increasing awareness and knowledge will lead to action. A number of studies on this relationship, however, have found little to support this assumption²⁶⁷. These methods are expert led and only allow for limited engagement and ownership of the learning process by the communities. Further, they provide little or no opportunity for community participation in decision-making.

Cultural factors are also an important influence on the way in which people learn, particularly as teaching styles differ between cultures and nations. Many EE programs targeted at communities of CALD backgrounds continue to struggle to adopt educational strategies that adequately accommodate cultural differences in teaching and learning. However, a handful of state and local authorities are recognising the importance of working closely with communities of CALD backgrounds in developing EE programs that consider the importance of cultural factors in the learning environment²⁶⁹ (see Box 3.60).

A small number of emergent community EE programs involve training bilingual educators to develop and facilitate community programs in conjunction with the culturally diverse communities²⁷⁰. The participation of community members in the planning and development of these programs is vital for fostering ownership of learning and can address equity issues associated with sustainability²⁷¹. It is important that communities of CALD backgrounds are involved in general sustainability and learning for sustainability processes that are tailored to meet their specific needs, rather than providing separate, unrelated EE programs²⁷². Some research suggests that these participatory practices can lead to longer and deeper levels of change²⁷³.

Many CALD communities in Australia have come from rural or agrarian backgrounds²³¹ and individuals enjoy sharing skills and approaches to gardening they have learnt in their homeland. Gardening is hands-on and truly interactive and can be done by people of all ages, interest levels and ability. Participants don't have to have a language in common and they break through language barriers by communicating through 'doing'. Tailoring education programs to plants and gardening can meet specific needs of CALD communities as well as provide ideal opportunities for promoting sustainable horticulture, recycling and water conservation. When the programs are linked to community gardens there is the potential to build social capital as well as improve the urban landscape (see Box 3.61).

Across Australia some local government authorities are engaging in dialogue with communities of CALD backgrounds through programs such as Local Agenda 21 (LA21). Marrickville Council²⁷⁴, for example, used translators and bilingual educators to engage their highly culturally diverse community in the LA21 process. The Council targeted the community specifically as they had not previously been formally involved in local environmental concerns. The Council invited a large range of established community groups to learn about, and 'audit', their environmental practices. The Council then held two LA21 forums, one of which was targeted specifically at the communities of CALD backgrounds²⁷⁵. The forum aimed to facilitate a process to gain input from the community for the development of the LA21 strategy and to teach participants how they could improve their environmental practices, based upon the principles outlined in 'Agenda 21'.

■ Box 3.57 NSW Government Ethnic Communities Programs

i) Earth Works Program

An evaluation of the NSW EPA's *Earth Works*²⁵⁷ waste education program found that in culturally diverse areas there was a significant underrepresentation of people from non-English speaking backgrounds (NESB), in proportion to their representation in their community. The report concluded that *Earth Works* courses were either more accessible or more appropriate to people from English speaking backgrounds.

ii) Ethnic Communities Waste Education Program

The Ethnic Communities Waste Education Project was a joint program of the Southern Sydney Waste Board and the Ethnic Communities Council of NSW. The project involved qualitative focus groups held with the members of the Chinese, Arabic and Greek communities to determine their current waste minimization knowledge, attitudes and practices. As a result, a range of strategies were developed to meet the needs identified by each community.

■ Box 3.58 Hume's Greening Program²⁶³

In Victoria, Hume's Greening Program sought to develop a public open space by actively seeking participation of people of non-English speaking backgrounds who had previously not been involved with environmental action and decision-making.

The process led to the NESB community's empowerment, development of a sense of place and ownership of the project. It involved three stages:

1. The development of relationships between the local authority and the NESB communities.
2. Involving the community in the development of action oriented and culturally appropriate programs, giving them ownership over action and change for sustainability.
3. NESB communities' capacity was strong enough for them to initiate their own sustainability programs, while local government adopted a more sustainable advisory role. Several of the projects initiated were education programs targeted at specific NESB communities.

■ Box 3.59 SA Water Education and Awareness Strategy

The *SA Water Education and Awareness Strategy* targets the Italian, Greek and Vietnamese communities through dissemination of information which uses the media of radio, outdoor signage, and displays at cultural events.

The program is underpinned by the assumption that: 'Programs aimed at the general community may not reach ethnic communities because of language and other cultural differences.'

URS (2003, S7-4)

While they mention the involvement of ethnic communities in volunteer opportunities that may provide an action orientation, their action strategy does not provide for this to be actively sought.

■ Box 3.60 Victorian Stormwater Action Program²⁶⁸

The *Springvale Stormwater Research and Education Project*, an initiative of the Greater Dandenong City Council and part of the *Victoria Stormwater Action Program*, aims to improve practices that contribute to storm water pollution in the Springvale Shopping Centre through education and awareness-raising activities targeted at NESB retail traders. The Council is working with traders, community groups and other councils to identify existing practices and develop educational materials and activities.

■ Box 3.61 Community Gardens and Neighbourhood Renewal in Waterloo

'It's community, it really is, and I meet the Russian ladies even though they can't always communicate to a certain extent, [in the] garden they can ... as soon as I get there ... they come straight down and we have a real old chat.' (Gardener)

'Oh yes, I've learnt so much [about the cultures]. I think this is like the diversity of colours [in the garden]. I learn more about the gardening in an organic way. And there are some plants that don't want to be together.' (Gardener)

Bartolomei et al. (2003)

While this program was unique in its approach to engaging these communities, it was limited by the fact that the LA21 forum did not ensure the communities' participation in the final decision; rather it sought their opinions through consultation. The power of decision-making, in this scenario, remained with the local government. This process of engagement, commonly found in Australia, perpetuates inequities often found in minority communities.

Some community EE programs are, however, beginning to build community capacity and provide opportunities for community members to participate in decision-making and change for sustainability, by adopting more action-oriented methodologies associated with learning for sustainability²⁷⁶.

In recent years, a small number of communities of CALD backgrounds have engaged with action research to develop capacities for sustainability in a culturally appropriate manner²⁷⁷. Action research engages the community through an action oriented, context specific, learning process. The process empowers participants by encouraging them to question the assumptions underpinning their actions and decisions towards issues of sustainability. The dialogue encourages adaptive and co-operative actions by constructing new understanding concerning the different cultural perspectives presented²⁷⁸. Action research in communities of CALD backgrounds thus builds the capacity of the community to actively participate in informed and effective decision-making²⁷⁹ (see Box 3.63).

Across Australia, engaging communities of CALD backgrounds in sustainability through learning processes is important to ensure their effective engagement in action and decision-making for change. However, most EE programs for these communities are still confined to information and awareness raising (see Box 3.62).

■ **Box 3.62**
Multicultural Communities Participation

'Future participation initiatives with multicultural communities should consider:

- Using the ethnic media more to get the message out to specific language groups;
- Using already existing networks of community groups to disseminate information, particularly using influential community leaders;
- Targeting presentations to the cultural interests and concerns of the various groups;
- Providing information both written and verbal in different languages (using translators to give talks);
- Making better links with children, especially through schools as a way of getting the environmental message into non-English speaking background homes; and
- Utilising self interest, cost saving and convenience as a central message in environmental education.'

Cotter and Hannan (1999, p.107)

■ **Box 3.63**
Market Gardeners and Participatory Action Research²⁸⁰

For the past decade, market gardening communities of NESB have been working with Dr. Francis Parker from the University of Western Sydney in participatory action research, which focuses on environmental and health impacts of pesticide use. The projects involve farmers and their families from Chinese, Cambodian, Lebanese, and Vietnamese backgrounds.

The project led to the empowerment of the communities and the formation of the Premier's Task Force on Market Gardening by farmers of non-English speaking backgrounds, and subsequently the Education and Training Strategy for Sustainable Agriculture in the Sydney Basin. As a result information, resources, and support were developed for the farming families.

The project has resulted in the safe production and consumption of vegetables across Sydney. Consequently, the project has empowered communities to be able to demand safe work regulations, and has improved environmental management, ensuring the farmers that their future continues in this area.



vi) Facilitation and Mentoring

■ Box 3.64 Some Fundamental Principles of Facilitation Include²⁸¹

- Trust and integrity;
- Transparency and accountability ;
- Flexibility to reflect the directions of the process; and
- Responsibility to process and outcomes.

■ Box 3.65 Role of the Facilitator

‘The facilitator’s role in this entire process is simply to set the task, observe, listen and encourage participation. The facilitator provides the vehicle for which the participants must provide the propellant.’

Srinivasan (1992, p.103)

Facilitation and mentoring approaches have appeared very recently in community EE. These innovative approaches are aligned with learning for sustainability since they redefine the role of the teacher to that of a facilitator and encourage learning to be driven by the learner. They challenge traditional power, politics and participation relationships associated with teaching and provide more compatible reflective learning and capacity building processes²⁸² (see Box 3.64).

Traditionally, community EE has involved the attendance by members of communities at a briefing session on government policies or seminars led by technical staff on project plans. Underpinning this practice, is the assumption that the technical staff distributes information to the community to develop understanding and awareness, and ultimately change their behaviour. This linear approach to behavioural change, however, has failed to result in the actions required to improve the environment²⁸³.

The sustainability agenda has challenged community environmental educators to shift away from dissemination and demonstration towards skilled facilitation that enhances opportunities for reflection and learning. Facilitation also enhances the effectiveness of other community engagements and education tools²⁸⁴ (see Box 3.66). It can build community confidence and capacity for participation in decision-making and can assist in dealing with conflicting parties or contested issues²⁸⁵. A facilitator is a person that enhances

opportunities for learning within a meeting, workshop or forum, ensuring that all are given opportunities to participate, reflect and learn²⁸⁷. A facilitator will ensure that the environment is conducive to the open expression of participants²⁸⁸ (see Box 3.67).

The use of facilitation in community EE has been promulgated internationally through events such as the Johannesburg World Summit on Sustainable Development (2002) and the Rio Earth Summit (1992). WSSD identified facilitation as a key ingredient to ensuring effective and sustainable partnerships for change²⁹⁰.

The facilitation process aligns well with the principles of sustainability²⁹³ as it has the following characteristics²⁹⁴:

- Enables a learner centred approach;
- Equips the community with the necessary skills and knowledge to take action and actively participate in community (and workplace) change and decision-making;
- Develops the capacity of the community to ‘critically’ reflect upon the social and cultural context underpinning the change they seek;
- Offers a more democratic approach to sustainability. The process encourages all citizens to engage in open dialogue and eliminates inequitable power hierarchies as the facilitators do not have a stake in the change for sustainability and

the process does not rely on the expert knowledge in community decision-making;

- Assures that change towards sustainability is embedded in community actions and decision-making by giving ownership of the learning experience to the community.

Facilitation has been increasingly associated with learning for sustainability. Community EE organisations and consultancies are seeking persons with experience in facilitation for community capacity building²⁹⁵. Across Australia more and more NGOs (see Box 3.68), local and state government agencies are employing community environmental educators, or learning for sustainability officers, who have facilitation skills.

Mentoring is also now beginning to emerge in EE thinking and practice in Australia. Mentoring as a learning tool supports the shift towards learning for sustainability approaches in EE and has been recognised in the NSW Government EE Plan as a suitable tool to assist environmental educators to achieve their goals²⁹⁶.

Community educators grappling with EE are attracted to mentoring as a process through which they receive much needed support and understanding²⁹⁷ (see Box 3.69). The process offers mentoree centred, collaborative support, and space, to engage community educators in critically examining opportunities for change within their community EE programs²⁹⁸.

■ Box 3.66 Facilitating Partnerships for Sustainability

'Facilitation and process design can be crucial to the success of multi-stakeholder partnerships:

- Facilitators help provide a clear structure for meetings and for a partnership process as a whole, thereby enabling stakeholders to: understand how decisions are being made; understand the role that they are playing in the decision-making process; and come to constructive agreement.
- A facilitator's skills should help all stakeholders to feel fully engaged in the decision-making process; help mediate between stakeholders with conflicting views; ensure that weaker stakeholders are given space to talk; and lead to the development of clear, consensus-based decisions.
- Because they come from a neutral position (i.e. they do not have a stake in the outcomes of the partnership), facilitators can generally act as honest brokers, trusted by all parties to recognise their needs and concerns.

A good facilitator should therefore be able to significantly increase stakeholders' sense of ownership of, and commitment to, the outcomes of a partnership process.'

Calder (undated, p.6)

■ Box 3.67 Facilitation Using Deliberative Democracy

Elton Consulting acted as independent facilitators on the Bronte Catchment Project, which was innovative in its processes of deliberative democracy and community participation to improve water quality at Bronte Beach, Sydney²⁸⁶.

'A process of deliberative democracy assumes that citizens who are given comprehensive, detailed information can produce high quality recommendations that can be implemented and achieved. Most importantly, the process emphasises the importance of bringing individual and collective experience to bear on the evidence, to think 'outside the box' and produce recommendations in the 'general interest' of all.'

Elton Consulting (2001a, p.1)

The project resulted in a demonstrated shift in perspectives across community groups and precincts, from minority and special interest views, to a position of collective and general interests.

■ Box 3.68 Community Action for the Rural Environment: Mid-Murray Local Action Plan²⁹¹

The Mid Murray LAP Committee is a group of community volunteers who aim to 'foster collaborative participation, the exchange of ideas, knowledge and experiences, so that the Mid-Murray community can progress towards a more sustainable and socially equitable future'²⁹².

Underpinning their planning and action process is the empowerment of the community through facilitated education and networking. To date the committee has been involved in facilitating workshops for irrigators, as well as school groups and the community.

This process ensures that the conservation of the region can begin with effective community participation.

■ Box 3.69 ‘Effective Mentoring:

- Is a relationship that focuses on the needs of the mentoree;
- Fosters caring and supportive relationships;
- Encourages all mentorees to develop to their fullest potential;
- Is a strategy to develop active community partnerships.’

Mentoring Australia (2004, p.1.)

■ Box 3.70 Our Environment - It’s a Living Thing Education for Sustainable Development Professional Development Program

Mentoring was an integral component of the *Our Environment - It’s a Living Thing (OEILT) Education for Sustainability Professional Development Program*. The OEILT project used mentoring as a tool for dialogue and reflection to support educators who attended the OEILT workshops and who choose to take on the challenge of implementing learning for sustainability approaches within the workplace/community context.

The OEILT mentoring program aimed to:

- a) build capacity to implement change in and through education; and
- b) maximise the impact of learning from the ‘*Our Environment - It’s a Living Thing*’ Education for Sustainability workshops.

The mentoring project was characterised by a collaborative learning process that was non-expert led and focused on the participants’ professional needs. It also provided a non-threatening space for reflection-on-action and consisted of three key components: a) workplace visits; b) focus groups; and c) online support.

The evaluation showed that mentoring is a valuable tool for facilitating workplace change and professional development. Mentoring is congruent with learning for sustainability and proved to be an effective means for reorienting practice towards sustainability.

ILT Team (2004, p.1)

A number of recent mentoring programs for community educators supported by the NSW Government (Stormwater Trust Fund and OEILT Program) and facilitated by Macquarie University have demonstrated the value of this approach. These one year programs have assisted community environment educators who are seeking to understand learning for sustainability approaches and their implications for their workplace. The mentoring programs have recognised the importance of both dialogue, and sharing of information, amongst colleague networks and the importance of creating opportunities for relevant change to the mentoree. Focus groups were established where mentorees could act as *critical friends* clarifying ideas and shifts in community education programs. Evaluations showed that mentorees benefit directly from the dialogue exchange and support gained through sharing of ideas and issues with their peers in these sessions (see Box 3.71). Visits from mentors in the mentoree’s

workplace developed both a presence of support for the program in the workplace and enabled the provision of more specific advice for the mentoree. Evaluations also found that mentoring is aligned with the principles and processes underpinning learning for sustainability and was successful in creating change for sustainability.

As community EE and community participation in decision-making increasingly merge, it is anticipated that the trend of community environmental educators as facilitators will increase. The mentoring of community educators has proved to be a method with impressive results thus far. The role of mentoring as an important tool for ensuring that change stems from learning for sustainability cannot be underestimated.

■ Box 3.71 Benefits of Mentoring

‘Mentoring has been seen as an important adjunct to transformational leadership development, where important attributes included: articulating vision, giving shared attention to problem solving, allowing for interaction between leaders and followers, increasing motivation and teaching values orientation such as commitment, quality, integrity, trust and respect.’

Fortino (1997, p.21)

3.3 Summary of Needs and Recommendations

Community Environmental Education plays a crucial role in influencing the course of action in relation to issues of sustainability particularly in local areas. This document provides a review of Environmental Education and its contribution to sustainability in the community sector within Australia. It forms part of a series prepared by the Australian Research Institute in Education for Sustainability (ARIES) for the Australian Government Department of the Environment and Heritage. The report consolidates and builds upon previous studies as well as reviews programs and emerging trends. It provides a snapshot of the current context and experiences within the community education sector so as to inform future work in this sector.

Environmental Education programs targeted at the community vary considerably from having a main focus in providing environmental information, awareness raising or community consultation through to more action orientated approaches. Recently there have been examples emerging of innovative Environmental Education programs seeking to engage the community in participatory learning, which intend to build community capacity for change towards sustainability. These programs have significant outreach and offer great potential for change towards sustainability.

Across Australia, Local Agenda 21 initiatives have been gaining ground. These programs aim at involving the community in decision-making

surrounding their local environment and offer great opportunities for extending learning for sustainability across the community. However, some local authorities struggle to implement these initiatives as local government staff have limited training (or workplace support) regarding LA21 approaches which include planning for sustainability or concepts of participatory learning and change in the community.

Community action programs have made a significant contribution to community participation and sustainability. Traditionally their focus has been on environmental action, however, increasingly community organisations are recognising the importance of Environmental Education in embedding change within communities. Action learning is offered as a suitable methodology to engage community volunteers in learning for sustainability approaches to Environmental Education, whilst continuing to generate action through conservation and restoration programs.

Traditionally, social marketing approaches are underpinned by behaviourist approaches to achieve its goal. It has been demonstrated by a number of studies that while social marketing programs have enhanced knowledge and awareness of environmental issues, they have had little impact on the attainment of long term environmental outcomes. However, recently a small number of social marketing campaigns have been integrating aspects of reflective learning

approaches, which may help overcome its limitations. Some case studies have shown that this combination of approaches results in longer lasting and more systemic change for sustainability.

Across Australia, interpretation is used to increase understanding of the natural environment and cultural heritage. Focused on the experience of the learner as a tool for understanding, a handful of interpretation programs are beginning to integrate 'critical' thinking and reflection processes. This reorientation of interpretation aligns itself more closely with learning for sustainability. Whilst these signs of change in interpretation are encouraging, to-date the process of reorientation has not been widespread.

As the cultural diversity of Australia's population is increasingly being recognised within government policy so too is this being reflected in the way community education programs are being implemented. Engaging communities of culturally and linguistically diverse (CALD) backgrounds in sustainability through learning processes has been identified as important to ensure their effective participation in action and decision-making for change. Although at this point, and whilst there are some notable exceptions, the majority of Environmental Education programs available for these communities are still confined to information and awareness raising.

Facilitation and mentoring are emerging as appropriate tools for learning, and change for, sustainability. They support 'critical' approaches to Environmental Education which recognise that there is a need for reflective, systemic and experience based approaches to education. The role of mentoring cannot be underestimated as it aids in overcoming the barriers associated with translating learning into action for change. Although both of these tools are only recently being adopted and utilised in the field of community education, the results thus far have shown they are important and valuable tools which need to be supported and further evaluated.

The nature of many community Environmental Education programs being heavily reliant on external sources of funds means that funding bodies in this sector have an important role in shaping the structures and processes utilised. One significant challenge for community Environmental Education in Australia is for governments, in partnership with community groups and local businesses, to develop new criteria for the evaluation of the effectiveness of community participation in achieving sustainability outcomes.

In the future, in order to strengthen its contribution to sustainability, community based Environmental Education will need to:

- Build the capacity of community based educators in learning for sustainability approaches;
- Provide incentives and support to include education and learning in community environmental and sustainability programs;
- Develop strategic networks and partnerships between government, community groups and citizens for more coherent and consistent education actions for sustainability.

Recommendations

The research undertaken by ARIES has revealed a number of key needs in the areas of Local Agenda 21, social marketing, interpretation, facilitation, mentoring, community action programs and programs targeted at people of culturally and linguistically diverse backgrounds. The following recommendations have been derived from these key needs. The recommendations identify practical steps at a policy, practice and research level that could strengthen the contribution of Environmental Education towards sustainability within the community sector.

Policy:

1. Realign existing funding programs to support funding for:
 - a. Training **community educators**, both government and non-government, in learning for sustainability approaches to Environmental Education;
 - b. Programs from **community action groups and interpreters** that develop action-oriented, futures focused, systemic and reflective approaches - aligned with learning for sustainability approaches;
 - c. More opportunities in **facilitation and mentoring**;
 - d. Programs targeted at communities of **CALD backgrounds** that go beyond the translation of materials into different languages.

Practice:

2. Value add to current LA21 initiatives by introducing a **mentoring program for local governments** across Australia,

in sustainability and learning for sustainability approaches to Environmental Education.

3. Develop and deliver **programs for environmental educators** that expose a range of different approaches to Environmental Education (e.g community engagement, social marketing, facilitation, mentoring and action research), including their features, benefits and limitations.
4. Develop and deliver **programs for interpreters** in conjunction with peak industry bodies (such as Interpretation Australia Association) which highlight the processes used to engage citizens in 'critical' and action-oriented interpretation aligned with learning for sustainability approaches to Environmental Education. These programs should be practical in nature and cover a breadth of environments, including national parks, museums, urban environments, indigenous sites and heritage.
5. Develop a **resource**, based upon the action research program for communities of CALD backgrounds (see recommendation 12). This resource should focus particularly on the success and effectiveness, as well as the issues and limitations, of **aligning culturally appropriate education with learning for sustainability principles**.
6. Establish a **scholarship program** for the education and training of bilingual educators and learning for sustainability.

Research:

7. Research needs to be undertaken to determine how **social marketing** approaches can be better integrated with other more participatory approaches to ensure environmental outcomes.
8. Research and develop a **national framework for learning for sustainability within the community**. This framework could be made available via the web and would guide community educators struggling to engage people in sustainability issues as well as those wanting to improve environmental outcomes of their programs.
9. Research and develop a **case study resource for local government educators** on the principles of LA21, learning based strategies for change and community engagement processes. The resources would support the mentoring project described in recommendation 2.
10. Research and develop a **web site targeted towards community action groups** demonstrating practical examples of how to best achieve environmental outcomes through learning. This website should be practical in nature offering examples of how Environmental Education contributes to sustainability and processes relevant to action groups.
11. Research and develop **guidelines for interpreters** on learning for sustainability approaches to Environmental Education and their implications for interpretation.
12. Undertake an **action research program** with project officers involved with CALD Backgrounds to assist with the development of programs aligned with learning for sustainability. A resource could be produced to document the learning of this experience for others to use (see recommendation 5).



Endnotes

- ¹ Walker (1997)
- ² Rudland et al (2004) p87
- ³ Government of South Australia (2003)
- ⁴ Non-formal education differs to formal education in that it does not take place in a learning institution such as a school or university. It may be offered through a community group or in the workplace, and usually does not result in certification. Non-formal education also differs from informal education, which is the learning we gain through everyday life and is usually subconscious.
- ⁵ National Community Education Association (2004)
- ⁶ NSW Government (1996)
- ⁷ Barraza et al. (2003)
- ⁸ CBOs provided 82% of community education courses in 2002: Australian Bureau of Statistics (2004)
- ⁹ Australian Bureau of Statistics (2004)
- ¹⁰ UNCED (1992b)
- ¹¹ UNESCO-UNEP (1978)
- ¹² UNESCO-UNEP (1978)
- ¹³ UNCED (1992a) stemming from the United Nations Conference on Environment and Development (1992)
- ¹⁴ UNCED (1992b) stemming from the United Nations Conference on Environment and Development (1992)
- ¹⁵ United Nations Economic Commission for Europe (undated)
- ¹⁶ See: Sustainable Development Education Panel (2003); Government of Canada (2002)
- ¹⁷ Government of Canada (2002)
- ¹⁸ Refer to Volume 1 of this series for further information on this process
- ¹⁹ Department of the Environment and Heritage (2002)
- ²⁰ Department of the Environment and Heritage (2000)
- ²¹ Department of the Environment and Heritage (2000)
- ²² Department of the Environment and Heritage (2004b)
- ²³ Government of Western Australia (2003)
- ²⁴ NSW Government (2002b)
- ²⁵ Kliminski and Smith (2004)
- ²⁶ Fagan (1996)
- ²⁷ Fagan (1996)
- ²⁸ Fagan (1996)
- ²⁹ Beck and Crawley (2002)
- ³⁰ NSW Government (2002b)
- ³¹ McKeown and Hopkins (2003)
- ³² UNCED (1992)
- ³³ Lopes and Theisohn (2003)
- ³⁴ Lopes and Theisohn (2003)
- ³⁵ For example the *Tasmanian Environment Centres Community Education Program* covered free lunchtime talks on a range of local environmental issues. Tasmanian Environment Centre (2004)
- ³⁶ IMPACT is a three-day residential camp for youth held at Birrigai Outdoor Education School in the ACT. The Program aims to increase student's knowledge and understanding of local threatened species, through working both individually and in cooperative teams. Students identify what actions they can take to assist conservation for the future; Australasian Regional Association of Zoological Parks and Aquaria (2002)
- ³⁷ Interpretive methodologies include guided walks, talks, drama, displays, signs, brochures and electronic media; Interpretation Australia (2003); The exception is Australian Museums Online provides an interactive interpretive website game for children which enables them to design an exhibition and create interpretive labels. Australian Museums Online (undated)
- ³⁸ For example: Networks: Save the Ridge (2004); Magazines: Australian Conservation Foundation magazine *Habitat*; Events: World Environment Day 'Save Tassie Forests' Rally in Melbourne, on June 6, 2004.
- ³⁹ For example, *Social Change Media* runs Community education workshops on how to apply social marketing techniques to run better community change campaigns. These programs focus on how to engage a community; change behaviour; and increase participation; Social Change Media (2004c)
- ⁴⁰ Community Learning Centres are friendly informal places where community members meet for a variety of activities to reflect the needs of their own community. There are over 60 CLCs in Western Australia alone, and CERES in Victoria is very well known. Environment Centre of WA (2001)
- ⁴¹ For example, the 'Cities for Climate Protection' program by ICLEI engaged 25% of all Australian councils, and covered the area where around 61% of the Australian population lives. The program highlighted the importance of local action and its effectiveness through partnerships between communities, councils, governments and other sectors, which are critical in achieving significant impacts.
- ⁴² Mentoring Example: Our Environment: *It's a Living Thing Education for Sustainability Professional Development Program* over 2002/2003: ILT Team (2004); focused strongly on mentoring as a key process of learning. Mentors have been described by Fortino (1997) as those who 'subtly challenge the deeply held belief system of the mentorees'. Facilitated support example: The *Cool Communities* program is an innovative community engagement program, funded by the Australian Government and delivered by Australian Greenhouse Office in collaboration with environmental non-government organisations across every State and Territory in Australia. See <http://www.greenhouse.gov.au/coolcommunities/>
- ⁴³ NSW Government (2004a)
- ⁴⁴ Merrill (2002)
- ⁴⁵ Volunteering Australia (2003)
- ⁴⁶ with Waverly Council and the University of NSW
- ⁴⁷ Elton Consulting (2001b, p 4)
- ⁴⁸ Department of the Environment and Heritage (2004a; 2004c)
- ⁴⁹ UNCED (1992b)
- ⁵⁰ Conservation Council (unpublished)
- ⁵¹ Seddon and Billett (2004)
- ⁵² See: http://www.ourcommunity.com.au/member/directory_details.do?orgId=15324
- ⁵³ NSW Government (unpublished)
- ⁵⁴ Rodger, Cowen, and Brass (2004)
- ⁵⁵ Leeming et al (1993)
- ⁵⁶ Butterworth and Fisher (2000)
- ⁵⁷ WA Collaboration (2003)
- ⁵⁸ Department of the Environment and Heritage (2004b)
- ⁵⁹ Niel, Sansom, Porter and Wensing (2002b)
- ⁶⁰ UNCED (1992); A document stemming from the Rio Earth Summit, which has been recognised internationally as the single most important document in moving towards sustainability.
- ⁶¹ Around one third of its 2509 actions require the involvement of local communities
- ⁶² UNCED (1992)
- ⁶³ Agyeman, Morris and Bishop (1996)
- ⁶⁴ Department of the Environment and Heritage (2000)
- ⁶⁵ Department of the Environment and Heritage (2004b)
- ⁶⁶ Cotter and Hannan (1999)
- ⁶⁷ UNCED (1992)
- ⁶⁸ in Cotter and Hannan (1999)

- ⁷⁰ Niel, Sansom, Porter and Wensing (2002b)
- ⁷¹ Adapted from Cotter and Hannan (1999)
- ⁷² Adapted from Cotter and Hannan (1999)
- ⁷³ UNESCO (2003a)
- ⁷⁴ International Association for Public Participation (2002); Niel, Sansom, Porter and Wensing (2002a, p41)
- ⁷⁵ Janse Van Rensburg (2000); Arnstein (1969)
- ⁷⁶ ICLEI (1995-2004c)
- ⁷⁷ Janse Van Rensburg (2000)
- ⁷⁸ International Association for Public Participation (2002)
- ⁷⁹ Niel, Sansom, Porter and Wensing (2002a, p41)
- ⁸⁰ Kanaley (1996)
- ⁸¹ Mercer and Jotkowitz (2000)
- ⁸² Niel, Sansom, Porter and Wensing (2002b); International Association for Public Participation (2002)
- ⁸³ UNCED (1992)
- ⁸⁴ United Nations (2002)
- ⁸⁵ UNESCO (2003b)
- ⁸⁶ Tilbury and Keogh (2005)
- ⁸⁷ ICLEI (1995-2004a)
- ⁸⁸ Cotter and Hannan (1999). These descriptions correspond with Arnstein's (1969) ladder of participation. In this ladder, Arnstein identifies Citizen Control (Community driven), Delegated power (strategic involvement) and Partnership (equal partners) as the three highest rungs on the ladder.
- ⁸⁹ Cotter and Hannan (1999)
- ⁹⁰ Department of Environment, Heritage and Aboriginal Affairs and the Local Governments Association of South Australia (1999)
- ⁹¹ Mercer and Jotkowitz (2000); Niel, Sansom, Porter and Wensing (2002a)
- ⁹² Whittaker (1999) in Niel, Sansom, Porter and Wensing (2002b). The Newcastle Declaration is a declaration concerning sustainability at the local level and was produced at the UN Pathways to Sustainability conference. IULA, ICLEI, ALGA and City of Newcastle (1997)
- ⁹³ Niel, Sansom, Porter and Wensing (2002a); International Association for Public Participation (2002)
- ⁹⁴ Mercer and Jotkowitz (2000, p 175)
- ⁹⁵ Mercer and Jotkowitz (2000)
- ⁹⁶ Department of the Environment and Heritage (1992)
- ⁹⁷ UNCED (1992b)
- ⁹⁸ United Nations (2002)
- ⁹⁹ Department of Education, Science & Training (DEST) (1994); Cotter and Hannan (1999)
- ¹⁰⁰ Niel, Sansom, Porter and Wensing (2002a)
- ¹⁰¹ DEST (1994)
- ¹⁰² Agyeman, Morris and Bishop (1996)
- ¹⁰³ Tilbury (1995)
- ¹⁰⁴ (deleted)
- ¹⁰⁵ (deleted)
- ¹⁰⁶ Curtis et al (2000)
- ¹⁰⁷ Landcare Australia Website (2004)
- ¹⁰⁸ Youl (1996); Landcare Australia (2001)
- ¹⁰⁹ Morrisey (1997)
- ¹¹⁰ East & Wood (1996); Morrisey (1997); Landcare Australia (2004)
- ¹¹¹ Natural Heritage Trust (2004); Landcare Australia (2004)
- ¹¹² Hill (1999); Natural Heritage Trust (2004); Bushcare Tasmania (undated); Ku-Ring-Gai Bushcare (undated)
- ¹¹³ See: <http://www.landcare.org.au>
- ¹¹⁴ Greening Australia (2004)
- ¹¹⁵ Greening Australia (2004)
- ¹¹⁶ See: <http://www.reefwatch.org.au>
- ¹¹⁷ Waterwatch Australia (2004)
- ¹¹⁸ NSW Government (2003d), Parks Victoria (2004)
- ¹¹⁹ Australian Conservation Volunteers (undated)
- ¹²⁰ Dwyer and Wissing (undated)
- ¹²¹ Simonelli (1997); Hill (1999)
- ¹²² Curtis et al (2000); Curtis and De Lacy (1995)
- ¹²³ Curtis et al (2000)
- ¹²⁴ Woodhill (1991, 1996)
- ¹²⁵ Curtis et al (2000)
- ¹²⁶ See : <http://www.kesab.asn.au/tidytowns/>
- ¹²⁷ Curtis et al (2000)
- ¹²⁸ Beaty (1999)
- ¹²⁹ Curtis et al (2000)
- ¹³⁰ Curtis et al (2000)
- ¹³¹ Woodhill (1996)
- ¹³² Savage (1993) Littlefield et al (1994) in Slattery (1998)
- ¹³³ Gough (1997)
- ¹³⁴ UNCED (1992b)
- ¹³⁵ United Nations (2002)
- ¹³⁶ Damme (1998); Tilbury (2003); Webler et al (1995); Lyons et al (2001)
- ¹³⁷ Natural Heritage Trust (2004)
- ¹³⁸ Chalkley and Lauder (2001); Fisher (2000); Youl et al (1999)
- ¹³⁹ Tilbury (1999)
- ¹⁴⁰ Natural Heritage Trust (2000)
- ¹⁴¹ Jensen and Schnack (1997); Breiting and Morgensen (1999)
- ¹⁴² Jensen and Schnack (1997)
- ¹⁴³ Marrickville Council (2004)
- ¹⁴⁴ Gray (2001)
- ¹⁴⁵ Williamson (1997)
- ¹⁴⁶ Smith et al (1999)
- ¹⁴⁷ Jones (2000); Yorks (2000); Williamson (1997)
- ¹⁴⁸ Boud and Walker (1996, p 4) in Williamson (1997)
- ¹⁴⁹ Williamson (1997); Wade and Hammick (1999)
- ¹⁵⁰ Tilbury (2000)
- ¹⁵¹ Curtis and De Lacy (1995)
- ¹⁵² Mustakova-Possardt, (1998), in Cuthill (2002)
- ¹⁵³ Flowers et al (2001)
- ¹⁵⁴ Social Change Media (2004a, 2004b, 2004c); Monroe et al (2000); McKenzie-Mohr (2004)
- ¹⁵⁵ GreenCOM (undated)
- ¹⁵⁶ Rangun and Karim (1991) in Andreasen (1994, p 108); Flowers et al (2001)
- ¹⁵⁷ Hershfield and Mintz (2004); Monroe et al (2000)
- ¹⁵⁸ Andreasen (1994)
- ¹⁵⁹ South Australia EPA (2004); Australian Greenhouse Office (1999)
- ¹⁶⁰ Social Change Media (2004b); EcoRecycle Victoria (2003); Cansmart (2004)
- ¹⁶¹ Social Change Media (2004b); NSW Government (2004d)
- ¹⁶² McKenzie-Mohr (1994); Social Change Media (2004b)
- ¹⁶³ NSW Lead Reference Centre (2003)
- ¹⁶⁴ Backyard Buddies (2004)
- ¹⁶⁵ Social Change Media (2004b); Armstrong (2002)
- ¹⁶⁶ Social Change Media (2004b); Oz Green (2004); NSW Government (2003e)
- ¹⁶⁷ South Australian EPA (2004)
- ¹⁶⁸ Imber (2004)
- ¹⁶⁹ Ecocycle Victoria (2003)
- ¹⁷⁰ NSW Government (2003c, 2003d, 2003f, 2003g)
- ¹⁷¹ NSW Government (2003a, undated)
- ¹⁷² Winter Air Pollution Campaign, South Australian EPA (2004)
- ¹⁷³ NSW Government (2003a)
- ¹⁷⁴ Andreasen (1994)

- 175 NSW Government (2003e)
 176 NSW Government (2003e)
 177 NSW Government (2002b)
 178 Monroe et al (2000)
 179 Robottom and Hart (1993)
 180 Monroe et al (2000)
 181 Andreasen (1994)
 182 Jensen and Schnack (1997)
 183 Robottom and Hart(1993)
 184 Robottom and Hart (1993, p 42)
 185 Robottom and Hart(1993)
 186 Robottom and Hart(1993)
 187 Robottom and Hart(1993; 1995)
 188 Andreasen (1994)
 189 Geller (1981); Costanzo et al (1986); Gardner and Stern (1996); Imber (2004)
 190 McKenzie-Mohr (1994)
 191 McKenzie Mohr (2004)
 192 McKenzie Mohr (2004)
 193 McKenzie-Mohr (2004)
 194 Robottom and Hart (1995); Sterling (1993); Jensen (2002)
 195 Jensen and Schnack (1997)
 196 Jensen and Schnack (1997)
 197 Jensen and Schnack (1997)
 198 Armstrong (2002)
 199 Jensen and Schnack (1997); Jensen (2002)
 200 Fien (1997)
 201 Fien (1997)
 202 Fien (1997)
 203 Jensen and Schnack (1997)
 204 Armstrong (2002)
 205 Armstrong (2002); Government of Western Australia (undated)
 206 Fien (1998)
 207 Andreasen (1994)
 208 McLoughlin (2003)
 209 Tilden (1977)
 210 Markwell (1996)
 211 Knapp & Poff (2001); Interpretation Australia (2003)
 212 Beck and Cable (1998) in Botanical Gardens Conservation International (2002)
 213 Interpretation Australia (2004)
 214 A constructivist approach attempts to build the knowledge of an individual based upon their past knowledge, understandings and experiences.
 215 MacLulich (1999, p3); Markwell (1996); Botanical Gardens Conservation International(2002)
 216 Hatherly (2003)
 217 Scott (2003)
 218 Department of National Heritage (1997)
 219 Museums Australia (2003)
 220 Botanic Gardens Conservation International (1994)
 221 Secretariat of the Convention on Biological Diversity in Conjunction with BGCI (2002)
 222 Botanic Gardens Conservation International (2004)
 223 Interpretation Australia (2004)
 224 Hatherly (2003)
 225 Interpretation Australia (2004)
 226 Knapp & Poff (2001)
 227 Interpretation Australia (2003)
 228 Young (1995)
 229 Ballantyne and Hughes (2001)
 230 Kimmel (1999)
 231 Hatherly (2004)
 232 Interpretation Australia (2004)
 233 Government of South Australia (2004)
 234 Robottom and Hart (1993)
 235 Markwell, (1996)
 236 Markwell (1996)
 237 MacLulich (1999, p 4)
 238 Young (1995, p5)
 239 Knapp & Poff (2001, p 56); Orams (1994) in Markwell (1996)
 240 NSW Government (2004e)
 241 Tilbury and Henderson (2003); Hill et al (2001)
 242 Markwell (1996, p 13)
 243 Swanagan (2000)
 244 Hatherly (2003)
 245 Fien (1997)
 246 Markwell (1996, p 11)
 247 Lee (2004)
 248 Markwell (1996)
 249 Markwell (1996)
 250 Markwell (1996)
 251 Markwell (1996)
 252 Lee (2004, p16)
 253 Australian Museums Online (undated)
 254 NSW Government (2002a)
 255 NSW Government (undated)
 256 Department of Immigration and Multicultural Affairs (2003b); NSW Government (1998); State of Victoria (2002); Government of South Australia (1980); Queensland Government (1998)
 257 NSW Government (2004f)
 258 NSW Government (2003c); Egan (1991); Parker and Bandara (1995)
 259 In NSW nearly one quarter of the population are born overseas, and close to one million people are from non-English speaking backgrounds. NSW Government (undated)
 260 Kendal (1996)
 261 NSW Government (undated)
 262 Kendal (1996)
 263 Kendal (1996)
 264 Kendal (1996)
 265 NSW Government (2001a); NSW Government (2004f)
 266 NSW Government (2004e); Resource NSW (2004); Victoria Government (2003); NSW Government (2003c); Melbourne Zoo (2003)
 267 Geller (1981); Bickman (1972). See also Section iii) Social Marketing of this document.
 268 Victoria Government (2003)
 269 NSW Government (2004f)
 270 NSW Government (2003c). Programs in NSW include the NSW EPA's Earth Works Program Ethnic Communities Waste Education Program and the recently established bi-lingual educators program.
 271 Lahiri-Dutt (2004)
 272 Kendal (1996)
 273 Flowers et al (2001)
 274 A municipality of Sydney
 275 See Section iii) Local Agenda 21 and Local Government
 276 NSW Government (2003c)
 277 Hughes (2000); Parker et al (2004)
 278 Cummings and Worley (1993) in Paul van Moort et al (2004)
 279 Parker et al (2004)
 280 Parker et al (2002); Parker & Jarecki (2004)
 281 Cole-Edelstein (2001) in NSW Government (2004c)
 282 Tilbury and Bowdler (2003a)

²⁸³ Robottom and Hart (1995); Sterling (1993); Jensen (2002)

²⁸⁴ NSW Government (2004c)

²⁸⁵ NSW Government (2004c)

²⁸⁶ Elton Consulting (2001a; 2001b)

²⁸⁷ NSW Government (2004c)

²⁸⁸ NSW Government (2004c)

²⁹⁰ Calder (2003), United Nations (2002)

²⁹¹ CARE – Mid Murray LAP Committee (undated)

²⁹² CARE – Mid Murray LAP Committee (undated, p 1)

²⁹³ Refer to Volume One for further discussion of the principles of sustainability

²⁹⁴ Srinivasan (1992) for facilitation processes with communities

²⁹⁵ Project Nature-Ed (2004) and NRM Jobs (2004) which frequently post positions for facilitators.

²⁹⁶ Action 47, in NSW Government (2002b)

²⁹⁷ Tilbury, Garlick, Clavert and Henderson (2003)

²⁹⁸ Tilbury and Bowdler (2003a, 2003b), ILT Team (2004)

²⁹⁹ Tilbury and Bowdler (2003a, 2003b), ILT Team (2004)

³⁰⁰ The review does not seek to dissect the EE experience into isolated parts, instead, it identifies key 'hooks' that help us hang the experience of what is happening within the community education sector. These themes do not identify the outcomes or impact of EE in the community education sector since this is beyond the scope of the report. Empirical evaluation and longitudinal research is required to identify the achievements and changes resulting from EE.

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Glossary

● Action Competence

Action competence is inherently linked to the concept of democracy. In this context actions are viewed not as reactive behaviour or lifestyle changes but rather as an active exercise of democratic participation in society. The action should be undertaken consciously, intentionally and voluntarily.

Action competence occurs when citizens:

- Have a critical and holistic knowledge of the issue;
- Are committed, motivated and driven;
- Can envision a sustainable solution; and
- Have experience taking successful concrete action.

Action competence is seen by some as a crucial outcome for Environmental Education because it brings together the processes and practices of education with the need to develop democratic citizenship skills and values, and with the nature of the ecological, social and environmental crises facing the world.

● Action Learning

Action learning is a process designed to build capacity using a form of reflection and assessment. The improvement of practice is the ultimate goal. The process involves the participants developing an action plan, implementing the plan and reflecting on what they have learnt from this. A facilitator and/or mentor assists the participants in developing their plan and learning from their experiences. Increasingly, it is being used in group settings where a number of people come together to critically reflect upon professional knowledge and improve practice.

● Action Research

Action Research can be used as a collaborative research tool, which is often represented as a four-phase cyclical process of critical enquiry – plan formation, action, outcome observation and reflection. It aims not just to improve, but to innovate practice.

Action Research provides a valuable process for exploring ways in which sustainability is relevant to the researchers' workplaces and/or lifestyles. It views change as the desired outcome and involves participants as researchers of their own practice. In this way Action Research produces more than just a research document. It results in catalytic change for sustainability. Its focus on critical enquiry and continuous self-evaluation makes it a useful tool for

professional development in Environmental Education.

Critical Action Research aims to change systems and to embed change in practice.

● Community Education

Community Education programs are taken to refer to all education programs which fall outside of the school, further and higher education sectors.

● 'Critical Theory'

'Critical theory' is a philosophical framework that seeks to radically critique systems of knowledge and power. 'Critical theory' seeks to develop systemic changes as opposed to individual behaviour changes. It emphasizes the importance of engaging people in thinking critically and developing their own responses and actions to issues rather than imposing on them previously constructed actions. 'Critical theory' attacks social practices, which obstructs social justice, human emancipation and ecological sustainability. 'Critical theory' is what underpins learning for sustainability approaches to Environmental Education. For further information see 'Critical Thinking'.

● 'Critical' Thinking

'Critical' thinking is an essential part of learning for sustainability approaches to Environmental Education that challenges us to examine the way we interpret the world and how our knowledge and opinions are shaped by those around us. 'Critical' thinking leads us to a deeper understanding of the interests behind our communities and the influences of media and advertising in our lives. For further information refer to Volume 1 in this series.

● Education About the Environment

Education *about* the environment is the most commonly practiced approach in Environmental Education. It focuses on developing key knowledge and understanding about natural systems and and complex environmental issues as well as developing an understanding of the human interaction with these systems and issues.

● Education *in* the Environment

Education *in* the environment is an approach, which provides opportunities for learners to have direct experience in the environment and develop positive attitudes and values towards stewardship of the environment. The approach may foster a value-based environmental concern of the importance and fragility

of ecosystems and landscapes. While ecological concepts may be taught through these explorations, the focus is on having positive experiences in a natural setting.

- **Education *for* the environment**

Education *for* the environment moves beyond education *in* and *about* the environment approaches to focus on equipping learners with the necessary skills to be able to take positive action. The education *for* the environment approach promotes critical reflection and has an overt agenda of social change. It aims to promote lifestyle changes that are more compatible with sustainability. It seeks to build capacity for active participation in decision-making for sustainability. In practice, however, education *for* the environment is often interpreted as the involvement of learners in one-off events or individual actions (e.g. tree planting) although occasionally they can trigger greater change on a social level.

- **Environmental Education**

Environmental Education within this series refers to the overall field of education which engages learners with their environments, be they natural, built or social. The range of practices and approaches to Environmental Education have evolved significantly since the term was first used in the late 1960s. Initially in the 1970s educators perceived Environmental Education as ‘education *about* the environment’ which focuses on developing knowledge and understanding (see glossary). Environmental Education then progressed to favour the approach of ‘education *in* the environment’ (see glossary) which promotes experiencing environment and issues. In the 1990s the practice of teaching ‘education *for* the environment’ emerged as a dominant force (see glossary) with its focus on participation and action to improve the environment. Currently within Environmental Education one can still find examples of all these approaches in practice. The most recent development in Environmental Education theory and practice is ‘learning for sustainability’. This approach challenges current practice in several ways to achieve more systemic change towards sustainability (see glossary).

- **Envisioning and Futures Thinking**

Envisioning a better future is a process that engages people in conceiving and capturing a vision of their ideal future. Envisioning, also known as ‘futures thinking’, helps people to discover their possible and preferred futures, and to uncover the beliefs and assumptions that underlie these visions and choices. It helps learners establish a link between their long term goals and their immediate actions. Envisioning offers direction and energy and

provides impetus for action by harnessing peoples’ deep aspirations which motivate what people do in the present. For further information refer to Volume 1 of this series.

- **Learning for Sustainability**

Learning for sustainability (also referred to as ‘education for sustainability’ or ‘education for sustainable development’) has crystallized as a result of international agreements and the global call to actively pursue sustainable development. It provides a new approach for current practice in Environmental Education. This new approach attempts to move beyond education *in* and *about* the environment approaches to focus on equipping learners with the necessary skills to be able to take positive action to address a range of sustainability issues. Learning for sustainability motivates, equips and involves individuals, and social groups in reflecting on how we currently live and work, in making informed decisions and creating ways to work towards a more sustainable world. This approach is underpinned by the principles of ‘critical theory’ (see glossary). Learning for sustainability aims to go beyond individual behaviour change or single actions often associated with education for the environment. It seeks to engage and empower people to implement systemic changes. For further information refer to Volume 1 of this series.

- **Learning Organisation**

A learning organisation is one which is based on the principles of adaptive management and uses these techniques within the workplace. It promotes exchange of information between employees hence creating a more knowledgeable workforce. This produces a very flexible organisation where people will accept and adapt to new ideas and changes through a shared vision. A key component of a learning organisation is that it incorporates the principles of adaptive management.

Adaptive management is a systematic process for continually improving management policies and practices by learning from the outcomes of operational programs. Its most effective form (‘active’ adaptive management) employs management programs that are designed to explore visions, develop ‘critical’ and systemic thinking in the workplace.

- **Participatory Action Research (PAR)**

Participatory Action Research is a collaborative process in which a group of co-researchers combine inquiry, critical reflection and action. A main component of PAR is that there are no ‘experts’ and as such all of the group are involved equally in the processes of inquiry and problem solving. PAR seeks to breakdown the traditional hierarchies

and power structures experienced between researcher and researched. It is the participants or 'researchers' that have control and ownership of the process, direction of research and ultimately the use of the results.

The process has been used as a form of group Action Research that encourages more open communication and discussion amongst colleagues regarding a specific task or issue. The group Action Research process invited deeper 'critical reflection' and more effective action. For further information refer to 'Action Research'.

- **Social Capital**

Social capital represents the degree of social cohesion which exists in communities. It refers to the processes between people which establish networks, norms, and social trust, and facilitate coordination and cooperation for mutual benefit.

- **Sustainable Development and Sustainability**

The idea of sustainability owes a great deal to the United Nations which in 1983 set up the World Commission on Environment and Development (WCED) and promoted quality of life for present as well as future generations. The key goals of sustainability are to live within our environmental limits, to achieve social justice and to foster economic and social progress.

Issues such as food security, poverty, sustainable tourism, urban quality, women, fair trade, green consumerism, ecological public health and waste management as well as those of climatic change, deforestation, land degradation, desertification, depletion of natural resources and loss of biodiversity are primary concerns for both environmental and development education.

The issues underlying 'sustainable development', or 'sustainability', are complex and they cannot be encapsulated within the diplomatic language and compromises. Sustainability is open to different interpretations and takes on different meanings not only between cultures but also between different interest groups within societies. Sustainability embraces equality for all, and for this reason a key aim of sustainability is to enable multi-stakeholder groups to define their vision of sustainability and to work towards it. For further information refer to Volume 1 of this series.

- **Systems Thinking**

Systems thinking is a type of thinking methodology based upon a 'critical' understanding of how complex systems, such as environments and ecosystems, function by considering the whole rather than the sum of the parts. Systems thinking provides an alternative to the dominant way of thinking, which emphasizes analysis and understanding through deconstruction. In comparison, systemic thinking offers a better way to understand and manage complex situations because it emphasizes holistic, integrative approaches, which take into account the relationships between system components and works toward long-term solutions critical to addressing issues of sustainability. Systemic thinking offers an innovative approach to looking at the world and the issues of sustainability in a broader, interdisciplinary and more relational way. Closely related to holistic and ecological thinking, systemic approaches help us shift our focus and attention from 'things' to processes, from static states to dynamics, and from 'parts' to 'wholes'.

- **Values Clarification**

An educational approach employing a variety of strategies, which enables learners to clarify and critically examine their own values, particularly those, which are unconscious or inarticulate. This process helps learners uncover how our culture, ideology, gender, socio-economic background and religion shapes our deepest held personal beliefs and values and assists learners in determining how our own values coincide or conflict with others. Genuine engagement with sustainability requires us to understand how these factors shape our values and thus our view of the world.

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